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The editor, Dr. Marg Csapo, may be reached at *marcsapo@interchange.ubc.ca*
The co-editor, Dr. Iris Drower, may be reached at *irisdoug@cox.net*

I N D E X

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A STATEWIDE SURVEY OF SPECIAL EDUCATION DIRECTORS ON TEACHER PREPARATION AND LICENTIATE IN AUTISM SPECTRUM DISORDERS: A MODEL FOR UNIVERSITY AND STATE COLLABORATION

Juliet E. Hart
Ida Malian
Arizona State University

The sustained increase in prevalence rates of students with autism spectrum disorders (ASD) has led to a corresponding growth in interest among teacher educators on how to prepare teachers to work effectively with this student population. However, current research efforts on effective preparation in the area of ASD are only emerging and have not included targeted collaboration with state departments of education. In this study, a statewide survey of special education directors in the southwest United States was conducted to determine which competencies and licensure requirements would be necessary to prepare educators teaching students with ASD. Findings suggest that the majority of the 124 respondents indicated a preference for an autism endorsement added on to a special education certificate and described knowledge of characteristics of ASD, behavior management, and communication skills development as competencies as most essential for teachers working with students on the autism spectrum. As a model for university and state collaboration, implications for teacher preparation programs are described.

Considered the most rapidly growing developmental disability and ranked as the 6th most commonly classified disability in the U.S. (National Center on Birth Defects and Developmental Disabilities, 2011) autism spectrum disorder (ASD) occurs in all social, racial, and ethnic groups and is estimated to currently affect 1 in 110 children (Center for Disease Control and Prevention, 2011). Although exact prevalence statistics internationally are variable, a meta-analytic review of sixty-one studies worldwide reported that prevalence rates have increased in most countries and are attributable to changes in definition, public awareness, service availability, and new policies governing service provision (Saracino, Noseworthy, Steiman, Reisinger, & Fombonne, 2010). Concurrent with this increase in prevalence is the trend to serve greater numbers of students with disabilities in inclusive settings, and children with Autism Spectrum Disorder (ASD) are no exception (US DOE, 2009). Consequently, as the number of children diagnosed with ASD increases, a pressing educational challenges facing school officials in the U.S. and globally is to ensure educators not only are prepared to include these students, but also are trained to teach them effectively and according to grade level standards (Loiacono & Valenti, 2010).

State Certification and Licentiate Requirements for ASD

The increase in prevalence of students identified on the spectrum, along with current special education legislation mandating that *all* students have access to the general education curriculum through *highly qualified* teachers employing evidence-based practices (Individuals with Disabilities Education Improvement Act, [IDEIA] 2004; No Child Left Behind, [NCLB] 2002) signals growing and focused attention on effective teacher education programming for teachers working with students with ASD (Morrier, Hess, & Heflin, 2011). However, both within the U.S. and internationally, there is still a paucity in the research regarding the status of personnel preparation for teachers of this population of student (Scheueremann, Webber, Boutot, & Goodwin, 2003) Although Daley (2004) reported that over 80 different countries globally have organizations seeking to address autism and autism spectrum disorder, specific international certification or licentiate requirements are not readily available and are difficult to ascertain due to varying educational oversight agencies for children with autism around the world. Moreover, lack of relevant instruction in ASD at the pre-service level as well as limited post-

graduate training opportunities have also been reported in China and elsewhere (McCabe, 2008). With respect to the U.S., the National Comprehensive Center for Teacher Quality (2007) reported that only a handful of states currently have a policy or specific licentiate requirements for teachers serving students with ASD. Connecticut, Illinois, Indiana, Kansas, Oklahoma, and Nebraska include autism among their cross-categorical or multi-categorical teacher preparation certification options, with autism included in the mild/moderate or severe/profound disability categories. Delaware requires a standard certificate with a major in special education and a concentration in autism, while the state of Florida requires an endorsement in autism to include twelve semester hours of specialization in ASD. States with specific autism licentiate programs are in the minority and include Kentucky, Michigan, Nevada, and West Virginia.

Although it is highly probable that both general and special educators will encounter students with ASD in their classrooms, consistent with the findings from the state analysis above and of the National Research Council [NRC] (2001), most teacher graduates receive minimal to no preparation in evidence-based practices for students diagnosed with ASD, being prepared through a single introductory course as general education majors or other courses centered on strategies and accommodations to address a variety of disabilities as special education majors (Morrier, Hess, & Heflin, 2011). The NRC (2001) further concluded *personnel preparation remains one of the weakest elements of effective programming for children with autism spectrum disorders and their families* (p. 225). It is therefore not surprising to find that teachers rarely employ evidence-based instructional strategies with students with ASD (Hess, Morrier, Heflin, & Ivey, 2008).

Research on Teacher Preparation in ASD and the Need for Collaboration

Emerging research on teacher preparation in the area of autism has focused on several lines of inquiry related to teachers' extent and type of training as well as perceptions of their preparedness to meet student needs. For example, Loiacono and Allen (2008) and Loiacono and Valenti (2010) investigated the increase in autism prevalence in the state of New York over a five-year period as well the extent of teacher training in Applied Behavior Analysis [ABA] methodologies among general educators working with students with ASD in inclusive settings. Their findings showed increased prevalence rates consistent with the Center for Disease Control and Prevention [CDC] (i.e., 10-17% yearly) and educators largely untrained in and unfamiliar with ABA approaches. In the state of Connecticut, general education teachers' feelings of confidence and competence to teach children with ASD who were included in their classrooms were reported on by Teffs and Whitbread (2009), who determined that the teachers in their survey had little training to meet the needs of students with ASD, and once students with ASD were placed in the classroom, teachers lacked the support they needed to provide appropriate instruction for their students. In a statewide study, Morrier, Hess, and Heflin (2011) reported on the nature and type of training current teachers of students with ASD received. Morrier et al., found that the most frequently reported type of training was attendance at a full or half-day workshop, with fewer than 15% of teachers reporting training via their university preparation
program; moreover, the type of training did not predict use of evidence-based practices.

Barnhill, Polloway, and Sumutka (2011) surveyed teacher educators at 87 institutes of higher education [IHEs] across 43 states to determine prevalence of teacher training programs in ASD, the nature of autism-specific coursework, and the specific topics addressed through that coursework. Their findings indicated an apparent increase in the development and implementation of personnel preparation programs in ASD, but wide variation in the nature of these programs, due in large part to the fact that only a small number of states offer a licensure program in ASD. In conclusion, IHEs are working within a comparative void regarding guidelines for the development of their preparation programs. Barnhill et al., recommended increased guidance from state departments of education with regard to program development for teacher preparation in ASD. Loiacono and Allen (2008) and Loiacono and Valenti (2010) made similar calls for IHEs to work in collaboration with their state departments of education to determine pedagogical criteria for teaching students with ASD, which would require a significant collaborative effort among colleges and universities, Local Education Agencies [LEAs], and other state department stakeholders (including parents). The present study reports the findings of one state's statewide survey of special education directors on teacher preparation in ASD, accomplished through targeted collaboration among university faculty and state special education department stakeholders in the southwest.

Methods

Responding to the call for IHEs to collaborate with their respective state education departments and

stakeholders in the preparation of teachers serving students with ASD, the purpose of this study was to 1) determine if a single special education certificate should be offered for teachers of students with ASD; 2) prioritize competencies essential in teaching students with ASD; 3) prioritize academic and behavioral needs of students with ASD; 4) determine the role of para-educators in the education of students with ASD; 5) determine the types of professional development opportunities focused on ASD offered by districts; and 6) determine the role of higher education in preparing teachers with skills in ASD.

State and local special education directors and university faculty targeting these questions collaboratively developed a survey. The survey was piloted through the State Special Education Advisory Panel [SEAP] consisting of: parents with disabilities, individuals with disabilities, special education teachers, state and local education officials, administrators of programs for children with disabilities, representatives of state agencies involved with related services to students with disabilities, representatives of public charter and private schools, representatives of vocational, community or business organizations concerned with transition services to students with disabilities, and representatives from state juvenile detention and adult corrections agencies. Following suggested refinements the survey was created through an electronic survey engine and sent electronically through the state department to all local directors of special education in the state. A 3-week time line was established for responses to be completed and returned. Responses were entered electronically with no identifiable information. Responses were collated and reported electronically. Two open-ended questions were qualitatively analyzed for predominant themes regarding the research questions.

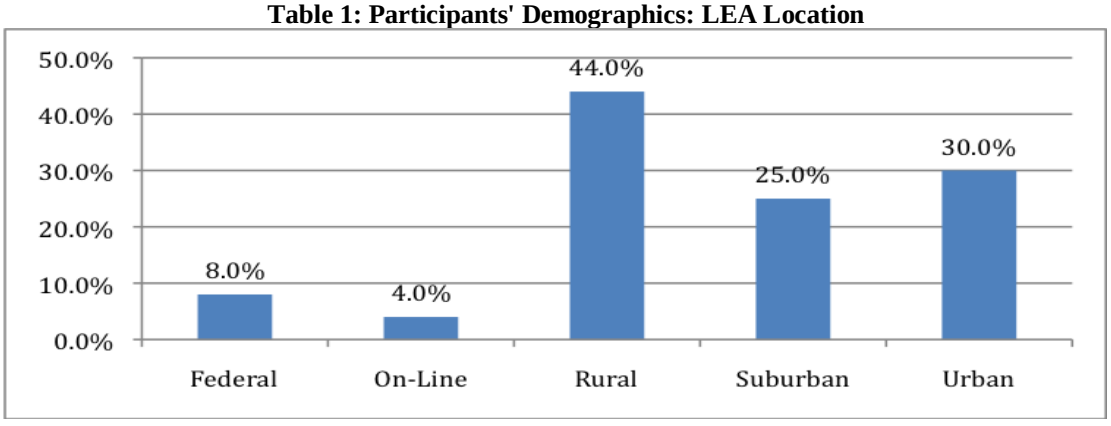
Results

Directors of special education programs (or a special education designated the state answered an online survey questionnaire targeting the research questions as related to students with ASD and their teachers within their district. A total of 18 items were administered including two open-ended response questions. Results are presented herein in terms of the major research questions (in text and table format) using descriptive statistics. A total of 124 special education directors that reported serving students with ASD responded, representing 20% of the total number of directors. In order to advise the State Department of Education, SEAP directed that the survey be administered within a three-week time-line for completion in order to address this item at their following meeting. Consequently, any follow up efforts to increase the response rate were not possible due to the time constraints imposed by the SEAP schedule.

Location and Nature of Services for Students with ASD

The first section of the survey related to demographics of the district such as overall Local Education Agency (LEA) enrollment, type of LEA, and location (e.g., urban, rural, or suburban). Of the LEAs, 90% were general education and 10% were special education.

Table 1: Participants' Demographics: LEA Location



Fifty-nine percent of respondents classified their school as a district school, while 41% classified their school as a charter school. Forty-four percent of the respondent's district schools were located in rural communities, 30% in urban areas, and 25% in suburban areas. Eight percent were considered federal and 4% were online.

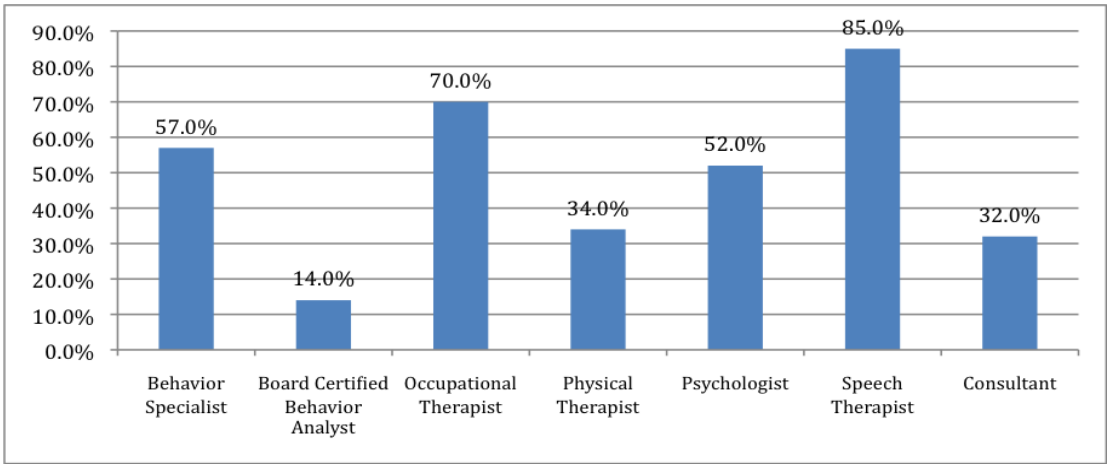
An item surveyed respondents on the percentage of time students with ASDs were served in certain environments in their LEA. It was reported that 49% of the time students were served in the general

education classroom, 20% in the self-contained classroom, and 18% in the resource classroom. The least served areas were home program (3%), itinerant (4%), and special school (7%).

Eighty percent of respondents reported serving students with ASD in their home school as opposed to a separate or special day school. In order to serve students with ASD in the future, respondents collectively reported a projected need of 967 full-time special education teachers, and 1,243 other full-time personnel, specifically in the related service areas.

Respondents were asked to project future related services needs for students with ASDs. Projected, related services needs registered by respondents were: speech therapists (85%), occupational therapists (70%), behavior specialists (57%), and psychologists (52%). Services least needed were: board certified behavior analysts (14%), consultant (32%), and physical therapists (34%).

Table 2: Related Services Needs for Students with ASD



State Licentiate

With respect to the type of credential most supported by special education directors, twenty-eight percent of respondents suggested that a dedicated autism certificate should be required by the state to teach children with ASD. Conversely, 72% did not support a separate special education certificate for teaching students with ASD.

When asked which credential they would most like to see available as an option, 71% chose an autism endorsement added to an existing special education certificate. Fifty percent answered that they would like to see an autism certificate offered by the state department of education while 35% indicated a preference for an autism certificate offered by an institution of higher learning. Twenty percent would like to see an autism endorsement added to an elementary or secondary general education certificate. Fifteen percent indicated a preference for a specialized ASD master's degree while another 15% supported including ASD within cross-categorical special education.

Respondents were asked which credentials special education teachers serving students with ASD typically hold. Ninety-four percent of special education directors reported that special education teachers typically hold cross-categorical special education endorsements added to a special education certificate; moreover, 42% of the current teachers in the director's respective districts were reported to hold a master's degree in special education. Fewer respondents reported their teachers holding the following credentials: categorical severe and profound mental retardation (9%), and autism certificate offered by an institution of higher education (11%).

Teacher Education and Curricular Competencies

Special education directors were asked to rank, on a scale of 1 (most essential) through 14 (least essential), the competencies essential for working with students with ASD. Respondents reported that knowledge of the characteristics of autism was the most essential skill, followed by behavior management and communication skills development. Skills regarded the least essential were consultation, transition, and curriculum.

Table 3: Preferred Credential/Certification Options

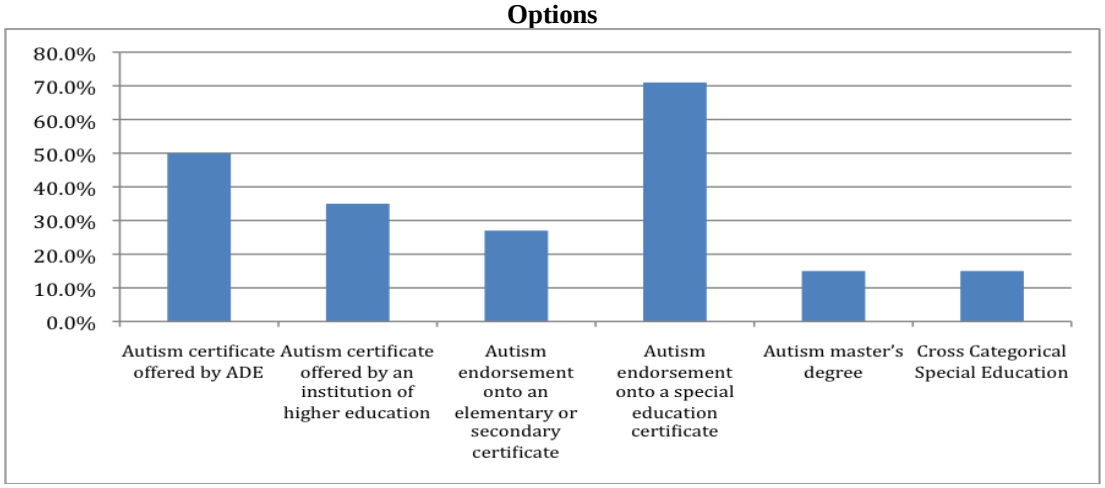
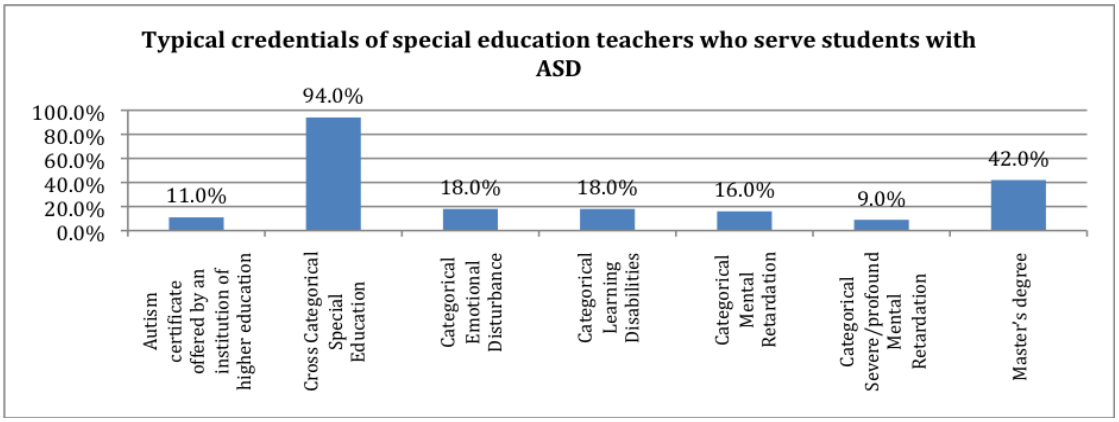


Table 4: Typical Credentials of Special Education Teachers Who Serve Students with ASD



Respondents prioritized academic needs of students with ASDs on a scale of 1 (most essential) through 6 (least essential). Ability to communicate what they know, functional or adaptive skills, and ability to work independently were considered the most essential academic needs (in that order). Ability to organize for class work, overall academic achievement, and K-12 state standards achievement were the least essential academic needs.

Behavioral needs of students with ASDs were prioritized from 1 (most essential) through 6 (least essential). Communication skills for personal and classroom interactions, acceptable classroom behavior, and adaptations for socio-emotional over and under-responsiveness were deemed the most essential needs. Adaptations for sensory over and under-responsiveness, attending skills, and friendship making skills were the least essential.

Several areas related to professional development were emphasized. These areas included preparing teachers of students with ASDs through group efforts such as training events held at a district-paid conference (87%) and individual efforts such as research and collaboration with others (80%). University programs paid or supported by the district (30%), and university programs supported by the individual teacher (31%) were deemed as less necessary.

Role of Para-Educators

In serving students with autism spectrum disorders, respondents reported that roles most assumed by para-educators are: skill reinforcement (95%), behavioral direction (91%), attention to task (86%), charting and documenting (82%). Roles less assumed are reporting to parents (18%), skill teaching (42%), reporting to teacher (81%). In terms of professional development opportunities for para-educators, 75% of directors of special education reported training at a district-paid conference.

Table 5. Professional Development Needs for Teachers of Students with ASD

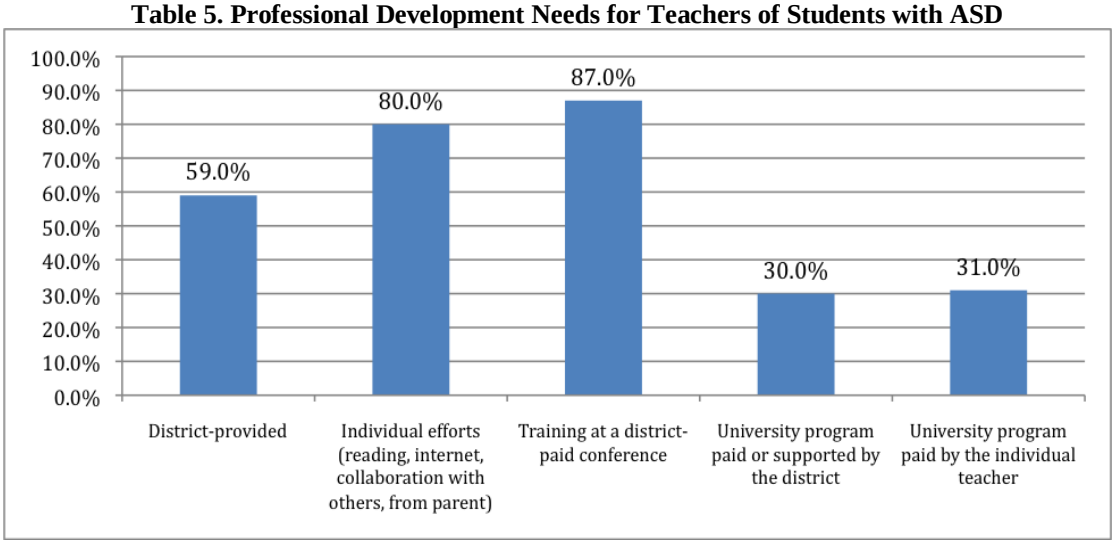
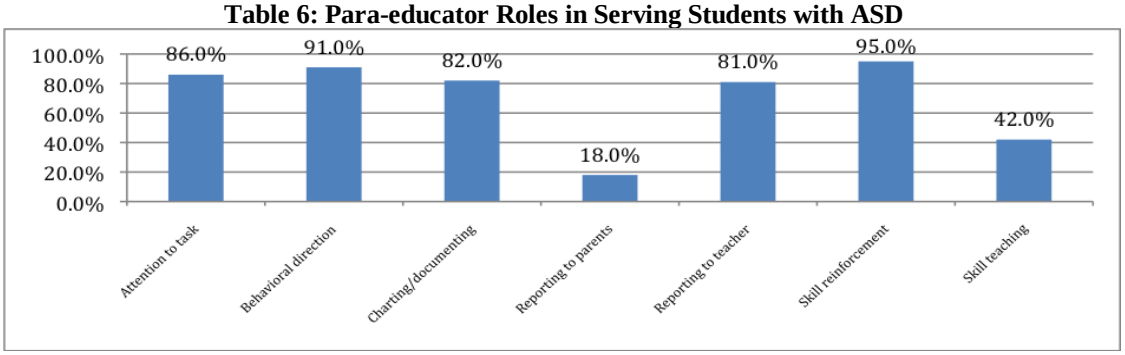


Table 6: Para-educator Roles in Serving Students with ASD



Role of Universities and Colleges of Teacher Education

Respondents were asked what role institutions of higher education played in facilitating competencies for teachers and para-educators of students with ASDs. Respondents felt the most important role of institutions was conducting and disseminating cutting-edge research into the characteristics of autism, which could guide the development of professional training courses for special education teachers. Respondents also suggested that state or district make such training affordable.

Respondents were asked to offer suggestions and comments through an open-ended format. Respondents appreciated a survey that sought their input in the certification process. The qualitative analysis yielded the following themes:

1. Teacher Preparation should provide more coursework and practical internships for *all* teachers preparing to work with students.
2. School-based program involvement should occur for professors and teacher candidates.
3. Content of course work should focus on behavior management, advocacy, parent relationships and curricular adaptation and modification specific to students with ASD.
4. Teacher in-service support should include options such as in-class consultation and on-line, web-cast and ITV support. More respondents suggested the need for continued research and training in the field of ASD.

According to the directors, the population of children with ASD is ever growing, hence the need to provide more training and to make training an integral, affordable part of higher education. Additionally, comments reflect the concept that since autism is a spectrum disorder, the more diverse credentials teachers have, the better equipped they are to teach students in a less restrictive environment.

Discussion

The survey results revealed that the participating Directors of Special Education in the state do not support the creation of a separate autism certificate. However, they do support an endorsement added to a cross-categorical Special Education certificate. Further there was clear support for additional competency

development through university-delivered degrees (Masters) and other forms of credentialing (State Department offered certificate). Currently, special education directors reported that teachers with cross-categorical endorsements (94%) are serving student with ASD. Typically the cross categorical certificate allows for teaching mild and moderate disabilities, which also includes children with ASD. The survey suggests that this certification is sufficient with additional focused competencies. To be certain, institutions of higher education do offer *university certificates* that provide a concentration of courses in autism-but are not necessarily acknowledged or required by the state credentials office.

State directors were clear on the competencies needed to address the educational needs of ASD. Fundamentally, teachers of students with ASD need to have a comprehensive knowledge of the disability and be able to manage the manifested overt behaviors. The focus on development of communication skills for the students was also essential to advancing the academic and behavioral development of students with ASD. A parallel consistency was found between essential teacher competencies and student needs regarding communication skill development. That is to say, special education directors prioritized the importance of teachers' ability to develop their students' communication skills as well as identifying communication as a critical area for students. This is also consistent with 85% of the special education directors reporting a high projected need for speech therapists to collaborate in providing communication-based related services to students with ASD. The data also suggested that the competencies that were deemed less essential--consultation, transition, and curriculum-- seemed to be skills that are provided by other professionals in collaboration with the special education teacher.

Professional development was seen as a necessary element to advancing skills of all teachers and para-educators serving students with ASD, with collaboration as a core theme underscoring the service delivery process. Additionally, directors of special education indicated that students with ASD were served in general education 53% of the time and resource rooms 23% of the time. Thus, professional development and collaboration with related service professionals were seen as necessary and provided.

The data suggest that professional development opportunities offered by institutions of higher education were the least available option. This may be due to the university credit-cost structure, distance to a campus and scheduled class offerings, and perhaps the expressed belief that university faculty was divorced from the realities of the classroom. Training at district-paid conferences was reported by 87% of the special education directors. Special education directors commented that newly certified teachers did not necessarily possess the depth and breadth of skills necessary to meet the needs of students with ASD. Consequently, the data suggest that districts are providing this training themselves to supplement the skills of the novice teacher.

Para-educators were reported to be assuming a greater role in serving students with ASD. This is consistent with findings of national studies on para-educators in a variety of classroom settings (French, 2001; Liston, Nevin & Malian, 2009). Specific tasks for para-educators were skill reinforcement, behavioral redirection, charting and communicating achievement and behavior. These functions again highlight the necessary collaboration between teachers and para-educators to meet the range of needs of students with ASD. Thus, referring back to professional development, it is logical that teachers and para-educators have been identified as needing much the same skill set for classroom implementation.

Moreover, special education directors voiced their opinions about teacher preparation. They admonished the universities to include courses on ASD for general as well as special education teachers. The rationale for this admonishment was clearly illustrated by the inclusive classes that are serving students with ASD. Additionally, opportunities to intern with mentor teachers in classes with students with ASD were highlighted. The special education directors went on to state further that those instructing future teachers of students with ASD should have recent classroom experience to appropriately inform their instructional content with the realities of the classroom.

Implications for Teacher Education

There are limitations in this research. We were unable to survey a majority of the special education directors and designates within the state but instead worked with a relatively low response rate that could not be redressed with additional efforts at survey administration given the time constraints. A higher response rate would have provided a fuller picture of the needs and recommendations from the state stakeholders regarding students with ASD and their teachers. The low response rate also limits the generalizability of the findings. These challenges notwithstanding, this study provides a model for convening a collaborative endeavor among colleges, universities, and LEAs that includes the voices of

multiple stakeholders in the determination of the most effective ways to prepare teachers to meet the challenges of working with students with ASD in the U.S. and globally.

Examining the Council for Exceptional Children's Competencies in ASD

Directors reported a clear prioritizing of competencies needed to effectively educate and work with students with ASD. The Council for Exceptional Children [CEC] has also identified initial and advanced core knowledge and skill competencies (CEC, 2009). Of CEC's 173 componrntss of specified knowledge and skills for initial licentiate in the area of *Teachers of Individuals with Developmental Disabilities/Autism* less than 14% are directed at autism spectrum disorders. Further, of the 103 *Advanced Knowledge and Skills for Developmental Disabilities/Autism Spectrum Specialist,* less than 24% target ASD. Moreover, both sets of competencies pair autism with developmental disabilities. While there are similarities between the disabilities and common core teaching competencies required for each of them, there are no unique skills for educators identified with respect to ASD. Lastly, standard 3: *Individual Learning Differences,* Standard 5: *Learning Environment/Social interactions*, and Standard 9-*Professional and Ethical Practice* for the initial knowledge and skills set and Advanced Standard 6-*Collaboration* do not list a single targeted competency for autism nor developmental disabilities specifically. While it could be argued that all of CEC's competencies implicitly include autism as well as developmental disabilities, naming and making these explicit within the competencies (as the directors of special education in this state have suggested) would provide a more accurate template to transition to teacher education programs. Additionally, the inquiry model of canvassing the special education directors in the state regarding suggestions for specific competencies could also facilitate the mapping of the field requirements to the teacher education programs.

Teacher Preparation Programming

Previous research has suggested that there exists significant variation in the nature of preparation programs in ASD, which reflects not only that a small number of states and countries globally currently offer licensure programs but also that the IHE's within most of these are operating from a relative void in terms of guidelines for development of their programs (Barnhill, et al., 2010). The present research directly responds to the call for increased guidance from and collaboration with state departments of education and stakeholders with respect to goals and objectives for program development in teacher preparation for ASD (Loiacono & Valenti, 2010), particularly since it is state departments of education who ultimately determine criteria for licentiate certification. While it is important to begin by linking course work with national CEC standards, it is also critical for teacher educators to align preparation programs with what our state agencies indicate that students need in terms of interventions (e.g., research-based practices such as ABA intervention methodologies, pivotal response and discrete trial training), what their teachers need in terms of training areas to effectively work with students (e.g., characteristics, functional behavioral assessments, and social skills development), and the types of field-based experiences to promote direct work with students with the unique features associated with ASD (Barnhill, et al., 2010).

The findings of this study also underscore the need for comprehensive professional development for teachers and para-educators in the field who are working with students on the autism spectrum, beyond the typical single day training, half-day workshop, and self-teaching reported by many teachers of students with ASD (Morrier, et al., 2011). Comprehensive professional development for teachers and para-educators should be spearheaded by expert faculty who can provide in-depth and substantive content knowledge as well as hands-on-training so that teachers are able to understand the range of learning, social, and behavioral features each student with ASD brings into the instructional setting and to subsequently respond effectively (McGee & Morrier, 2005). With direct access to the most up-to-date research, those faculty experts in the area of ASD must engage in more classroom-based supervision and on-site training in order to directly impact students with ASD and their teachers in our schools through the delivery of models of evidence-based practices. This preparation should also involve continued supervision, ongoing feedback, and consultation (NRC, 2001) as part of rigorous on-the-job training during the school year as well as summer institutes and seminars for practicing educators (Barnhill, et al., 2010). Professional development opportunities at the university level should be provided for faculty who are not yet expert in ASD (e.g., colloquia by internal and external consultants, actively participating in webinars); correspondingly, faculty should engage in volunteer, supervision, and observation opportunities in school settings to increase their knowledge and expertise in ASD characteristics and strategies.

Technical Support

Professional development is a critical component to updating skills for teachers of students with ASD and the teacher educators responsible for their effective preparation. Professional development can be offered through a variety of venues, including virtual. For teachers in the field, a connection to an *expert* who can provide perspective as well as effective classroom practice recommendations is critical to teacher development. A *consultant hot-line* that dedicates a bracketed time-frame for calls or computer chats with SKYPE capabilities can facilitate this type of professional connection. At the end of a school day, teachers can connect with others teachers and university faculty within the state or nationally to discuss curricular, behavior management or problem-solving successes and *soon-to-be success* inquiries. Interactive television can also provide a *forensic* meta-analysis of the broadcast session. Existing students in the teacher education program would benefit from the type of questions and the expert responses.

Aligned with the study, in-class expert consultation would also provide a type of professional development. A triad of content coaches, with expertise, for example, in behavior management, curricular modifications, and/or social skills and communication can engage in a clinical supervision session. Following a pre-conference to set forth the lesson objectives and areas to observe, the observation can be recorded or scripted. The post-conference would then focus on objective achievement and focused observation feedback. Finally, web - casts are not only available through professional organizations but can also be developed by the content coaches and classroom teachers for further analysis with current students at institutions of higher education's teacher education programs.

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COMPARISON OF OCCUPATIONAL STRESS IN RESPONSE TO CHALLENGING BEHAVIOURS BETWEEN GENERAL AND SPECIAL EDUCATION PRIMARY TEACHERS IN NORTHERN ITALY

A. Pepe
L. Addimando
University of Milano-Bicocca

In the Italian education system, pupils with special education needs (SEN) are fully included in mainstream education and receive extra support from special education teachers (SET). Starting from this point, it is reasonable to expect some degree of difference between special education teachers (SETs) and general education teachers (GETs) in term of occupational stress stemming from job demands as well as students' challenging behaviours. The study explored the connection between *students' challenging behaviours* and *teachers' occupational stress* in a sample of Italian in-service primary teachers (N= 306). Data from the Italian version of the *Challenging Students Standard Questionnaire* were analysed to understand the impact of six different categories of *challenging students' behaviours* on eliciting *occupational stress* responses in SETs and GETs. Descriptive, comparative t-test analyses and effect sizes for all measures were reported. Results were consistent with the idea that SETs and GETs experience different degrees of occupational stress as a result of experiencing different *challenging students' behaviours*. Recommendations for planning more targeted in-service training for primary teachers are discussed.

Empirical research on teachers' perceptions of undesirable classroom behaviours is a common topic in educational psychology (Langfeldt, 1992) because teachers are often called upon to address students' behaviours to maintain an adequate classroom climate in which students can be motivated to achieve more. For this reason, students with *challenging behaviour* are frequently mentioned as a major concern by special and regular teachers (Forest & Pearpoint, 1990; Hitzig, 1992) and school administrators (Borelli, 1997). Many researchers have already shown that high levels of classroom *challenging behaviour* contribute to climate of mutual fearfulness and mistrust that dissolves the relationship between teachers and students (Charles & Senter, 2005). However, both general and special education teachers reported they are not adequately trained to handle with misconducts that they witness every day (Merrett & Wheldall, 1993). The failure of managing misconduct results in several negative outcomes, such as: the disruption of students' rights to learn, the disruption of teachers' rights to teach and wasting time for both students and teachers. Kyriacou (2001) suggested that the relationship between stress from exaggerated job-demands (i.e., disruptive or challenging misconducts) and teachers' work performances must be investigated because of its practical importance in affecting effective learning processes. This describes the main rationale justifying the study of the effect of *challenging behaviour* on teachers' performance: the link between greater frequency of challenging behaviour and the lack of academic outcomes (i.e. learning cannot occur when students neither in their seats nor engaging with academic material, although this is not a sufficient condition for learning). Therefore, when pupils' misconducts are not correctly detected or addressed, teachers may experience high levels of occupational stress.

Unfortunately, identifying the extent to which students' behaviours contribute to teachers' strain is still a challenge for educational psychology. The main difficulty with the concept of *challenging behaviour* is that the social and cultural background of an individual affects the appraisal of who can be considered a disruptive student (Bibou-nakou, Kiosseoglou & Stogiannidou, 2000; Langfeldt, 1992). Teachers and people in general, tend to judge behaviours as troublesome, challenging or desirable based on their own cultural patterns, social norms or personal habits (Weisz, Somsong, Chaiyasit, Weiss, Achenbach & Eastman, 1993). The label challenging behaviours is thus a socially-constructed and cultural concept: in

a plain way a behaviour becomes problematic when it is troublesome to someone (Jones, Charlton & Wilkin, 1995).

Based on these premises, we conducted a local research in the field of primary students' *challenging behaviours* both to replicate effects documented in different cultural milieu and to gain insight from different educational settings. As suggested by Leung and Ho (2001), *to increase the applicability of findings, it pays to explore most relevant students' behavioral categories in local settings* (p. 232). Starting from prior research in the analysis of pupils' *challenging behaviours*, the present study investigated the relationship between disruptive classroom behaviours and occupational stress in a sample of in-service Italian primary teachers. As Kokkinos and Davazoglou (2009) stated, *one of the variables that has been taken into consideration in teacher stress research is within-occupation variance, which assumes that different occupational titles subsume many heterogeneous work functions, which are associated with different degrees of job strain* (p.407). It must be remarked, however, that the present study is looking to examine challenging behaviours effect on teacher occupational stress rather that zeroing in on the definition of a challenging behaviour as a construct. To this end, the study used the six-model of *challenging behaviours* (Wolf, Van der & Everaert, 2003) to test whether Special Education Teachers (SET) and General Education Teachers (GET) differ in perceived stress associated with, and frequency of students' *challenging behaviours* in the Italian education system. Our research hypothesis stated that as a result of different job demands SETs' and GETs' scores would differ in the frequency of *challenging behaviours* they encounter, as well as the consequent occupational stress they experience.

In order to address this issue, the paper first outlined theoretical underpinnings of the study (as well as the description of the main psychometric proprieties of the *Challenging Students Standard Questionnaire* and its measures), and then reported the results of ANOVA which was conducted to compare the two groups of teachers (N= 306). Descriptive, comparative t-test analyses and effect sizes for all measures were reported.

The present study represents an attempt to fill previous gaps in the investigation of students' *challenging behaviours* in elementary schools because, despite its importance, little research has focused on the middle years, five to nine, of schooling (Arbuckle & Little, 2004; Sun & Shek, 2012). From this viewpoint, this study collected information from teachers with different years of teaching experiences and institutional tasks (e.g. SETs and GETs), in order to portrait a more accurate glimpse of such issue. Academically, the study's findings would increase local literature since a general paucity of recent researches on this topic can be found (Addimando, 2010). Practically, it was aimed at helping teachers to understand what is currently occurring in their classrooms about the most frequent and stressful behaviour in order to improve the learning environment through an active management of such misconducts.

Prior studies

Research on teachers' stress

The topic of *teacher stress* has long been investigated and has become a research area with worldwide interest (Kyriacou, 2001). The international literature consistently describes the teaching profession as an occupation beset by high level of stress (Beer & Beer, 1992; Johnson, Cooper, Cartwright, Donald, Taylor & Millet, 2005). Roughly, one-third of all interviewed teachers referred to themselves as *very* or *extremely* stressed due to high work demands (Chan & Hui, 1995; Gevin, 2007; Kyriacou, 1987).

On a theoretical level, the *transactional model of stress* (Lazarus, 1966; Lazarus & Folkman, 1984) asserts that the feeling stress occurs when people experience *imbalances* between personal life demands and the availability of resources to cope with such demands (Sapolsky, 1998). According to this model, Kyriacou and Sutcliffe (1978) refers to *teacher stress* as: a response syndrome of negative affects (such as anger or depression) resulting from aspects of the teacher's job and mediated by an appraisal of threat to the teacher's self-esteem or well-being and by coping mechanisms activated to reduce the perceived threat (p. 159).

From this point of view, *occupational stress* is the result of a situation in which teachers are afflicted by *negative affects* resulting from exposure to various *job stressors*. A job stressor is a work-related environmental condition that affects the psychological, social and physiological health of an individual (Hurrel, Nelson, & Simmons, 1998).

Excessive workload, poor school climate, lack of support from colleagues (Chan, 1998; Durham, 1992; Wilson, 2002), lack of professional recognition, diversity of tasks required, excessive bureaucracy, time pressure and the amount of paperwork required of teachers are recognised as *job stressors* (Burke & Greenglass, 1995; Pithers, 1995). Other sources of *occupational stress* included large class size, social isolation, fear of violence and role ambiguity (Travers & Cooper, 1996). Particularly severe consequences of *job stressors* included: physical illness, early retirement from the profession (Chaplain, 2008), cardiovascular disease, decline in quality of relationships with peers, anxiety, feelings of inadequacy (Punch & Tuettman, 1990), chronic fatigue, depression and *burn-out syndrome* (Betoret, 2006). The influence of job stressors on teachers' lives can be classified into two categories: *external-environmental* and *internal-emotional.* The first set, external-environmental, is directly linked to the academic facet of teachers' work and teaching processes (i.e., the efficacy of learning), the second set, internal-emotional, is more connected to inner states and feelings that teachers experience as a result of handling job stressors: anxiety, anger, annoyance, irritation, frustration, low sense of efficacy, low motivation and distress. The internal-emotional and external-environmental spheres are extremely interwoven (Schutz & Zembylas, 2009) and both contribute to shape teachers' performances.

Students' challenging behaviours in primary schools

Since the early stages of research on teachers' occupational stress, students' *challenging behaviours* have been shown to increase levels of distress for both qualified and novice teachers (Head, Hill & McGuire, 1996). Dealing with classroom misconduct prompts acute psychological distress in teachers (Finlay-Jones, 1986), sometimes causing them to leave the profession early (Priyadharshini & Robinson-Point, 2003). But what should be considered challenging behaviour in an educational context? We have already mentioned that, in some ways, the label *challenging behaviour* is no longer anchored to the intrinsic characteristic of the phenomenon, but even still it can be useful to propose some shared definitions of *misbehaviour* that underlie the social aspect of the phenomenon.

In general, the term students' *challenging behaviour* refers to any behaviour that threatens the flow of academic performance in a particular context (Turnuklu & Galton, 2001). A similar way to describe a *challenging behaviour* could be *any student behaviour that is perceived by the teacher to compete with or threaten the academic actions at a particular moment* (Burden, 1995, p.15). In a survey of British teachers' perceptions of students' classroom behaviour, Houghton, Wheldall, and Merrett (1988), defined a *challenging* conduct as: *an activity which (a) annoys, upsets or distresses teachers (b) is disruptive of good order in the classroom and causes trouble and (c) leads teachers to comment continually* (p. 299). An alternative definition was proposed by Emerson (1995): *a culturally abnormal behaviour(s) of such intensity, frequency or duration that the physical safety of the person is likely to be placed in serious risk* (p.3).

In all proposed definitions, authors underlined both the cultural features and the disruptive nature of *challenging behaviours*: misconduct plays an active role in teachers' activities by threatening academic progress and work performance. Although many studies have examined the issue of *challenging behaviour,* few studies have tried to categorise the wide range of *challenging behaviours* in classroom in order to obtain a synthesized view of the phenomenon through the adoption of more comprehensive categories.

In an attempt to categorise students' misconducts, the Individuals with Disabilities Education Act Amendments (IDEA, 1997) briefly described two *clusters*: *externalized behaviours* and *internalized behaviours.* Externalized behaviours include under-socialized conduct disorders (i.e. antisocial behaviour with both physical and verbal aggression), over-socialized conduct disorders (such as truancy, running away from home and opposition to authority) and motor excess conducts. Internalized behaviours include anxiety, social withdrawal and clinical depression (Cullinan, 2004). These two categories are not mutually exclusive (Gresham & Kern, 2004); for instance a verbal aggression from a pupil can occur with a more pervasive feeling of anxiety.

An alternative model based on four different categories of students' conduct has been recently proposed by Evertson, Emmer and Worsham (2006): 1) no problem consists of behaviours that did not interrupt learning; 2) minor problems are those that do not occur frequently and do not interfere with learning process (i.e. eating candy); 3) major problems interfere with the teaching process (they include failing to follow rules or hitting classmate); 4) escalating problems are cases where minor problems escalate and result in a menace to the classroom climate.

Along with models that try to categorise pupils' *challenging behaviour* according to its impact on the teaching process, other approaches emphasise the need to specifically report the type of behaviour that is most troublesome for teachers. In these studies, disruptive classroom misconducts and students' *challenging behaviours* are studied in terms of the most frequent disruptive behaviour and the most troublesome disruptive behaviour that occurred in classrooms (Stephenson, Martin, & Linfoot 2000).

Merret and Wheldall (1984) carried out a relevant survey among British primary teachers concerning students' misbehaviour; talking out of turn, disturbing others, non-attendance and disobedience were reported as most problematic. Wheldall and Merret (1988) replicated the same study in another random sample of British in-service teachers (N=198) in which talking out of turn was again the most troublesome and most frequent misconduct followed by hindering other children. A modified version of Wheldall's questionnaire was used by Leung and Ho (2001) in a sample of Hong Kong primary school teachers. In this Chinese sample, teachers emphasised that talking out of turn was the most disruptive and the most frequent *challenging behaviour,* but non-attentiveness ranked second.

Italian Educational System: Special and General Education Teachers

In Italy, schools for pupils with special education needs do not exist and students with different abilities usually attend traditional schools with other students. Since 1977, law 517 (Official Government Gazette, 224, 18/08/1977) has provided a fully-functional framework to address the job of Special Education Teacher (SETs). In order to achieve standard curriculum goals, students are helped by SETs through one-on-one relationships or by arranging small group work setting within the classrooms.

To become a SETs, *novices* must undergo the same academic training of GETs, but must also earn a degree in Educational Science, in which they pass a 400 hours specialisation course (law 104, Official Government Gazette 05/02/1992). SETs fieldwork chiefly pertains to two domains: 1) providing direct teaching to special needs students (i.e., setting out academic goals and planning activities) and 2) interacting with other professionals and parents to coordinate students' full academic development. Thus, the main differences between SETs and GETs can be expressed in terms of the relationship they have with their students: SETs direct their work to a single student (or to a small group), GETs are called to deal with a whole class of pupils (up to twenty or more).

Despite the fact that SET and GET share the macro-cultural framework (they actually work in the same educational system), evidence indicates that GETs may be less tolerant in dealing with problematic behaviour than SETs (Safran & Safran, 1985). Unfortunately, in the international literature a *demarcation line* about what differences exist between the two groups, in terms of experienced stress, can't be traced: from this point of view results are still far from being conclusive (Kokkinos & Davazoglou, 2009). For instance, Cherkes and Fimian (1982) reported an higher levels of stress in SETs, Kyriacou (1987) and Trendall (1989) reported lower levels of stress in SETs and Williams and Gersch (2004) found no significant differences between groups. It must be mentioned that all proposed studies were conducted in educational contexts in which SETs are employed in Special Education Schools rather than in an inclusive setting. To our knowledge, in Italian milieu there are few studies that investigated the differences between SETs and GETs in terms of stress-inducing students' behaviour. In general, Italian SETs reported a more favourable attitude towards students with disabilities (Vianello & Moalli, 2001), they tend to adopt more *innovative* learning strategies (Besio & Chinato, 1997) and, finally, SETs perceived GETs less prepared to deal with *problematic* students (Miller, Brownell & Smith, 1999).

Research questions

As a part of a larger cross-national project, the aim of the present study was to investigate in-service primary teachers' perception of pupils' *challenging behaviour* in Italian schools, as well as the relationship between misconduct and teachers' *occupational stress*. According to Lazarus's *transactional model* (1966), individual distress cannot be depicted as a static element, but instead represents the results of dynamic process between the characteristics of the person and the characteristics of the environment (Lazarus, 1990). In relation to Italian educational system, researches should expect that SETs and GETs will rate the frequency at which behaviours occur and the related distress from such behaviours in different ways due to their different job tasks. Although the study of stress can be extricated separated from the study of the process of exchange between individuals and their environment, in the present paper *occupational stress* is primarily used as an outcome variable of the occupational context: a measure of the subjective psychological distress experienced by teachers in response to students' *challenging behaviours*. Three main research questions were addressed:

1 – What are the most frequent and most stressful students' *challenging behaviours* for Italian primary GETs ?
2- What are the most frequent and most stressful students' *challenging behaviours* for Italian primary SETs ?
3 – Are there any detectable differences between GETs and SETs in terms of which behaviours they regard as the most frequently challenging or most stress-inducing?

Method

Sample and procedure

A sample of 306 full-time in-service primary school teachers from the city of Milano, as well as other urban and sub-urban areas of the Lombardy (Italy), participated. Since data have been collected in the northwestern part of the country, the sample is a convenience sample and does not claim to be representative of the whole population of Italian teachers. Participation in the study was on a voluntary basis: participants were recruited on-site and interviewed during their working time. All questionnaires were completed anonymously and handed in collectively. Authors decided to organize plenary assemblies in schools so that the teaching staff was quickly informed about the aims of the research and about the procedures for properly filling in the questionnaire. The data included 26 different school locations in the area of Milano and its suburbs. Only teachers in charge of their own class for at least one full year at the time of the study participated. The research had been conducted following the APA's ethical principles and code of conduct (American Psychological Association, 2010).

Table 1 shows the distribution of participants by sex, role, and teaching experience. Most are women with 15 to 30 years of teaching experience; 79.7 % are GETs.

Table 1: Teacher Characteristics: Demographic Variables

Sex	%	Role	%	Experience (years)	%
Women	93.5	SETs	20.3	from1 to 5	22.5
Men	6.5	GETs	79.7	from 6 to 15	29.3
				from 15 to 30	35.5
				from 31 to 40	12.7

Due to the rate of missing data during the pilot study (approximately 10%), authors decided to organize plenary assemblies in schools, at which the whole teaching staff was quickly informed of the aims of the research and the procedure for properly filling in the questionnaire. The data includes 21 different school locations. Only teachers in charge of their own class for at least one full year at the time of the study participated. The research was conducted following APA's ethical guidelines and code of conduct. There were no commercial interest and conflict of interest for any of the authors of the present work.

Measures: the Challenging Students Standard Questionnaire

The *Challenging Students Standard Questionnaire* (Wolf, van der & Everaert, 2003) is a measurement tool that assesses both perceived stress and frequency of students' classroom behaviours that teachers found most challenging during the school year. In the *Standard Questionnaire*, occupational distress is methodologically operationalized as the informants' reported experience of being bothered by pupils' *challenging behaviours* in the classrooms.

Inspired by Brophy's work (1996), the questionnaire asks teachers to rate 23 items, spread over six different dimensions of student's *challenging behaviour*: *against the grain (AG), full of activity/easily distractible (FA), need a lot of attention/weak (WS), easily upset (EU), excessive perfectionism(EP),*

aggressive/hostile (AH). Each item is a behavioural descriptor and is rated twice: once for the frequency (to what extent does the student show this behaviour?) and then for the experienced stress (how stressful is it for you if the students engage in these behaviours?). The response format is Likert-style with five categories ranging from 0 (It doesn't happen at all) to 4 (It happens a lot) for frequency ratings and from 0 (not stressful at all) to 4 (very stressful) for stress ratings. The 23 items cover six different categories of students' misconducts:

Against the grain (AG): The most common contemporary meaning of ***against the*** *grain* is to describe something that fails to follow social or cultural expectations. Even if behaving counter to social norms is not necessarily misconduct *per se*, the impact of such behaviours in educational settings is remarkable. In the framework of the questionnaire this subscale includes behaviours such as breaking classroom rules, seeking conflict with adults and undermining the role of the teacher;

Full of activity/Easily distractible (FA): In spite of referring to ADHD syndrome (which requires an objective use of DSM-IV-RT criteria developed by trained specialists), this measure simply describes situations in which a student is more active than other students (i.e., he/she is unable to sit still or leaves his/her seat very often);

Needs a lot of attention/Weak student (WS): This subscale described those circumstances in which teachers are asked to spend extra time with a particular student to facilitate his/her achievement of educational goals. This student is generally considered *weak* because he/she has learning difficulties or has trouble following class instructions.

Easily upset (EU): Some students misbehave because they come to school with emotional problems that originate in other contexts. As a result, some their emotional responses lead to inappropriate behaviours. Some examples include: being overly sensitive to mood, crying very often or being difficult to reassure when upset;

Failure syndrome/Excessively perfectionist (EP): In educational literature two types of perfectionism exist: *normal* and *neurotic* (Parker & Adkins 1994). *Normal perfectionists* are pupils that naturally derive a sense of pleasure when their tasks are accomplished, but perfectionism is a more complex set of behaviours which can also include compulsiveness in work habits. *Neurotic perfectionists* are mostly unable to feel satisfaction because, in their own eyes, they never seem to do things well enough (Roedell, 1984). Adderholth-Elliot (1989) proposed that perfectionist students may underachieve because of procrastination and fear of failure;

Aggressive/Hostile (AH): Hostile-aggressive misconduct is frequently encountered (and sometimes dreaded) by many teachers. Students who engage in such behaviours are classically labelled as *problem students* due to the impact they have on classroom management. Two major categories of these behaviours are: *verbal* and *physical aggression*. The former includes being rude, arguing, sarcasm and teasing, the latter includes kicking, hitting, fighting, spitting, throwing objects and biting. Aggressive/hostile behaviours undermine learning process when the main target is the teacher, or when directed toward other classmates. From teachers' point of view, an aggressive misconduct is a severe threat because can escalate when incorrectly managed or underestimated.

As in previous research into students' misbehaviour (for instance Wheldall & Merret, 1988), the *Standard Questionnaire* offers the opportunity to detect differences between the two scores by examining both the frequency and severity of students' *challenging behaviour*. It is not surprising that enduring physical aggression may be perceived as very troublesome even if it occurred only once in a decade. In the same manner, the most frequent behaviours might be relatively minor (i.e. talking out of turn, playing with pencils) yet cause concern because of how often they occur (Little, 2005) but, on the contrary, their impact on stress levels might be limited in intensity.

As reported in other works (Castelli, Pepe & Addimando, 2012; Addimando, 2010) the six-factor structure of the *Standard Questionnaire* can be regrouped in a second-order underlying structure that in some way resembles the well known differentiation between internalised and externalised behaviours. The second order solution accounted for 65.9% of the explained variance. Internalised behaviours were WS (.794), EP (.762) and EU (.750) while externalised behaviours were AG (.860), FA (.812) and AH (.751) (original factor loadings in parentheses). This alternative conceptualisation is helpful in framing the topic of students' *challenging behaviours* because it offers a further glimpse into the phenomenon

under analysis. To this end, in the present paper, scores for frequency and stressfulness were analysed separately for internalised and externalised behaviors separately.

Before discussing the results, it must be explained how the Standard Questionnaire scores are analysed. Apart from the distinction between internalized and externalised behaviours, two other methods are adopted. The first approach provides more accuracy in indentifying teachers' major sources of stress by using a *predominance scale*. Among the set of six factors, the *predominance scale* is the highest-rated behaviour in frequency or degree of stress. For instance, if a respondent provided the following scores: AG = 3.12, FA = 2.45, WS = 1.23, EU = 0.97, EP = 0.43, AH = 2.96, its *predominance scale* is *against the grain*. By using this method, the scores can be ranked in term of percentages of teachers that handle a particular *challenging behaviour* and results can be profitably compared with other studies that adopted a similar percentage-based approach (see for example Ding, Li, Li & Kulm, 2007; Leung & Ho, 2001; Merret & Wheldall, 1984; Stephenson, Martin & Linfoot, 2000).

The second approach computes incidence and stress scores to identify the values of each scale in terms of descriptive statistics and sample distribution (i.e. mean, standard deviation, asymmetry and variance). This means that the ranking of most *challenging behaviours* is simply obtained by arranging the behaviour ratings in numerical order. This method allowed to apply common statistical techniques (i.e., one-way analysis of variance) and to calculate differences between subgroups using effect size measures. These results can also ready to be meta-analysed by future researchers.

Confirmatory factor analysis and reliability of sub-scales.
In the context of scales development, an appropriate Confirmatory Factor Analysis (CFA) reflects a measurement models in which observed variables (e.g. items of *Challenging Students Standard Questionnaire*) define a set of constructs or latent variables (Hoyle, 2000) by providing strong evidence in regard to the best factor structure of the measure (Jöreskog, 1993). A given measurement model can be defined as 'appropriate' when the variance - covariance matrix (Σ) reproduced (or model implied) by the hypothetical measurement model fits with the real variance - covariance matrix (S). The degree to which the model fits data can be determined by assessing model fit criteria. The most commonly adopted fit indexes are Chi square statistic ($\chi 2$), Normed Chisquare (NC), Rootmeansquareresidual error of approximation (RMSEA), Goodness of fit (GFI), Adjusted goodness of fit (AGFI), and Normative fix index (NFI) (for further details about the characteristics of fit indexes and their normative bound, see Browne & Cudek, 1993; Hu & Bentler, 1999; Jöreskog, 1969; Schumacker & Lomax, 2004).
The results of CFA performed on 23 frequency items of the questionnaire are as follows: $\chi 2$ (202) = 514.72, NC = 2.54, RMSEA = .058 (90^{th} C.I. .053 - .062), GFI = .94, AGFI = .91, NFI = .94; the results strongly confirmed the existence of a measurement model based on the six different hypothesized dimensions.

To test internal consistency of both frequency and stress scales, reliability analysis (based on Cronbach's α; Cronbach, 1951) has also been applied to 23 items. The values are as follows: against the grain (f) = .79, full of activity/easily distractible (f) = .82, need a lot of attention/weak (f) = 0.82, easily upset (f) = .74, excessive perfectionism(f) = .61, aggressive/hostile (f) = 0.81; against the grain (s) = .79, full of activity/easily distractible (s) = .83, need a lot of attention/weak (s) = .80, easily upset (s)= .76, excessive perfectionism(s) = 0.67, aggressive/hostile (f) = 0.78.

Results
What are the most frequent and the most stressful *challenging behaviours*, in the eyes of Italian in-service primary teachers? Descriptive results are listed in Table 2.

Perhaps due to differences in job demands, predominance stress scale (i.e. the highest-rated behaviour in degree of stress) results were different between SETs and GETs. When Italian GETs were asked to think of the most *challenging students* they generally referred to a students with FA behaviour (41%), followed AG (20%) and AH (19%). As one can easily compute, 80% of GETs indicated that the most *challenging student* was characterised *by externalised behaviours*. Results from SETs reveal that the most *challenging behaviours* were FA (34%), WS (26%) and AH (17%). Therefore externalised behaviours accounted for only 57% of SETs' answers for this measure.

Table 2: Challenging Behaviors: Mean and Standard Deviation (scores range 0-4)

	SETs		GETs	
	Frequency	Stress	Frequency	Stress
Against the grain (AG)	m (ds)	m (ds)	m (ds)	m (ds)
Full of activity/easily distractible (FA)				
Need a lot of attention/Weak(WS)	1.80 (1.14)	1.61 (1.07)	2.07 (1.08)	2.07 (1.13)
Easily upset (EU)	2.59 (1.08)	2.05 (1.08)	2.82 (1.04)	2.50 (1.06)
Excessive perfectionism (EP)	2.71 (0.99)	1.82 (1.01)	2.15 (1.14)	1.64 (1.06)
Aggressive/hostile (AH)	2.23 (0.88)	1.48 (1.01)	1.77 (0.96)	1.35 (0.97)
	1.49 (1.03)	1.19 (0.99)	1.35 (1.00)	1.09 (0.96)
	1.86 (1.23)	1.68 (1.32)	1.76 (1.31)	1.81 (1.31)

With regards to the frequency of *challenging behaviours* (the results are ranked in descending order), SETs rated *need a lot of attention/weak* (m = 2.71, sd = 0.99) highest, followed by *full of activity/easily distractible* (m = 2.59, sd = 1.08), *easily upset* (m = 2.23, sd = .88), *aggressive/hostile* (m = 1.86, sd = 1.23), *against the grain* (m = 1.80, sd = 1.14) and *excessive perfectionism* (m = 1.49, sd = 1.49). GETs rated *full of activity/easily distractible* (m = 2.82, sd = 1.04) highest, followed by *need a lot of attention/weak* (m = 2.15, sd = 1.14), *against the grain* (m = 2.07, sd = 1.08), *easily upset* (m = 1.77, sd = 0.96), *aggressive/hostile* (m = 1.76, sd = 1.31) and *excessive perfectionism* (m = 1.35, sd = 1.00). Teachers also indicated their degree of stress as a consequence of *challenging behaviours*. The most stressful misconduct for SETs was *full of activity/easily distractible* (m = 2.05, sd = 1.08), followed by *need a lot of attention/weak* (m = 1.82, sd = 1.01), *aggressive/hostile* (m = 1.68, sd = 1.32), *against the grain* (m = 1.61, sd = 1.07), *easily upset* (m = 1.48, sd = 1.01) and *excessive perfectionism* (m = 1.19, sd = 0.99). GETs rated *full of activity/easily distractible* (m = 2.50, sd = 1.06) as most stressful, followed by *against the grain* (m = 2.07, sd = 1.13), *aggressive/hostile* (m = 1.81, sd = 1.31), *need a lot of attention/weak* (m = 1.64, sd = 1.06), *easily upset* (1.35, sd = 0.97) and *excessive perfectionism* (m = 1.09, sd = 0.96). Among GETs in general, the most frequent areas of misconduct were FA followed by WS. But the most stressful behaviours were FA, AG and AH. On the contrary, the least frequent and least stressful behaviour was EU. Some differences existed between the most frequently occurring behaviour and the most stressful in GETs group. Among the SETs in general, the most frequent areas of misconducts were WS, FA and EU. The most stressful behaviour were FA, WS and AH. Once again, EU was the least frequent and the least stress-generating area of misconduct. Results of the predominance stress scale are presented in Table 3.

Table 3: Predominance Stress Scale

	SETs	GETs
	Predominance scale (%)	Predominance scale (%)
FA	34	41
WS	26	20
AH	17	19
EP	11	13
AG	6	4
EU	6	3

Table 4: ANOVA results for Comparison of Means by frequency and stress of behaviours

	SETs	GETs			
Frequency	m	m	t-test	sig.	Effect size *d*
Against the grain (AG)	1.80	2.07			
Full of activity/easily distractible (FA)	2.59	2.82			
Need a lot of attention/Weak (WS)	2.71	2.15	3.56	***	0.51
Easily upset (EU)	2.23	1.77	3.42	***	0.49
Excessive perfectionim (EP)	1.49	1.35			
Aggressive/hostile (AH)	1.86	1.76			
Tot. externalised behaviors	6.24	6.65			
Tot. internalised behaviors	6.37	5.26	3.52	***	0.51
Stress					
Against the grain (AG)	1.61	2.07	2.87	**	0.41
Full of activity/easily distractible (FA)	2.05	2.50	2.96	**	0.43
Need a lot of attention/Weak (WS)	1.82	1.64			
Easily upset (EU)	1.48	1.35			
Excessive perfectionism (EP)	1.19	1.09			
Aggressive/hostile (AH)	1.68	1.81			
Tot. externalised behaviors	5.38	6.37	2.41	*	0.34
Tot. internalised behaviors	4.41	4.07			

Note: * p < .02, ** p < .01, *** p < .001

SETs vs. GETs: a comparative perspective

Are there any differences between SETs and GETs in occupational stress in response to *challenging behaviours*? In order to explore data variability between SETs and GETs , the result of one-way analysis-of-variance are reported in Table 4 (externalised and internalised measures were examined separately).

As expected, Italian elementary SETs and GETs scores differed significantly. As a consequence of the heterogeneity of their job demands, the frequency and the degree of experienced stress from *challenging behaviours* is different between the groups. For each pairwise comparison, Cohen's effect size (*d*) is reported. Cohen (1992) addressed the topic of interpreting effect size estimates and labeled an effect size small if *d* is lower than .20. According to Cohen, large magnitudes of effects are reported when *d* = .80 or more. Finally, if *d* ranges between .21 to .79 the effect should be considered medium. The frequency of students' challenging behaviours differed between SETs and GETs with regard to *WS*, F (1,306) = 3.56, p < .001 and EU, F (1,306) = 3.42, p < .001.Cohen's effect sizes were medium (.51 and .49 respectively). The perceived level of stress among SETs differed from GETs with regard to AG, F (1,306) = 2.87, p < .01, and FA, F (1,306) = 2.96, p < .01. Cohen's effect sizes were medium (.41 and .43 respectively). Finally, the distinction between internalised and externalised behaviours revealed that the two groups differed. SETs rated the frequency of internalised behaviours F (1,306) = 3.52, p < .001 higher, while GETs stress scores were significantly higher with regards to externalised behaviours, F (1,306) = 2.41, p < .02. The Cohen's effect sizes were again medium (.51 and .34 respectively).

Discussion

The starting point of this project was the peculiarity of Italian education system in which students with special education needs are fully-included in mainstream classrooms. As a result of this inclusive model of education, SETs are called to work directly with an individual or a very small group of students exhibiting behavioural, emotional or learning difficulties. Given this kind of job organization, we

expected to find differences between SETs and GETs with regard to the most frequently-occurring students' *challenging behaviours* and related occupational stress. The results revealed that the most frequent *challenging behaviour* experienced by GETs was *full of activity/easily distractible* followed by *need a lot of attention*/*weak*. The SETs show the opposite result: the *need a lot of attention*/*weak* ranks first and *full of activity/easily distractible* ranks second. Some interesting effects on occupational stress appear when examining the stress measures more closely: both groups claimed that the behaviour that generated the largest amount of stress was *full of activity/easily distractible.* This suggests that students distracting other pupils, when they are unable to stay sitting and leave their seats and that this represents the most stressful behaviour for both SETs and GETs. If we analyze the second most stressful behaviour, some differences appear base on the teachers' role: the student with learning difficulties (i.e., *need a lot of attention*/*weak*) do not cause as much occupational stress for GETs as SETs. These results should be considered with caution, but it appears that the work done by SETs in supporting students with special education need may reduce this source of occupational stress for GETs. Further, *against the grain* behaviours were the second most stressful behaviours among GETs. These results fit with previous research documenting that the most troublesome misconduct is usually minor behaviour, such as poor attention or continuous violation of class procedures and rules (Little, 2005). The analysis of what we labeled *predominance scale* provided a closer look into the phenomenon. About 40% of GETs and 34% of SETs claimed to encounter *full of activity/easily distractible* behaviours during the school year. But, by adopting a distinction between internalised and externalised behaviours, a pattern emerged: the students with externalised behaviours were the most stressful for the 80% of GETs but only 57% of SETs. Moreover, behaviour directed to break the rules (*against the grain* dimension) characterized the most *challenging student* for 20% of GETs but only 6% of SETs, perhaps due to their physical proximity and emotional closeness with students.

In the third analysis, we compared both frequency and perceived stress of the six *challenging behaviours* as well as values of internalised and externalised behaviours between groups. Results supported the hypothesis that SETs and GETs significantly differed in terms of stress experienced in response to students' *challenging behaviour*. SETs were exposed to a higher level of *weak* and *easily upset* behaviours but compared to GETs they experience the same level of stress, statistically. On the contrary, GETs were subjected to high level of stress from *against the grain* and *full of activity* behaviours although the frequency of those behaviours does not significantly differ from SETs. At a higher level of abstraction, SETs experienced a higher frequency of internalised behaviours but in term of perceived stress the two groups did not differ. On the contrary, GETs experienced more stress from externalised behaviours but when the frequency was considered the values were statistically similar. Our data do not furnish direct evidence on reasons for explaining differences between GETs and SETs, but several possibilities deserve attention. For example, the way in which SETs are trained could be a possible explanation of the differences that arise in their rankings of the most *challenging behaviours*. They may be better prepared to manage both minor and major emotional problems and learning difficulties, thereby reducing the amount of stress experienced from internalised behaviors. Alternatively, SETs may experience stress differently based on the fact that the Italian educational model includes one-to-one relationships between SETs and students with special education needs. For example, when teachers pay individualized attention to pupils and build a trust-based relationship with them, stress associated with the severity of *against the grain* behaviours may be reduced.

Conclusion

The present paper explored how different job demands affect teachers' occupational stress in response to students' *challenging behaviours*. The main limits of the present study included not having a sample that was fully representative of the entire Italian teacher population: in fact, results are specific to a sample of urban and sub-urban in-service Italian primary teachers.

A second important limitation was connected to the research methodology. We surveyed teachers' perceptions of *challenging behaviours* using a self-report quantitative questionnaire and, even though they were direct witnesses of the way in which pupils behave in classrooms, the appraisal of misconduct is, in some way, rooted in social, cultural and personal characteristics of teachers and their heritage. The practical importance of exploring the experiences of SETs and GETs with *challenging behaviours* encountered in their work can assist in planning pre-service and in-service training programs. From this point of view, the results offered a useful overview of the most frequent and most stressful behaviours in Italian elementary schools. In the eyes of Italian elementary teachers in our sample (both SETs and GETs), *full of activity/easily distractible* behaviours comprise were rated as the most challenging and this fact should be considered when designing training courses for them. Based on these results, we strongly

advise that educational policy makers and head-teachers should be more attentive to these topics in order to correctly address custom stress-reducing intervention programs.

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INCLUSIVE EDUCATION IN INDIA: ARE THE TEACHERS PREPARED?

Ajay K. Das
Murray State University

Ahmed B. Kuyini
University of New England

Ishwar P. Desai

This study examined the current skill levels of regular primary and secondary school teachers in Delhi, India in order to teach students with disabilities in inclusive education settings. A total of 223 primary school teachers and 130 secondary school teachers were surveyed using a two-part questionnaire. Part-one of the questionnaire collected background information of the respondents. Part-two was a Likert scale which required the teachers to indicate their perceived current skill levels on a list of competencies needed to implement inclusion. Data was analyzed using descriptive statistics and t-tests. The major findings were that nearly 70% of the regular school teachers had neither received training in special education nor had any experience teaching students with disabilities. Further, 87% of the teachers did not have access to support services in their classrooms. Finally, although both primary and secondary school teachers rated themselves as having limited or low competence for working with students with disabilities, there was no statistically significant difference between their perceived skill levels. The implications for teacher training in India are discussed in terms of the different models that can improve teacher quality for inclusive education.

In a country like India the number of the disabled people is so large, their problems so complex, available resources so scarce and social attitudes so damaging, it is only legislation which can eventually bring about a substantial change in a uniform manner. The impact of well-directed legislation in the long run would be profound and liberating (p.273-274). Baquer & Sharma (1997)

The passage of the landmark legislation, The Persons with Disabilities (PWD) Act, 1995 ushered in a new era for the education of children with disabilities in India. A major emphasis of this law was the inclusion and full participation of students with disabilities in regular schools. It guaranteed non-discrimination and removal of barriers, both physical and psychological, to facilitate the inclusion of students with special needs into regular schools. It urged policy makers, educators, parents and other service providers to consider the premise that special education should be seen not only in the context of separate education but also as an integral part of regular education. It aimed for the infusion of a research-based knowledge of special education and the systematic application of sound instructional practices for the education of students with disabilities who are placed in regular education classrooms. Thus the acceptance of social justice, equity and school effectiveness reform literature from the west provided a sound rationale for the inclusion of students with disabilities into mainstream education in India.

Over the last decade, a range of stakeholders advocated for reform to the 1995 Act. A working draft of the PWD Act, 2011 is prepared by the Center for Disability Studies, University of Hyderabad and is due to pass in 2012 (Deccan Herald, Jan. 14, 2012). The changes in the new draft legislation have been made in respect of several areas including right to education and provision for inclusive education. This has arisen because in spite of the effort, actions demanded by the PWD Act 1995, including educational provisions for students with disabilities were still inadequate. Several studies have shown that there is inadequacy of teacher training in India especially pertaining to inclusive

education provisions for all students (Bindal & Sharma, 2010; Sharma & Desai, 2002; Swaroop, 2001). Other studies show that teachers who have received training are still concerned about implementing inclusion (Sharma & Desai, 2002) and yet some are able to translate training into actual instructional practices to promote inclusion of those with disabilities (David & Kuyini, 2012).

However, the inadequacies of the PWD Act, which necessitated the current education reform included limited implementation of the provisions of the Act and a lack of clarity about the conditions under which some services could be provided. In respect of inclusive education, this lack of clarity resulted in confusion about what inclusion meant and the implementation of inclusive education at school and classroom levels. Many regular school teachers were concerned that inclusion might interfere with their ability to teach in the traditional manner i.e. deliver classroom instruction via a didactic approach (Jangira, Singh, & Yadav, 1995). Anecdotal evidence suggested that teachers found it difficult to accept the notion that social skills and peer relationships were equally important as academic subjects in a school relationship. Parents of nondisabled children were reported to believe that inclusion was likely to result in the *unintended consequences* of limiting their own children's educational opportunities. Were these concerns or barriers to acceptance on the part of these various vested interested groups solely attitudinal? Were they simply logistical problems? Or were they a combination of these two points of view? Whatever they were, one fact loomed large: The Persons with Disabilities Act, 1995 signaled the need for a number of new roles and responsibilities for regular school teachers. Thus, if the spirit and intent of the Act were to be translated into practice, it was expected to positively impact on the delivery of services and the educational status of 12.6 million children with disabilities in India.

A natural corollary of this Act was the expectation that regular classroom teachers would be required to possess the appropriate attitudes, knowledge and skills in order to fulfill their new roles and responsibilities. Romi and Leyser (2006) reported that teachers who are favorably disposed toward the inclusion of students with disabilities in regular education classrooms employ more effective instructional strategies than those who hold negative attitudes. Other researchers have also indicated that there is a positive correlation between supportive attitudes by teachers and enhanced performance by students with disabilities who were included in regular education classrooms (Cook, 2001; Ross-Hill, 2009). Literature indicates that teachers' actions in classrooms are greatly influenced by their knowledge of the learning characteristics of their students and the impact these have on learning processes (Philpott, Furey, & Penney, 2010; Pinar & Sucuoglou, 2011). Regular school teachers are, now, increasingly required to be sensitive to the curricular needs, styles of learning and levels of motivation of students with disabilities. They would be expected to design appropriate learning materials and to adapt instruction to meet the educational needs of students with disabilities. Specifically, they would be required to design, implement and evaluate the educational program which had to be based on the students' assessed needs. They would also be required to participate in Individual Education Program (IEP) meetings and work in partnership with special education teachers, paraprofessionals, parents and other service providers (Ashman & Elkins, 2009). Kochhar & West (1996) emphasize that in inclusive education classrooms regular school teachers are required to teach content differently: it must be integrative, flexible and interdisciplinary. In contrast to traditional, teacher-centered instructional approaches in which the teacher stands in front of the classroom and 'lectures' to the entire class, in the inclusive classroom, the focus shifts from teaching to learning. These authors further suggest that regular classroom teachers are now required to create situations in which active student learning is maximized.

The Council for Exceptional Children (1996) developed and validated a common core of minimum essential knowledge and skills for entry into professional practice in special education. They included: 1. philosophical, historical and legal foundations of special education, 2. characteristics of learners, 3. assessment, diagnosis and evaluation, 4. instructional content and practice, 5. planning and managing the teaching and learning environment, 6. managing student behavior and social interaction skills, 7. communication and collaborative partnerships, and 8. professionalism and ethical practice. Although all the skills in the CEC common core may not be essential for regular classroom teachers, these educators nonetheless need a certain level of proficiency in these skills when students with disabilities are included in their classrooms (Daniels & Vaughn, 1999). Philpott et al. (2011) suggested a number of strategies that regular school teachers would need to accommodate students with disabilities in the regular classroom environment. These include peer tutoring, cooperative learning, mastery learning and applied behavior analysis. The literature also indicates that regular classroom teachers are required to use instructional strategies such as multi-level instruction, differentiated instruction, activity based learning and individualized and adaptive instruction to facilitate special needs students' learning. Thus a new and

extended body of knowledge and skills would be required of all regular school teachers in India if inclusive education programs were to be implemented successfully.

This study continued this research by exploring the perceptions of regular school teachers in India regarding their preparedness for inclusion, who are at the forefront of implementing inclusion programs in their classrooms. The following research questions were the focus of the study:

1. What is the perceived current skill level of primary and secondary regular school teachers in Delhi, India in order to work effectively with students with disabilities?
2. Are there any significant differences between the perceived current skill levels of primary and secondary school teachers?

Method

Subjects and Settings

A cluster sampling method was used to select participants for this study. The same procedure was repeated twice to select both primary and secondary school participants.

Primary school teachers' selection. There are twelve educational zones in the Municipal Corporation of Delhi (MCD). Of these, three zones namely, South, Central and Shahdara South were selected for this study. These zones were selected as they had a mix of rural and urban schools as well as some schools where an inclusive education program was implemented. The MCD directory showed that there are a total of 477 schools in these three zones. Of these 148 are in the South zone, 133 in the Central zone and 196 are in the Shahdara South zone. All schools in each zone were listed in alphabetical order and then ten schools from each zone were randomly selected for this study. All teachers from the selected schools were then invited to participate in the study. A total of 349 primary school teachers from 30 schools in Delhi were surveyed. Two hundred and twenty three useable questionnaires were returned giving a response rate of 63.77%.

*Secondary school teachers' selection***.** There are nine educational districts in the Directorate of Education (DOE), Delhi. Of these, three districts namely South, South-West and East were selected to be included in this study. These districts were selected as they had a mix of rural and urban schools as well as some schools where an inclusive education program was implemented. The DOE directory showed that there are a total of 321 secondary schools in these three zones. Of these 116 are in the South district, 121 in the South-West district and 84 are in the East district. All schools in each district were listed in alphabetical order and then five schools in each district were randomly selected. All teachers from the selected schools were invited to participate in the study. A total of 318 teachers from 15 schools were surveyed. One hundred thirty useable questionnaires were returned giving a response rate of 40.85%.

Research Design and Instrumentation

A survey design was utilized for this study. A two-part questionnaire was utilized in this study for the collection of data from the respondents.

Part-one of the questionnaire was designed to obtain background information related to the primary and secondary school teachers. Specifically, it asked the respondents about their (a) training received in special education (b) experience in teaching students with disabilities and (c) access to support services such as paraprofessionals (e.g. speech therapist, physiotherapist, occupational therapist etc.), special education teachers and the availability of resource room services.

Part-two of the questionnaire titled Inclusion Competencies of Indian Teachers (ICIT) was a modified version of Essential Teacher Competencies Questionnaire which was developed by Gear and Gable in the USA in 1979. The original questionnaire consisted of 50 items clustered around ten competency categories. All caution was taken to make the instrument responsive to the unique socio-politico-economic and education traditions in India. Terminology was adjusted to align the items to the educational, social and legal systems in India. For example, the term mainstreaming was changed to integration. The instrument was then presented to a panel of experts in the field of special education in India to review the questionnaire items. Suggestions from the experts were reviewed and incorporated to modify the questionnaire. The final survey instrument consisted of 52 items. These items were clustered around the ten competency categories. The survey instrument was a Likert scale where participants responded by indicating 1 = Not at all competent to 4 = Highly competent. The categories were: (1) professional knowledge concerning exceptional children (2) classroom climate of acceptance (3) communication with parents, community and colleagues (4) assessment of students' needs (5) classroom

management (6) goal setting (7) resources for classroom learning (8) instructional techniques (9) personalized curricula (10) evaluation of student progress. Two versions of ICIT questionnaire were made available to the respondents. One was in English and the other one was in Hindi which was produced after a careful translation by two experts in Delhi.

Pilot Testing

The survey instrument was pre-tested on a small population prior to its administration to the population selected for the study. The pilot study was designed to enable the researchers to (a) determine if the items included in the questionnaire would produce data from which conclusions could be drawn to answer research questions (b) produce information which would lead to any improvement of the questionnaire to ensure the overall acceptance of it by the respondents. The pilot group consisted of 22 primary and 16 school teachers from two schools in Delhi. These teachers were asked to critically examine the questionnaire by responding to the following questions:

(a) Are the competencies listed in the questionnaire, the competencies needed by regular school teachers to work effectively with students with disabilities? What additions, corrections, modifications or deletions could be made?
(b) Are the directions clear? If not, how can they be improved?
(c) Is the wording clear? If not, how can it be improved?

Written and verbal feedback was provided by the pilot group. Most of the suggestions were related to unfamiliar concepts, items considered irrelevant to these teachers' classroom situations and items considered too trivial to be included in the survey. The length of the survey was the major concern among the pilot respondents. Suggestions of the pilot group were considered and some minor changes were made to the questionnaire. Most of the changes included rewording and rephrasing of the questionnaire items. No item was added or deleted. The pilot data was not included in final data analysis.

Psychometric Properties of Inclusion Competencies of Indian Teachers (ICIT)

Factor analysis. The ten competency categories of the original questionnaire were developed on the basis of input provided by special education experts in the USA (Gear & Gable, 1979). Two new items were added to the questionnaire as suggested by Indian experts. In order to confirm the suitability of the categories and to provide statistical support for the factors to be used with the revised instrument, the combined data from the study sample (N = 223 primary school teachers and N = 130 secondary school teachers) was subjected to factor analysis. The principal axis factor analysis yielded ten factors with eigenvalues greater than 1 (see Table 1). On rotation, the obtained factors provided some support for the established competency categories of the revised questionnaire in accordance with the responses made by primary and secondary school teachers. Table 1 shows the un-rotated ten factors which accounted for 68% of the variance. It should also be noted that the strong first factor supported the validity of using the total-scale score as well as the ten separate category subtotals.

*Reliability testing***.** DeVellis (2003) suggests that a reliability co-efficient of .70 is satisfactory for research purposes. The reliability analysis of the revised ten-factor scale indicated that ICIT was a reliable measure to identify teachers' current skills levels in competencies. The alpha value for the total scale was .94. In addition, each sub-scale of ICIT has an alpha value of at least .80. Therefore, The total ICIT scale and its ten sub-scales compared well with the accepted standards of reliability (See Table 2).

Results

Analysis of part-one of the questionnaire of primary school teachers indicated that a vast majority of them, 146 (67.59%) had not received any training in special education skills. Further, a greater number of the teachers, 169 (77.88%), indicated that they did not have any experience working with special needs children. These issues were further compounded when 184 teachers (86.38%) reported that they did not have access to support services such as special education teachers, paraprofessionals or resource room services in their schools. Table 3 provides information on primary school teachers' background variables.

Table 1. Principal Axis Factors Un-rotated Solutions: Eigenvalues and Explained Variance

Factors	Sum Squares of Loading	% Variance	Cumulative %
1	20.597	39.609	39.609
2	3.658	7.304	46.644
3	2.011	3.867	50.511
4	1.763	3.391	53.902
5	1.584	3.046	56.947
6	1.355	2.606	59.553
7	1.231	2.367	61.921
8	1.123	2.159	64.080
9	1.059	2.036	66.116
10	1.043	2.006	68.122

Table 2. Alpha Values for the ICIT Sub-scales and the Total-scale

Sub-scales (competency categories)	Alpha
Professional Knowledge	.80
Classroom Climate	.86
Collaboration	.87
Assessment	.83
Classroom Management	.87
Goal Setting	.85
Resource Management	.87
Instructional Techniques	.84
Individualized Instruction	.83
Evaluation	.83
ICIT Total	.94

Table 3. Distribution of Primary School Teachers by their Background Variables

Variable	No. of Respondents		% of Sample
Training in Special Education	Yes	70	32.41
	No	146	67.59
Experience in Teaching Students	None	169	77.88
with Disabilities	Under 2 years	23	10.60
	3-5 years	15	6.91
	6-10 years	3	1.38
	Over 10 years	7	3.23
Access to Support Services	Yes	29	13.62
	No	184	86.38

Similar results were obtained when secondary school teachers' responses were analyzed. Of the total number of respondents only 41 (32.28%) indicated that they had received some training to work with students with disabilities. 80 (62.99%) teachers indicated that they did not have any experience teaching students with disabilities. An overwhelming majority of the teachers, 111 (87.40%) did not have access to support services in their schools. Table 4 provides information on secondary school teachers' background variables.

Table 4. Distribution of Secondary School Teachers by their Background Variables

Variable		No. of Respondents	% of Sample
Training in Special Education	Yes	41	32.28
	No	86	67.72
Experience in Teaching Students	None	80	62.99
with Disabilities	Under 2 years	19	14.96
	3-5 years	10	7.87
	6-10 years	11	8.66
	Over 10 years	7	5.51
Access to Support Services	Yes	16	12.60
	No	111	87.40

Part-two of the questionnaire was analyzed to determine teachers' perceived current skill levels. The following procedures were employed to identify the teachers' perceived current skill levels in each of the ten competency categories of ICIT:

(a) Means for each of the competency categories were computed by adding the current skill level ratings of teachers for each competency statement in a category and then dividing the total score by the number of items in that category.

(b) Competency categories were then arranged in rank order from highest to lowest mean scores to indicate the relative current skill levels of the teachers in each category.

A mean score of above 3.0 would indicate that teachers regarded themselves as either moderately or highly competent in that competency. A mean score below 3.0 would indicate that teachers regarded themselves as not competent in that competency. The scoring pattern would be applicable to competency categories as well.

Primary School Teachers' Current Skill Levels

Table 5 shows the means and standard deviations of primary school teachers' perceived skill levels for each of the competency categories of ICIT. The mean and standard deviation for the total ICIT scale are also presented. Ranks were allocated to each category based on the order of the means. Since all of the mean scores are below 3.0, primary school teachers in Delhi rated themselves as not competent in each of the competency category. A total scale-score of 2.40 also supported that notion. In relative terms however, they rated themselves higher in Classroom Climate (rank #1) vs. Professional Knowledge (rank#10). Upon close scrutiny of individual competencies it was found that they indicated their highest perceived current skill level in competency #9 (Provide a warm, supportive classroom climate, mean = 3.01). This was the only competency in which the primary school teachers in Delhi considered themselves to be moderately competent. This was followed by competency #8 (Develop a trusting relationship with students through fairness, consistency and openness, mean = 2.93) which still failed to meet the moderately competent criteria. They indicated their lowest skill level in competency #2 (Compare and contrast various administrative models such as itinerant teachers, resource rooms and special classes for serving students with disabilities, mean = 1.91).

Secondary School Teachers' Perceived Current Skill Levels

Table 6 shows the means and standard deviations of secondary school teachers' perceived skill levels for each of the competency categories of ICIT. The adjusted mean and standard deviation for the total ICIT scale are also presented. Ranks were allocated to each category based on the order of the means. Since all of the mean scores are below 3.0, secondary school teachers in Delhi rated themselves as not competent in each of the competency category. A total scale-score of 2.38 also supported that notion. In relative terms however, they rated themselves higher in Classroom Climate (rank #1) vs. Professional Knowledge (rank#10). This finding was similar to the results obtained for primary school teachers. Upon close

scrutiny of individual competencies, it was found that the secondary school teachers indicated their highest perceived current skill level in competency #9 (Provide a warm, supportive classroom climate, mean = 2.98). Although this result was very close to deem them moderately competent, however failed to meet the criteria by not having a mean of at least 3.0. They indicated their lowest skill level in competency #2 (Compare and contrast various administrative models such as itinerant teachers, resource rooms and special classes for serving students with disabilities, mean = 1.77).

Table 5. Primary School Teachers' Perceived Current Skill Levels

Competency Category	Mean	SD	Rank
Professional Knowledge	2.18	.70	10
Classroom Climate	2.79	.79	1
Collaboration	2.33	.82	5.5
Assessment	2.24	.77	8
Classroom Management	2.52	.74	3
Goal Setting	2.44	.76	4
Resource Management	2.21	.74	9
Instructional Techniques	2.59	.73	2
Individualized Instruction	2.33	.74	5.5
Evaluation	2.30	.77	7
TOTAL ICIT	2.40	.63	

Table 6. Secondary School Teachers' Perceived Current Skill Levels

Competency Category	Mean	SD	Rank
Professional Knowledge	1.97	.69	10
Classroom Climate	2.67	.90	1
Collaboration	2.18	.74	8.5
Assessment	2.18	.74	8.5
Classroom Management	2.52	.93	3
Goal Setting	2.38	.82	4
Resource Management	2.26	.87	7
Instructional Techniques	2.64	.73	2
Individualized Instruction	2.37	.73	5
Evaluation	2.34	.80	6
TOTAL ICIT	2.38	.60	

Differences in Perceived Skill Levels of Primary vs. Secondary School Teachers

Differences between mean ratings for primary and secondary school teachers' perceived current skill levels in each of the ten competency categories of ICIT were subjected to t-tests. The results indicated that significant differences did not exist between primary and secondary school teachers' perceived current skill levels in all competency categories but one, Professional Knowledge (see Table 7). When the total-scale score of ICIT was compared, no significant difference ($p>.05$) was observed in the perceived current skill levels of the two groups of teachers.

Discussion

The purpose of this study was two-fold. The first-part aimed to identify whether the regular school teachers in Delhi (a) had received training in special education (b) had access to support services and (c) how long they had worked with students with disabilities. The second-part of the study aimed to obtain the perceptions of their skill levels in competencies listed in ICIT.

The results showed that nearly seventy percent of the regular school teachers in Delhi had neither received any training in special education nor had experience teaching students with disabilities. It was even more troubling to see that nearly eighty seven percent of the teachers did not have access to support services in their classrooms. It is therefore not surprising to see teachers rating themselves not competent in each of the ten competency categories. Research indicates that negative attitudes of teachers and their lack of skills impede the successful implementation of inclusive education programs (Scruggs & Mastropieri, 1996, Swaroop, 2001). Experiences from western countries indicate such educational reforms have not been easy to implement. A number of writers (Hargreaves, 1994; Kuyini & Desai, 2007) point out that school systems are particularly resistant to change; resistant to the introduction and

implementation of new ideas especially if they have teachers who do not have appropriate skills and knowledge to implement the desired change.

Table 7. Differences between Means for Primary and Secondary School Teachers' Perceived Current Skill Levels in Competency Categories with Significance Tests

Competency Category	Primary School Teachers (N=223)		Secondary School Teachers (N=130)		t
	M	SD	M	SD	
Professional Knowledge	2.18	.70	1.97	.69	2.76**
Classroom Climate	2.79	.79	2.67	.90	1.25
Collaboration	2.33	.82	2.18	.74	1.75
Assessment	2.24	.77	2.18	.74	.71
Classroom Management	2.52	.74	2.52	.93	.05
Goal Setting	2.44	.76	2.38	.82	.61
Resource Management	2.21	.74	2.26	.87	-.51
Instructional techniques	2.59	.73	2.63	.73	-.56
Individualized Instruction	2.33	.74	2.37	2.37	-.55
Evaluation	2.30	.77	2.34	.80	-.48
TOTAL ICIT	2.40	.63	2.38	.60	.32

** p<.01

Social cognitive theory (Bandura, 2006) suggests that individuals feel threatened and tend to avoid situations in which they are not competent. This notion has been supported by the vast majority of research which indicates that when regular education teachers are not adequately trained to work with students with disabilities, they tend to resist the implementation of inclusive education programs (Bindal & Sharma, 2010; Kuyini & Desai, 2008). The literature on effective schooling further indicates that educational change occurs at the classroom level. The classroom teacher is the person in charge and is the catalyst for change at the classroom level. If he or she is not confident in meeting the instructional needs of students with disabilities, the likely success of the program may be placed in jeopardy. The results of this study therefore have important implications for university personnel who are responsible for pre-service and in-service training of regular school teachers in India.

Firstly, university personnel in India who are charged with designing training programs for regular school teachers need to make a concerted effort to review their teacher preparation programs especially in the light of the passage of the PWD Act and the draft amendments. They need to revise existing pre-service programs to include more coursework and practicum related to the education of students with special needs. Special emphasis should be placed on those competencies (professional knowledge, assessment, collaboration and evaluation) in which the teachers expressed relatively lower skill levels. Other emerging competencies such as proficiency in the use of assistive technology may also need to be considered for including in teacher training programs.

A critical need, as indicated by this study, is the necessity to bridge the gap between teachers' current skill levels and those needed to implement effective inclusive education programs. Regular school teachers who are already a part of the work force should be provided with adequate opportunities for professional development. In this regard, one shot seminars or workshops would not appear to be the answer. Rather ongoing professional development opportunities should be made available to regular school teachers. Literature has indicated that teachers have benefited from in-service programs which form part of a long term systemic staff development plan rather than from single shot short term programs (David & Kuyini, 2012).

Professional development program planners in India also need to consider 'bottom up' strategy rather than a 'top down' process for the determination of training program content and format. This would not only help to reduce teacher isolation but also make the program more meaningful and relevant for the participants. In recent years there has been a trend away from a narrow control of in-service education programs by school administrators and/or university professors and from the generic information pertinent to a group of teachers to training which is more closely aligned to the expressed needs and preferences of teachers (Sharma & Deppeler, 2005).

Due to the large teacher population and the limited availability of fiscal resources in India, it is further proposed that the training programs for these teachers should be carried out using train-the-trainer model. The first stage, one teacher from each school should be provided with training. Subsequently, this teacher will be required to carry out training programs for all teachers in his/her school. Although this model has been successfully used in India-Australia Training and Capacity Building Program, some (Wedell, 2005) have cautioned that this model does not result in sustainability. Wedell (2005) argues that For educational change to be implemented in classrooms more or less as intended, it is necessary for educational change planners to try to ensure that teachers are supported as fully as possible by their immediate and wider working environments (p. 12). For this reason, policy makers could consider establishing school-based teacher education and professional development programs through which teachers can be trained on the job and within the local context and have the potential to improve quality of teaching in the long term. This is an option for policy makers in India especially given that Article 23L(2) of the draft amended PWD Act, which relates to qualifications of teachers, provides that All educators should be trained to teach a student with disabilities in an inclusive classroom (p. 71). This would improve on teacher competencies for inclusive education across India in a more sustainable way.

A vast majority of respondents (nearly 87%) in this study indicated that they did not have access to support services in their schools. The educational reform literature in special education is unanimous about the availability of support services for the successful implementation of inclusive education programs. A numbers of authors have argued that the provision of adequate support services is synonymous to the implementation of inclusion in regular schools (Bindal & Sharma, 2010; Sharma & Desai, 2002; Singal, 2006). There are obvious implications for the Government of India to make the necessary support services available to regular school teachers if they are to meet the needs of students with disabilities in their classrooms.

Conclusion

In conclusion, while the results of this study provide valuable insights into teachers' readiness to implement inclusive education programs in their schools, they also substantiate the assertion that the solutions for how best to prepare teachers may begin with understanding how teachers' beliefs are integrated within the classroom (Taylor & Sobel, 2001). Future research would need to consider other methods for the determination of teacher readiness such as personal or focus group interviews and classroom observations. Responses from other stakeholders including administrators, teacher educators, special education teachers and parents of students with disabilities would also be helpful in validating the responses obtained from the regular school teachers. Further investigation of the factors which lead to lower perceived skill levels is also required. Factors such as class size, number of students with disabilities in the class, the severity of disabling conditions and support from school personnel may also have an effect on teacher readiness for inclusive education.

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MEASURING LEVELS OF STRESS AND DEPRESSION IN MOTHERS OF CHILDREN USING HEARING AIDS AND COCHLEAR IMPLANTS: A COMPARATIVE STUDY

Santhi S Prakash,
Prakash S.G.R,
Aparna Ravichandran,
K.Y. Susan,
Winnie Alex
Ali Yavar Jung National Institute for Hearing Handicapped

Hearing impairment is an exceptional circumstance that restricts the child's ability to communicate verbally. Depression is a common stress-related response for hearing parents of children with hearing loss. Evidence suggests that mothers are more inclined than fathers to experience depression in response to their child's hearing loss (Mavrolas, 1990; Meadow-Orleans, 1995; Prior, Glazner, Sanson & Debelle, 1988) and mothers with depression have been found to be less effective at nurturing language and psychosocial development in their children. The aim of the study was to compare the levels of stress and depression in mothers of children using hearing aids and children who had cochlear implants. 50 mothers of children with bilateral profound hearing loss were divided into two groups according to the rehabilitation option used. Two self reporting scales Parental Stress Index (PSI) & Centre for Epidemiologic Studies Depression Scale (CESD) duly translated into Telugu were used for the study. The results revealed that mothers in both the groups have high stress levels. On comparison the mothers of children who had cochlear implant obtained significantly higher scores than mothers of children using hearing aid on PSI. The results on CESD revealed high depression levels in both groups with no significant difference in the mean scores between groups. Hence, the present study highlights the need for the rehabilitative professionals to focus on family-based intervention for children with hearing impairment.

Parents contemplating the birth of a child share a hope that their child will enjoy access to the full array of life options. As hearing loss is not a visible handicap, hearing parents who give birth to a deaf child are often unaware of the child's hearing loss. Hearing loss if undetected and untreated can result in the delay of speech, language, and communication skills. The diagnosis of deafness in a child often leads to a crisis in the life of the parents. The psychological reaction to this diagnosis typically includes feelings of grief, helplessness, guilt and anger, given the central role of hearing to human communication, a sense of isolation within the parent-child dynamic is inevitable (Nancy & Mellon, 2009).

A parent adjusting to a child's diagnosis of hearing loss commonly ascends through a series of emotional stages. Stein and Jabaley (1981) described three stages of parental responses to the diagnosis of hearing handicap in their child: (1) an initial expression of anger toward the professionals who diagnosed the deafness in their child; (2) subsequent expressions of anger toward the child as they find it increasingly difficult to deny the existence of the hearing loss; and finally (3) the acceptance of the hearing impaired child by the parents, which marks the transition from sadness and anger to the development of adaptation and coping behaviors. Successful resolution of parent's anger and grief at diagnosis is important to the child's future as these feelings may otherwise be manifested as depression. Depression can negatively affect a child's outcome, as depressed mothers have been found to be less sensitive to their child's need and hence are less effective at nurturing language and psycho-social development in their children.

Children may be especially vulnerable to the impact of maternal depression as they are dependent on the quality of maternal care-giving and emotional responsiveness (Beardslee, Bemporad, Keller, & Klerman, 1983). Abidin (1986) and Quittner, Glueckauf and Jackson (1990) (as cited in Orlans, Spencer & Sanford, 2004) have studied the psychological reactions of mothers of children with disabilities and stated that mothers of children with disabilities experience more stress related to parenting than do mothers of children without these conditions. Calderon, Marschark, Clark and Greenberg (1993) as well as Calderon, Martin, Greenberg, and Kusche (1991) were able to show that successful coping on the mother's part had a significant influence on child development. Luterman (1999) (as cited in Punch & Hyde, 2010) maintained that the self-esteem of the parents, particularly the mother, is the crucial key to the child's success, and that all clinical endeavors should be devoted to empowering and increasing parents' self-confidence. Moeller (2000) (as cited in Punch & Hyde, 2010) has shown that family involvement, and particularly maternal self-efficacy has a positive influence on deaf children's language development and other outcomes. The more successful the mothers were in acquiring helpful strategies for coping with their deaf child, the better developed were the children's emotional sensitivity, reading competence, and problem-solving behavior. The children also exhibited less impulsive behavior, higher cognitive flexibility, and better social competence (Hintermair, 2006).

Adjustment to an exceptional child is an ongoing process marked by varying degrees of grief, anger and worry (McDowell, 1976). Addressing rehabilitative options for a child's hearing loss presents daunting challenges. Matkin (1981) reported that the focus of routine audiological monitoring of amplification must include not only the child's auditory status and the function of hearing aids but also the function of the auditory training system (in school) and the parent's participation in the rehabilitation program.

The task of parenting becomes most difficult while opting for an appropriate amplification device, therapy program or a school program for their child with hearing loss. Children born with severe to profound hearing loss are now provided with technological options that can afford them better access to speech and language through audition. Management options for the children with hearing impairment have changed substantially over the decades from conventional amplification devices to cochlear implants. Cochlear Implantation has become an increasingly common rehabilitation option for children with severe to profound hearing impairment (Spencer & Marschark, 2003). Francis, Koch, Wyatt and Niparko (1999) assessed the educational independence in the children with hearing impairment using hearing aid and cochlear implant and found that the children with cochlear implant performed better than children with hearing aid and achieved educational independence by 20th month of post implantation. The rapid rise in the number of children undergoing cochlear implantation has invoked interest among many researchers to assess various areas where cochlear implantation is superior to hearing aid.

Currently, early intervention specialists and educators attitude in rehabilitating children with hearing impairment has changed from emphasizing on the special needs of the child with hearing impairment to that of providing services to the family unit. Recent research has focused on maternal stress and depression as one of the potential factor affecting the outcomes from the various rehabilitation options. Cochlear Implants are now firmly established as effective options in the rehabilitation of individuals with profound hearing impairment, hence a need arises to assess the levels of stress and depression in mothers of children using cochlear implants and compare them with that of hearing aid users. The aim of the current study is to measure and compare the levels of stress and depression in mothers of children with hearing impairment using hearing aids and cochlear implants.

Method

Participants

Mothers of children with bilateral severe to profound sensorineural hearing loss (50 women, *M* age =23.5 years, age range: 20 to 30 years) attending early intervention programs at AYJ National Institute for the Hearing Handicapped, Southern Regional Centre, various hospitals, schools for the deaf located in twin cities of Hyderabad and Secunderabad, Andhra Pradesh, India participated in the study. The subjects were divided into two groups based on the type of rehabilitation option used by their children, Group 1: mothers of children using digital BTE hearing aids (N=25) and Group 2: mothers of children using cochlear implants (N=25). The criteria for inclusion of participants was children with severe to profound sensorineural hearing loss in the age range of 4-7 years(*M* age =5.3 years), age of identification of hearing loss & rehabilitation obtained is 2 years and for the group using implantation the implanted age is 3- 4 years(*M* age =3.3 years). The mothers had minimum educational qualification of 10th grade. The socio-economic status of the family included in the study had a monthly income of less than Rs.6,500/-

Tools

Two standardized self reporting scales namely Parental Stress Index with 14 subscales (PSI) (Abidin, 1995) and Centre for Epidemiologic Studies Depression Scale(CESD) (Radloff, 1997) both adapted in Telugu (a Dravidian south Indian language extensively used in the state of Andhra Pradesh) by Krishnamurthy (2006) were used for the current study. The description of the scales employed is as follows.

Parental Stress Index (PSI) (Abidin, 1995)

The parental stress index is a 120 - item clinical and research questionnaire designed to identify sources of stress in parent - child sub systems using a 5 point rating scale (1= Strongly Agree and 5= Strongly Disagree) with a minimum score of 120 and a maximum score of 600. The PSI yields stress score in three domains - Child domain, parent domain, and life stress. In the child characteristics domain, sub-scales measured are child-related stressors such as child's adaptability (adaptability), acceptability of child to the mother (acceptability), child's demands to the mother in terms of attention, time and effort (demandingness), moodiness and distractibility/ hyperactivity (the child's attention is easily distracted by small and irrelevant stimuli) and degree to which the mother found the child reinforcing (Reinforces parent). In the parent characteristics domain, sub-scales measured are parent attachment to the child (attachment), restrictions imposed by the parental role (Restriction of role), depression, social isolation, relationship with spouse/parenting partner, parental health and parent's evaluation of their competence (sense of competence). Finally, the life stress scale assessed the occurrence of 19 stressful life events over the previous 12 months weighted for their potential impact. 11 of the 19 life events are negative (e.g. death of the family member).Note: In scoring, a high score indicates reduced levels of stress, whereas a low score reflect increased levels of stress.

Centre for Epidemiological Studies Depression scale (CES-D): (Radloff, 1977)

The CES-D is a 20-item scale designed to measure current levels of depressive symptoms and mood in the general population using a 4 point rating scale (1= Rarely or none of the time and 4 = Most or all of the time). Note: A high score reflects greater levels of depression.

Procedure

Following an initial screen all subjects were requested to participate in the study, an oral consent was obtained from all the subjects. A structured interview was conducted and demographic data was obtained. The self report questionnaires were administered to assess the maternal stress and depression. The incompletely furnished questionnaires were discarded. The data collected were subjected to statistical analysis. To find out whether there was a statistical significant difference between the two groups of mothers, a t-Test for Independent Samples was used.

Results

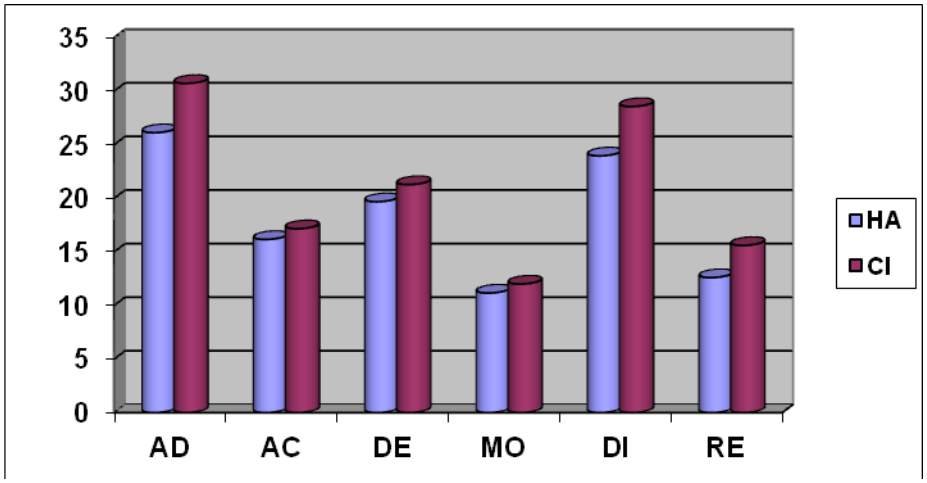
Parental Stress Index

The results obtained on PSI are as mentioned below in Table 1, 2 & 3. The results obtained on the child domain of the parental stress index indicate a significant difference on the sub-scales of adaptability (AD) [t= 3.596, P < 0.01], distractibility (DI) [t=2.613, p < 0.01] and reinforces parent (RE) [t=3.906, p<0.01] whereas no significant difference was found on sub- scales of demandingness, moodiness and acceptability as shown in Table 1 and Figure 1.

Table 1. Means, Standard Deviation & T–Values for the Child Domain Scale of Parenting Stress Index

VARIABLE	HA Group (N=25)		CI Group (N=25)		t Value
	Mean	**SD**	**Mean**	**SD**	
Child Domain					
Adaptability (AD)	26.12	4.91	30.72	4.09	3.596**
Acceptability (AC)	16.16	4.38	17.16	5.64	0.699
Demandingness (DE)	19.68	7.83	21.28	5.36	0.843
Mood (MO)	11.16	3.36	12.00	5.21	0.6778
Distractibility (DI)	23.96	3.57	28.56	8.04	2.613**
Reinforces Parent (RE)	12.60	2.58	15.60	2.84	3.906**

Note: ** P < 0.01



HA = Mothers of children using hearing aids, CI= mothers of children using cochlear implant, AD= adapatability, AC=Acceptability, DE=demandingness, MO=mood, DI=distractability & RE= reinforces parent

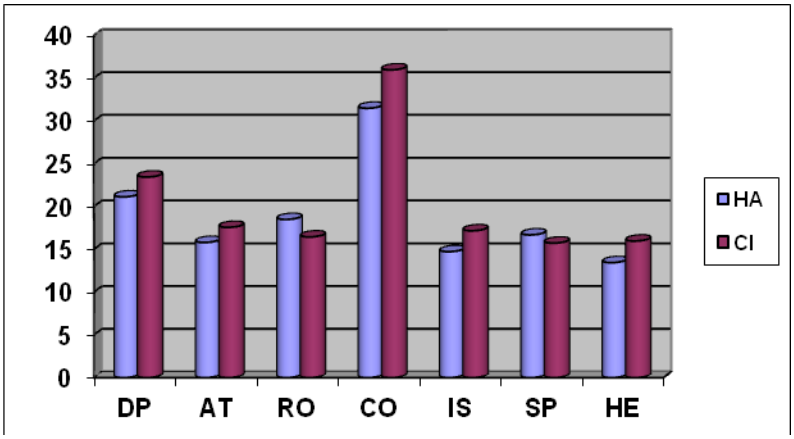
Figure 1. Means for the Child Domain Scale of PSI

On the scale of parent domain of parental stress index, the results indicate a significant difference on the sub scales of Competence (CO) [t= 2.781, P <0.01], Attachment (AT) [t = 2.050, P < 0.05] and Health (HE) [t= 2.056, P < 0.05] whereas on sub scales of role restriction(RO), depression(DP), social isolation(IS), relationship with spouse/parenting partner(SP) no significant difference was noted as depicted in Table 2 and Figure 2.

Table 2. Means, Standard Deviation &T–Values for the Parent Domain Scale of Parenting Stress Index.

VARIABLE	HA Group (N=25)		CI Group (N=25)		t Value
	Mean	**SD**	**Mean**	**SD**	
Parent Domain					
Depression (DP)	21.12	4.14	23.44	5.62	1.661
Attachment (AT)	15.80	2.87	17.56	3.18	2.050*
Role restriction (RO)	18.48	4.09	16.44	6.95	1.263
Competence (CO)	31.48	6.49	35.96	4.76	2.781**
Isolation (IS)	14.72	4.26	17.16	5.08	1.839
Spouse (SP)	16.68	4.02	15.72	3.76	0.870
Health (HE)	13.44	3.24	15.96	5.20	2.056*

Note: *P < 0.05 ** P < 0.01



HA=Mothers of children using hearing aids, CI=mothers of children using cochlear implant, DP= depression, AT=attachment, RO=role restriction, CO=competence, IS=isolation, SP=spouse relation & HE=health

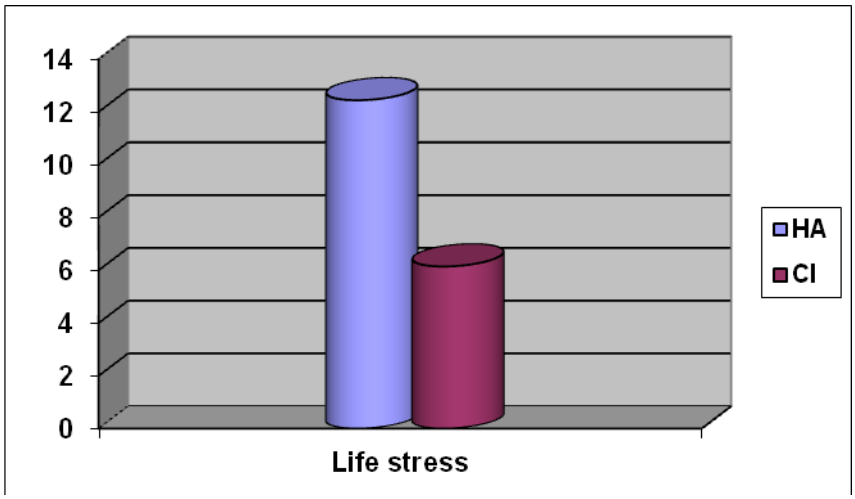
Figure 2. Means for the Parent Domain Scale of PSI

The scores obtained on the PSI Life Stress domain are depicted in Table 3 and Figure 3 reveals a significant difference in the scores between the mothers of children using cochlear implants and hearing aids on all nineteen life stress conditions.

Table 3. Means, Standard Deviation &T–Values for the Life Stress Domain Scale of Parenting Stress Index.

VARIABLE	HA Group (N=25)		CI Group (N=25)		t Value
	Mean	SD	Mean	SD	
Life stress	12.44	8.82	6.16	0.31	3.049**

Note: ** P < 0.01



HA=Mothers of children using hearing aids, CI=mothers of children using cochlear implant

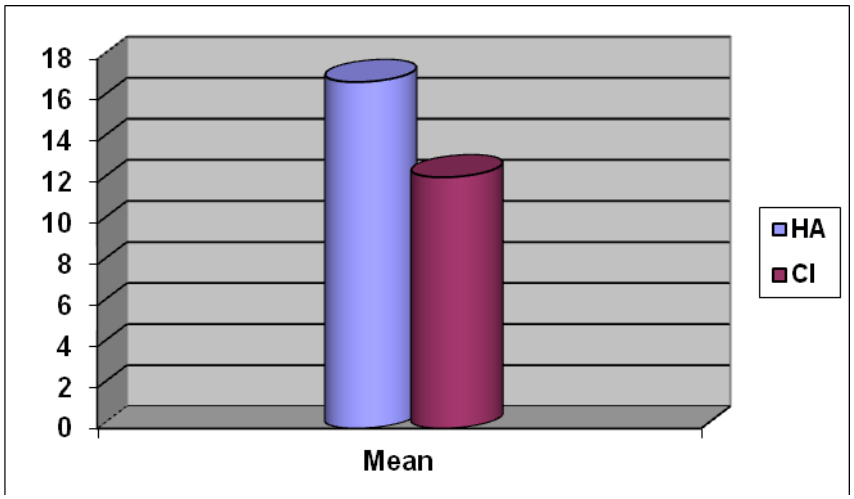
Figure 3: Means for the Life Stress Domain Scale of PSI

Centre for Epidemiologic Studies Depression Scale (CESD)

The CES-D scale is designed to measure levels of depressive symptoms and mood using a 4 point rating scale. The 20 item scale was administered on both groups. Table 4 compares the scores obtained by group 1 and group 2 on the CESD scale and indicates no significant difference in CESD scores of both groups of mothers across all test items on the scale

Table. 4 Means, Standard Deviation &T–Values on the CSED Scale.

VARIABLE	HA Group (N=25)		CI Group (N=25)		t Value
	Mean	SD	Mean	SD	
Depression	16.880	8.8286	12.24	10.5051	1.69



HA=Mothers of children using hearing aids, CI=mothers of children using cochlear implant,

Figure 4. Means of Group 1 & 2 on CSED Scale

Discussion

Stress among parents is not an inevitable consequence of having children with hearing impairment. A combination of multiple stressors appears to predict the likelihood of the parents experiencing stress and anxiety. Stressors can be defined as those life events that will bring about a change in the family system. The findings of the current study reveals a high stress level in the mothers of children using hearing aid

as compared to mothers of children using cochlear implants on sub scales of adaptability, distractibility and reinforce parent in child domain and attachment, competence and health in parent domain on PSI. However, the scores obtained on CESD did not differ significantly.

Higher scores were obtained for mothers of children using cochlear implant (Mean 30.72) when compared to the mothers of children using hearing aids (Mean 26.12) on the Adaptation (AD) sub-scale in the child domain reveals that the mothers of children using cochlear implant rated their child to be more adaptable as compared to their counterparts which could be attributed to enhanced listening skills that will enable the child to integrate to the environment which in turn will have a positive impact on the mother-child relationship. The higher mean score obtained by mothers of children using cochlear implants(Mean 28.56) when compared to the mothers of children using hearing aids (Mean 23.96) on the Distractibility (DI) subscale in child domain indicates that the mothers of children using cochlear implant have noticed lesser distractibility among their children which could be due to the constant and appropriate auditory feedback received by the children with cochlear implant when compared to their counterparts who do not receive adequate auditory feedback. A cochlear implant provides the recipient with access to sounds he may have not have heard before even when using hearing aids and is better able to self monitor his own speech which will help him to remain focused on a given task and thereby reducing distractibility (Donna, Sorkin & Caleffe-Schenck 2008).

The mothers of children using cochlear implants obtained higher mean score (Mean 15.60) when compared to the mothers of children using hearing aids (Mean 12.60) on Reinforces Parent (RE) sub-scale of child domain indicating that the mothers of cochlear implant users were reinforced by their child's outcome and behavior than their counterparts. The better outcomes and improved performance among cochlear implant users can be directly related to the better reinforcement to their mothers. The findings of Francis et al., (1999) reveal that the performance of children with cochlear implant was better than children using hearing aids. Also, the reduced distractibility and better adaptability to the environment aids the above findings. No significant difference was obtained on the remaining subscales of the Child Domain namely Acceptability (AC), Demandingness (DE), and Mood (MO). The results reflect on the higher expectations of parents of cochlear implant users when compared to their counterparts. Also, the questions on these sub-scales are general reflectors of the handicapping effects which the hearing handicapped children have on their parents.

On the Attachment (AT) sub-scale of the parent domain, higher mean score (17.56) obtained for mothers of children using cochlear implant as compared to the mothers of children using hearing aid (Mean 15.80) revealed that the mothers of cochlear implant users were more attached to their children than their counterparts. These findings could be attributed to the possibility that the parents of cochlear implant users can communicate with their children with ease and receive more reinforcement from their children as discussed above. They also feel more confident and comfortable to take them to social gatherings when compared to the mothers of hearing aid users who are possibly filled with guilt and fear due to the poor performance of their children.

Higher mean scores (Mean 35.96) obtained by mothers of children using cochlear implant as compared to the mothers of children using hearing aid (Mean 31.48) on the Competence (CO) sub-scale of parent domain reveals that the mothers of children using cochlear implant were more competent and had lesser feelings of not being able to handle things easily than their counterpart. The findings suggest that the mothers of children using cochlear implant experienced lesser stress in handling issues as their children were less distracted and more adaptable to their environment. Moreover, the mothers of children using cochlear implant were more confident about their child's outcome. Calderon et al.,(1991) and Calderon et al., (1993) indicated that the more successful the mothers were in acquiring helpful strategies for coping with their deaf child, the better the children's emotional sensitivity, reading competence, and problem-solving behavior developed. The children also exhibited less impulsive behavior, higher cognitive flexibility, and better social competence

Higher mean scores (Mean 15.96) obtained for mothers of children using cochlear implant as compared to the mothers of children using hearing aid (Mean 13.44) indicated that the mothers of children using cochlear implant users had lesser health issues than the mothers of children using hearing aid suggesting that the stress levels had a greater impact on the mothers of children using hearing aid than their counterparts. Moreover the reduced outcomes and increased distractibility in children using hearing aids has lead to greater distress in the mothers thereby affecting their physical and mental well being.

No significant difference was obtained in the remaining sub-scales of the Parent Domain namely Depression (DP), Role restriction (RO), Isolation (IS) and Spouse (SP). However as a group the mothers of children using cochlear implant obtained higher scores as compared to their counterparts. The diagnosis of profound sensorineural hearing loss must have equally affected the mothers of children using both hearing aid and cochlear implant. The decision to choose an appropriate rehabilitation option for their child might have been taxing and occupying most of their time. The lower socioeconomic status of the parents of the both groups would have required family support and adjustment to the financial constraints in the family. On the whole both the mothers have undergone similar stress levels in coping with isolation, depression and family support. The results of our study are in accordance with the findings of Punch and Hyde (2010). Life Stress Domain of PSI showed that the mothers of children using cochlear implant had lower mean scores (Mean 6.16) than the mothers of children using hearing aid (Mean 12.44) indicating increased life stress among mothers of children using hearing aid which can be attributed to the aggravated stress levels due to less satisfaction with hearing aid outcomes and more communication difficulties in their children which is in consonance with the findings of Zaidman-Zait and Most (2005).

The findings on Centre for Epidemiologic Studies Depression Scale (CESD):
The mothers of children using cochlear implant obtained lower mean scores (Mean 12.24) than the mothers of children using Hearing aid (Mean 16.880) however, they were not statistically significant indicating that mothers of children using hearing aid were comparatively more depressed than their counterparts. This could be attributed to fact that the handicapping effects of the hearing impairment have equally affected mothers in both groups. Moreover the financial constraints faced by the family due to high expenditure on the maintenance of hearing aids and/ or cochlear implants and the ongoing rehabilitation needs could have been exhaustive and demanding especially on mothers. This could have lead to equal levels of depression in mothers of both groups. The results of the current study can be supported by similar findings of Quittner et al., (1990) who found that mothers of children with severe or profound hearing losses had higher levels of parenting stress and depression, anxiety, and anger as compared to mothers of children with normal hearing. Abidin (1995) also in his study indicated that 16% of the parents of children with cochlear implant scored at or above the clinical cut-off on Parenting Stress Index. Some parents have reported high levels of satisfaction with the outcomes of their children's implantation, but have also reported ongoing concerns about aspects of their children's progress with the implant, as well as stressors involved in the ongoing demands of their children's (re)habilitation.

Conclusion
The findings of the current study reveal high prevalence of stress levels and depression among mothers of cochlear implant users as well as hearing aid users; however stress and depression levels were comparatively higher in mothers of children using hearing aids than mothers of children using cochlear implants. Results were also indicative of equal amount of stress in mothers of both groups in certain areas of their life. Hence, the study highlights the psychological needs of mothers which have to be addressed and attended by the rehabilitative specialist. In recent years, the aural rehabilitation professionals have begun to realize the need to redefine the role they play with the child with hearing impairment. Higher stress levels in parents will affect the parent child interaction which in turn may adversely affect the developmental and educational outcomes of children with hearing impairment. Hintermair (2006) in his study showed that high parental stress is associated with frequent socio-emotional problems in the children, thus emphasizing the importance of a resource oriented consulting and support strategy in early intervention, because parental access to personal and social resources is associated with significantly lower stress experience.

The study poses an urgent need to the rehabilitative professionals to provide family-based intervention especially to empower the parents of children with hearing impairment irrespective of the type of rehabilitation options used. Perhaps the predominant message for professionals from these findings are: (a) the need for understanding empathy and the skills to convey these qualities to parents; (b) the need to build up parents' feelings of self-efficacy and competence in undertaking the myriad tasks involved in parenting a child with a cochlear implant or a hearing aid; (c) the importance of flexibility in responding to families' changing needs; (d) the importance of continuing efforts to provide prompt back-up services in case of equipment breakdown; and (e) the necessity for ongoing communication between the professional and children's schools and teachers.

The findings also throw a light on the needs of mothers with children with disability as their increased depression and anxiety levels affects their quality of life. The findings therefore speak very strongly for a

thorough analysis of the situation of the concerned mothers and evaluate their needs to initiate effective rehabilitation programs including stress reduction programs for parents to increase their child management skills and to develop self esteem in mothers. Sufficient opportunities for repeated follow-up interviews also should be encouraged which offer not only information on the children's disabilities but also provide psychological support for the mothers. The current study is focused on mother's reports of stress and depression in Indian context. The fathers and sibling perspectives were not included. A comparison of mothers and fathers reports in terms of stress, emotional support and depression may aid in differentiating patterns of maternal and paternal adjustment in Indian context.

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PARENTAL NEEDS OF TRANSITION OF CHILDREN USING COCHLEAR IMPLANTS FROM PRESCHOOL TO INCLUSIVE SCHOOL

Josephine Vinila V.
Aparna Ravichandran.
Santhi Prakash S.
Prakash S. G. R.
Narender K.
Ali Yavar Jung National Institute for the Hearing Handicapped

The families of children with hearing impairments are more focused on early detection and intervention. Transition to school is a stressful experience to the parents as they miss out on understanding the importance of transition process and the information required for a successful, efficient and effective transition to school. The current study was aimed to evaluate the needs of parents on transition of their children with hearing impairment from preschool to inclusive school. Thirty five mothers of children with hearing impairment using cochlear implants in the range of 4-6 years participated in the study. Scale of parental needs in transition to school *(Kargin, Baydik & Akçamete, 2004) was modified, adapted and administered on the mothers. Percentage analysis indicated that 75% of parents expressed need for information on most of the areas of transition to school. Correlation between groups was found to be significant with respect to educational status, age of the mothers and socio economic status of the families. Parents are the most influential yet significantly underrated factors in children's education and hence their information needs should be determined for successful transition process.*

Globally there are over 250 million persons with hearing impairment of whom 2/3rd are in developing countries. In India there are over 3.1 million persons afflicted with moderate, severe and above severe hearing impairment in both the ears (NSSO, 2002).The census of India (2001) reports that 1.62 million persons have hearing loss of which 2% are children below the age of 3 years. Hearing impairment in children does not only make it difficult for them to communicate with other people; it also slows down, or even prevents learning hence, they need special help to learn. This special help will come from schooling; but parents, siblings, family members and the community also needs to help (Messaria, 2002).The families of children with hearing impairments are more focused on early detection, intervention, cochlear implantation (CI), therapy and so on. With appropriate amplification and early intervention, children with hearing loss can be mainstreamed in regular elementary and secondary education classrooms (Joint Committee on Infant Hearing, 2000).

Joining an elementary school is a major life transition for children and their families (Docket & Perry, 2001). The start of primary schooling has been perceived as one of the most important transitions in a child's life and a major challenge of early childhood. Initial success at school both socially and intellectually, lead to a virtuous cycle of achievement (Burrell & Bubb, 2000) and can be a critical factor in determining children's adjustment to the demands of the school environment and future progress (Ghaye & Pascal, 1989). Children and families respond differently to the transition to elementary school. For some it is a smooth process, while for others it is a nightmare - a string of stressful experiences. When transition to elementary school for a normal child is a stressful experience to the parents, it's even more challenging for parents of children with hearing impairment using cochlear implants, as most of these parents miss out in understanding the importance of transition process and the information required for a successful, efficient and effective transition process.

Research on parents' needs in the transition process reveal that parents have a desire to participate in the transition process and may require the support of specialists during the process (Hanline & Halvorsen, 1989). The families may reduce their level of anxiety and stress during the transition period by preparing for transition (Spiegel-McGill, Reed & Mc Gowan, 1990; Fowler, Scwartz & Atwater, 1991). Research on the effects of parental involvement has shown a consistent, positive relationship between parents' engagement in their children's education and student outcomes. Hoover-Dempsey and Sandler (1997) stated that parental involvement includes participation in home-based activities (e.g., helping with homework, discussing school events or courses) and school-based activities (e.g., volunteering at school, coming to school events).

Cochlear implantation (CI) has become an increasingly common habilitation option for children who are hearing impaired (Marschark & Spencer, 2003). An increasing body of research demonstrates improvements in children's functioning after cochlear implantation in particular their spoken language and their ability to communicate (Bat-Chava, Martin & Kosciw,2005; Geers, Nicholas & Sedey,2004; Svirsky, Robbins, Kirk, Pisoni & Miyamoto, 2000).However, successful outcomes following cochlear implantation are neither conclusively assured nor immediate(Geers et al., 2004) and significant variability in children's outcomes following cochlear implantation has been reported(Bat-Chava et al., 2005; Sach & Whynes, 2005; Spencer, 2004; Marschark & Spencer, 2003; Svirsky et al., 2000)**.** It has been suggested that the role of parents throughout the habilitation process is one among the many factors responsible for enhancing the benefits of CI and eventually the child's progress (Allegretti, 2002; Geers & Brenner, 2003; Spencer, 2004). Desjardin, Eisenberg and Hodapp (2006) suggested that parental involvement and self efficacy are two family factors that account for the variance in children's communication development following cochlear implantation. Cochlear implantation accompanied by aural (re)habilitation increases access to acoustic information of spoken language, leading to higher rates of mainstream placement in schools and lower dependence on special education support services (Francis, Koch, Wyatt & Niparko, 1999).

Transition of child with a hearing impairment from pre-school to school is something that still bothers their parents. Hanline(1988) in his study on parents whose children have completed the transition process from preschool to special classes in public school had found that the parents needed information about the relevant services, placement procedures, individualized education plan (IEP) development, written information about the available kindergartens in their neighborhood and also a specialist who could provide the above information for their children with special needs. Meeting the various needs of parents in the transition period plays an important role in the successful transition process of the children.

Spencer (2004) examined different behavioral indicators of parental involvement related to their children's education and development both before and after cochlear implantation and indicated an association between high levels of parental involvement like learning sign language, advocating for their child's needs, devoting time and effort to take their child to the CI clinic for follow up and monitoring children's language achievement. Desjardin (2004) found that mothers higher sense of involvement was associated with mothers enhanced language facilitation strategies and their children's improvement in language abilities. Active participation of parents can be provided by preparing transition plans while taking into consideration the parents individual needs about the transition process (Spiegel-Mc.Gill et al., 1990). Equipping parents with the necessary knowledge and skills determined by their special needs enables the families to experience less stress during the transition period (Hanline & Halverson, 1989; Fowler et al, 1991).

During pre-school to inclusive school transition, parents can be prepared by providing information about the period and available support services. For many parents, the period of transition to a new school starts with the evaluation of the skills of their children. For this reason parents should first be given information about the evaluation process and the interpretation of the results. Parents may experience less anxiety when they are given information about the activities to prepare children for their kindergarten (Bagley, 1995). Other school or program choices available for the children, their legal rights in the transition period (Rous, Hemmeter & Schuster, 1994), developmental characteristics of pre-schoolers (Waxler, Thomson, & Poblete, 1990), their children's needs, roles of educators and parents in this process (Pianta & Kreft-Sayre, 1999), kindergarten curriculum and time table, kindergarten rules and expectations (Meier & Schafran, 1999) are among the other topics of information to be provided to the families.

Parents of children with cochlear implants are keen for their children to succeed in school, but some of them find it difficult themselves to access the school. This difficulty may arise because of their work hours which prevent them from getting to the school during the day, or they live some distance from the school and do not have transport or time to travel to school on a regular basis, or were not able to help children with homework and many other reasons. It cannot be assumed that these people have no interest in the school or in supporting their children as they start school (Perry & Dockett, 2001). Research has shown that student and family characteristics affect levels of parental involvement. Working-class families and families in which mothers work full-time tend to be less involved in their children's education. The family is one of the most influential forces in human life. How we educate, nurture, guide and support parents of children with hearing impairment will significantly have an impact upon the development of that child (Epstein, 1995).

There are not enough sources and studies conducted, especially in Indian context which can help the parents prepare their children with cochlear implants to start schooling and learn about some of the issues that they need to consider in the first years of the school. Thus, the importance of getting the necessary information that assists the parents in an easy transition of their child with cochlear implants to the inclusive school is ignored. Therefore, studies focusing on parental needs during transition to schooling are the need of present research which will help us to get an insight about the expectations, doubts and aspirations of parents and guide them for smooth transition to an inclusive school. The aim of the study was to determine the requirements of the parents having children with cochlear implants in transition to Inclusive school. The study also aimed to determine whether such factors as mothers' age, educational status and socioeconomic status of the family had a significant impact on those needs during the transition of their child from pre-school to inclusive school.

Method

Participants

In this cross-sectional study, mothers of thirty five children with hearing impairment using cochlear implants were involved and selected using simple random sample selection method from auditory verbal therapy centres located in twin cities of Secunderabad and Hyderabad, Andhra Pradesh, India. The age of the mothers ranged between 19 years to 35 years with a mean age of 24.5yrs. Their education level was from 10^{th} standard to graduation and above, all the mothers were housewives and their families' socio economic status was Rs.6500/- and above per month as shown in table 1. The age range of the children with hearing impairment varied from 4-6 years and they had just completed their pre-school / auditory verbal therapy program and were about to join regular school. All the children have profound sensory neural hearing loss as certified by a qualified Audiologist. All the thirty five children had an auditory experience for about 2-3 years.

Table 1: Demographic Data of Mothers

Variables	Group	Category	Number
Age of the mother	CI (35)	25 yrs & younger	12
		26 - 30yrs	10
		31 - 35yrs	13
Education status of mother	CI	< graduation	12
		> graduation	23
Occupation of mothers	CI	Housewives	35
Socio economic status	CI	<6500	18
		>6500	17

Selection Procedure

Mothers were selected using simple random sample selection method. The data was collected from auditory verbal therapy centres in the Twin Cities of Hyderabad and Secunderabad, Andhra Pradesh. A demographic data form was used to obtain details about the age of the mothers, educational status of mothers, occupational status of mothers, age of children, gender of children, age at which children were identified with hearing loss, age at which children were implanted with cochlear implants, age at which children started education.

Tool

A questionnaire titled *Scale of Parental needs in transition to School* developed by Kargin, Baydik and Akcamete (2004) was adapted in Telugu for the study. The questionnaire was modified to match the geographical and cultural variations. The scale consists of twenty four statements and three response alternatives to each statements; YES, NOT SURE and NO. (Appendix 1)

Reliability & Validity

The modified questionnaire was shared with 15 experienced Special Educators and Audiologists for review and validation. Inter judge reliability was checked and the reliability co-efficient was found to be 0.93. The total item correlation for 24 items in the scale was greater than 0.45. In addition, an alpha-coefficient was calculated to determine inner consistency of the scale, and alpha value for the scale was determined to be 0.95. The factor analysis was performed to determine structural validity of the scale and the factor loadings of items were 0.46 to 0.83. Results of reliability and validity suggest that the psychometric properties of the scale are sufficient to support its use to determine parental needs in transition to school. Hence, it was decided the scale would consist of 24 items as was in the original scale and used for testing.

Procedure

The questionnaire was administered to thirty five mothers of children with hearing impaired using cochlear implants. A single interviewer explained the questionnaire, obtained consent and administered the questionnaire. The time taken for administration was 45 minutes. Parental responses to the questionnaire were obtained as Yes, Not sure and No which were converted to scores of 2, 1 and 0. Parental responses to the statements of the *Scale of Parental Needs in Transition to School* were analyzed by using arithmetical means and percentages. Furthermore, student's t-test was used to determine if parental needs were affected by educational status of the mothers, socio economic status of the family and age of the mothers. Analysis of variance (ANOVA) was used to determine if parental needs varied according to the age of the mothers of children using cochlear implants.

Results

Arithmetical means and percentile values of the collected data were analyzed to determine the parental needs in transition to kindergarten. Table 2 and Figure 1 shows the mean and percentile values of the needs expressed by parents. As shown in the table the mothers expressed needs for all items on the scale. The highest percentage and item mean score was 91.42% (mean 1.08) for item of *I need information about my legal rights regarding my child's acceptance to school and lowest score* was 42.85% (mean 1.97) for the item *I need information about the schools that my child can attend*. Scores between 80 - 89% were obtained for items 6, 15, 18 and for items 1, 4, 5, 7, 11, 12, 16, 21, 23 and 24 scores were between 70-79%, for other statements scores were between 69 – 50% indicating that overall 75% of parents expressed need for information for their children's transition to school.

The findings of this study are in accordance with the results of Kargin et al., (2004) and Hanline (1988) who concluded that parents need information about relevant services and legal arrangements. It can be noticed from the above table that parents of children using cochlear implants needed information in all the areas on parental scale which may be attributed to the fact that the parents are more inquisitive about their child's progress in school and are open to learn.

Parents needs in transition with respect to various variables

Furthermore, statistical analysis was done to determine if the level of parental needs varied according to educational status, age and socio economic status of the mothers of children using cochlear implants. To find the effect of education status of the mothers, the subjects were divided into two groups those who have studied graduation and above (Group A) and those who have not completed graduation (Group B) an independent t-test was used to compare their scores and find statistical significance. From the table 3 and figure 2, it can be seen that the mean value for mothers with education status above graduation is 84.2 and the mean value for mothers with education status below graduation is 71.7 and t-value is 0.22($P<0.01$), it can be concluded that there is no significant difference in the need levels in terms of education level of mothers of children using cochlear implants suggesting that the need level is almost same for both higher educational status group and low educational status group which indicates that all the parents irrespective of their educational status are in a need to gather more information regarding their children's schooling.

Table 2: Mean Scores and percentile values of needs of mothers on the Scale of Parental Needs in Transition (N= 94)

Item No.	Item	M	% Score
14	I need information about my legal rights regarding my child's acceptance to regular school	1.08	91.42
18	I need know what I should do to introduce my child to the other children in the class.	1.17	89.32
15	I need information about places that I could apply in case that my child would not be accepted by regular school.	1.14	85.67
6	I need information on the rules that my child and I should observe when joining in school.	1.22	82.35
7	I need to know what the school teachers and administrators would expect from me and my child.	1.37	79.13
5	I need information about the similarities and differences between regular school and preschool.	1.37	77.67
23	I need to know how I can solve my child's problems in cooperation with the school teachers.	1.34	77.64
21	I need to know how I can give information about my child to other parents.	1.4	75.63
11	I need information about what I should be watching for during my observation to choose an appropriate school for my child.	1.37	75.38
12	I need to know how I can help my child to get him/her ready for regular school.	1.42	74.45
1	I need information regarding how well the primary school will meet the needs of my child.	1.42	74.24
16	I need to know how I can inform the school teacher about the disability and characteristics of my child.	1.45	73.53
24	I need information about the persons and places in or out of school from which I can get information when my child experiences a problem.	1.45	73.31
4	I want to know if my child's developmental level and skill are appropriate for joining in regular school.	1.37	71.23
2	I need information on the developmental characteristics of other children at age of primary school.	1.57	69.14
22	I need to know how I can meet with parents with similar circumstances to share our experiences.	1.4	69.12
10	I need to know how I can establish contact with schools available for my child and visit them to observe.	1.4	68.54
17	I need to know how I can communicate my expectations from him/her to the school teacher	1.42	68.27
20	I need to know if my child would need special education while she is attending a regular school.	1.88	67.54
19	I need to know what I should do to provide a cooperation between the special education teacher and regular school teacher.	1.57	66.32
13	I need to know what information I should provide to school administration during my child's enrollment.	1.68	65.43
8	I need information about where my child could be evaluate to determine if he / she will attend school	1.62	64.76
3	I need to know what my child will be taught in school.	1.4	62.56
9	I need information about schools that my child can attend	1.97	42.85

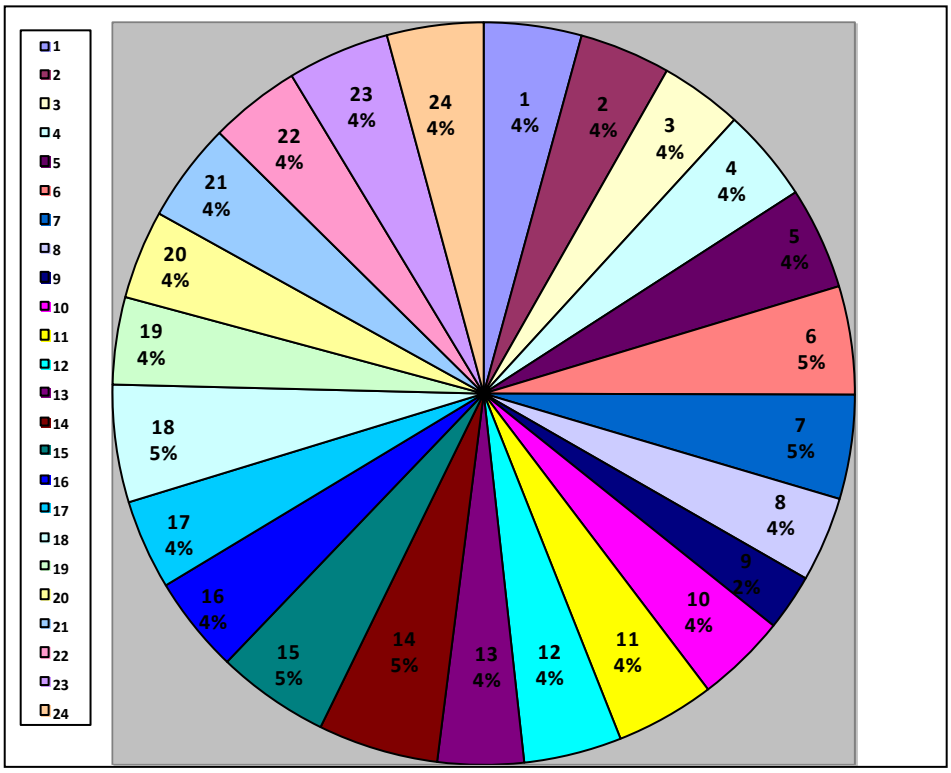
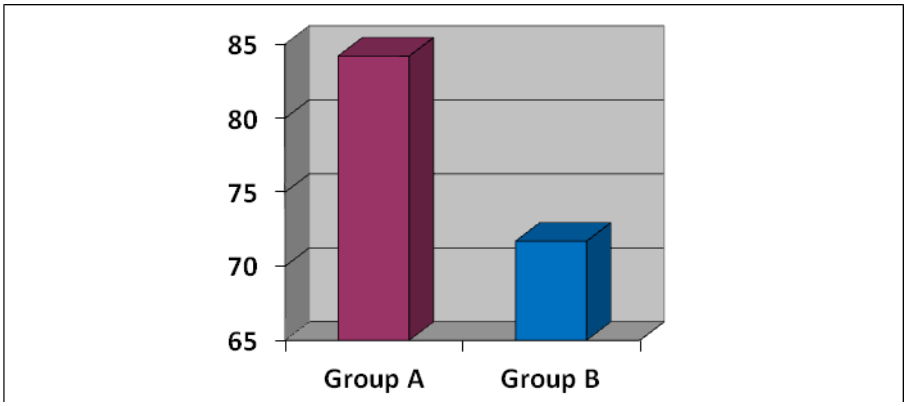


Figure 1: Percentage of Responses for each statement by mothers on the Scale of Parental Needs in Transition to school (N= 94)

Table 3:
Mean, SD and t-values of the needs expressed by parents as per educational status of mothers.

Group	Mean	SD	T values
Group A (above graduation)	84.2	5.30	0.22**
Group B(below graduation)	71.7	1.70	

Note: *P < 0.05 ** P < 0.01



Group A = Mothers whose educational status is above Graduation, Group B= Mothers whose educational status is below Graduation

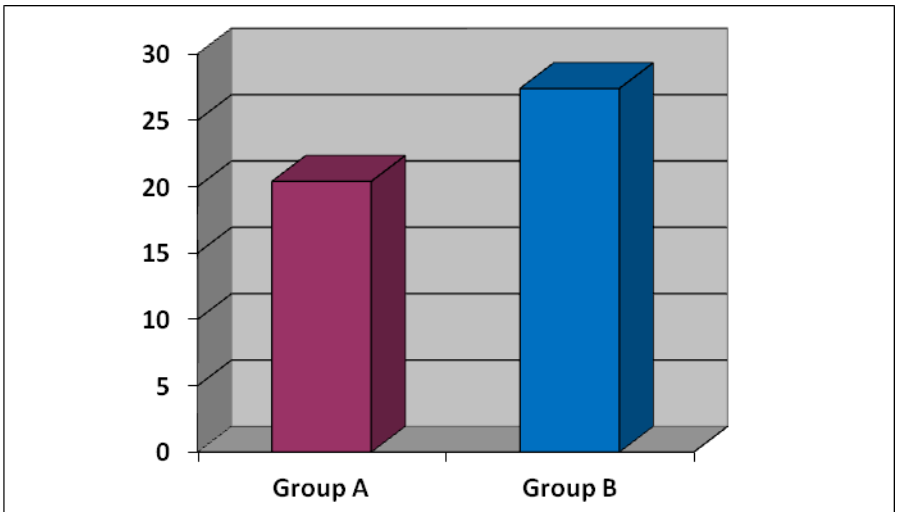
Figure 2: Mean values of the transitional needs expressed by mothers of Group A & B as per educational status.

To evaluate the effect of socio economic status of the parents, t test was administered. The subjects were divided into two groups based on monthly income from all sources, Group A (low socio economic group -whose monthly income is less than Rs 6500/-) and Group B (high socio economic group- whose monthly income is greater than Rs 6500/-). The mean values of group A (whose monthly income is less than Rs 6500/-) was 74.0 and group B (whose monthly income is greater than Rs 6500/-) was 87.0 respectively. From the table 4 and figure 3, it can be seen that there was no statistically significant difference between low socio economic group and high socio economic group with t-value being 0.065($p<0.01$) suggesting that the need level is same for high socio economic group and low socio economic group. This shows that all the parents irrespective of their socio-economic status are enthusiastic to get more information about their children's education.

Table 4: Mean, SD and t-value of the needs expressed by parents as per the socio-economic status of mothers.

Group	Mean	SD	T values
Group A less than Rs 6500/-	74.0	1.3	0.065**
Group B greater than Rs 6500/-	87.0	2.8	

Note: *P < 0.05 ** P < 0.01



Group A = Mothers with low socioeconomic status, Group B= Mothers with high socioeconomic status

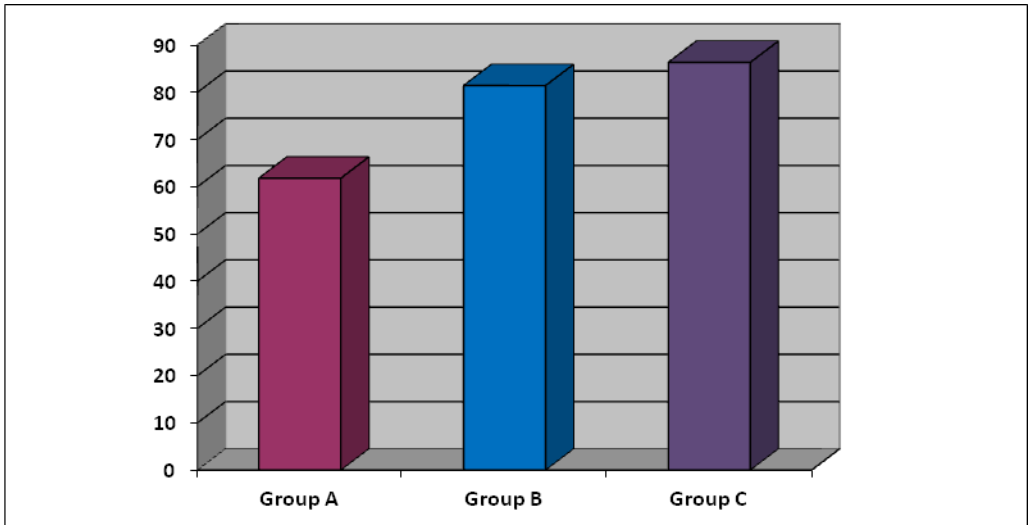
Figure 3: Mean values of the transitional needs expressed by mothers of Group A & B as per the socio-economic status.

To study the effect of age of mothers on the need for information on transition, the mothers were divided into three groups; group A (25 years and younger), group B (26 -30 yrs) and group C (31-35 years). The mean, standard deviation was computed and one way ANOVA was administered to find the statistical significance between groups. Mean value of group A was 61.80, group B was 81.42 and group C was 86.33 with an F value of 12.76, thus showing a statistically significant difference in terms of needs of mothers for transition between the three age ranges as shown in table 5 and figure 4 and it can also be noted that mothers within the age range of 31-35 years are more interested in getting information on the needs for transition to inclusive school than the mothers of age ranges of 25 years and younger and 26-30 years. Hence, results indicate that as the mother's age increases need to know the information regarding transition also increases.

Table 5: Mean, SD and F value of the needs expressed by mothers as per their age.

	Mean	Standard Deviation	F value	Significant value
Group A(25yrs & <)	61.80	11.57		
Group B(26-30yrs)	81.42	6.29	12.76	0.05
Group C(31-35 yrs)	86.33	6.02		

Note: *P < 0.05 ** P < 0.01



Group A = Mothers in age range of 25 yrs & younger, Group B= Mothers in the age range of 26 -30yrs, Group C= Mothers in the age range of 31 -35yrs

Figure 4: Mean value of the transitional needs expressed by mothers of Group A, B & C as per their age.

Discussion

The results of the current study indicate the importance of necessary information that the parents need to have during the transition to school from pre-school of their child with hearing impairment using cochlear implants. The findings of the study are similar to the findings of Fowler et al., (1991), Rous et al., (1994) and Kargin et al., (2004), who concluded that parents need information about relevant services and legal arrangements. Results of this study indicated that most of the mothers of children with hearing impairment using cochlear implants needed information in all areas of transition to school which could be explained by the fact that the focus of education programs on children with hearing impairment in India is low on parental needs and hence, emphasis should be placed on adopting an approach to provide parental information on needs for successful transition process in India.

The results also indicate that socio economic status of the parents (mothers) and the education levels of the mothers do not have a significant effect however; age of the mothers has a significant effect on parental need for information during transition to school. It is noticed that need level is high in families from high socio economic group and higher educational status group who are more open to acquiring information and have wider scope for exploration. This is in accordance with the results of Teale and Elizabeth (1986) which stated that high education levels and the high economic backgrounds of parents largely contributes to the home environment that they provide to their children. Therefore, it can be concluded that parents are one of the most influential yet significantly underrated factors in their children's education, and society should encourage more parental participation in education.

Conclusion

Parents play an integral part in the lives of their children with disability and success in transition is less likely without their participation. Parents have a significant role to play in assuring that the rights mandated by law are provided to their children at school and the severity of the child's disability will influence the degree of advocacy the parent needs to assume. Parents must be provided with the

necessary support, training and skills required that will empower them to serve as advocates for their children.

The results of the study indicated that most of the parents of children with cochlear implants in India needed information related to transition from preschool to school. The professionals working with children with CI typically focus their attention on the rehabilitation of the children rather than their parents and family as a whole. It is important however, for them also to consider the children's parents especially mothers as a significant element of the CI rehabilitation process which will ultimately help the mothers to provide for and support their children's needs. The professionals should also focus on helping parents to identify, locate the supports that facilitate them to succeed in maintaining their child's health, education, identification of barriers and assistance with managing them, offer appropriate personal counseling to them on an intermittent or ongoing basis as identified by themselves, assists them in establishing connections with others in similar situations such as peer support groups.

It is important that professionals who work with these families need to be educated to understand the struggles that these mothers face. In particular, they need to understand how to recognize emotional needs with regard to recurring grief. Professionals also need to determine effective ways to support communication and to develop skills so that they may support the process of personal transformation within the mothers'. Finally; it is incumbent upon the professionals who work with these families to advocate for policy changes relevant to meeting the needs of mothers. Moreover information in transition should be given to parents as a legal right in Andhra Pradesh, India.

Research needs to be conducted that investigates the effectiveness of parents serving as their child's advocate. At present, there is a lack of research that links specific transitional program interventions with any particular outcomes. There are designs that look at co relational relationships but few confirmatory studies. The challenge remains to develop programs that encourage the participation of parents of children with disability, provide them support and treat them as equal members in the transitional intervention plans of their children. The transition to school is likely to be improved, therefore, by the appropriate quantity and content of information flow to parents and their children. Increased participation of the parents can only enhance the success of children with disability in obtaining the services they need and making the transition successful.

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Appendix 1

The Scale of Parental Needs in Transition to School

Name: **Age:**

Name of the Child: **Age of Child:**

	Item	**Yes**	**Not sure**	**No**
1	I need information regarding how well the school will meet the needs of my child.			
2	I need information on the developmental characteristics of other children at age of School.			
3	I need to know what my child will be taught			
1.	I want to know if my child's developmental level and skill are appropriate for School.			
5	I need information about the similarities and differences between School and preschool.			
6	I need information on the rules that my child and I should observe.			
7	I need to know what the School teacher and administrators would expect from me and my child.			

8	I need information about where my child could be evaluated to determine if s/he will attend School.			
9	I need information about Schools that my child can attend.			
10	I need to know how I can establish contact with Schools available for my child and visit them to observe.			
1	I need information about what I should be watching for during my observation to choose the School for my child.			
12	I need to know how I can help my child to get him/her ready for School.			
13	I need to know what information I should provide to School administration during my child's enrollment.			
14	I need information about my legal rights regarding my child's acceptance to School			
15	I need information about places that I could apply in case that my child would not be accepted by School.			
16	I need to know how I can inform the School teacher about the disability and characteristics of my child.			
17	I need to know how I can communicate my expectations from him/her to the School teacher			
18	I need know what I should do to introduce my child to the other children in the class.			
19	I need to know what I should do to provide cooperation between the special education teacher and School teacher.			
20	I need to know if my child would need special education while she is attending a School.			
21	I need to know how I can give information about my child to other parents.			
22	I need to know how I can meet with parents with similar circumstances to share our experiences.			
23	I need to know how I can solve my child's problems in cooperation with the School teachers.			
24	I need information about the persons and places in or out of school from which I can get information when my child experiences a problem			

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PREPARING SPECIAL EDUCATORS FOR COLLABORATION IN THE CLASSROOM: PRE-SERVICE TEACHERS' BELIEFS AND PERSPECTIVES

Bethany Hamilton-Jones
University of Rhode Island

Cynthia O. Vail
University of Georgia

Inclusion of students with disabilities in general education classrooms and programs continues to be a focus in the international field of special education. In the USA where the history of inclusion is over three decades old, current special educator's professional standards clearly expect that certified special educators will enter the field with adept collaboration and co-teaching skills in order to optimize services for students with disabilities in inclusive settings. Coursework in collaboration for pre-service special educators is a common mechanism for providing this training within the United States (McKenzie, 2009). This qualitative case study (n=12) conducted over a semester of coursework on collaboration in a distance education format utilized grounded theory, through document analysis and interviewing (n=5), to build a better understanding of pre-service special educators' perceptions and beliefs about collaborating with general educator partners in school settings. Five themes emerged from over 300 participant quotations: 1) definitions of collaboration, 2) outcomes of collaboration, 3) collaborative behaviors between teachers, 4) challenges to collaboration, and 5) preparedness to collaborate. These pre-service special educators most often commented on the challenges they experienced in school settings. Implications for teacher education programs worldwide and future research are discussed.

A global movement towards inclusion of students with disabilities in typical classrooms and schools has intensified focus on skills teachers need to meet the unique demands of this challenging equal educational opportunity. Diverse countries such as Canada (Jordan, Schwartz, & McGhie-Richmond, 2009; Philpott, Furey, & Penney, 2010), Trinidad (Johnstone, 2010), and Turkey (Gurgur & Uzuner, 2011) are identifying the strengths and weaknesses of their respective teaching forces and the necessary supports, including teacher training, for effective collaboration between special educators and general educators. Collaboration, the interaction style between school professionals, is defined as two or more equally certified or licensed professionals implementing shared teaching, decision-making, goal setting, and accountability for a diverse student body (Friend & Cook, 2009). Collaboration, though often represented as synonymous with co-teaching, rather includes co-teaching as one subset of skills needed to effectively and jointly educate students with disabilities in twenty-first century schools. Collaboration between special and general educators has been a key topic in education in the United States since the early 1970's when seminal legislation for students with disabilities mandated considering *least restrictive environment* in which students with disabilities would receive their education in an environment as close to their non-disabled peers as possible while still experiencing academic success, and not in separate classrooms or schools as was traditionally considered the appropriate setting for all students with

disabilities. Since that time, discourse on collaboration between general and special educators including the workings of this professional partnership, the impact on professional roles and responsibilities, and the affect on student achievement has permeated special education literature (e.g., Cook & Friend, 1995; Keefe & Moore, 2004; Mastropieri, Scruggs, Graetz, Norland, Gardizi, & McDuffie, 2005; Murawski & Swanson, 2001; Nevin, Cramer, Voigt, & Salazar, 2008; Rea & Connell, 2005; Rea, McLaughlin, & Walther-Thomas, 2002; Scruggs, Mastropieri, & McDuffie, 2007).

Recent national policy in the USA, specifically, the re-authorization of The Individuals with Disabilities Education Improvement Act (IDEA, 2004) regulations (which serve as the blueprint for the delivery of special education services in USA public and private schools) continued to delineate what should be considered when determining each students' appropriate *least restrictive environment*. Currently, considering *least restrictive environment* for students with disabilities in the United States requires considering students' full participation in the general education curriculum delivered in the general education classroom and then considering more segregated settings only after it is determined that the student is not successful in the general education curriculum and classroom without more restrictive supports or specialized instruction (Office of Special Education Programs, 2006, sec. 614). In addition, high stakes testing and increased teacher accountability, requirements embedded in the No Child Left Behind Act (NCLB; U.S. Department of Education, [USDOE], 2002), resulted in more students with disabilities receiving their instruction in the general education class (Turner, 2003). According to the 29th annual report to congress on IDEA implementation during the 2007 school year, 54% of students with disabilities (ages 6-21) received instruction in general education settings for 80% of the day (United States Department of Education, 2010). Thus, twenty-first century classrooms have become epicenters for collaboration between special educators, general educators, related service professionals, and other school support personnel.

In addition to public policy, professional teaching standards have emphasized effective collaboration as a vital skill and knowledge domain in teaching. *What Every Special Educator Must Know: Ethics, Standards, and Guidelines for Special Educators* (2009), the Council for Exceptional Children's guidelines for preparing professional special educators worldwide included collaboration as a stand alone domain area in which special educators should show competence prior to entering the teaching field. These standards provide guidance in *developing and revising policy and procedures for program accreditation, entry-level certification, professional practice, and continuing professional growth* (p.11). According to the Council for Exceptional Children, collaboration as a professional practice includes multiple partners such as parents, teachers, related service providers, and outside community agencies. By working in tandem with these partners in a culturally responsive manner, *special educators are viewed as specialists by a myriad of people who actively seek their collaboration to effectively include and teach individuals with exceptional learning needs* (p.48). Furthermore, indicators of a special educator with strong collaboration skills include: a) modeling strategies for consultation and collaboration, b) building respectful and positive relationships with professionals, c) coordinating the inclusion of students with disabilities into a variety of school settings, and d) using co-teaching methods to increase student achievement in the classroom. Additionally, the National Board for Professional Teaching Standards *What Teachers Should Know and Be Able to Do* (2007) specifically addresses the necessity of collaboration between special educators and general educators due to increased inclusion in schools. Finally, the National Council for Accreditation of Teacher Education (NCATE, 2007), the professional accrediting body for teacher preparation programs throughout the USA, includes standards on teacher preparation programs evidence of providing the pedagogical and professional knowledge and skills required by teacher candidates in all professional settings: *They have a thorough understanding of the school, family, and community contexts in which they work, and they collaborate with the professional community to create meaningful learning experiences for all students* (NCATE, Standard 1c).

However, teacher preparation programs which are beholden to the aforementioned standards are often faulted for insufficient training in collaboration skills for special educators (Austin, 2001; Billingsley, 2004; Cook & Friend, 1995; Deiker, 2001; Friend, 2000; Greene & Isaacs, 1999; Keefe & Moore, 2004; Keefe, Moore, & Duff, 2004; Laframboise, Epanchin, Colucci, & Hocutt, 2004; Lovingfoss, Eddy, Molloy, Harris, & Graham, 2001; McKenzie, 2009; Otis-Wilborn, Winn, Griffin & Kilgore, 2005; Turner, 2003). Researchers have proposed that teacher education programs fail to equip special educators with the unique skills necessary for co-teaching (e.g. Alvarez & Daniel, 2008; Austin, 2001; Keefe & Moore, 2004). Colleges have been accused of a *do as we say, not as we do* attitude toward teaching instructional and behavioral techniques for the inclusive classroom (Greene & Isaacs; Kluth & Straut, 2003). In addition, programs often perpetuate the phenomena of segregated disciplinary roles and isolated practice (Bullock, Park, & Snow, 2002; Cook & Friend, 1995; Greene & Isaacs; Quinlan, 1998; McKenzie, 2009). According to Otis-Wilborn et al., 2005, teacher education failed to deliver *strategies for clarifying roles and building collaborations in formal and informal ways with general education teachers* (p.149). These programs produce teachers bound for professional placements feeling unprepared and inexperienced (Keefe & Moore, 2004; Thompson, 2001). Conversely, possessing developed collaboration skills may support the induction and retention of special educators in the field (Billingsley, 2004). Special educators who feel prepared for the complexities of collaboration in their daily career may avoid being overwhelmed by these demands.

Suggestions for teacher education program reforms include the common thread of building better collaboration skills not just for special educators, but for general educators as well. Repeatedly, researchers called for higher education to initiate changes resulting in successful collaboration skills (e.g., French & Chopra, 2006; Griffin & Pugach, 2007; Thousand, Villa, & Nevin, 2006; Villa, Thousand, & Chapple, 1996). Specifically, the proposed solutions for this dilemma included: (a) integrated programs with other disciplines such as elementary education, school psychology, or a specific content area (Griffin & Pugach, 2007; Miller & Stayton, 2006; Otis-Wilborn et al..,,2005; Turner, 2003); (b) classes designed to teach collaboration skills (Arthaud et al., 2007; Austin, 2001; Lovingfoss et al., 2001; McKenzie, 2009); (c) co-teaching during practica or student teaching (Alvarez & Daniel, 2008; Van Laarhoven et al., 2007; Wilson Kamens, 2007); and (d) modeling co-teaching in the higher education classroom (Bakken et al., 1998; Cook & Friend, 1995; Duchardt, Marlow, Inman, Christensen, & Reeves, 1999; Greene & Isaacs, 1999; Kluth & Straut, 2003; Miller & Stayton, 2006; Waters & Burcoff, 2007).

Although coursework in collaboration is recommended, there is scant research on how pre-service special educators view their collaboration skills while completing coursework and prior to entering the teaching field (Bradley & Monda-Amaya, 2005; Gallagher, Vail, & Monda-Amaya, 2008). Without building this knowledge, it continues to be difficult to assess how coursework, as a mechanism for preparing special educators in collaborative skills and knowledge, influences pre-service teachers' beliefs and practices. A better understanding of preservice teachers' experiences with collaboration may provide valuable information on relevant content, activities, and assignments that focus on collaboration between school professionals.

Method

The purpose of this study was to gain further understanding of pre-service teachers' beliefs and perceptions about collaboration between special educators and general educators while completing coursework on collaboration and in their future professional practice. Due to the descriptive nature of the research questions asked, a qualitative case study design was used. The research questions were:

1. What are pre-service special educators' beliefs and perceptions about collaboration as a professional practice?

2. What challenges do pre-service special educators report as obstructing collaboration in their school environments?

3. After completing coursework in collaboration, how prepared to collaborate do these educators feel?

Context of the Study

Pre-service special educators were beginning their second and final year of a distance education undergraduate degree program in special education at a large southeastern university in the United States. The course on collaboration was designed to cover the wide array of collaboration that occurs in schools. Requirements for the distance education course matched the face-to-face version. Participants were concurrently spending approximately 20 or more hours a week as part of their practicum requirement. The 13 objectives in the course syllabus are aligned with professional preparation standards outlined in *What Every Special Educator should Know and Do* (Council for Exceptional Children, 2009). Course objectives cover: (a) the history and theory behind collaboration, (b) communication skills for working with families and professionals, (c) relationship building with families, (d) ethical practices, (e) team roles and responsibilities in planning an individualized education plan, and (f) collaborative teaching techniques including instructional delivery, planning, and assessment. Assignments for the course included attending a school team meeting, periodic reflective journal entries, and interviewing a parent of a child with a disability.

Participants

Purposeful sampling was used. Twelve participants volunteered: 11 females and one male. All participants agreed to submit their assignments for analysis, and five agreed to conduct a post-course interview. The gender breakdown reflects the overall breakdown of men (12%) to women (88%) in this distance education undergraduate special education program. Participants' ages ranged from 24 to 55 years. All of the participants could be considered nontraditional undergraduates (National Center for Educational Statistics, 2003). The majority of participants currently worked as paraprofessionals; the target population of this federally funded grant program for teacher certification through distance education in special education. The remaining participants completed their field placement through a practicum arrangement. Three participants worked in elementary settings, four worked in middle schools, and five worked in high schools. Fifty-eight percent worked in urban school districts while 42% worked in rural districts.

Participants reported working in a variety of special education program models. Four participants taught in a co-taught/collaborative classroom, four taught in a resource setting, three worked in an inclusion class, and one participant taught in a self-contained class. Therefore this sample offered a diverse range of educational experiences (e.g. elementary, middle, and high school) in a variety of program settings (e.g. co-taught, resource, self-contained) within diverse school districts.

Data Collection

Multiple data collection methods were used during the semester. Documents collected for the study included: reflective journals (5 per participants), a team meeting observation assignment, and a parent interview assignment. The semi-structured post-course interview protocol consisted of questions about participants' perceptions of collaboration, their beliefs of their self-efficacy in collaboration; and attitudes about experiences with collaboration now and in the future. Interview transcripts from five interviews lasting 21-46 minutes were analyzed. Prior to data-analysis, transcripts were given to participants for member checking (Brantlinger et al., 2005; Marshall and Rossman, 2006).

Data Analysis

Data were analyzed using a seven-phased inductive approach (Marshall & Rossman, 2006). For each piece of data, initial coding consisted of creating *in vivo* codes, or codes containing verbatim utterances from participants. These were then reviewed and compared across multiple pieces of data and multiple sources resulting in the identification of themes on collaboration for these pre-service teachers. Coding

was checked for substantive significance (Patton, 2002) and triangulation across participants and documents before final themes were determined.

Findings

Data analysis of 84 assignments and interviews revealed five themes related to collaboration among teachers: (a) defining collaboration, (b) outcomes of collaboration, (c) collaborative behaviors among teachers, (d) challenges to collaboration, and (e) preparedness to collaborate. Contained within themes were data categories as shown in Table 1 that more precisely describe commonalities from the data. The most salient categories will be discussed.

Table 1. Themes and Categories about Collaboration

Code Theme	Categories Included	Frequency
Definitions of collaboration	Working together	21
	Blending differences	11
	Collaboration is common	9
Outcomes of collaboration	Positive outcomes	21
	Student success	19
	Extra attention	6
Collaborative behavior between teachers	Shared professional responsibility	29
	Co-teaching models	20
	Teacher behaviors	13
	Shared planning	10
	Shared resources	9
Challenges to collaboration	Power	44
	One teach one assist	25
	School-wide recognition of collaboration	17
	Time/schedule	12
	Failure to share responsibility	9
Preparedness	Belief in performance	30
	Critical look at collaboration	29
	Coursework	14

Defining Collaboration

How someone defines collaboration suggests their beliefs about collaboration as a professional skill and their expectations of how collaboration should work. Participants primarily defined collaboration in one of two ways a) as people coming together to resolve differences or b) as people working together towards a common goal. The participants who described collaboration as *blending differences* expected that collaboration would include different ideas and opinions. For example, Angela wrote, *Often times, you will have to bring your different opinions together in order to make a decision about something. Sharing these ideas and coming up with something that works for everyone is a great example of collaboration at work.* Lillian commented, *Each teacher who sees a particular student may see different facets of his/her personality, different strengths and weaknesses and different ways to reach him or her.*

Secondly, some gave *working together* as the definition of collaboration. Anne stated, *To me, collaboration is when two or more people work together towards a common goal, by sharing ideas with each other that could be used to assist them in reaching their particular goal.* Rhonda provided a school example to illustrate her definition of collaboration: *I work with several teachers at school to help our students understand concepts being taught and helping student reach their goals. We work as a team to accomplish this.* In contrast with the category blending differences, these participants' definitions described collaboration as people who are in agreement or are on the proverbially *same page* with each other about a decision. These definitions did not suggest differences of opinions sorted out by collaboration.

Outcomes of Collaboration
When individuals combine their knowledge and expertise, a positive and pleasant learning environment will be created for all to learn and be successful in the school setting. (Tanya)

Participants believed that *student success* was achieved through collaboration. Anne wrote, *The better the collaboration is among its members, the more successful the school district. Furthermore, the students will be more successful.* Tanya declared, *Collaboration should be a process of giving and taking for a child to learn and succeed academically.*

Besides student success, participants believed that collaboration meant *greater academic assistance* for students in the classroom. Two teachers could deliver more individualized support to an individual student in their classroom. Roger commented, *More students are reached and given the free appropriate education they deserve. Students that are not reading at grade level or students having a difficult time with the school life are helped.* Isabelle wrote, *In a collaboration classroom the students have not one teacher but two teachers to ask for assistance.*

Collaborative Behavior between Teachers
Participants described teachers' behaviors in school settings that to them exemplified positive effective collaboration. Participants voiced that teachers and other school professionals who were collaborating did so by *sharing professional responsibility*. This category included descriptions of teachers making commitments: to jointly educate students, to jointly prepare and present information on students in meetings, and to jointly uphold each teacher's unique responsibilities for a student. Participant quotes suggested that with shared professional responsibility students with disabilities belong to both teachers. For example, Angela, when discussing her own performance in the classroom stated, *I work in three different inclusion classes during the day, and in all three classes there is rarely a time when I can sit down. Both teachers are constantly helping students.* Tanya's journal entry included a classroom exemplar of sharing professional responsibility:

One teacher was going over the vocabulary words that were on the board. The other teacher made sure the students were writing the terms and knew how to pronounce and define each term. The special education teacher could break the terms down so that the special needs students could understand the work. The teachers also distributed graphic organizers to the students that had problems with writing. Both teachers cared about all of the students.

Participants also noted that shared professional responsibility was at work when teachers met informally to problem solve about a student or when they met in a more formal context such as an IEP meeting. Shared professional responsibility for students was considered a positive representation of collaborative behavior between teachers.

The majority of the participants reported that *co-teaching models* were in use as the primary instructional delivery model in their settings. Comments described observing and utilizing four co-teaching models with general educators in classrooms settings. The most common co-teaching model reported, one teach-one assist, was associated with challenges in the collaborative partnership between teachers and therefore will be discussed under that theme. Participants reported seeing: a) parallel teaching, where the group of students are split and taught the same content; b) one teach and one remediate, where one teacher provides main instruction and one provides individualized help; and c) team teaching, where both teachers are actively teaching and supporting throughout the lesson. Participant comments on these models focused on classroom examples. Roger wrote, *The special education and regular education teacher are actively involved in the co-teaching model. They decide what strategies to use and who will teach each part of a lesson. Some days involve flip flopping each period on who's teaching.* Tanya reported seeing, *One such good partnership was in a biology classroom; a regular education and special*

education teacher were working together. The two teachers taught like wrestlers. They worked like a tag team.

An additional positive tenet of collaboration was identified as teachers who *shared planning time and resources* in order to educate students. Participants wrote of teachers swapping instructional activities, and mapping curriculum as a collaborative effort. One participant noted that she provided her general education partner materials for a student behavior plan. Angela commented on the outcome of shared planning and resources: *Since the general education and special education teachers plan together on a weekly basis, it eliminates the possibility of the special education teacher feeling like an outsider or intruder in the general ed [sic] teacher's classroom*.

Challenges to Collaboration between Teachers

This theme contained the highest number of quotes from participants. Increased reference to challenges may have been influenced by course assignment guidelines in which participants were ask to think critically about collaboration in their schools. The participants witnessed some challenging situations while other situations directly involved the participant as a collaborator. The most salient categories under this theme were: power, one teach-one assist, and school-wide recognition of collaboration.

With increased collaboration in schools and higher percentages of teachers co-teaching, teachers now experience different *power* dynamics in the classroom. This category of codes describes participants' reactions to unequal power between teachers. Frequently, participants described co-teaching arrangements where power was a problem. Gail reported on a co-teaching pair she witnessed:

From what I have observed, the general education teacher is the primary teacher, and the co-teacher tries to step in and help explain to the students different ways to measure angles, and chimes in to help answer questions, etc. The general education teacher is obviously bothered and somewhat *put out* by the co-teacher. As a matter of fact, four or five weeks ago, she pulled him aside and told him that he was being much too loud in her classroom. Furthermore, she mentioned to him that he needed to be quiet during her lecture. He was highly offended by her remarks, and went and sat in the back row of the classroom.

Teachers who were not willing to relinquish power and control were seen as very difficult to collaborate with. Diana reported, *She (the general education teacher) definitely demonstrated it was a big power thing. She didn't like the fact that I wanted to go in there and teach the class*. Lastly, Mary Ann offered her opinion on this challenge: *It (co-teaching) is more about a power play and showing who has more control than the other one. Power and control is not why I want to be a teacher.*

Next, participants' descriptions highlighted challenges of the co-teaching model, *one teach- one assist*. Typically in this model, the general educator provided the majority of instruction while the special educator assisted students. For example, Angela wrote, *Co-teaching means that two teachers work together as two teachers in one classroom, not a teacher and a secretary.* Overall participants expressed dislike for the one teach- one assist model of co-teaching that they witnessed and participated in at their schools. Some reported that this was the most prominent model in their school such as Lillian who said, *What they call co-teaching is basically either using the special education teacher as a paraprofessional or using the special education teacher to run from one class to another.*

Finally, participants reported that when *school recognition of collaboration* was lacking, the ability to collaborate was challenged. This challenge included the administration having a narrow view of collaboration, such as accepting the one teach one assist model of co-teaching as the primary model of instructional delivery in co-taught classrooms. Mary Ann commented on this challenge: *At the school I work at I often here [sic] the term inclusion/collaboration but I do not feel that is being done the way I have been taught… and read about in different textbooks and articles.*

Preparedness to Collaborate

According to Bandura (1997) self-efficacy is a social cognitive theory that posits that a person's belief in their performance influences their actual performance and their ability to attain certain outcomes. These beliefs influence a person's course of action and their perseverance when faced with challenges. It is a relationship between belief of performance and attainment of desired outcome. Those who believe they will be successful are successful; as are they more determined, more resourceful, and less discouraged (Bandura). For collaboration in particular, participants' *belief in their collaborative skills* helps to situate the learning they did in their coursework and their school settings.

In this category quotations from participants described their personal evaluation of their performance during a collaborative event in their school setting. The evaluation was most often positive in nature and connected to an experience where the participant was satisfied with the outcome of the collaboration. Ten out of 12 participants noted their beliefs in their performance at least one time throughout their coursework, and several included their beliefs in their ability to collaborate across multiple assignments. Several participants commented on their performance within a formal meeting. For example, Rhonda wrote, *It was good that I attended this meeting because I played an active role in the decision making process*. In addition, Barbara said, *I was able to be an active participant of this meeting when she (the mother) brought her concern about the lunch line.*

Participants remarked on instances where their experiences led to better collaboration. When describing a co-teaching situation in which the participant and the general education teacher were struggling to work together, Roger noted his course of action: *After a couple of days with no improvement, I decided to use the valuable information I learned in my college textbook and put consultation service to work*. Later in his writing, Roger commented that, *having this experience gave me a great deal of confidence in the collaboration process.*

Not all participants' personal evaluations were positive. After an intensive meeting with parents where the parents and school expectations did not match, Rhonda felt defeated by the collaboration process: *Looking back at the meeting, I felt as though all of us failed the child. We gave into the parents' demands*. Anne described a situation in which while acting as a paraprofessional in the special education teacher's classroom, she was subjected to aggressive arguments from the lead teacher in the room. She chronicled a pattern of behavior in which when frustrated the teacher would yell at her and at students. In thinking back on her behavior, Anne is clearly disappointed in her collaborative performance, *I was wrong for not taking the proper steps to confront the conflict occurring in the classroom. I should have demanded respect for myself and the students; instead I engaged in avoidance.*

Discussion

Findings suggested differences in how these pre-service special educators defined collaboration. The distinction becomes interesting when considering the number of challenges between collaborative members that participants identified. If conflict within collaboration is seen as negating collaborative efforts, then participants are at risk of taking an unrealistic definition of collaboration into the school environment. Friend and Cook (2009) warn, *both conflict and resistance are natural occurrences in collaboration, but depending on your response to them, they can either enhance collaboration or impede it* (p.290).

According to these pre-service educators, collaboration between teachers led to increased student success. In addition, when a general education teacher and a special education teacher worked together, more individualized instruction and increased academic support were provided. Although participants' expressed the belief in collaboration to produce this outcome, they made few references to specific instances in which a collaborative teaching team made instructional modifications or provided additional assistance to students. More importantly, the evaluation of student success was never mentioned in their writings. In other words, these pre-service teachers believe that collaboration produces increased student

success but are not reporting evidence that this outcome occurs, or that it is being measured at their schools. Murawski and Swanson's (2001) meta-analysis of co-teaching yielded little evidence of co-teaching increasing student success. With special education demanding evidence-based practices to be used in classrooms, it remains unknown as to whether collaboration between teachers, often demonstrated through co-teaching, affects student achievement.

Perspectives of collaborative behavior between teachers partially coincided with Friend and Cooks' (2009) defining characteristics of collaboration: a) collaboration is based on mutual goals, b) collaboration depends on shared responsibility, c) collaborative partners share resources, and d) collaboration includes shared accountability for students (pp. 9-11). Participants felt that collaboration occurred when teachers performed behaviors such as sharing resources and professional responsibility in order to teach all students. However, Friend and Cook's first tenet of collaboration, that it is voluntary, was not identified as part of the collaborative paradigm by participants. This may be due to the role these pre-service educators played at their school, either acting as paraprofessionals or as student interns, which may not have allowed them access to how collaborative partnerships emerged. The research has emphasized that voluntary collaboration, particularly with co-teaching, is fundamental to the success of the partnership (Mastropieri et al., 2005; Scruggs et al., 2007).

Most frequently noted in assignments and interviews, were challenges to collaboration. When discussing collaboration between teachers, the unwillingness of two teachers to share space, instructional responsibilities, and students was seen as representing a power struggle among the educators. Some general education teachers were presented as demanding that special educators assume a submissive or *back seat* role in class. Difficulties in negotiating power within the co-teaching relationship are well documented (e.g. Keefe et al., 2004; Mastropieri et al., 2005; Walsh & Jones, 2004). In addition, participants saw that the overuse of the one teach-one assist model of co-teaching perpetuated the power differential between general educators and special educators. Based on their reactions, it may be prudent to remove this model from the co-teaching paradigm, instead focusing on models that by the very nature of the environmental arrangement suggest a more equal power dynamic. For example, in parallel teaching, each teacher takes a heterogeneous groups if students and teaches the same content to their group. This requires active teaching and preparation for both co-teachers.

Finally, participants reported that after completing coursework they felt prepared to collaborate and confident in their ability to do so in the future. They reported positive self-efficacy beliefs around collaboration. Reflecting about collaboration resulted in their being more aware of the collaboration around them, and more apt at critically assessing collaborative work. These findings support that coursework in collaboration prepares pre-service teachers for the collaborative aspects of their profession. Yet, due to these participants providing vague and general answers about the skills they learned throughout the course and applied in their school settings, this interpretation should be cautiously adopted. Rarely mentioned by participants were any of the specific nuanced skills necessary for effective collaboration (i.e. problem solving models, conflict resolution, and meeting agendas).

Limitations

Generalizability of the findings reported here is limited by the unique small sample and focused geographical location (i.e. southeastern United States). However, this limitation was minimized by participants' varied placements along the continuum of special education service delivery models, grade levels, and classification of school district (i.e. urban). This research provides a specific building block to the greater understanding of collaboration as a professional practice of special educators. Case studies can be considered as a whole to develop consistent themes or ideas about a topic (Flyvberg, 2006) and generalizability is achieved when readers for whom the topic is of interest are offered a detailed description of the findings as those reported herein (Merriam, 2002). A second limitation was my dual role as both instructor of the course and researcher of this study. Although my students were guaranteed verbally and in writing that their responses would in no way affect their performance in the class, my

holding this position of power may have caused students to be more guarded and less candid in their responses. This was minimized through the use of grading rubrics and member checking.

Implications for Practice and Research

The research questions answered here may be of particular importance to countries newly including students with disabilities in typical school settings for example, Cyprus (Bekirogullari, Soyturk, & Gulsen, 2011), and currently developing policies for training and teacher preparation. First, teacher preparation in special education should provide training in both the pedagogical knowledge around collaboration and the pedagogical skills necessary to collaborate. Second, the design of collaborative training should be considered carefully. Recommendations from the literature include a growing research base on collaborative cohorts of general and special pre-service educators who complete coursework and field placements in matched pairs (Griffin & Pugach, 2007; Van Laarhoven et al., 2006; Ross, Stafford, Church-Pupke, & Bondy, 2006; Smith, Frey, & Tollefson, 2003; Villa, Thousand, & Chapple, 1996; Kamen, 2007). Van Laarhoven et al., (2006) used both a shared curriculum as well as shared field experiences for 84 special education and general education students, and compared their experiences to a control group of student teachers taking course work alone. Longitudinal outcomes favored the group of teachers who had completed field experience and practiced planning and presenting a co-taught lesson. These teachers reported feeling that the training they received improved their ability to collaborate with other school professionals. Using this type of model for the training of collaboration may promote the learning of the nuanced collaborative skills that these participants did not discuss after coursework alone.

Third, the content of the training should be considered. These participants' overwhelming representation of challenging experiences in collaboration highlight the need for teacher preparation to focus on conflict and its resolution as a key skill when collaborating with other school professionals (Bradley & Monda-Amaya, 2005; Gallagher et al., 2008). Power struggles in the classroom between teachers were strongly implicated as a challenge to collaboration. Disagreements were seen as detrimental to collaborative practices, and not as a naturally occurring part of collaborative events. Participants rarely reported constructive conflicts in which, *a problem is solved, when the relationship among those involved is strengthened, and when the people involved increase in their ability to resolve conflicts in the future* (Villa, Thousand, & Nevin, 2004, p.98).

Lastly, coursework on collaboration should emphasize positive student outcomes as the result of collaboration between school professionals and between schools and families. Educators' beliefs that collaboration, and specifically co-teaching, is beneficial to the students does support inclusion of students with disabilities in the general education classroom. Teachers must be trained on how to document students' academic and behavioral progress so that the effects of their collaboration are empirically noted. Models of student progress monitoring emerging from the Response to Intervention initiative could be used to document the affect of teacher behavior on student growth. Activities and assignments should be designed wherein the types of instructional strategies, adaptations to curriculum, and use of accommodations are paired with ongoing data collection. Collaboration skills training needs to expand to consider the collection and use of data in planning instruction and designing materials by both special educator and general educator, as well as the sharing of this information with parents.

Lastly, this study explored the link between pre-service special educators' experiences with collaboration and their perceived self-efficacy of future professional practice. Expanded research on the construct of teacher efficacy should include collaborative behaviors and scenarios between teachers. Gibson and Dembo (1984) found that teacher beliefs in their ability to promote learning in students despite mitigating challenges conformed to Bandura's (1977) theory of self-efficacy. Teachers who believe they have the skills to promote positive learning experiences structure their classrooms differently than teachers who have low efficacy beliefs (Allinder, 1994: Gibson & Dembo, 1984, 1985) and are less susceptible to teacher burnout (Brouwers & Tomic, 1999). Evidence shows that teachers with high

efficacy rates have better performing students (Bandura, 1997). Teacher efficacy has traditionally been examined using rating scales developed around student- centered events. Bandura (1997) recommended, *the assessment of teachers' perceived efficacy should be broadened to gauge its multifaceted nature* (p. 243). New developments in measuring this construct which include statements regarding teachers' beliefs in their collaborative skills would succeed in diversifying the many roles and responsibilities of a teacher in today's classroom and provide a more comprehensive view of this social learning construct. The findings presented here could aid in the construction of such a measure.

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PSYCHOSOCIAL ADJUSTMENT IN SIBLINGS OF CHILDREN WITH WAR-RELATED INJURIES

Vivian Khamis
American University of Beirut

The study assessed the prevalence and predictors of post-traumatic symptomatology and emotional and behavioral difficulties in siblings of children who incurred war-related injuries. It was predicted that injury severity, gender and attributional style would account for a significant amount of the variance in post-traumatic stress symptoms and emotional and behavioral difficulties in those siblings. The sample consisted of 406 siblings of both genders with a mean age of 12.50 years. The results indicated that injury severity, gender and attributional style were related to emotional and behavioral difficulties and symptoms of post-traumatic stress, except for gender and post-traumatic stress .Siblings of children with severe injury appeared to be at greater risk for intrusive thoughts and avoidance as well as emotional and behavioral difficulties. Females exhibited more emotional and behavioral problems than did males. Siblings with more maladaptive attributional styles endorsed more emotional-behavioral problems and symptoms of post-traumatic stress. Techniques for strengthening coping abilities designed to enhance cognitive control may be used with siblings at risk, particularly females and siblings of children who sustained a severe injury. Treatments such as trauma-focused cognitive behavior therapy may incur positive results.

Introduction

The impact and long-term effects of war-related injuries in children represent traumatic events with ramifications for their social system (Cozza et al., 2010; Khamis, 2000 a). From a family systems' perspective (Minuchin, 1985) members of a family are interrelated, so what affects one family member will have effects across the whole system including the individual members of that system. As an integral part of the injured children's social system, siblings are affected. Because sibling relationships are both intense and intimate (Dunn, 1983; Dunn & McGuire, 1992; Rutter & Redshaw, 199l), the effect of the injured child on siblings may be profound.

While there has been a plethora of clinical and social science research on the impact of war-related injuries on children and their families (Khamis, 2008, 2000a,b,1993a,b; Randitz et al., 1998) , there is a darth of published research on the specific effects upon a child of serious injury to a brother or a sister. Research on political violence and Palestinian families suggests reasons for concern regarding the siblings of those who were injured. One large-scale study indicated that family members of those who incurred *intifada-related* injuries are at greater risk for post-traumatic stress disorder (PTSD), psychological and behavioral problems (Khamis, 2000a). The Palestine Red Crescent Society, (PRCS), estimates that from the onset of *Al-Aqsa intifada* in September 2000 to December 2007 there were 31,873 injuries among the Palestinians of which a large number were children under 16 years (PRCS, 2007).Many of these injured children have siblings, yet the effects of their injury on these siblings are not known.

There is still uncertainty about the factors that make some children more vulnerable to developing psychological morbidity after traumatic events. The degree of exposure to the event is probably critical, and witnessing death or injury in others may all influence outcomes. There is little in the scientific literature that identifies the specific effects upon a child of serious injury to a sibling that does not result in death (Newman et al., 1997). The majority of the psychological research investigating the relationship between the severity of war injury, PTSD and emotional and behavioral problems has focused on the

injured persons (Khamis, 1993a, b, 2008) and their parents (Khamis, 2000a). While some studies reported strong relationships between severity of injury and PTSD (Randitz et al., 1998) other studies did not confirm any relationship (Khamis, 1993b, 2008). However, siblings may be at risk for increased distress and symptomatology due to the sudden changes in living arrangements, schedules, parenting practices, and the amount of time spent with their parents (Cozza et al., 2010).

One social status believed to influence differential vulnerability to adverse consequences of war atrocities among family members is gender (Hourani, Armenian, Zurayk, &Afifi, 1986; Lyons, 1979; Rosehech, 1986). Specific psychosocial theories that have been applied to the effects of trauma and stress have indicated that gender is a characteristic that influences the stressors to which people are exposed (Billings & Moos, 1984; Pearlin, 1989; Pearlin & Lieberman, 1979), as well as the personal and social mediating resources that can be utilized to deal with hardship. In general, research results on trauma-related symptomatology and gender have been inconsistent (Fairley, 1984; Gleser, Green, &Winget, 1981; Khamis, 2000a; Lopez-Ibor, Canas, & Rodriguez-Gamazo, 1985; Parkes, 1977). While some studies found that females were more likely to suffer from PTSD than males (Afana et al.,2002 ; Brewin et al., 2000; Punamäki, Komproe, El Masri, Qouta, & De Jong, 2005; Stein, Walker, & Forde, 2000), other studies have found that the prevalence of PTSD was higher in males than females (Llabre & Hadi, 1997; Khamis, 2005). How gender roles affect the outcomes of war–related injury in siblings may be prompted by the findings that girls tend to report more affection and intimacy in their sibling relationships than boys (Akiyama et al., 1996; Kim et al., 2006). In a society marked by strictly defined sex roles, the behavior of girls is extremely constrained, and, therefore, the overwhelming responsibilities that are placed on female siblings may be critical determinants in the development of psychological distress and emotional and behavioral difficulties (Khamis, 2000a). Because females shoulder most of the responsibility when a family member is injured, they may feel the pressure more that results in high psychological distress and lower well-being (Khamis, 1998).

Another variable that may influence the course of children's and adolescents' adjustment to war–related injury in siblings is attribution (Abramson, Seligman, & Teasdale, 1978). Researchers have found that trauma survivors with PTSD often exhibit negative beliefs about self and others (Janoff-Bulman, 1989; Newman, Riggs, & Roth, 1997). Maladaptive attributional styles have been associated with other psychopathological reactions, such as depression (Abramson, et al., 1978). Given that higher levels of depression in children are more likely to be associated with more internal-stable-global attributions for negative events, and more external-unstable-specific attributions for positive events (Gladstone & Kaslow, 1995), one might expect that such maladaptive attributional styles may also be associated with other psychological, behavioral, and adjustment problems in children of siblings who incurred war-related injuries. Similar constructs have been proposed by social psychologists in dealing with traumas. Reactions to traumatic events may be affected by the desire to maintain a belief in a just world (Lerner, 1971; Lerner & Mathews, 1967), the desire to protect oneself from blame (Shaver, 1970), external locus of control (Craig, Hancock, Chang, & Dickson, 1998), and belief in fate (Khamis, 2008). Accordingly, children's attributional styles may be related to the psychological sequelae of war -related injuries sustained by their siblings. Research on gender differences in attributional style is also inconsistent. While some researchers have reported no sex differences in attributional style during childhood or adolescence (e.g., Curry & Craighead, 1990; Gotlib et al., 1993; Schoenherr, Brown, Baldwin, & Kaslow, 1992), other researchers have found sex differences in the relation between attributional style and self-reported measures of depressive symptoms (e.g., DeMoss, Milich, & DeMers, 1993; Nolen-Hoeksema, Girgus, & Seligman, 1991; Nolen- Hoeksema et al., 1992). Studying the psychosocial conditions and attributional style of the siblings of children who incurred war-related injuries has various consequences for developing an adequate understanding of problems pertaining to their psychosocial adjustment and, therefore for instituting intervention programs that will effectively accommodate their needs.

The purpose of this research, therefore, was to identify predictors of post-traumatic stress symptoms and emotional and behavioral difficulties in siblings of children who incurred war-related injuries. It was predicted that injury severity, gender and attributional style would account for a significant amount of the variance in post-traumatic stress symptoms and emotional and behavioral difficulties in siblings of children who incurred war-related injuries. Specifically, it was hypothesized that children with maladaptive attributional style who make more internal- stable-global attributions for negative events and more external- unstable-specific attributions for positive events report more post-traumatic stress symptoms and emotional and behavioral difficulties than do children with the reverse attributional style. In addition, it was hypothesized that symptoms of post-traumatic stress and emotional and behavioral

difficulties would be associated with injury severity and the female gender. Also, it was predicted that siblings of children with severe injuries and females would display more childhood problems such as conduct problems, hyperactivity/ inattention, emotional symptoms, peer problems and pro-social behaviors as well as post-traumatic stress symptoms including intrusion and avoidance compared to siblings of children with mild injuries and males.

Method

Participants

The sample consisted of 406 siblings, of whom 202 were males and 204 were females. They ranged in age from 11 to 14 years *(M* = 12.50 years, *SD* = 1.13). Of the sample, 96.3 % were from intact families, predominantly Moslems. The mean of parents' educational level was secondary school. The mean for the number of children was 5.66 per family and the monthly income of the participants' families ranged from no income to 2425 US dollars (*M* =408.31, *SD* = 286.72). All the injured children were males from the West Bank and Gaza Strip representing various residential patterns: cities (*n*= 166; 40.89%), village (*n*=70; 17.24%), and refugee camps (*n*= 170; 41.87%). They ranged in age from 12 to 18 years (*M* =16.30, *SD* =1.64).The lapse of time between the date of injury and this study ranged from 6 months to 38 months (*M* = 27.82, *SD* = 7.43). Fifty one percent (*n*= 207) of the participants were assigned to the mildly injured group and 49% (*n*= 199) to the severely injured group.

Instrumentation

Personal History Form. The personal history form was used to provide background information about siblings and their families. The child variables considered for this study were age, and gender. Also, several of the trauma predictor variables were determined by the injured child's medical report. The severity of the injury was classified as mild if the child had soft tissue injury only and severe if it was a bone injury that caused a disability. The date the child was injured was used to determine how recent the injury was.

Strengths and Difficulties Questionnaire (SDQ). The SDQ (Goodman, 2001) was used to detect childhood emotional and behavioral problems. The SDQ is a brief 25 item behavioral screening instrument designed for use with children and teenagers between 4 and 16 years old. The 25 items are divided into five sub-scales each of five items, generating scores for conduct problems, hyperactivity/ inattention, emotional symptoms, peer problems and pro-social behaviors. Internal consistency for each of the five sub-scales has been shown to be good with a mean Chronbach's alpha of 0.73 (Goodman 2001). A total difficulties score ranging from 0 to 40, representing increasing difficulties, is derived by summing scores on the first four of theses sub-scales. The remaining scale, pro-social behavior, is a positive measure ranging from 0 to 10 representing increasing caring, helpful behavior. The self-report version of the SDQ for children aged 11 to 16 years (Goodman *et al.* 1998) was used in this study. The SDQ has been validated and used in previous studies among Palestinian children (Thabet, Stretch, & Vostanis, 2000). In this sample Cronbach's alpha is .72.

Impact of Event Scale (IES). The Impact of Event Scale (IES**)** was used to measure the psychological impact of events (Horowitz, Wilner, & Alvarez, 1979). The scale measures two dimensions of PTSD: trauma-related intrusion and avoidance such as *I had trouble falling asleep or staying asleep, I felt as if it hadn't happened or wasn't real, I tried not to talk about it, I felt irritable and angry*. The frequencies of these symptoms were coded *not at all* 0, *rarely* 1, *sometimes* 3, and *often* 5 (Zilberg, Weiss, &Horowitz, 1982). The IES has been widely used with children (e.g., Dyregrov, Kuterovac, & Barath, 1996; Malmquist, 1986; Yule & Udwin, 1991). In a study that assessed the psychometric properties of the IES on the basis of a comprehensive list of studies (Horowitz & Sundin, 2002), the results indicated that the IES' two factor structure is stable over different types of events, that it can discriminate between stress reactions at different times after the event, and that it has convergent validity with observer – diagnosed post-traumatic stress disorder. Previous research found good split-half reliability (.87) and one-week test-retest reliability (.87) for the total score (Horowitz et al., 1979). In this sample Cronbach's alpha is .89.

Children's Attributional Style Questionnaire –Revised (CASQ-R). The Children's Attributional Style Questionnaire –Revised (CASQ-R) was used to assess causal attributions. It includes 24 forced-choice items, half addressing positive outcomes and half addressing negative outcomes (Thompson, Kaslow, & Weiss, 1998). For the 12 positive events, 2 items tap the internal-external dimension, 7 items assess the stable-unstable dimension, and 3 items address the global-specific dimension. For the 12 negative events, 3 items tap the internal-external dimension, 6 items assess the stable-unstable dimension, and 3 items address the global-specific dimension. Positive, negative, and overall (positive minus negative

composite) scores are divided. The lower the positive composite score, the higher the negative composite score and the lower the overall composite score the more depressive is the attributional style. In this sample Cronbach's alpha is .76.

Procedure

The primary sample included 420 siblings of children who incurred war-related injuries.
Of these, 406 were willing to participate in the study. The overall response rate was 96.6%. Participants were identified from official Palestinian National Authority reports. To be eligible to participate in this study, siblings had to be free of war injuries and serious physical problems. They also had to have a brother or a sister who sustained a war injury. One sibling was selected from the three- and four-child families based on age (11 years and above), gender and severity of injury. In families that have more than one sibling the youngest was selected .Participants were assigned to the severely injured group when their sibling had a bone injury that resulted in permanent disability such as paraplegia, and quadriplegia whereas those who were assigned to the mildly injured group had a sibling with a soft tissue injury only. Those who experienced other types of traumatic events were not included in the study in order to rule out the confounding effects of multiple traumas in addition to the critical injury.

All families were initially contacted by phone or a home visit and asked to participate in a study about the psychological status of siblings of war -injured children. If the family consented, an interview with the sibling was scheduled at their home. Parental consent and child assent to participate were obtained. They were given a full explanation of the study, were assured of the anonymity of their responses, and were ensured confidentiality of all information collected.

Two psychologists carried out the interviews with children at home. Completion of the interview took approximately 30 minutes. The interviewers had previous experience in working with children. Ethical approval for the study was obtained from the American University of Beirut.

The three instruments used in this study were translated into Arabic, and the content validity of the translated Arabic versions was assessed by comparing the pairs of original and back-translated items. Overall, the back translation of each item in the scales closely reflected the content of the original item.

Statistical Analysis

Preliminary analysis screened for missing data and tested distributional assumptions of analysis. There was a small amount of missing data as a consequence of entry error on the study variables of two participants and were handled with multiple imputation (MI). MI provides unbiased, generalizable estimates of missing values and standard errors (Graham 2009).

Inter-correlations among predictor variables and dependent variables were employed to examine the general relations. Then, separate stepwise regression analysis was used to examine the relative contribution of predictor variable (i.e., injury severity, gender, and attributional style) to total emotional and behavioral difficulties (SDQ) scale and post-traumatic stress symptoms (IES). To further investigate the impact of injury severity, and gender on the various outcome measures, a separate multivariate analysis of variance (MANOVA) was performed on the emotional and behavioral difficulties (SDQ) sub-scales (i.e., conduct problems, hyperactivity/ inattention, emotional symptoms, peer problems and pro-social behaviors) and the post-traumatic stress symptoms (IES) sub-scales (i.e., intrusion and avoidance) to determine whether the sub-scale scores varied with the sibling's group (mild and severe injury) or gender (male and female).

Results

Diagnostic Findings

Of all the siblings of war-injured children 21.6 % were reported as having total difficulties score in the 'abnormal' range and 147 (36.20 %) had a probable diagnosis of PTSD (Goodman ,1997). A cut-off score of 33 or more is recommended for PTSD diagnosis (Creamer, Bell, & Falilla, 2002).

Gender, Injury Severity, Attributional Style and Outcome Measures

Associations among the predictor and outcome variables were examined and are presented in Table 1. Each of the predictors was related to siblings' emotional and behavioral difficulties (SDQ) and post-traumatic stress symptoms (IES). Among the variables, trauma severity was associated with negative attributions indicating that siblings of children with severe injuries had higher negative composite scores than their counterparts in the mild injuries group. Also, positive and negative attributions were negatively

correlated in the expected direction. Gender was not associated with positive and negative attributions or with injury severity. Moderate positive correlations were also found between SDQ and IES.

Table 1. Inter-correlations of Predictor Variables and Outcome Measures

Variables	1	2	3	4	5	6
1) Injury severity	-					
2) Child's gender	-.09	-				
3) Positive attributions	-.06	-.02	-			
4) Negative attributions	.11*	-.08	-.31***	-		
5) Emotional and behavioral difficulties (SDQ)	.16**	-.16**	-.26***	.27**	-	
6) Post-traumatic symptoms (IES)	.21***	-.08	-.13**	-.26***	.32***	-

*Indicates $p< 0.05$;**Indicates $p< 0.001$;*** Indicates $p <0.0001$
Note: Gender is coded: Male =1; Female =0. Injury severity is coded: Severe =1; Mild =0.

Prediction of Behavioral and Emotional Difficulties and Post-traumatic Stress Symptoms

Separate stepwise regression analysis was employed to assess the contribution of injury severity, gender and attributional variables (negative and positive) to total SDQ and IES. The standardized beta weights and amounts of explained variance from the two analyses are presented Table 2. The results indicated that 14.9 % of the variance in SDQ and 10.6 % of the variance in IES could be predicted by the variables assessed. The models were statistically significant, *F*'s (4,391) = 16.87 and 11.60, *p*'s < 0.0001, for SDQ and IES, respectively. All the predictors in the SDQ model were significant predictors. Siblings of children with severe injuries who acquired a permanent disability reported higher levels of emotional and behavioral problems than did siblings of children with mild injuries. Females reported higher levels of SDQ than did males. Also the results indicated that positive and negative attributions were significant predictors of SDQ in siblings of children who sustained war -related injuries. Siblings, who reported lower positive composite score and higher negative composite score, had more SDQ problems. Among all the predictors in the IES model injury severity and negative attributions were the only significant predictors. Siblings of children who acquired a permanent disability reported higher levels of intrusive and avoidance thoughts than did siblings of children with mild injuries. Also, siblings with higher negative composite scores reported more IES problems.

Table 2. Prediction of children's SDQ and IES levels from injury severity, gender and attribution variables.

	SDQ				IES			
	beta	R^2	*t*	*p*	beta	R^2	*t*	*p*
Injury severity	.116		2.44	.01	.180		3.73	.0001
Gender	-.141		-2.97	.003	-.31		-.05	.28
Positive Attribution	-.203		-4.10	.0001	-.05		-1.03	.30
Negative Attribution	.189		3.79	.0001	.22		4.34	.0001
Model		.149				.106		.0001

Injury Severity and Gender

Separate 2 (group : severe injury, mild injury) x 2 (gender : male, female) multivariate analysis of variance (MANOVA) was carried out to investigate the impact of injury severity , and gender on the various SDQ sub-scales including conduct problems, hyperactivity/ inattention, emotional symptoms, peer problems and pro-social behaviors and the two sub-scales of IES: trauma-related intrusion and avoidance respectively. The results yielded significant multivariate effects (using Wilk's Lambda) for group F (5 ,391) = 2.21 , p < .05 with a small effect size (η_p^2=.028) and gender F (5 ,391) = 12.92 , p < .0001 with a medium effect size (η_p^2=.143) on the SDQ sub-scales scores . Univariate results for the SDQ sub-scales revealed significant group effects with a small effect sizes for emotional symptoms (F (1 ,393) = 5.67, p < .01,η_p^2=.014); conduct problems (F (1 ,393) = 6.75, p < .01,η_p^2=.017); and pro-social behavior (F (1, 393) = 5.54, p < .01,η_p^2=.014) with siblings of children with severe injuries experiencing more emotional symptoms , and conduct problems than siblings of children with mild injuries whereas siblings of children with mild injuries reported more pro-social

behaviors than siblings of children with severe injuries .No significant differences were found between the groups on inattention and hyperactivity and peer problems sub-scales (see Table 3). Also, univariate results for the SDQ sub-scales revealed significant main effects for gender with a small effect on emotional symptoms F (1 ,393) = 6.06, p < .01, η_p^2=.015); inattention and hyperactivity (F (1, 393) = 13.94, p < .0001, η_p^2=.035); peer problems (F (1 ,393) = 6.11, p < .01,η_p^2=.015); and pro-social behavior

(F (1, 393) = 39.55, p < .0001, η_p^2=.092) with females experiencing more inattention and hyperactivity, emotional symptoms, and peer problems than males whereas males reported more prosocial behavior than did females .No significant differences were found between males and females on conduct problems (see Table 3).

As for post-traumatic stress symptoms, the results yielded significant multivariate effects (using Wilk's Lambda) for group F (2, 397) = 8.52, p < .0001 with a small effect (η_p^2=.041) on the IES sub-scales. However, the results revealed no significant effects for gender F (2 ,397) = 1.64, p < .19. Univariate findings for the IES measures revealed significant group effects for intrusive thoughts F (1, 399) = 11.54, p < .001; and avoidance F (1 ,399) = 16.27, p < .01 with small effect sizes (η_p^2=.028 and 0.039 respectively). Siblings of children with severe injuries experienced more intrusive thoughts and avoidance than siblings of children with mild injuries (see Table 3).

Table 3. Means and Standard Deviations of Gender and Group by SDQ and IES subscales

Variable	Gender				Group			
	Male		Female		Severe Injury		Mild Injury	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
SDQ								
Conduct problems	2.78	2.19	2.80	2.20	3.07	2.25	2.49	2.09
Hyperactivity/ inattention	3.12	1.90	3.86	1.86	3.65	1.90	3.35	1.90
Emotional symptoms	3.44	2.26	4.04	2.10	4.05	2.13	3.45	2.23
Peer problems	3.25	1.99	3.77	1.70	3.70	1.80	3.35	1.92
Prosocial behaviors	8.01	2.13	6.68	2.01	7.00	2.26	7.62	2.05
IES								
Intrusion	11.18	8.29	12.92	7.77	13.55	7.76	10.75	8.15
Avoidance	13.94	9.32	14.93	8.10	16.25	7.98	12.73	9.07

Discussion

The substantial prevalence of behavioral and emotional difficulties and post-traumatic stress symptoms in this study is consistent with other studies of children in war zones (Bourdon , Goodman, Rae , Simpson, Koretz, 2005 ; Goodman, 1997; Malmquist, 1986; Mellor, 2005; Khamis, 2005,2008; Yule& Udwin, 1991) . The current study represents an important step in identifying reliable predictors of behavioral and emotional difficulties and post-traumatic stress symptoms in siblings of children with war related injuries. The results show that the severity of injury was a significant predictor of various psychological and behavioral problems. While siblings of children with severe injuries reported higher levels of post-traumatic stress symptoms and behavioral and emotional difficulties including emotional symptoms, and conduct problems, siblings of children with mild injuries reported more pro-social behaviors. These results are consistent with some previous findings (Newman, Black, & Harris-Hendriks, 1997). Perhaps the presence of the child with severe injury in the family engenders stress and as a result siblings become unable to cope with changes in family circumstances and manage the hardships and difficulties of transitions and crises. Another alternative explanation would suggest that the observed response differences in behavioral and emotional difficulties and post-traumatic symptoms between siblings of children with mild injuries and siblings of children with severe injuries may result from the later group having utilized a negative attributional style and therefore cannot evaluate the family circumstances posed by the war injury and cope with it. It is noteworthy to mention that the results indicated that siblings of children with severe injuries utilized a negative attributional style to a greater extent than did siblings of children with mild injuries. Therefore the impact of the injury severity in this study must be considered within siblings' attributional style. Also, previous studies on the injured of the *intifada* indicated that the severity and visibility of an injury intensifies the process of assimilating the trauma by increasing negative self concept, frustration, concern about stigma and passing, and feelings of

being disapproved of by others (Khamis, 1993a). Conversely, siblings of children with severe injuries that acquired a disability may endure stigma by association (Byrne, 2000; Gray, 2008). The nature of encounters experienced by these siblings is illustrated in Burke (2004), who showed how a number of siblings perceive themselves as disabled simply by being a member of a family who has a child with disability (Burke, 2010).It is noteworthy, however, that the context in which an injury is seen assumes special significance because the negative label associated with an injury seemed to fade to relative insignificance when it represents heroism and patriotism (Khamis, 1993a). Other feelings or experiences may be unique to siblings of children with severe war–related injuries such as the additional burden of shared care by siblings (Burke, 2010), the experience of severe disruption following the injury (Khamis, 1993 a), disrupted schedules, separation from parents, altered living arrangements, and changes in parenting behavior all compound the stress of siblings to heighten distress (Cozza et al., 2010).

In this study, females reported more, emotional symptoms, peer problems, inattention and hyperactivity, and emotional and behavioral problems than did males whereas males reported more prosocial behavior than did females. Previous research results yielded a relatively similar conclusion suggesting that girls may be more affected (Slone & Schechner, 2009). Furthermore, the differential response between males and females reinforces the case that emotional and behavioral difficulties are certainly associated with gender, with females experiencing more emotional symptoms than males (Muris, Meesters, & van den Berg, 2003; Vigil, Geary, Granger, & Flinn, 2010). Although, the results are not in line with previous studies that indicated that inattention and hyperactivity, peer problems, and total difficulties were more exhibited by males rather than females (Clarbour& Roger, 2004; Muris et al., 2003), the findings may be at least partially accounted for by the predominantly male culture of the Palestinian society where girls usually shoulder most of the responsibilities and duties. Also, when interpreting this result, it is important to bear in mind that females position in the Palestinian family is less favorable since they carry a greater burden of demands and limitations compared to males (Khamis, 2000 a, b), which in turn may have contributed to emotional and behavioral difficulties. Other possible explanations for gender differences in emotional and behavioral problems include the willingness of girls to express feelings more than boys (Kleinke, Staneski, & Mason, 1982; Tolin & Foa, 2006). However, young females generally report or disclose more symptoms of distress, regardless of whether they have experienced trauma (Crick & Zahn-Waxler, 2003). Consistent with previous findings (Thompson et al., 1998), the results showed no significant differences in attributional analysis used by girls and boys. This would indicate that although both groups used the same attributional strategies, for females these attributional styles were not sufficient to overcome the traumatic event and most probably the demands placed upon them in their family life. While the absence of gender differences on post-traumatic stress symptoms was inconsistent with previous studies (Dyregrov, Gupta, Gjestad, & Mukanoheli, 2000), it was consistent with other studies on children exposed to warfare (Dyregrov, Gjestad, & Raundalen, 2002). It seemed that the injury itself was so intensely powerful that the gender variable was overshadowed (Khamis, 1993 a).

Children causal attribution is an important aspect of disaster response (Joseph, Yule & Williams, 1993) .Consistent with previous findings, the results revealed that siblings with more maladaptive attributional styles (i.e., negative attribution) reported more emotional and behavioral problems as well as symptoms of post-traumatic stress (Thompson et al., 1998; Weiner, 1986). Recently, researchers have argued that emotionally distressed individuals are more likely than non-distressed individuals to perceive events as stressful (Miller & Rasmussen, 2010; Neuner, 2010).

Conclusion

The results of this study contribute to the growing literature highlighting the adverse effects of children's war related injuries on their siblings The conditions of having a sibling with severe injury, being a female, and having a negative attribution style appear to be a heightened vulnerability that increased the risk for higher rates of post-traumatic stress symptoms and behavioral and emotional difficulties.

Studies of siblings' responses to their brother or sister war injuries provide a window to understand traumatic stress after events that are indirectly experienced in contrast with directly experienced events (Khamis 1993 a, b, 2008). Greater understanding of the impact of children's war-related injuries on siblings is required to better inform effective prevention approaches. As with any study, these results must be considered in the context of its limitations. First, the cross-sectional design leaves the findings open to questions concerning the potential effects of retrospective self report bias. Second, any generalization of the results of the study may be limited by the fact that the sample comprised only those who were listed by the Palestinian National Authority and could not include cases of injuries not reported. Third, all measures were obtained from children's own reports. External informants such as parents and teachers confirming what children say would lend more validity to the findings. Fourth, it

would be important to recognize the need to explore additional areas that are not tapped by this study such as other types of traumas and daily stressors encountered by siblings, family environment and ways of coping (Miller & Rasmussen, 2010; Neuner, 2010).

The results of the study also bear practical clinical implications. Given the apparent empirical outcome of the severity of injury, gender and attributional style revealed by this study, techniques for strengthening coping abilities designed to enhance cognitive control might have to be worked through females and siblings of children with severe injuries who sustained disabilities. The associations between maladaptive attributional styles and emotional and behavioral problems and posttraumatic stress symptoms make it likely that cognitive interventions such as trauma-focused cognitive behaviour therapy (CBT) may incur positive results(Cohen, Mannarino, Berliner, & Deblinger, 2000; Khamis,2008). Further studies are called for to expand the currently meager understanding of how siblings' attributions relate to the treatment of behavioral and emotional problems and posttraumatic symptomatology.

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RED TAPE AND GREEN TEACHERS: THE IMPACT OF PAPERWORK ONNOVICE SPECIAL EDUCATION TEACHERS

Richard L. Mehrenberg
Millersville University

Eighteen novice special education teachers were interviewed regarding their opinions, experiences, and advice regarding professional paperwork such as IEPs, behavior plans, and annual goals. A qualitative analysis of the responses suggests three main findings: (1.) Participants had a negative opinion of paperwork based on its lengthiness and perceived irrelevancy to instruction. (2.) Participants cited mentors, peers, and practice, as the best ways to learn about paperwork. (3.) Recommended paperwork advice for new teachers were to understand expectation, ask for help, and get organized. Implications and recommendations are discussed.

Supporting and Retaining Novice Special Education Teachers

The first five years of a special education teacher's (SET) career have been described as particularly fragile. Studies have shown anywhere from one-third to one-half of beginning teachers leave the profession during this time (Singer, 1993; Coleman, 2000; Menlove, Garnes, & Salzberg, 2004). The research also suggests that the attrition problem is more a matter of retention than of recruitment (Billingsley, 2004; Brownell & Smith, 1992; McLeskey, Tyler & Flippin, 2004). It has been compared to continuously filling a water bucket with a large hole in its bottom.

This analogy may be oversimplified. It might be more accurate to describe a bucket with dozens of tiny leaks in it, since special educators leave the field for many different reasons (e.g., low pay, poor working conditions, transfers to general education).

Role Conflict and Attrition.

One largely unexplored obstacle to remaining in the field has been role conflict. Singh and Billingsley (2004) defined role conflict as *a large discrepancy between the type of tasks that workers expect to do and those in which they regularly engage* (p. 40). SETs may experience role conflict when they believe that their supervisors place a higher priority on the bureaucratic demands of their job (i.e., professional paperwork), compared to teaching.

Role conflict can lead to feelings of frustration, isolation, and despair (Singh & Billingsley, 2004). Therefore, it is important to examine to what degree a perceived paperwork burden can negatively affect the morale of SETs. The following section describes some of these challenges.

Challenges of Special Education Paperwork

Professional paperwork is defined as *the documents, reports, brochures, and the like that are filled out, distributed, or submitted by school personnel or parents to meet procedural requirements of federal, state, or local special education law or regulations* (Study of State and Local Implementation and Impact of the Individuals with Disabilities Education Act, n.d., p. 7). Examples include individual education plans (IEPs), behavioral plans, manifestation determination review materials, annual goals and objectives, and student re-evaluation forms.

The following research suggests that SETs often view professional paperwork in a negative light. Two of their most common complaints are that it is time consuming and that it has limited perceived value.

Time consuming. Paperwork can be an extremely time consuming and labor intensive activity. It is estimated that the average special education teacher spends five hours per week on paperwork (Suran &

Giangreco, 2009). Educators spend more time on completing paperwork than grading papers, communicating with parents, sharing expertise with colleagues, supervising paraprofessionals, and attending IEP meetings combined. (Carlson, Chen, Schroll, & Klein, 2003).

Limited perceived value. Paperwork can present additional challenges if it is not seen to be of significant value. SETs have described it as *wasteful, repetitive and redundant* with limited direct impact on daily instruction (Kirlin et al., 2004). Paperwork can be especially problematic if it is perceived as a legal formality, rather than a useful working document. For example, Dudley-Marling (1985) found that less than half of special education teachers surveyed referred to IEPs more than once a month and less than one-fourth believed it helped prepare for daily instruction.

Problems with paperwork can negatively impact the productivity and motivation of SETs. The following section highlights past studies that uncovered a negative relationship between paperwork and teacher morale.

Effects of Paperwork on Special Education Teacher Morale

Morale is defined as *The capacity of an individual to maintain belief in an institution or goal.* (Kirlen et al., 2004, p. 82). As is relates to the SET, morale can be divided into two subsections: a.) job stress/burnout, b.) job satisfaction/commitment to the profession.

Paperwork impact on job stress and burnout. Olson & Matuskey (1982) investigated six professional sources of stress for teachers of students with learning disabilities. Survey respondents cited *excessive paperwork* as the number one stress factor. Seventy-eight percent of respondents replied that this was a source of tension at their job.

In a 2001 study, Emhich surveyed 300 secondary teachers of students with learning disabilities. *Perceived workload* (defined as paperwork, meetings, conferences and other non-teaching activities) was one of the highest predictors of job stress and burnout.

Paperwork impact on job satisfaction and commitment to the profession. The paperwork burden has also cited as having a negative impact on job satisfaction and commitment to the profession for some special educators. For example, a national survey of teachers of students who are deaf or hard of hearing was conducted to determine which variables most negatively affected job satisfaction.
It was discovered that the items *amount of paperwork required* and *time needed for non-teaching duties* were among the respondents' highest perceived threats to job satisfaction (Luckner & Hanks, 2003).

Similarly, Cross & Billingsley (1994) surveyed SETs regarding factors that negatively influence job satisfaction. Prompts associated with non-teaching responsibilities proved to be the most problematic for the sample.

In a survey of 96 emotional support teachers, over one-fourth of respondents felt that *completing required paperwork* was the most difficult aspect of their job. Furthermore, the prompt *inadequate time for paperwork* was cited as one of the most frequently mentioned reasons why teachers left the profession (George, George, Gersten, and Grosenick, 1995).

Current Study

Previous research has suggested that professional paperwork can be problematic for SETs. Negative consequences such as job stress, job dissatisfaction, and a desire to leave the field have all been documented. The current study examines if and how these problems are intensified for novices.

Participants

The current study involved semi-structured telephone interviews with 18 novice SETs. For the purpose of this study, a novice is defined as a teacher with five or less years experience. Participants were selected at random with assistance from Market Data Retrieval, an American market research firm focused specifically on the education profession.
The study called for a total of 20 novice teachers from throughout the United States; however a series of prior commitments prevented two individuals from participating. Eighteen interviews were deemed an acceptable number by the researcher, as it was a substantial enough amount to gain a well-rounded selection of experiences and opinions, yet manageable in regards to the coding and analytic demands of qualitative research.

Key demographics reported among the sample included residency in twelve states, teaching students with nine distinct IDEA-recognized disabilities, and teaching in schools that run the gamut from pre-school to vocational transitions services.

Other demographics mirrored those reported elsewhere in the literature, such as a majority of respondents being both white and female (Billingsley, 2002; Billingsley, Carlson, & Klein, 2004; Griffin et al., 2009).

The mean age of the respondents was 33 years old. This was older than the mean participant in the aforementioned studies, but can be accounted for by the fact that five of the participants were embarking on their second career. The mean number of years experience for the sample was 2.5. A select rundown of key demographics is listed in Table 1.

Table 1. Select Respondent Demographic Information

Name	Age	Years Experience	Primary Type of Instruction
Amy	22	1	Itinerant
Angela	24	1	Itinerant
April	24	1	Itinerant
David	50	2	Self-contained
Doreen	48	2	Itinerant
Jeanette	47	3	Co-teach
Kathie	42	2	Self-contained
Kerri	26	3	Self-contained
Krissy	31	4	Self-contained
Laura	29	5	Self contained
Linda C.	24	2	Itinerant
Linda M.	24	2	Self-contained
Melinda	37	2	Self-contained
Paul	25	3	Co-teach
Rosalee	33	2	Itinerant
Ryan	29	5	Co-teach
Shellie	52	3	Co-teach
Tiffany	25	2	Self-contained

Research Questions

The study had three main research questions:

1. To what degree do novice special education teacher value professional paperwork?
2. How do novice special education teachers best learn to successfully complete professional paperwork?

3. What paperwork management advice do novice special educators have for those planning to enter the field?

During the interview process, respondents were asked a series of open ended prompts pertaining to each of the three research question. Follow up questions and requests for clarification and examples were also included. Table two shows sample follow-up prompts associated with each of the main three questions.

Table 2. Interview Question Clusters and Sample Prompts

Research Question Cluster	Example Prompts
1. Value of paperwork	What is the first thing that comes to mind when I say *special education paperwork*?
	Give a specific experience that has shaped your opinion about paperwork.
2. Learn about paperwork	What one factor has been most valuable in preparing you for your paperwork duties?
	To what degree have your college classes prepared you for your paperwork responsibilities?
3. Advice about paperwork	What one piece of paperwork advice do you wish you knew earlier?
	What paperwork advice would you give to a pre-service special education teacher?

Research Procedures

Respondents were interviewed for approximately 45 minutes each. Each telephone conversation was recorded with permission from the individual. Recordings were later converted into written transcripts.

Transcripts were evaluated and assessed using an issues-focus analysis (Weiss, 1994). First, the data were coded according to categories and concepts that were later determined. Coded material was then sorted, according to similar themes and recurring elements. Lastly, data were integrated into a cohesive narrative form.

Trustworthiness of the data was accomplished in two ways. First, another scholar familiar with the needs of beginning special educators independently read and reviewed all transcripts for emergent themes. Findings between researchers were compared and revised accordingly.

Secondly, respondents were later contacted to review their attributed quotes within the study and relevant themes associated with each quote. Individuals had an opportunity to provide clarification or correction as needed.

Findings

Opinions on Paperwork Value

The first research question was, *To what degree do novice special education teachers value professional paperwork?* The responses from participants were mixed. Although a few teachers acknowledged paperwork as a tool to help plan, document, and assess, many others described it as redundant, lengthy, and overwhelming.

The following section describes participants' feelings regarding their paperwork responsibilities, and common reasons for these feelings.

First impressions. Participants were asked to share the first thing that came to their mind when it came to paperwork. Most of these first impressions were negative in tone. Comments included, *way too much, overwhelming, always changing, pain in the neck,* and *ridiculous.* Only one teacher, Doreen. shared an

impression that was strictly positive. She stated that she *loved it*. Her follow up response was that *it was the only way to really get to know the kids.*

Justification of opinions. The transcripts revealed three main themes as to why many respondents had a negative attitude when it comes to paperwork. The three themes were: (a.) challenges of multi-tasking, (b.) ambiguity, and (c.) time management problems.

Challenges of multi-tasking. Several respondents shared anecdotes to illustrate the numerous demands placed upon a new teacher. For example, David shared his challenges with multi-tasking:

It is impossible to know your students, master their files, go to all the meetings, and to teach. So many new teachers have no clue how to do it correctly. When the staff is so inexperienced, it is primarily the student whom suffers most.

He goes on to detail the additional bureaucracy associated with being an emotional support instructor:
Not only do we have to do academic goals and accommodations, but there are also all of the behavior plans and checklists and manifestation meetings that we must attend on top of that.

Amy expressed her difficulty with multi-tasking in trying to balance her responsibilities as an IEP team leader with those of a classroom teacher:

I'd often have a parent in a meeting and feel as if I had to hurry them through because the bell was about to ring. They wanted to talk about their child and I would feel bad because I was too focused on getting to class. My mind was totally scattered during those occasions.

Ambiguity. A second common theme that emerged was a perceived lack of clarity in both paperwork purpose and procedure. Ryan explained how he felt that the ambiguity of the paperwork presented a greater problem than its length:

I've learned by trial and error, and sadly, some of those errors have been a real pain to fix. It's not so much the amount of paperwork, as it is the uncertainty of what I should be using, signing, and when.

Melinda shared that her supervisors put more value on what was written on paper, as opposed to what was taught in class. She said:

It's all for show. From my experiences, it doesn't matter a lick what goes on in the classroom, but rather what goes down on paper. Even when you do want to use an IEP to learn about your students, they are either incomplete or too vague to be of any use.

Time management problems. Time management problems and scheduling complexities were a third area described negativity regarding paperwork. For example, Angela shared, *All our IEPs were due after spring break…things got crazy at the end of the year.*

Technology was not generally viewed as a IEP time saver to participants. As David explained, *Although we use computer software, I don't think it helps much. The rules keep changing and we have to be retrained on how to fill them in.*

Linda C. shared concerns about problems associated with paperwork software. She said, *Both a curse and blessing this year is that we were assigned laptops so that we could access the IEP program from home. I find myself resorting to taking my paperwork home. It helps me at school; it doesn't help my family or marriage.*

Paperwork Completion Training
The second research question was, *How do novice special education teachers best learn to successfully complete professional paperwork?* Participants were generally negative in regards to the extent of preparation their pre-service programs provided them about paperwork. It was also revealed that for many, the most beneficial training took place on the job. Others felt that training and experiences in a previous career best helped prepare them for special education red tape.

Pre-service training. A few participants were able to cite specific pre-service classes or experiences designed to help them understand the purpose and function of professional paperwork. For example, Amy stated, *I had two classes in college about writing IEPs. The instructors were very realistic and honest about the volume of paperwork that special educators have to complete*

It was much more common for an educator to state that their pre-service exposure to paperwork completion was lacking or non-existent. Kathie said, *My college training, however, was not very thorough. We had probably one or two examples to look at. It wasn't very in-depth.* Similarly, Ryan shared, *Honestly, my college courses did not help at all. Throughout my entire program, I only had to write one IEP for class. It wasn't helpful*.

On the job training. The majority of respondents felt that on the job training was the best source of preparation. There was a general consensus that new teachers needed to *roll up their sleeves and get their hands dirty* in order to truly understand how to successfully complete professional paperwork. Responses that support this notion included, *I think the best training is actually doing the IEPs* and *The majority of experience I have had with paperwork has been on the job training.*

Participants suggest that with experience, teachers will gain confidence in their paperwork writing abilities, and reduce the amount of time needed for completion.
As Rosalee stated:

The only thing that has helped me with the IEPs is practice. The more I do, the better (and quicker) I get. My first year it took me two or three hours to do an IEP. Now, I can probably do four of them in that time period.

Colleagues and mentors. A commonly discussed asset for these beginning teachers were colleagues and mentors who answered questions and provided clarification when needed. As Angela explained, *On the job training was just about the only thing that helped me learn paperwork. We have a small school, so I got help from colleagues because we feel as if we are in this together.*

Participants also had positive experiences regarding their interactions with mentor teachers. Ryan shared, *My mentor teacher has been extremely helpful to me. She is very knowledgeable and very organized.*

Administrators and supervisors. Administrator and supervisors were generally not highly valued in regards to the amount of paperwork support and training given to novice teachers. Administrators were often perceived as *clueless*, while special education supervisors were described as *unrealistic in their expectations.* April said:

I had a supervisor who never taught. I have no respect for her. She was fixated on the details of my paperwork that we were required to submit every two weeks. She would hand them back and make me revise them for the most ridiculous reasons. All the while, I didn't have time to adequately prepare for classes because I was spending all my time addressing her nitpicking concerns.

Advice for New Teachers
The third research question was, *What paperwork management advice do novice special educators have for those planning to enter the field?* Many participants were willing to share their personal practices and outlook that they feel had helped them become more successful with the bureaucratic responsibilities of their profession. Three pieces of advice emerged from the interviews, (a.) understand expectations, (b.) ask for help, and (c.) get organized.

Understand expectations. The most prevalent piece of advice, contributed by eight of the 18 participants was to encourage pre-service special education teachers to fully understand the extent of the paperwork demands associated with their jobs. Quotes such as, *I would tell them to make sure they understood everything that was expected of them, and that they were clear about expectations* underscores the importance of familiarizing beginning teachers with their professional responsibilities beyond the classroom.

Some participants voiced this notion in a relatively optimistic manner, *Learn to love it! It can be overwhelming at times, but it is definitively worth it.* Others took a more pessimistic tone. Paul stated:

They ought to know how much they will be involved in paperwork, and how little it will really matter. It's garbage. It's all for show. From my experience, it doesn't matter what goes on in the classroom, but rather what goes down on paper.

Ask for help. A recurring piece of advice from respondents was to encourage new teachers to ask colleagues and supervisors about paperwork and how to complete it.. As Tiffany explained, *Don't be afraid to ask questions. Don't be afraid to look bad. For every one question you ask, there are probably five other people who are thinking the same thing.*

Angela illustrated the importance of asking for help via a personal anecdote that happened to her during her first year. She explained that in order to be hired as a Spanish teacher, she had to also teach special education part time. A lack of any formal training or experience lead to the following situation.

It was about March of my first year, when another teacher asked if she could borrow the IEP for one of my students. I replied, *What's an IEP?* Nobody told me ahead of time what they were or how to do them. At this point, a colleague sat down with me and we knocked out twenty of them in a week. I am not a dumb person, so it didn't take long once I figured out what I was supposed to be doing.

Get organized. A common belief expressed was that professional paperwork can be more easily managed with strong organizational skills. Specific examples of way to get organized were to encourage new teachers to *use binders, color code things,* and *save a template of IEPs that work for you.*

Other respondents felt that organization extended beyond simple tips and tricks. They felt that organization was an important personality trait that special education teachers needed to be successful. Two quotes that highlight this concept are, *I think I am very good at paperwork because I am anal retentive* and, *I think being an organized person is the best thing that helps me prepare for the bureaucratic duties of being a special ed teacher.*

Limitations, Discussion and Suggestions

A limitation of this study is its dependence on the self-reported data of participants. Future studies could address this limitation through the addition of some objective quantitative measurements such as analysis of the number of IEPs written or amount of time spent on paperwork per week. A second limitation of the study is that each participant was only interviewed once. Longitudinal studies may allow researchers to determine if the opinions and practices regarding paperwork change for novice teachers over the course of a school year, or even over the course of their careers.

The findings of this study reinforce prior research that found special education paperwork to be a stressful and tedious task. Participants stated that paperwork is often viewed negatively, and that it is not consistently used as a tool to enhance the academic growth of their students.

Regardless of national origin, or the amount of bureaucracy associated with being a SET, the results of this study suggests that educators are happier and more satisfied when they regularly are engaged in tasks directly associated with helping children learn. These findings align with the belief that role conflict presents a significant problem for SETs. It is suggested that future studies investigate if role conflict leads to attrition for novice special educators.

A prominent suggestion brought up repeatedly by participants is the need for ongoing help and support. It is suggested that administrators, teacher-educators, and other stakeholders invest in multiple ways of providing paperwork assistance to novice teachers The utilization of mentors, in-service trainings, and formal induction programs all have the potential to increase teacher confidence and competence when it comes to paperwork. This is especially true when these techniques are used in tandem,rather than in isolation

A second suggestion, based on the interviews, is for teacher-educators and administrators to better explain the value of paperwork. IEPs should be discussed and treated as a valuable tool in planning, instruction, and assessment, rather than some sort of necessary evil.

Special education paperwork is not going to go away in the near future. In fact, due to increased accountability and societal litigiousness, the amount may even increase. Therefore, it is critical that the

field invests in on-going training, guidance, and communication to best support our new teachers, and, ultimately to provide our students with the quality education that they deserve.

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SCHOOL PSYCHOLOGY CROSSROADS IN AMERICA: DISCREPANCIES BETWEEN ACTUAL AND PREFERRED DISCRETE PRACTICES AND BARRIERS TO PREFERRED PRACTICE

Kevin J. Filter
Sara Ebsen
Minnesota State University

Rebecca Dibos

A nationally representative sample of American school psychology practitioners were surveyed to analyze discrepancies that they experience between their actual discrete practices and their preferred discrete practices relative to several domains of practice including assessment, intervention, meetings, and continuing education. Discrepancies were also analyzed relative to service delivery in three levels of prevention (primary, secondary, and tertiary). Results indicate that practicing school psychologists experience significant discrepancies between actual and preferred practices in all discrete practices, with the largest discrepancies by hours noted in the discrete practices of report writing, prevention screening, CBA/CBM administration, IQ testing, and conducting research. Respondents also indicated a clear preference for participating in significantly more primary-level and secondary-level prevention efforts. Barriers to preferred practices were analyzed with the most commonly reported barriers being time and administrative expectations. Findings are discussed in terms of emerging models of school psychology, including problem-solving and response-to-intervention, and implications for the international practice of school psychology.

School psychology is a profession historically defined by assessment activities with a particular focus on intelligence testing and informing special education eligibility decisions. However, recent trends in the field in the United States are moving away from some of these traditional roles toward focusing on systems-level efforts and assessment activities that inform intervention. While many American school psychologists have been trained in practices consistent with the recent trends in the field, such as consultation, assessment, intervention, research and program evaluation, preliminary research suggests that many are experiencing a discrepancy between what they are expected to do professionally and what they would prefer to do (Hosp & Reschly, 2002; Merrell, Ervin, & Gimpel, 2006). Given that job satisfaction among school psychologists has generally been high (Anderson, Hohenshil, & Brown, 1984; Levinson, 1989; VanVoohris & Levinson, 2006), limited attention has been devoted to issues of professional dissatisfaction, such as the discrepancy between actual and preferred practices. It is likely, though, that these discrepancies could become increasingly important to the field if left unattended. The purpose of the present study was to investigate the magnitude of this discrepancy and explore perceived barriers to preferred practices.

School Psychology as an International Discipline

School psychology is a discipline with varying identities and degrees of professional development around the world (Jimerson, Oakland, & Farrell, 2007). It emerged as a distinct discipline in the United States slowly over several decades in the 20th Century. The first training program in school psychology was established at New York University in 1928, the first organizations of school psychologists were formed at the state and national level in the 1940s, and the first national conference devoted to school psychology, The Thayer Conference, was held in 1954. Finally, in 1969 the National Association of School Psychologists (NASP) was founded (Merrell et al., 2006). The field has been changing significantly over the past century as has the definition of school psychology. On its website, NASP describes school psychologists as the following, *School psychologists help children and youth succeed*

academically, socially, behaviorally, and emotionally. They collaborate with educators, parents, and other professionals to create safe, healthy, and supportive learning environments that strengthen connections between home, school, and the community for all students. (http://www.nasponline.org/about_sp/whatis.aspx; retrieved August 9, 2012). Most definitions of school psychology generally include an emphasis on applying principles of psychology to issues in education (Merrell et al., 2006). It is also important to understand that school psychologists are generally tied very closely to special education and mandates requiring comprehensive evaluation of students in special education.

Around the world, school psychology has varying degrees of professionalization. Some countries, such as Canada (Saklofske, Schwean, Harrison, & Mureika, 2007), South Africa (Daniels, Collair, Moolla, & Lazarus, 2007), Norway (Anthun & Manger, 2007), and Brazil (Guzzo, Martinez, & Campos, 2007) use the term school psychologist. In many other countries, however, the roles of school psychologists are performed by people with the titles of counselor, psychologist, educational psychologist, or guidance counselor (Jimerson et al., 2007).

The current study should be of interest to an international audience because the role of school psychologist exists in some capacity all around the world and the changes that have been happening in the discipline within the United States may have implications for special education and school psychology internationally. This is particularly true to the extent that changes in the educational system seen in the United States (e.g., focus on accountability, evidence-based practice, and prevention) are also occurring in other places around the globe. As educational systems have changed in the United States, so has the discipline of school psychology.

Early Development of School Psychology and the Assessment Role

A review of the historical development of school psychology as a profession in the United States is important in understanding the current trends and changes in the discipline that may be leading to a discrepancy between actual and preferred practices. The development of intelligence tests is generally considered to be a major milestone in school psychology (Merrell et al., 2006). The first modern intelligence test developed by Binet and Simon at the turn of the 20th Century in France was designed to differentiate children based on their ability to be successful in the general education setting. Intelligence testing soon became a means of educational programming, used to identify an individual's opportunities and future (Merrell et al., 2006; Fagan & Wise, 2007). Hence, psychologists first became relevant in schools because of their unique ability to administer and interpret intelligence tests.

Since the 1970's school psychology is a field in the United States that has been largely defined by special education laws and federal funding (Nastasi, 2000). With the passage of PL 94-142 in 1975, later renamed the Individuals with Disabilities Education Act (IDEA), a free and appropriate education was mandated for students aged three to 21 with disabilities and required assessment for placement into special education classrooms (Prasse, 2008). Students can now qualify as having a disability under 14 categories and school psychologists are mandated to be directly involved with the assessment process for many of these disability evaluations. No Child Left Behind also impacted the role of school psychologists, as it called for all students to be proficient in basic academic skills by the years 2013-2014, thereby increasing the value of quality services based on comprehensive individual evaluations (Merrelll, et al., 2006; Tilly, 2008).

Recent Trends

Many professionals in the field of school psychology are pushing to replace the traditional gate-keeper orientation of school psychology with a preventative problem-solving orientation. Perhaps the most fundamental shift between these orientations is that assessment be directly linked to intervention rather than used as a tool for sorting students into service categories. The problem solving orientation is an avenue that links assessment to intervention and is predicated on early intervention, monitoring of outcomes through continuous data collection, and a focus on the function of behavior (Reschly, Tilly, & Grimes, 1999; Tilly, 2008). Problem solving occurs in four stages: (a) identifying a problem, (b) determining the cause of the problem, (c) developing and implementing interventions, and (d) determining if interventions were effective. Therefore, a problem-solving orientation necessitates the use of assessments that inform interventions and increased involvement on the part of the school psychologist throughout all stages of the problem solving model, particularly consultation and intervention related activities.

A recently emerged model of service that supports a shift toward problem solving is response-to-intervention (RtI; Tilly, 2008). RtI is a robust model that can be applied to the provision of academic, behavior, and mental health services in schools (Daly, Martens, Barnett, Witt, & Olson, 2007; Fairbanks, Sugai, Gaurdino, & Latrhop, 2007; Merrell, et al., 2006; Sugai & Horner, 2006). In an RtI model, formative data are continuously gathered for decision making across all levels of prevention (primary, secondary, and tertiary). For example, an RtI model for academic achievement involves screening all students in a school using brief, psychometrically sound probes of basic skills and then determining which students are in need of more intense services based on a discrepancy from the norms and existing data regarding appropriate learning trajectories. As a student moves up the three-tiered levels of service delivery, she or he receives more intense assessments and services. In an RtI model, therefore, the role of the school psychologist shifts from gate-keeper to a focus on connecting assessment information to interventions.

With RtI and problem solving emphasizing intervention-focused assessment over eligibility-focused assessment, curriculum based measurement (CBM) has emerged as an alternative to the school psychologists' traditional focus on intelligence tests (Deno, 1989; Gresham & Witt, 1997; Shinn, 2008). CBM is a set of standardized, validated, brief fluency measures of basic academic skills in the areas of reading fluency, spelling, writing, math, and early literacy (Deno, 1985; Kaminski, Cummings, Powell, Smith, & Good, 2008; Shinn, 1989). A major advantage of using CBM probes is that they are directly related to the curriculum, are sensitive to changes in performance, and can be used as to monitor and identify students at risk for failure. These measures offer information that is useful in developing, implementing and monitoring interventions.

The movement away from a gate-keeping orientation toward a problem-solving orientation in school psychology is clearly supported in the *Blueprint* for the training and practice of school psychology that is published by the National Association of School Psychologists (NASP; Ysseldyke et al., 2006). The *Blueprint* specifies that school psychologists achieve the desired outcomes of improved competencies for all students and build the capacity of systems through a three-tiered preventative delivery system using foundational competencies that include, among others, data-based decision-making and accountability. It further specifies that *school psychologists must also possess a set of skills, including the ability to use problem-solving and scientific methods…* (p. 14) as well as *be instructional consultants who can assist parents and teachers…* (p.13). With the guidance and support of NASP (e.g., *Blueprint, Best Practices V*), federal legislation (*IDEA 2004*), and numerous researchers in the field, it seems likely that a problem-solving orientation will continue to grow in school psychology.

Role Conflict and Barriers to Preferred Practice

Although historical factors led to a strong assessment-orientation and special education gate-keeper role for school psychologists, recent data indicate more diverse practices among school psychologists than previously found. Bramlett, Murphy, Johnson, Wallingsford, and Hall (2002) surveyed three-hundred members of the NASP and found that, although assessment was the most common activity among respondents (46% of their time), they also spent 29% of their time in consultation (16%) and intervention (13%), and the remainder of their time in counseling (8%), conferencing (7%), supervision (3%), continuing education (2%), research (1%), parent training (1%), and other (3%). As Bramlett and colleagues found, assessment consumes a considerable percentage of school psychologist's time. The researchers projected that both school psychologists amount of engagement in assessment activities and the nature of those assessments activities may change in the years to follow (Bramlett et al., 2002). Due to factors previously discussed, such as Amendments to IDEA, school psychologists were predicted to engage in more intervention-based assessment which would entail gathering data more frequently in order to make decisions. This trend has yet to be documented. Bramlett and colleagues also found a slight decrease in the time allocated to consultation compared to previous studies, even though it is prominent among the school psychology literature. Consistent with consultation, increased intervention services are frequently suggested in the literature but continue to make up a small percentage of a school psychologists time.

Hosp and Reschly (2002) looked at the amount of time school psychologists spent in various professional activities and reported that respondents to their survey of 1,423 NASP members spent one half or more of their time per week in assessment activities (22.2 hours), 7.6 hours per week in intervention activities, 9.2 hours per week in consultation activities, and one hour per week engaged in research activities. While these findings included significant regional differences in the relative amount of time spent in each of these activities, they were highly similar to previous research in the area. In a national survey done by

Bramlett and colleagues (2002), respondents indicated spending 46% of their time on assessments and assessment-related activities. Other roles included consultation (16%), providing direct interventions (13%), and counseling (8%). Respondents only indicated spending 1% of their time on research and research evaluation.

Similarly, Reschly and Wilson (1995) found that school psychologists were spending over half of their time involved in psychometric assessments, 20% of their time was devoted to providing direct interventions to students, and less than 5% devoted to evaluating research and consulting at the organizational level. Reschly and Wilson also examine the preferred roles of the school psychologists. Desired time allocations included assessments (32%), providing direct interventions (28%), Problem-solving Consultation (23%), organizational consultation (10%) and research evaluation (7%). Findings by Reschly and Wilson (1995) are consistent with recent literature. While school psychologists recognize the necessity of assessment practices, the majority desire a more diverse role that includes a shift in assessment practices toward those that inform interventions and increased time devoted to intervention, consultation and research (Worrell, Skaggs, & Brown, 2006). In an investigation examining the role preferences of school psychologists, Worrell and colleagues found that desired roles had changed very little over the course of 22 years. Additionally, as alluded to earlier, with recent changes towards the implementation of RtI and problem solving models, school psychologists would prefer roles more focused on larger systematic issues (Merrell et al., 2006; Shapiro, 2000).

Due to the conflict between actual and preferred practices, most school psychologists are advocating for role expansion (Merrell, et al., 2006). In order to impact school psychologist role reform toward more preferred practices, it is first vital to identify the barriers that are creating resistance. Curtis, Grier and Hunley (2004) suggest that the shortage of school psychologists and increased school psychologist-to-student ratios act as barriers and result in less opportunity for school psychologists to engage in activities outside of those dictated by state legislative and district mandates. Recent findings also indicate that limited teacher perceptions of the breadth of services school psychologists provide may present a barrier to preferred practices (Gilman & Medway, 2007). When compared to special education teachers, general education teachers reported less knowledge on the roles and services provided by school psychologists, rated school psychologists as being less helpful to students, and gave lower ratings of overall satisfaction with the services provided by school psychologists.

Present Study

Through an understanding of the discrepancies between actual and preferred practices and the barriers that perpetuate the discrepancies, steps can be taken toward reducing the discrepancies and implementing practices that improve outcomes for a wide range of students. Although preliminary research has indicated that discrepancies between actual and preferred practices are common, all studies to date have focused on broad categories of practice rather than discrete practices (i.e., assessment rather than IQ testing and CBM administration). Further, no studies have addressed discrepancies in terms of various levels of prevention (e.g., primary, secondary, and tertiary) or the variables that predict discrepancies. The present study, therefore, adds to the literature by measuring the extent and significance of current discrepancies between actual and preferred practices in terms of discrete practices and levels of prevention, analyzes demographic factors that predict major discrepancies, and identifies potentially malleable barriers to preferred practices using a nationally representative sample of school psychologists.

Method

Participants and Procedures

Respondents for this survey were practicing school psychologists in the United States were selected from a random sample of 1,000 members of the NASP based on 2008-2009 membership. In order to select only school psychologists who were practicing in the field, the sample used excluded those working at colleges/universities and retired and student members. Completed surveys were returned by 216 respondents for an overall response rate of 21.6%. A demographic description of respondents as compared to the membership of the NASP is provided in Table 1. Completed surveys were received from 41 states and one came from Spain. States from which at least 10 surveys were received include CA, FL, MA, NY, OH, and PA.

Table 1. Demographic Characteristics of Respondents as Compared to the Membership of NASP

Demographic Variable	Respondents	NASP Membership (2008-2009)
Gender		
Female	82.4%	76.8%
Male	17.6%	23.2%
Ethnicity		
Black/African American	1.9%	3.3%
White/Caucasian	93.1%	87.0%
Asian American	0.5%	1.9%
Hispanic or Latino	0.5%	7.1%
American Indian	0.0%	0.6%
Two or More Races	4.2%	Not available
Degree		
Bachelors	Not available	5.3%
Masters	6.0%	12.1%
Masters + 30	26.9%	33.1%
Specialists	41.2%	21.9%
Doctorate	25.9%	27.6%

Survey packets were mailed to the sample of 1,000 practicing school psychologists in March, 2008. Included in the packets were the questionnaires, a postage-paid return envelope, and a slip of paper on which respondents could write their name and address in order to be entered into a drawing for a $10 Target gift card. Reminder post cards were mailed out in April and gift cards were mailed out in June after all surveys had been received.

Materials

The survey was 10 pages long and took approximately 45 minutes to complete.

The survey included five distinct sections: (a) demographics, (b) multicultural experiences, (c) professional practices, (d) job satisfaction and organizational commitment, and (e) multicultural competence. The present study focuses only on the professional practices and demographics sections of the survey.

The professional practices section of the survey required respondents to indicate the number of hours they actually spend and would prefer to spend in various professional activities. The range of professional activities included assessments, interventions, meetings, trainings, and other (including report writing and research), each of which included multiple discrete practices (e.g., IQ testing, behavior rating scales, and achievement testing under assessment). In total, respondents reported on 23 discrete practices. Definitions of each discrete practice are included in the Appendix. Also included in the professional practices section of the survey were items for which respondents indicated percentage of time actually and preferably spent in general education and the three levels of prevention: primary, secondary, and tertiary. A description of each level of prevention was included in the survey because pilot research had indicated that respondents often misunderstood how these levels of prevention related to their practice (see Appendix for definitions). Finally, a sub-section on barriers to preferred practice was included wherein respondents endorsed checklist items that they perceived to be barriers to preferred practice followed by an open-ended narrative statement wherein respondents described perceived barriers to preferred practice. The list of items on the barriers checklist was derived from the findings of a piloting of a similar survey using open-ended questions.

Data Analysis

Current practices of school psychologists and perceived barriers were summarized using descriptive statistics (e.g., means and standard deviations). Discrepancies between actual and preferred practices were analyzed using paired-samples *t*-tests. Multiple regression analyses were conducted to determine the predictors of major discrepancies (IQ testing, CBA/CBM, staff consultation, research, report writing, general education, and the three levels of prevention). For these analyses, the discrepancies were the criterion and demographic variables (years in practice, years until retirement, highest degree earned, and psychologist-to-student ratio) were the predictors. Separate regression analyses were run for each discrepancy.

Results

Actual Practices

The actual practices reported by practicing school psychologists were reported as hours per week for discrete professional activities and as a percent of total hours for levels of service. Discrete professional activities and levels of prevention are reported separately because different metrics were used for each (hours per week and percent of time, respectively).

Discrete Professional Activities. The mean hours per week actually spent in various discrete professional practices is presented in Figure 1. The three most common activities reported were report writing (M = 7.46; SD = 5.42), IQ testing (M = 5.69; SD = 4.99), and staff consultation (M = 5.47; SD = 5.94). The three least common activities reported were academic instruction (M = 0.32; SD = 1.28), research (M = 0.46; SD = 1.19), and program evaluation (M = 0.51; SD = 1.70).

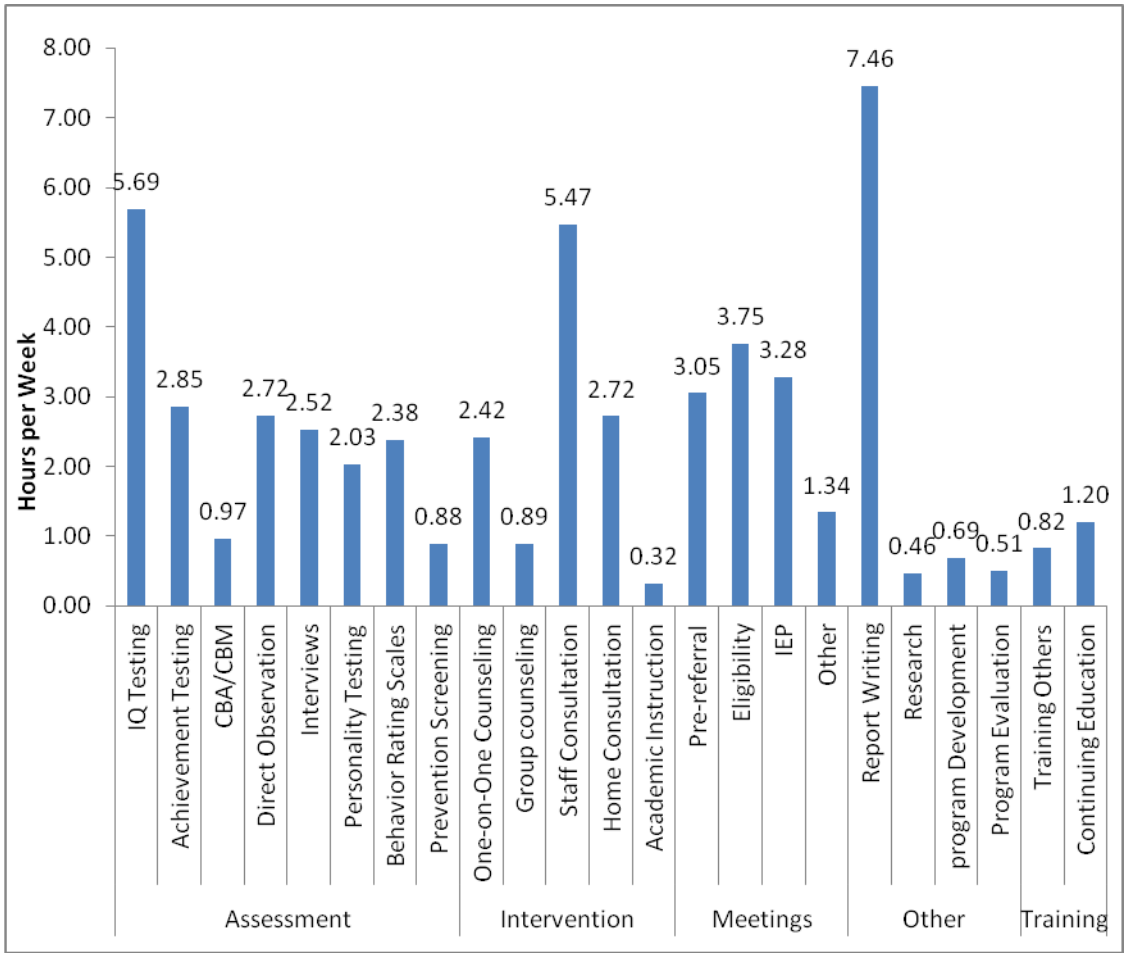

Figure 1. Number of hours per week school psychologists reported actually spending in discrete professional activities.

Levels of Service. The percent of hours actually spent in each of the three levels of prevention and in general education is reported in Figure 2. Respondents reported spending the largest percent of their time in tertiary prevention (M = 49.36; SD = 30.44) and the percent of their time in primary prevention (M = 10.39; SD = 13.34). Respondents also reported spending a mean of 17.13 percent of their time working with general education issues (SD = 23.52) which suggests that a majority of the time of the practicing school psychologist is spent dealing with special education issues.

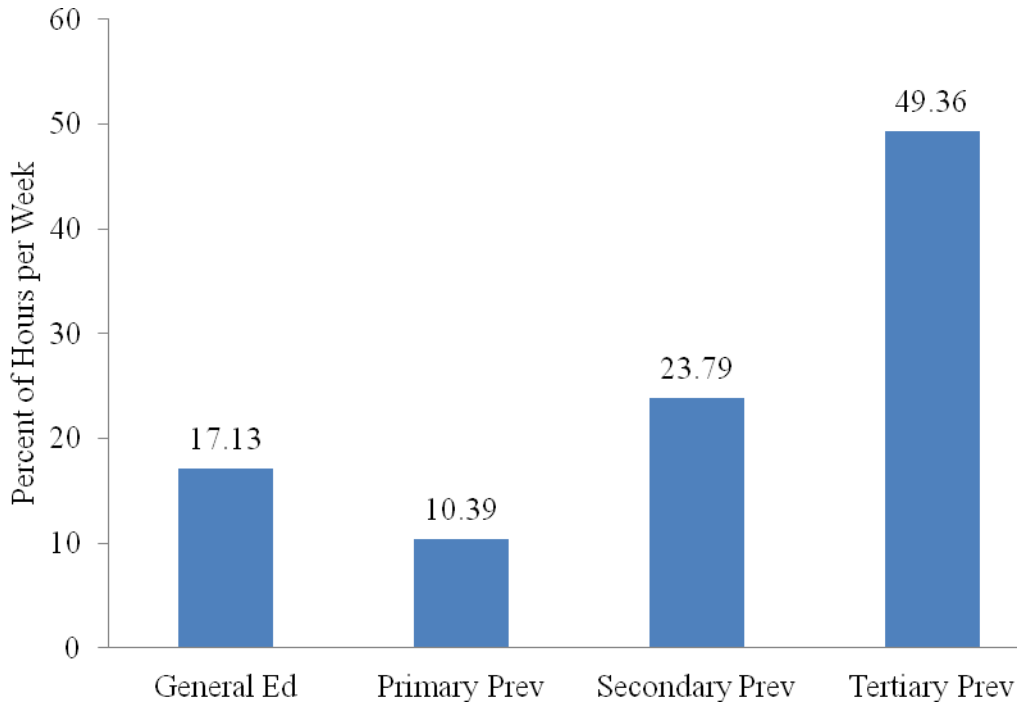

Figure 2. Percent of hours per week that school psychologists reported spending working in various levels of service delivery.

Discrepancies between Actual and Preferred Practices

Discrete Professional Activities. Discrepancies between the mean hours per week that practicing school psychologists actually spend per week and prefer to spend per week in various discrete professional activities is presented in Figure 3. There were several activities that respondents generally preferred to do less than they actually do, such as report writing, IQ testing, and special education eligibility meetings, with mean discrepancies of -3.34 (SD = 4.10), -1.83 (SD = 3.76), and -1.21 (SD = 3.07), respectively. There were also several activities that respondents generally preferred to do more than they actually do, such as prevention screening, curriculum-based assessment/curriculum-based measurement, and research, with mean discrepancies of 2.31 (SD = 4.10), 2.05 (SD = 3.62), and 1.74 (SD = 3.87), respectively. Statistically significant discrepancies ($p < .02$) were found for each discrete practice based on paired-samples *t*-tests.

Levels of Service. Figure 4 depicts the discrepancies between the percent of hours per week that practicing school psychologists actually spend and prefer to spend in the three levels of prevention and in general education. Results indicate that respondents would prefer to spend less time in tertiary prevention with a mean discrepancy of -18.13 (SD = 26.35) and more time in general education, primary prevention, and secondary prevention with mean discrepancies of 13.12 (SD = 16.60), 18.78 (SD = 19.26), and 4.75 (SD = 20.42), respectively. Paired samples *t*-tests indicate significant discrepancies ($p < .001$) for each level of service.

Predictors of Major Discrepancies between Actual and Preferred Practices

A multiple regression analysis was conducted to determine the predictors of discrepancies between actual and preferred hours spent in IQ testing, curriculum-based assessment/curriculum-based measurement, staff consultation, research, report writing, and the percent of time spent in general education and the three levels of prevention. These practices were selected because of their relevance to recent changes in the field and the magnitude of their discrepancies. The same four predictors were used for all of the analyses: years in practice, years until retirement, school psychologist-to-student ratio, and highest degree earned. Analyses of IQ testing ($F = 5.51$, $p < .001$, $R^2 = .111$) and curriculum-based assessment/curriculum-based measurement ($F = 2.85$, $p < .05$, $R^2 = .063$) produced statistically significant predictive models (see Table 2). Years until retirement was a significant predictor of discrepancies for both IQ testing and curriculum-based assessment/curriculum-based measurement. Predictive models for the other practices were not statistically significant.

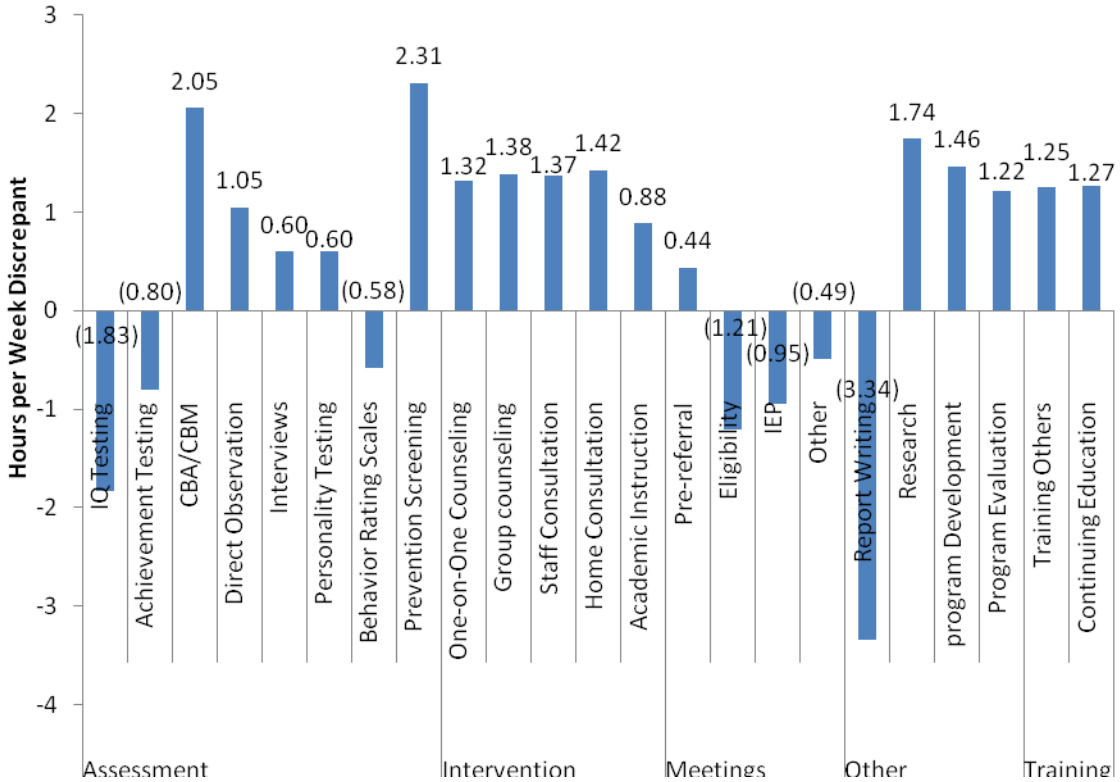

Figure 3. Discrepancies in hours per week actually and preferably spent in discrete professional activities by school psychologists

Note: All p's < .02

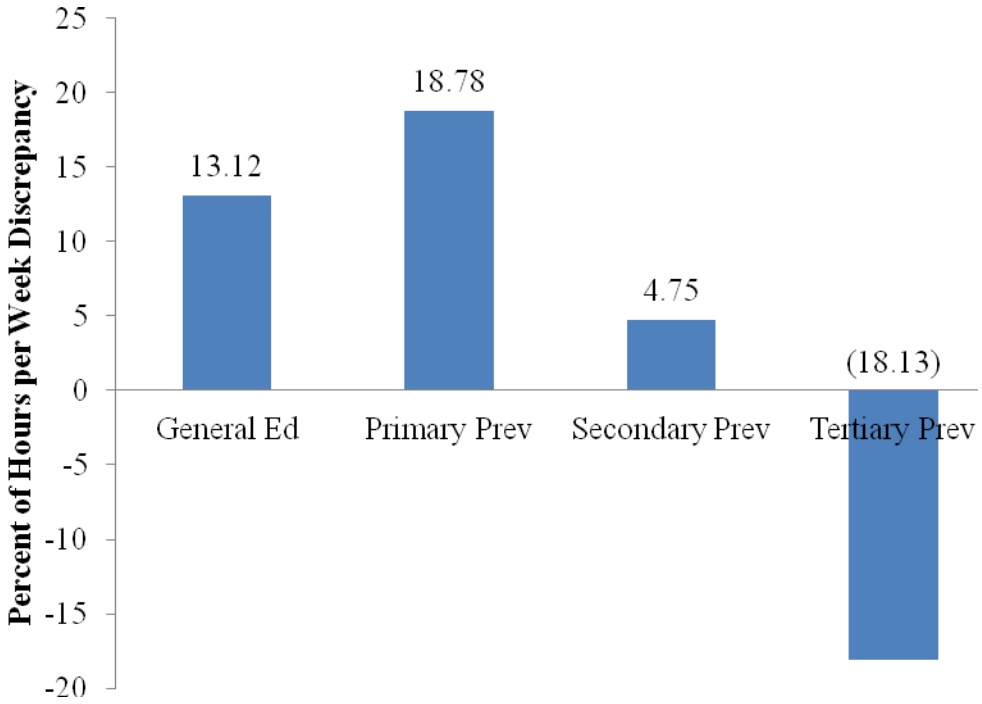

Figure 4. Discrepancies in percent of hours per week actually and preferably spent working in various levels of service delivery by school psychologists.

Note: All p's < .001.

Table 2: Multiple Regression Analysis of Predictors of Discrepancies between Hours Actually and Preferably Spent Administering IQ Tests and Curriculum-Based Assessments/Curriculum-Based Measurement

Discrete Practice	IQ Testing			CBA/CBM		
Variable	B	SD	β	B	SD	β
Years in Practice	-.063	.046	-.152**	.029	.045	.075
Years Until Retirement	-.142	.043	-.369***	.093	.041	.261*
Psychologist-to-Student Ratio	-.459	.157	-.209	.051	.155	.025
Highest Degree	.401	.330	.087	-.611	.322	-.142

Note. *p < .05, **p < .01, ***p < .001

Barriers to Preferred Practice

To determine why school psychologists were not able to engage in their preferred practices, respondents were presented with a checklist of potential barriers and were instructed to select as many as they perceived were relevant to their practice. The percent of respondents who endorsed specific barriers is reported in Figure 5. The most commonly cited barriers were time (79.6%), administrative expectations (63.9%), school psychologist-to-student ratio (56.0%), and working in multiple schools (56.0%). The least commonly cited barriers were expectations of other school psychologists (7.9%), expectations of parents and families (15.7%), and practices of predecessor (17.1%).

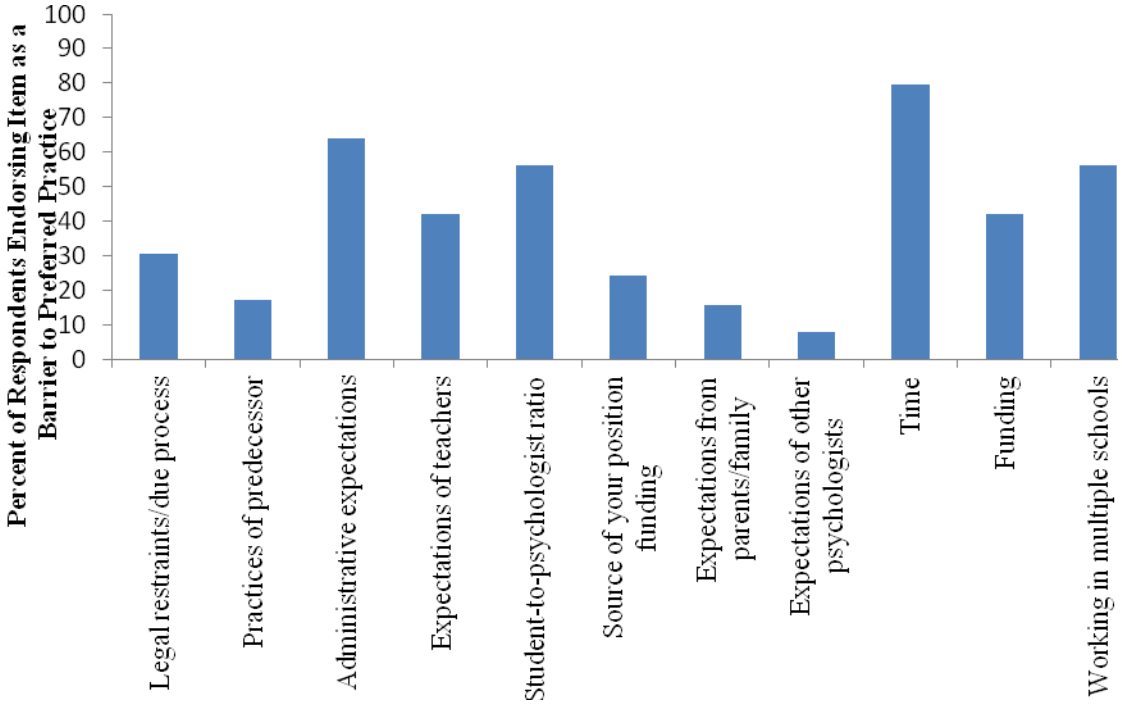

Figure 5. Percent of respondents endorsing specific barriers to preferred school psychology practice.

Discussion

The findings from the present study support previous findings that school psychologists generally experience significant discrepancies between actual and preferred practices (Hosp & Reschly, 2002). The present study extended these findings by demonstrating that the significant discrepancies exist for every discrete practice measured and for services across all three levels of prevention. Some of the larger discrepancies as measured by total numbers of hours discrepant were found for practices that are tied closely to major trends in the field. For example, IQ tests have been a major point of contention during the transition from a gate-keeper model of school psychology toward a problem-solving model (Gresham & Witt, 1997; Willis & Dumont, 2006). As the field moves toward a problem solving model the relevance of the IQ test to the assessment process seems to be decreasing. It is not surprising then to find in the present study that school psychologists report spending 5.69 hours per week administering IQ tests

but prefer to spend 1.83 hours per week less in this discrete practice. Further, IQ tests have traditionally comprised significant portions of reports written by school psychologists and the present sample reported wanting to spend 3.34 hours less per week writing reports.

As the field moves toward problem-solving, driven in part by recent changes in IDEA, it is also reasonable to expect that CBAs, including CBM, will experience an increase in usage due in large part to their strong treatment validity (Gresham & Witt, 1997; Shinn, 2008). The school psychologists in the present sample reported spending just under one hour per week administering CBA/CBMs but would prefer to spend over three hours per week in this discrete practice that is useful in planning and monitoring acacdmic interventions. It is interesting to note that when demographic variables were used as predictors to determine which practitioners were most likely to experience the discrepancies between actual and preferred practice for the discrete practices of IQ tests and CBA/CBM, years until retirement was the strongest predictor for both. These differences could be due to the fact that those newer in the field have received more training CBA/CBM practices. Based on the correlational direction of these variables, this suggests that those who are furthest from retirement are most likely to experience a discrepancy between how much time they actually spend administering IQ tests and CBA/CBMs and how much time they would prefer to spend administering them. It is reasonable to assume, then, that newer school psychologists are generally entering the field with the expectation that they will be able to engage in more problem-solving activities and fewer gate-keeping activities but the realities of practice are often more reflective of the traditional gate-keeper role.

Regarding prevention, this study found that school psychologists would prefer to spend significantly more time in primary prevention activities and secondary prevention activities than they do at present. In fact, they would prefer to spend 190.47% more time in primary prevention than they presently do. Conversely, respondents would prefer to spend 57.06% less time in tertiary prevention than they do at present. In a study school psychology counselors in Norway, Idsoe (2006) found that professional activities related to systems-level prevention strongly predicted job satisfaction, job commitment, and organizational commitment; whereas activities related to individual student treatment activities did not. Therefore, it appears that school psychologists are embracing the recent trend toward systems-level service delivery that is promoted in the most recent *Blueprint* for school psychology training (Ysseldyke et al., 2006) but systems-level service delivery is still more of an ideal than a typical practice.

Another contribution of the present study is the inclusion of perceived barriers to preferred practice. Some researchers have speculated that increasing student-to-psychologist ratios and teacher expectations of services have been barriers to preferred practice but little empirical research has validated these perceptions with a practitioner population (Curtis, Grier & Hunley, 2004; Gilman & Medway, 2007). The present study found that over half of all school psychologists agreed with Curtis and colleagues that the ratio of students to psychologists was a major barrier to preferred practice. Time was the most commonly cited barrier to preferred practice but it should be noted that time was significantly positively correlated with the student-to-psychologist ratio (Pearson $r = .21$). Working in multiple schools was also endorsed by over half of respondents and was the only other barrier significantly correlated with time (Pearson $r = .20$). Other than the time-related factors, the other most commonly cited barrier was administrative expectations, which was endorsed by over two-thirds of respondents. An important next step for the field of school psychologist will be build on the current efforts at role expansion that have been championed by many including the National Association of School Psychologists by systematically addressing the malleable factors that have now been identified as barriers.

The data from the present study were drawn from a larger survey packet that included 10 pages and took about 45 minutes to complete. The overall response rate of the study (21.6%) is lower than similar surveys of school psychologists but likely reflects the substantially greater length and intensity of this survey than most. This is a common limitation in research involving national surveys of school psychologists. Several recent national surveys of school psychologists have received low response rates (Chafouleas, Clonan, & Vanauken, 2002, 37%; Stinnett, Havey, & Oehler-Stinnett, 1994, 31% usable). Another limitation of the study is the selection of school psychologists from an organization membership list because not all school psychologists join national organizations. Given the lower response rate, it is possible that those who did not respond could be systematically different than those who chose to respond. Therefore, interpretations of the present findings should be made in light of this fact.

Conclusion

As school psychology in the United States sits at a crossroads of models, undergoing a change from the traditional gate-keeper orientation to the more recent problem-solving orientation, it is not surprising to find that there is some discrepancy between what practitioners prefer to do and what they actually do. Such was the finding of the present study. Although this discrepancy is nothing new, it is clear that the current specific discrepancies reflect changes in areas of practice relevant to the new trends in the field. School psychologists want to do more assessments that inform interventions and fewer assessments that inform placement decisions. They want to spend more time involved in systems-level service delivery and less time working with the most severe individual-student problems. It appears that administrative expectations and factors that drain time from current practitioners, such as student-to-psychologist ratios and working in multiple schools are the primary barriers to achieving preferred practices. Therefore, it is incumbent on the field and those who supervise school psychologists to reduce these barriers and allow school psychologists to provide more systems-level and intervention-relevant services if we are to get past the crossroads and into a problem-solving reality. Since school psychology as a discipline varies in terms of scope and degree of professionalization internationally, it will be interesting to see if the changes occurring in the United States will be demonstrated in other countries. School psychologists in other countries and those that work with them might need to prepare for similar changes in the near future.

Appendix:
Definitions of the 23 Discrete School Psychology Practices and the Levels of Prevention

Assessments

- *IQ/Ability*: Administering and scoring cognitive assessments
- *Achievement (non-curriculum based)*: Administering and scoring standardized norm-referenced tests of achievement
- *Curriculum Based Assessment/Measurement*: Short-duration probes that measure mastery of general outcomes of basic academic skills (e.g., 1-minute oral reading fluency)
- *Direct Observations*: Observing student behavior in the school context
- *Interviews*: Direct conversations with students, staff, and/or family about student performance or behavior
- *Personality / Mental Health*: Administering and scoring measures of student personality or mental health (e.g., personality inventories)
- *Behavior Rating Scales*: Administering and scoring measures of student, staff, or family perceptions of student behavior
- *Prevention Screening*: Administering and scoring measures that are designed to identify the needs of all students and not specific to special education

Interventions

- *One-on-one counseling*: Direct support to students for mental health concerns
- *Group counseling*: Direct support to students in a group format for mental health or social concerns
- *School Consultation with staff*: Working with staff to support student needs
- *Consultation with parent and/or family*: Working with family to support student needs
- *Academic Instruction*: Direct academic support to students, often in a group setting

Meetings

- *Pre-referral / Student Assistance Teams*: Meetings to discuss student needs and arrange supports outside of special education
- *Eligibility / Evaluation Summary*: Meetings to discuss the results of individualized testing for the purpose of determining special education eligibility
- *IEP Team*: Meetings to discuss a students' Individualized Education Plan for special education.
- *Other*: Any meetings that school psychologists attend other than the three listed above

Programming/Research/Writing

- *Report writing*: Writing the results of special education assessments or other assessments that will be included in student files.
- *Research*: Using scientific method and procedure to answer empirical questions (includes the writing and dissemination of the results of research)
- *Program Development*: Creation and implementation of programs in schools to support student development

- *Program Evaluation*: Using assessment to determine if programs are being implemented with fidelity, leading to satisfaction among stakeholders, and leading to desired outcomes

Professional Development

- *Professional Development of Others (Training)*: Providing professional development training to others, generally in the form of in-service staff trainings
- *Your Own Continuing Education*: Attending staff trainings, attending conferences, and completing self-study to build or maintain professional competence

Levels of Prevention

- *Primary, Universal Prevention*: Assessment and intervention services for all students in a school to prevent problems
- *Secondary, Targeted Intervention*: Assessment and intervention services for students at-risk
- *Tertiary, Intense Intervention*: Assessment and intervention services for students with significant problems

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SPECIAL EDUCATION PRACTICUM AT THE UNIVERSITY OF JORDAN: PRELIMINARY INDICATORS OF STUDENTS' SATISFACTION AND CONCERNS

Mohammad A. AL Jabery
Hatem A. AL Khamra
The University of Jordan

Due to the continuous growth of special education worldwide, highly qualified teachers are needed. The Special Education program at the University of Jordan places student teachers for their practicum in different educational settings. The purpose of this study was to report preliminary information about students' satisfaction and concerns about the practicum. A survey of two questions was distributed among 50 undergraduate students in the Spring 2010/2011 semester. Results revealed that students were not satisfied with their practicum experience. Students' concerns highlighted issues related to stakeholders' partnerships, connections between university courses and practicum requirements, supervision, mentors, and field sites. Discussion and recommendations are presented in the study.

Working in the field of special education requires teachers to gain specific knowledge and skills to meet different and emerging demands. The field requires highly qualified teachers to work with children with disabilities in different educational settings (Wilcox, Putnam, & Wigle, 2003). In this endeavor, universities are committed to provide students with good pre-service teacher preparation programs that assure good connection between theory and practice before actually entering the field (Hayes, 2002; Beck & Kosnik, 2002a; McLeskey & Waldron, 2004).

To maintain this goal, universities usually provide students with "*school-based extended practicum experience \(pre-service field experience)* (Ralph & Noonan, 2004, p. 1). During the practicum, students are required to enroll and work in field sites for a period of time in order to implement their knowledge and gain practical experiences (linking theory to practice) under the supervision of university professors and supervisors in addition to the field site cooperative teachers (also known as mentors) (Ralph & Noonan, 2004; Beck & Kosnik, 2002b; Allsopp, DeMarie, Alvarez- McHatton, & Doone, 2006).

This field experience or practicum is considered as a major part of the special education program, furthermore, it has been claimed that providing students or prospective teachers with field experience may enhance their knowledge in day-to-day classroom experiences (Hillman, Bottomley, Raisner, & Malin, 2000), teach them practical and effective instructional teaching strategies (Frey, 2008), help them observe accomplished teaching models (Sears, Cavallaro, & Hall, 2004), provide them with opportunities to bridge the theoretical and practical aspects of actual teaching practices (Wilson, Folden, & Ferrini-Mundy, 2001), and demonstrate the required competencies needed in the profession (Sears, Cavallaro, & Hall, 2004).

Investigating the practicum role in preparing prospective teachers has been a concern in many research studies. These studies have investigated topics such as practicum overall structure (Sears, Cavallaro, & Hall, 2004; Bouck, 2005; Gorunwater-Smith, 1996; Hayes, 2002; Cruickshank & Armaline, 1986; Prater & Sileo, 2004; Keener & Bargerhuff, 2006; Macy, Squires, & Barton, 2009; Newberger, 1982; Ralph & Noonan, 2004; Beck & Kosnik, 2002a, Murray-Harvey, 2001), practicum ability to link theory with practice (Allsopp, DeMarie, Alvarez-McHatton, & Doone, 2006; Moore, 2003), partnerships with mentors (O'Brain, Stoner, Appel, & House, 2007; Hudson, 2005; Bullough et al., 2002; Duquette, 1994;), partnerships between universities and field sites (Fueyo & Lewis, 2002), practicum supervision (Richardson-Koehler, 1988; Beck & Kosnik, 2002b), and practicum role in teacher long term career options (Connelly & Graham, 2009).

Results of these studies highlighted the importance of providing students with strong and effective practicum experience (Hillman, Bottomley, Raisner, & Malin, 2000). In addition, results indicated that if students experienced a well-structured practicum, the benefits were major especially in their abilities to work effectively with students, manage the field challenges, and stay in the profession for a long period of time (e.g., Ralph & Noonan, 2004; Beck & Kosnik, 2002a, Murray-Harvey, 2001). Finally, results of these studies emphasized that providing students with an appropriate mentoring process (e.g., O'Brain, Stoner, Appel, & House, 2007), reducing the gap between the practicum requirements and university course work (e.g., Beck & Kosnik, 2002a), and improving the quality of identifying placements (e.g., Potthoff & Alley, 1996) considered major issues ,that impacted supon tudents' experiences and practicum functionality.

Description of the program

The Special Education teacher preparation program at the University of Jordan is introduced at the undergraduate level (a 4-year program of study). The study plan at the university requests students to register for the practicum in the last year/semester before graduation. The practicum represents one full semester (offered either in the fall or spring semester) that lasts for 16 weeks and accounts for 12-credit hours. Students are enrolled in the practicum five days a week (each day for 7 hours) and participate in all teaching responsibilities presented in their assigned field sites. Students are required to fulfill all practicum requirements in order to pass and graduate. These requirements include preparing an IEP for each student they teach, develop behavior intervention plan, attend weekly meetings, provide instructions in the classrooms, participate in all academic and non-academic daily school activities, and pass two practical exams and one final written exam.

Supervising students is carried out under the guidance of one university professor and two supervisors who, cooperatively, organize and supervise students' work. Supervision is done on a daily basis and carried out fully by the supervisors and partially by the faculty member. Mentoring is implemented through cooperative field teachers assigned to students by the school. Mentors are responsible (in cooperation with supervisors) for monitoring students teaching, helping them to overcome any challenges, and provide them with feedback. In order to graduate from the program, students have to finish all practicum requirements, pass the practical and final exams, and be evaluated by their mentors and supervisors.

Significance of the study

Due to a reformation process conducted by our department, all components of the special education preparation program were scheduled for a full evaluation. The reformation process aimed to improve the current status of the program based on data collected by all faculty members who participated in the reformation panel. The data collection process took place during the academic year of 2010/2011.

Authors of this article were responsible for gathering data that aimed at examining the practicum (as a major component of the teacher preparation program) by exploring students' voices (i.e., satisfactions and concerns). For this purpose, data around the practicum were collected during the spring semester of the academic year 2010/2011. The selection of this semester was based on two reasons: (1) the need for immediate and preliminary indicators about the practicum to help in reconstructing the practicum before the beginning of the next academic year, and (2) the need for including and surveying as many students as possible in order to examine their opinions. Fpr this particular reason, our communications with practicum supervisors as well as the practicum faculty member indicated that the majority of our students enroll in the practicum during the spring semester. This enrollment was restrained by the department eligibility requirements that required students to finish all of the course work included in their study plan before registering for the practicum.

Another reason for conducting this research was the authors' sense that the practicum was implemented for a long period of time and has not been evaluated until now. Although the data provided are limited to this particular semester and this academic year, it was the author's decision that students' voices were worth to be reported as they were similar to other research studies reported in the literature.

Overall, this paper describes the results of a survey aimed at examining students' satisfactions and concerns regarding he practicum, providing preliminary information to guide the reformation process conducted by the University, and evaluating the overall structure of the practicum.

Methods

Participants and Settings

A total of 50 undergraduate students (18 males and 32 females) were enrolled in the practicum during the spring semester of the academic year of 2010/2011 and participated in this study. All students participated in the practicum were placed in seven private-self contained special education institutions that serve children with Intellectual Disabilities and Autism Spectrum Disorders as well as four private schools that serve children with Learning Disabilities via five attached resource rooms in the capital city of Jordan-Amman. Among the 50 students, 20 (40%) had their practicum in the area of Intellectual Disabilities, 14 (28%) in the area of Autism Spectrum Disorders, and 16 (32%) in the area of Learning Disabilities (Table 1).

Each practicum student was assigned to teach two students with disabilities; attend to their field site for five days in a week (from 8 am to 2 pm) during the entire period of the practicum that lasts for 16 weeks; participate in all academic and non-academic activities implemented by the field site, and fulfill all practicum requirements.

Instrumentation and Implementation

A survey form was constructed (see Appendix A) and composed of two questions. Question 1 prepared to gather information about students' satisfaction with their practicum experience on eight items using a five point Likert-type scale (ranged from (1) indicating "*not very satisfied;* (3) indicating "*neutral*; and (5) indicating "*very satisfied*).

Table 1: Distribution of Participants According to Gender and Category Choice of Disability for the Practicum

Variable	N (%)
Gender	
Males	18 (36%)
Females	32 (64%)
Category choice of disability	
Intellectual Disabilities	20 (40%)
Autism Spectrum Disorder	14 (28%)
Learning Disabilities	16 (32%)
Distribution of field sites based on the type of disability	
Intellectual Disabilities	5
Autism Spectrum Disorder	2
Learning Disabilities	4

Statements included in Question 1 addressed eight issues assumed to be essential for a good practicum experience mentioned in the literature (e.g., Macy, Squires, & Barton, 2009; Keener & Bargerhuff, 2006; Prater & Sileo, 2004; Ralph & Noonan, 2004; Beck & Kosnik, 2002a; Newberger, 1982). These issues aimed at measuring students' satisfaction with the practicum structure in general (e.g., satisfaction with practicum duration, supervision, mentors, and field sites) as well as benefits from participating in the practicum (personally and professionally).

Question 2 of the survey included an open-ended question asked students' to list their concerns about the practicum in specific statements. The purpose of this question was to allow students to voice their concerns. These concerns intended to represent a need for a change that might be essential and to gain more insights into students' experiences with the practicum in a wider perspective.

To establish the face validity for the survey, an initial version was given to seven faculty members from the Department of Counseling and Special Education and Department of Educational Psychology at the University of Jordan. All reviewers' comments and suggestions were taken into consideration and were incorporated in the final survey. The survey statements were also given to practicum supervisors and three cooperative mentors to assess its suitability for the research purposes. All reviewers indicated the survey's ability to measure students' satisfaction and concern with the practicum. Reliability indicators were obtained by piloting the survey on fifteen students (not included in the study sample). The value of Cronbach Alpha for Question 1 statements was .862.

The implementation process included asking students to attend an evaluation meeting in the last week of their practicum. During this meeting, the first author directly distributed the survey to students with a

cover letter that explained the purpose of the study and the response procedures. All distributed surveys were directly collected, resulting in a response rate of 100%.

Data Analysis

The data were entered and analyzed using the Statistical Package for the Social Sciences (SPSS-16.0). Descriptive statistics (e.g., frequencies, means, standard deviations, and percentages) were presented in the result section. In addition, one-way ANOVA and independent samples *t* test were used to test for any statistically significant differences between students' gender and their category choice of disability. A p-value of 0.05 was retained as the level for statistical significance in the analysis. In regard to students' concerns, statements were counted and presented alongside with their percentages.

Results

Question 1: Students' Satisfaction

The purpose of Question 1 statements was to identify students' level of satisfaction in relation to eight statements assumed to be essential for assuring good practicum experience. Results related to students' satisfaction indicated a low average of satisfaction in relation to all statements included in question number 1. This result was based on dividing students' responses into three satisfaction categories: (1) low satisfaction category with a range of (1-2.33), (2) average satisfaction with a range of (2.34-3.66), and (3) high satisfaction with a range of (3.67-5.00). The overall mean of students' satisfaction with all statements included in question number 1 was 2.33 (*SD* = .97; range from 1.86 to 2.64), reflecting the upper limit of the low average of satisfaction category.

Table 2: Means, Standard Deviations, Percentages, and Satisfaction Category on Each Statement included in Question 1

Practicum Areas	*M*	*SD*	% of Student Satisfaction	Satisfaction Category
Overall satisfaction with practicum experience in general	2.64	.827	66%	Average
Overall satisfaction with Practicum cooperative teachers (mentors)	2.60	.700	62%	Average
Practicum ability to facilitate personal development	2.46	.851	60%	Average
Overall practicum supervision	2.42	1.26	52%	Average
Practicum requirements as specified in the syllabus	2.40	.948	48%	Average
Practicum level of preparation for actual teaching situations	2.28	1.107	42%	Low
Overall satisfaction with field sites	1.98	.958	32%	Low
Overall satisfaction with practicum duration (16 weeks)	1.86	1.14	28%	Low

Table 2 presents students' responses on each statement ranked by its mean from highest to lowest with an indication of the satisfaction category for each one of them. Out of the eight statements included in question number 1, five statements had a mean of satisfaction within the average satisfaction category; three statements had a mean of satisfaction within the low satisfaction category; and none of the statements had a mean within the high satisfaction category.

Among the five statements listed in the average satisfaction category, students were satisfied with the overall practicum experience (*M* = 2.64, *SD* = .82; 66%); overall practicum mentors (*M* = 2.60, *SD* = .700; 62%); and practicum ability to facilitate personal and professional development (*M* = 2.46, *SD* = .85; 60%). On the other hand, the three statements that presented in the low satisfaction category included issues of practicum ability to prepare students for actual teaching (*M* = 2.24, *SD* = 1.10; 42%); overall satisfaction with field sites (*M* = 1.98, *SD* = .95; 32%); and overall satisfaction with practicum duration (*M* = 1.86, *SD* = 1.14; 28%). It is important to mention that none of the students have marked the option "*neutral* as a response to any of the eight statements included in the question; since they were encouraged to provide us with their sincere level of satisfaction.

Moreover, to test for any significant differences in students' overall mean of satisfaction on all statements included according their category choice of disability, results of one-way ANOVA revealed no significant differences in students' overall satisfaction that could be attributed to this factor, *F*(2, 47)

= 1.72, p = .189. In addition, results of independent sample t test revealed no statistically significant differences between students' overall satisfaction and their gender $t(48)$ = .-1.26, p = .21.

Question 2: Students' Concerns

Question 2 in the survey asked students to express their concerns in relation to their practicum experience in term of specific statements. Authors have reviewed all of students' statements to reach to common issues that might affect or hinder students from experiencing an effective practicum experience.

Table 3: Issues of Students' Concerns Related to the Practicum

Students' Concern Statements	Issues	Percentages
Sense of disconnection between practicum requirements and university course work	Practicum	67%
Feeling of distress because of practicum requirements	Structure	43%
Complaining about the workload inline of practicum duration		38%
Inadequacy of supervisors total number of visits		35%
Questioning communication time with supervisors		35%
Insufficiency of supervisors' feedback quality and quantity	Supervision	15%
Providing practical support from mentors		30%
Mentors level of expertise		25%
Mentors hesitation in giving teaching responsibilities to practicum students	Mentors	20%
Difficulties in transportation to and from the field sites		76%
Appropriateness of the field site to meet practicum goals	Field	36%
Criticism of the relation between field sites activities and practicum requirements and goals	Sites	16%

Four common issues were implied in the students' responses. Table 3 lists the most common concerns cited by students alongside with their issues and their percentages. The first issue was related to practicum structure in general. This issue was expressed by (1) students' sense of disconnection between practicum requirements (e.g., assignments) and university course work (67%); (2) students' expression of being distress because of practicum requirements (43%); and (3) students' complains about practicum workload and practicum duration (38%). In relation to the disconnection between the practicum and the course work, students commented that they neither were confident nor competent enough to develop some of the practicum requirements; although they have taken courses related to these requirements. For example, students are required to take a course in managing problematic behavior. However, when it comes to developing and implementing a behavior management plan (one of practicum assignments) they did not feel confident of doing that.

Continuously, students considered practicum requirements as "*too much*, especially in taking the duration of the practicum (that lasts for 16 weeks) and students' responsibilities. In this matter, students expressed in their answers that they felt in need to finish their assignments as fast as possible (with low quality) to match the due dates assigned in the syllabus. Others mentioned that in some assignments (e.g., developing an IEP), practicum supervisors had to extend the due dates many times in order to give students the chance to finish them.

The second issue was supervision. In this issue: (1) Thirty five percent of students indicated the inadequacy of the total number of supervisors' visits (they also mentioned the shortage in supervisors' number); (2) Thirty five percent of students questioned the communication time with their supervisors provided during the practicum; and (3) Fifteen percent felt that the feedback provided by their supervisors was insufficient in term of quality and quantity.

Moreover, the third concerning issue was related to mentors. This issue was delineated by students statements in which (1) Thirty percent of them felt that their mentors did not provide them with practical support; (2) Twenty-five percent of students questioned their mentors' level of expertise; and (3) Twenty percent indicated that their mentors were hesitant to give them some teaching responsibilities. In addition, students stated that some of their mentors were freshly graduates (17%) without any teaching

experiences, others were not specialized in special education (12%), and a little (7%) carried some unenthusiastic/negative attitudes (e.g., refusing to mentor students, considering them as extra load, and fears of letting them teach their students).

The final issue was related to field sites. The majority of the students (76%) outlined difficulties in transportation to and from the field site. Students wished that the university would provide them with this service. Around 36% of the students felt that their field site were not appropriate place to have an effective practicum experience. In this specific issue, students indicated dislikes of the overall atmosphere found in their field sites (56%), missing the concept of teamwork (46%), seeing effective collaboration with families (66%), observing effective communication between the staff (70%), and questioning (33%) the overall field site structure (e.g., number of students in each classroom, student-teacher ratio, and size and safety of the building). Finally, 16% of the students criticized being engaged in other activities than the ones required by the practicum (e.g., substituting other teachers, observing students in recess time, and arranging nonacademic activities).

Despite of these concerns, students indicated positive benefits gained from their overall practicum experience. For example, Sixty six percent of them stated that the practicum had increased their awareness about the actual work difficulties; Fifty five percent mentioned that the practicum had improved their attitudes toward the field; Thirty four percent felt that this experience had enhanced their communication abilities; and Thirty percent had been encouraged to work in the field right away after graduation.

Discussion

Using field experience is generally considered influential and important in pre-service preparation programs (Sears, Cavallaro, & Hall, 2004). The purpose of engaging students in the practicum is to enhance their preparation, help them connect theory with practice, and enhance their teaching abilities (Allsopp, DeMarie, Alvarez- McHatton, & Doone, 2006). Assuring good and effective practicum experience is essential for making conclusion about the program appropriateness in preparing future teachers to be highly qualified teachers (NCLB, 2002).

In this study, a low satisfaction was expressed by the practicum with their overall practicum experience. Perhaps the greatest input in this study came from students' responses on Question 2. Out of all results obtained from this study, we have selected some issues we thought they would be of a great importance to be presented and discussed hereafter.

The first issue, and a central one, is the connection that should be made between university course work and the practicum. Interestingly, students mentioned this issue as a major concern. Basically, the connection between the university course work and practicum is mandatory to bridge any gaps between theory and practice (Allsopp, DeMarie, Alvarez-McHatton, & Doone, 2006). Zeichner (2010) mentioned that "*connection between campus courses and field experiences is considered a central problem that has plagued college and university-based pre-service teacher education for many years* (p.479). Wilson, Folden, and Ferrini-Mundy (2001) also mentioned that "traditional field experiences are often disconnected from coursework, focused on narrow range of teaching skills, and reinforce the status quo (p.22) .

Since our practicum is similar to traditional field experience model described by Prater and Sileo (2004) with a limited representation from faculty members (university professors); a disconnection or gap between students' practicum and students learning is reasonably accepted. This disconnection might be due to factors such as lack of first-hand exposure gained by faculty professors to their students' practicum as well as the absence of a match between practicum practices and the practices emphasized in the university courses (Allsopp, DeMarie, Alvarez-McHatton, & Doone, 2006).

To solve the issue, teacher education preparation programs have tried different ways to bring academic knowledge gained from university courses closer to practitioner knowledge provided by expert teachers (Zeichner, 2010). In this endeavor, colleges and universities tried bringing teachers and their knowledge into campus courses, incorporating representations of teachers practices in campus courses, moving out some of campus courses and teaching them in schools, and establishing what is called "*hybrid teacher educators* (Zeichner, 2010). Another solution might be found in providing full involvement (or at least cooperation) between faculty members and practicum personnel (Beck & Kosnik, 2002b). In some way or another, the above mentioned solutions can effectively assure mutual benefits in our program for both

the academic level (i.e., the entire student teacher education program) and the practitioner level (i.e., cooperative schools, mentors, and supervisors).

The second issue is the practicum length of time. Only 28% of the students indicated their satisfaction with practicum duration. The low satisfaction percentage might be further explained by looking at students' concerns. 38% of our students indicated a conflict between practicum period (16 weeks) and the workload required in the practicum. In this matter, Prater and Sileo (2004) mentioned that the length of time specified for the practicum remains an unresolved issue. They also mentioned that this issue is arguable in terms of specifying the exact required time (for one or more semesters) for the practicum or for the correlation between the time length and students' performance (p. 252). In addition, the relationship between the workload required by the practicum and the practicum length of time has also been an issue. Beck and Kosnik (2002a) indicated that heavy but not excessive workload is valuable in the practicum (p. 96). It seems necessary to further study the impact of the practicum length of time on students' overall experience.

The third important issue is related to practicum supervision. More than half of the students were satisfied with practicum supervision; however, the students raised concerns in the adequacy of supervision, communication time with supervisors, and opportunities for receiving feedback about their gradual progress. The role of supervisors in the practicum is substantial (Zimpher, DeVoss, & Nott, 1980; Beck & Kosnik, 2002b). They direct student's field experience, set up practicum requirements and assessment procedures, make critical contribution to students' gradual progress, facilitate relationships among students and their mentors, and assure the application of the entire practicum process (Zimpher, DeVoss, & Nott, 1980).

In our practicum, only two supervisors are involved in monitoring students' practicum experience. Those supervisors are required to conduct the daily visits, administer the weekly meetings and the exams, provide students with feedback, grade students' assignments, and communicate with students whenever is needed. Taking into account the small number of our supervisors and the low participation of faculty members in our practicum, it might be sensible that practicum supervision will be an issue or even a challenge (Ruhl & Hall, 2002).

This challenge might also be enhanced by factors such as practicum duration, the frequent change in students' number (from semester to semester), location and number of cooperating field sites, purposes of supervision, the overall context of the practicum, university support (e.g., providing transportation), level of communication and collaboration among supervision triad (students, mentors, and supervisors), supervisors critical supervisory skills (e.g., ability to communicate, personal characteristics, and managerial and technical skills), and the low participation from university faculty in the practicum (Beck & Kosnik, 2002b; Hoover, O'Shea, & Carroll, 1988; Warger & Aldinger, 1984; Ruhl & Hall, 2002; Bullough & Draper, 2004). Perhaps the solution of such a challenge might be rooted in increasing the number of supervisors, changing supervision style from traditional triad model into multi-level monitoring style (Ruhl & Hall, 2002), and increasing level of involvement from faculty members (Beck & Kosnik, 2002b). All of these solutions are surely applicable in our program especially the multi-level of monitoring style by our graduate students.

The fourth and fifth issues are related to mentors and field sites. Although 62% of our students expressed their satisfaction with their mentors; only half of them indicated being satisfied with their field sites. The issue of mentoring has been well studied in the literature. It has been indicated that factors such as level of emotional and practical support from mentors (Beck & Kosnik, 2002; Hudson, 2005), positive relationship based on communication and trust (O'Brian, Stoner, Appel, & House, 2007), mentors personal qualities and attitudes (Whitney et al, 2002), level of knowledge and expertise, and professional support (Goodnough, Osmond, Dibbon, Glassman, & Stevens, 2009) are important factors in assuring effective mentoring process for practicum students.

The above factors in addition to factors such as dependency, confusion in role in the classroom, loosing individuality, lack of trust and emotional support could negatively impact the entire mentoring process (Goodnough, Osmond, Dibbon, Glassman, & Stevens, 2009; Hudson, 2005). Maybe the concerns highlighted by our students in this study (e.g., mentors' support, mentors' level of expertise, and hesitation in giving teaching opportunities) could be comprehended in term of the above factors. Taking these factors in mind when preparing for the practicum as well as creating more collaboration among the supervision triad and the entire school-university partnership could assure overcoming these concerns.

Consequently, field sites present the contexts were the field experiences occur (Potthoff & Alley, 1996). Perhaps, reasons of low satisfaction from our students might root in the way that these sites are arranged by practicum personnel (Prater & Sileo, 2004), the way students are placed in these sites, level of cooperation with students (Potthoff & Alley, 1996; Hudson, 2005), degree of support provided (personally, professionally, and technically), site factors (e.g., size, number of students, proximity, variety), and type of partnership between these sites and the university (Fueyo & Lewis, 2002).

To overcome the challenges presented above, Potthoff and Alley (1996) mentioned six considerations needed to assign the field sites: (1) diversity, (2) collaboration, (3) cooperating teacher preparation, (4) challenging beliefs, (5) mentor matching, and (6) clustering (p.85). They also concluded that more communication is needed among all stakeholders (universities, schools, students, and the community) engaged in the practicum in areas of shared philosophical understanding and values, emphasizing the importance of providing a good placement for experiences instead of a site to be found, and grounding a shared context of collaboration (p. 94). All of these considerations are important to assure effective outcomes. In accordance, our practicum needs to be reevaluated in light of these considerations. Unfortunately data from our study does not provide sufficient information to examine these considerations. Perhaps a recommendation for more research in this context is needed.

Conclusions

Results of this study are important in understanding the current status of our practicum overall structure and the effectiveness of the components. Although the sample of students who participated in the study is relatively small and restricted to one semester; however students' voices were important to direct the attention toward a needed reformation process for the entire practicum. Students participated in the study were less satisfied with their practicum experience as presented.

Improving students' satisfactions and concerns can be achieved if we concentrate on enhancing the entire structure of the practicum, closing the gap between the practicum requirements and university course work, increasing the level of supervision in term of quality and quantity, reconsidering students' placement process, increasing level of cooperation between the university and the field sites (i.e., university-school partnerships), and increasing faculty level of engagement to understand practicum goals. These recommendations alongside with other stated within the article represent a starting point that will guide the current and future reformation processes.

Limitations

It is important to indicate that results mentioned in the study should be taken alongside with its limitations. Therefore, results of this study are limited to its sample size and practicum educational settings included in the spring semester of the academic year of 2010/2011. This limitation in sample size and educational setting affects generalization of results. On the other hand, these results are valuable as they represent the only available results in hand. In addition, this study is only a self-reported study in which only practicum students' voices have been presented. It might be necessary if other studies can be carried out to confirm whether these voices or perceptions truly reflect what is occurring in the practicum or not. In this case, we suggest that additional research with triangulation of data that include other stakeholders (e.g., mentors, supervisors, field sites administrators, other students in other practicum semesters) with direct observations made in actual settings would strengthen the validity of the results.

Appendix A
Practicum Satisfaction Evaluation Survey

Gender: Male ☐ Female ☐
Category of Disability in the Practicum: IDD ☐ ASD ☐ LD ☐

Satisfaction Rating Scale Indicators:
1: Not very satisfied 2: Not satisfied 3: Neutral 4: Satisfied 5: Very satisfied

Question 1: Please rate the following statements using the satisfaction rating scale mentioned above:

Practicum Area	Overall Satisfaction				
	1	2	3	4	5
Overall satisfaction with practicum experience in general					
Overall satisfaction with Practicum cooperative teachers (mentors)					

Practicum ability to facilitate personal development					
Overall practicum supervision					
Practicum requirements as specified in the syllabus					
Practicum level of preparation for actual teaching situations					
Overall satisfaction with field sites					
Overall satisfaction with practicum duration (16 weeks)					

Question 2: What concerns you the most about the practicum (please write as much answers as possible)?

Thank you.

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THE APPLICABILITY OF CURRICULUM-BASED-MEASUREMENT IN MATH COMPUTATION IN JORDAN

Bashir Abu-Hamour
Mutah University

Jihan Mattar
University of Jordan

The proper assessment of math computational skills is essential for monitoring progress, predicting achievement, and identifying students with disabilities. The current study extends previous research on assessment of curriculum-based measurement in mathematics(M-CBM) . The purpose of this research was to examine the effects of the M-CBM computation assessment on improving third-grade math achievement. This paper presents a comparison study of two classrooms; one used a M-CBM computation in addition to the summative assessment and one used summative assessment only. Each class consisted of 35 students; three who had a Specific Learning Disability in math. The results of a 15-week CBM process demonstrated the effectiveness of using the M-CBM with third- grade students. Furthermore, when compared to the traditional way of assessment, the use of the M-CBM produced significant gains in students' achievement, specifically, for the students who were struggling with math.

The Applicability of the Curriculum-Based-Measurement in Math Computation in Jordan

Identifying appropriate ways for teachers to assess students' skills in the critical areas of reading, spelling, and math is an important goal in helping all students succeed in school. Unfortunately, some assessments that teachers typically use (e.g., informal inventories, teacher-made tests) lack reliability and validity (Spear-Swerling & Sternberg, 1998), and many (e.g., norm-referenced tests) may lack treatment validity. Treatment validity is important because it indicates that the results of a test can be used to guide instruction and improve student performance (Hosp & Hosp, 2003).

Summative evaluation is important as a measure of accountability (i.e., to what degree are students meeting established standards), but does not offer the feedback teachers need to make day-to-day adjustments in their teaching. Unlike summative evaluation approaches where student performance is often evaluated only at one point in time during the academic year, the formative approach to assessment provides an opportunity for teachers to catch problems early and monitor progress throughout the school year (Hosp, Hosp, & Howell, 2007). Researchers have recommended curriculum-based-measurements (CBM) as an alternative assessment procedure for monitoring progress and guiding the selection of interventions (Deno, 2003; Hosp et al., 2007). CBM's validity and reliability are well established (National Center on Response to Intervention, 2012).

The CBM is considered to be a type of formative assessment. Formative assessment is not a test per se, but instead a process by which teachers use test-elicited evidence to revise instruction for students and help students adjust their own learning strategies (Popham, 2009). The CBM has been used by teachers and school psychologists for over three decades and has been shown to provide reliable and valid indicators of students' achievement in reading, writing, and mathematics (for reviews, see Deno, 1985; Deno, Fuchs, Marston, & Shin, 2001).

The CBM lays the foundation for profiling specific child strengths and weaknesses and for mapping and evaluating the academic skills rather than the common way of assessing (Bagnato, 2007). Teachers can design interventions that can be proactive and can prevent learning problems from occurring. The CBM

used in conjunction with a problem-solving model can be used to target scarce intervention resources to those who need it the most. Moreover, the formative approach using the CBM allows for the on-going evaluation of interventions. Thus, ineffective interventions can be discarded in favor of more effective ones. The CBM and problem-solving teams are proving to be an effective and efficient way to design student interventions and to monitor student's academic progress (Hosp et al., 2007). As compared to reading, not as much is known about the use of the CBM and math performance (Monuteaux, Faraone, Herzig, Navsaria, & Biederman, 2005).

Reading and literacy are often considered the most important skills taught in schools; however, many argue that math is similarly important for life success. Just as the other CBMs, the math CBMs (M-CBMs) provide a reliable and valid way to identify students who are at risk for failure; not making adequate progress given the instruction they are receiving; need additional diagnostic evaluations; or determination of instructional levels (Hosp et al., 2007).

The M-CBMs have been developed for three areas: early numeracy, computation, and concepts and applications. Computation has been the traditional standard of the M-CBM and therefore, has the most research to support its use (Deno, 2003). The computation CBMs were developed to provide a quick and easy method to measure computation performance that would be reliable and relate to outcomes measures. For the rest of the study, when we refer to math CBM (M-CBM), we will be talking about computation only. An overview of the M-CBM use in both general and special education is presented next.

The M-CBM Computation and Students' Achievement in General Educations

Previous research has demonstrated that teachers who use M-CBM produce greater student achievement than teachers who use other forms of assessment for developing instructional programs (see Fuchs, Butterworth, & Fuchs, 1989; Fuchs & Fuchs, 1991; Shinn, 1989). Christ and Vining (2006) suggested that stratified construction of multiple-skill M-CBM probes would be likely to yield more generalizable and dependable measurement outcomes and found that it was especially robust within the upper primary grades. Another study was conducted by Allinder, Boiling, Oats, and Gagnon (2000) on the effects of the M-CBM measures on students' achievement. The results indicated that teachers who used the combination of self-monitoring and the M-CBM found that their students demonstrated significantly greater progress than did students whose teachers did not use the M-CBM. In addition, results indicated that the students for whom teachers made instructional adjustments, based on those students' own M-CBM data, performed significantly better on a global achievement test than did their partners whose instructional adjustments were not based on their own assessment data (Stecker & Fuchs, 2000).

Finally, some studies have reported outcomes of relationships between the M-CBM and statewide assessments in math. For example, Helwig, Anderson, and Tindal (2002) examined the effectiveness of a M-CBM concept task at predicting eighth-grade student scores on a computer adaptive test of math achievement designed to approximate a state (Oregon) standardized math achievement measure. Results indicated that the M-CBM task used in this study was effective at predicting scores on the computer adapted test of math assessment for students in general education. In fact, when the data were analyzed using discriminant function analysis, the M-CBM probes predicted with 87% accuracy the students who would meet the state math standards. Helwig et al. noted that assessments such as M-CBM that can accurately estimate progress toward statewide goals in addition to monitoring classroom progress have considerable utility for planning instruction.

The Use of M-CBM in Special Education

Approximately 5-9% of the school-age population may be identified with mathematics disability (e.g., Badian, 1983; Geary, 2004). Comparable prevalence was documented in Jordan as well (McBride, 2007). Studies indicate that students in the United States are not achieving sufficient mathematics skills to meet the demands required of them within and outside of school. Among the keys to preventing mathematics difficulties are to identify and intervene with those students who may be most at-risk for later failure, monitoring their progress as frequently as possible (Clarke & Shinn, 2004; Reese, Miller, Mazzeo, & Dossey, 1997). Continuous monitoring of individual student academic progress has long been an important component of special education (Deno, 1985; Fuchs & Fuchs, 2005).

According to the 21st Annual Report to Congress, students with disabilities have lower math skills than their general education peers. Teachers need a practical and user-friendly method to increase the math achievement of all students, including students with disabilities. One method of increasing math

achievement is to monitor progress in basic skills using a method known as CBM (Hosp et al., 2007). The M-CBM represents an empirically supported system of progress monitoring that has produced demonstrated effects on student achievement.

The M-CBM is an approach for assessing the growth of students in basic skills that originated uniquely in special education. The M-CBM can be used effectively to gather student performance data to support a wide range of educational decisions, including screening to evaluate pre-referral interventions, determining eligibility for and placement in remedial and special education programs, evaluating instruction, and evaluating the reintegration and inclusion of students in general education programs (Deno, 2003).

Purposes of the Study

Although the M-CBM procedures may be more racially and culturally neutral than traditional norm-referenced tests (Galagan, 1985; Shinn, 1989), there have not been any studies in Jordan to examine the validity of the CBM procedures when used to assess math in Arabic. Schools in Jordan are in need of an empirically-based assessment tool to monitor math progress. The assessment practices among the resource room teachers in Jordan were investigated in a recent study (Al-Natour, AlKhamra, & Al-Smadi, 2008). The results indicated that most teachers rely heavily on teacher-made tests of academic achievement to make eligibility decisions. On the other hand, the M-CBM was rarely used by teachers. These findings were not surprising since resource room teachers in Jordan are not familiar with the M-CBM procedures.

The purposes of this study were to: (a) improve students' math achievement in a third grade math class by using the M-CBM computation, (b) enhance the math achievement of students who have math disability, and (c) investigate the effectiveness of using the M-CBM in Arabic.

Three main hypothesizes were investigated in this study. First, there will be a significant difference in terms of performance on math achievement tests between students who were administered the M-CBM computation and summative assessment compared to students who were administered summative assessment only. The differences will be in favor of the M-CBM computation group. Second, students will develop a positive steady growth rate in their M-CBM computation skills as a result of using the M-CBM and making instructional adaptations. Finally, students with SLD will develop a positive increase/trend-line in their M-CBM computation skills as a result of using the M-CBM and making instructional adaptations.

Method

Participants and Setting

A total of 70 third-grade students participated in this study (37 female and 33 male). The mean age was 103 months with a range of 100 to 107 months. The participants attended a private school in the central region of Jordan. The participants were selected from a larger set of students who were assessed to meet the requirements for inclusion in the study: intelligence within the average range, native speakers of Arabic, no noted emotional/behavioral disorder, and no sensory impairments. Consent for participation was obtained from the participants and their parents/guardians.

The math class was taught by a class teacher and assisted by a resource room teacher to facilitate teaching students with SLD in math. The researchers and school's principal coordinated to choose two comparable samples for the purpose of the study. Each one of the two samples was comprised of 35 students in two separate classes. Three students with SLD in math were identified by the resource room teacher in each class. The summative assessment was used with the first group, while progress monitoring (M-CBM computation) and summative assessment were used with the second group during one academic semester.

Measures

M-CBM computation. When giving the M-CBM computation probes, the examiner can choose to administer them individually or to groups of students. For the purpose of this study, we used the multiple-skill worksheets that covered all computational skills for the second semester of third-grade math curriculum and administered them to the entire class. The student was given the worksheet and then asked to complete as many items as possible within 2 minutes. The M-CBM assigns credit to each individual correct digit appearing in the solution to a math fact. By separately scoring each digit in the answer of a computation problem, the instructor is better able to recognize and give partial credit to a

student. The probes were administered to groups of students and scored according to the correct digit system in this study.

End-of-academic semester test. A 100-point final examination included multi-digit addition without regrouping, multi-digit addition with regrouping, multi-digit subtraction without regrouping, multi-digit subtraction with regrouping, adding and subtracting, of fractions and math problem solving. Two equivalent forms of this test were created from the accredited curriculum and administered to the students in the experimental and control groups.

Procedural and inter-scorer reliabilities. To ensure consistency of testing administration across the M-CBM probes, the second author and the class teacher read from scripts and used timers. The fidelity of testing administration was tested by using a detailed checklist to ensure each test was administered as it was intended and described in the CBM manuals (Hosp et al., 2007). Procedural reliability was obtained during 100% of testing sessions with an average reliability of 100 percent.

Each M-CBM probe was scored and entered into an excel sheet. The first author randomly checked 25% of the scoring sheets. The average inter-scorer reliability of scoring fidelity data was 99% (range 98%-100%). In terms of data entry reliability, all of the excel data (100%) were checked against the paper scores and all discrepancies were resolved by examining the original protocols. In addition, we had weekly updates and discussions with the class teacher to address the crucial points of teaching the course and using the M-CBM assessment. Instructional adjustments' were made based on the M-CBM computation data.

Results

To assure that there were no violations of assumptions in independent *t*-tests, a Levene's test was administered to the last semester of second grade math scores for both groups. No violations of normality and homogeneity of variance were detected. The variances were equal for the M-CBM group and the control group, $F(1, 68) = .009$, $p = 0.925$, which is greater than 0.05. On the average, students in the control group had slightly higher scores (M = 71.57, SD = 8.43) than students in the experimental group (M = 70.4, SD = 8.97). However, this difference was not significant $t(68) = -.563$, $p = 0.576$, which is greater than 0.05.

These results were confirmed by conducting other independent *t*-test and Levene's test to the median baseline M-CBM computation scores for the two groups. No violations of normality and homogeneity of variance were detected. The variances were equal for the CBM group and the control group, $F(1, 68) = .056$, $p = 0.813$, which is greater than 0.05. On average, students in the control group had slightly higher scores (M = 7.74, SD = 2.33) than students in the experimental group (M = 7.29, SD = 2.45). This difference was not significant $t(68) = -.799$, $p = 0.427$, which is greater than 0.05.

The following sections present the results for each hypothesis explored in this study.

Hypothesis 1: there will be a significant difference in terms of performance on math achievement tests between students who were administered the M-CBM computation and summative assessment compared to students who were administered summative assessment only.

All assumptions of performing independent *t*-tests were examined. No violations of normality and homogeneity of variance were detected. The variances were equal for the CBM computation group and the control group, $F(1, 68) = .23$, $p = 0.629$, which is greater than 0.05. On average, students who had M-CBM measure achieved higher grades in math (M = 77.43, SD = 9.11) than students who experienced summative assessment only during the academic semester (M = 70.11, SD = 8.58). This difference was significant $t(68) = 3.45$, $p = 0.001$, which is less than 0.05, and it represented a medium-sized effect $r = .38$.

The same conclusion was yielded when other independent *t*-tests and Levene's test were administered to the median score of the last three M-CBM computation probes for the two groups. All assumptions of performing independent *t*-tests were examined. No violations of normality and homogeneity of variance were detected. The variances were equal for the M-CBM experimental group and the control group, $F(1, 68) = .032$, $p = 0.859$, which is greater than 0.05. On average, students who had M-CBM measures achieved higher grades in the median M-CBM computation (M = 27.4, SD = 5.82) than students who experienced summative assessment only during the academic semester (M = 18.2, SD = 5.23). This

difference was significant $t(68) = 6.94$, $p = 0.000$, which is less than 0.05, and it represented a medium-sized effect $r = .64$.

Hypothesis 2: Students will develop a positive steady growth rate in their M-CBM computation skills as a result of using M-CBM and making instructional adaptations

The CBM results, a more sensitive measure of growth, were used to support the efficacy of using M-CBM computation with students. Students progressed on their M-CBM computation skill from 6.8 correct digits in two minutes on the first probe to 26.58 by the last week of instruction. The estimated growth rate was 1.3 correct digits per week. Graph 1 provides information on the weekly growth for M-CBM computation skill for the third-grade students.

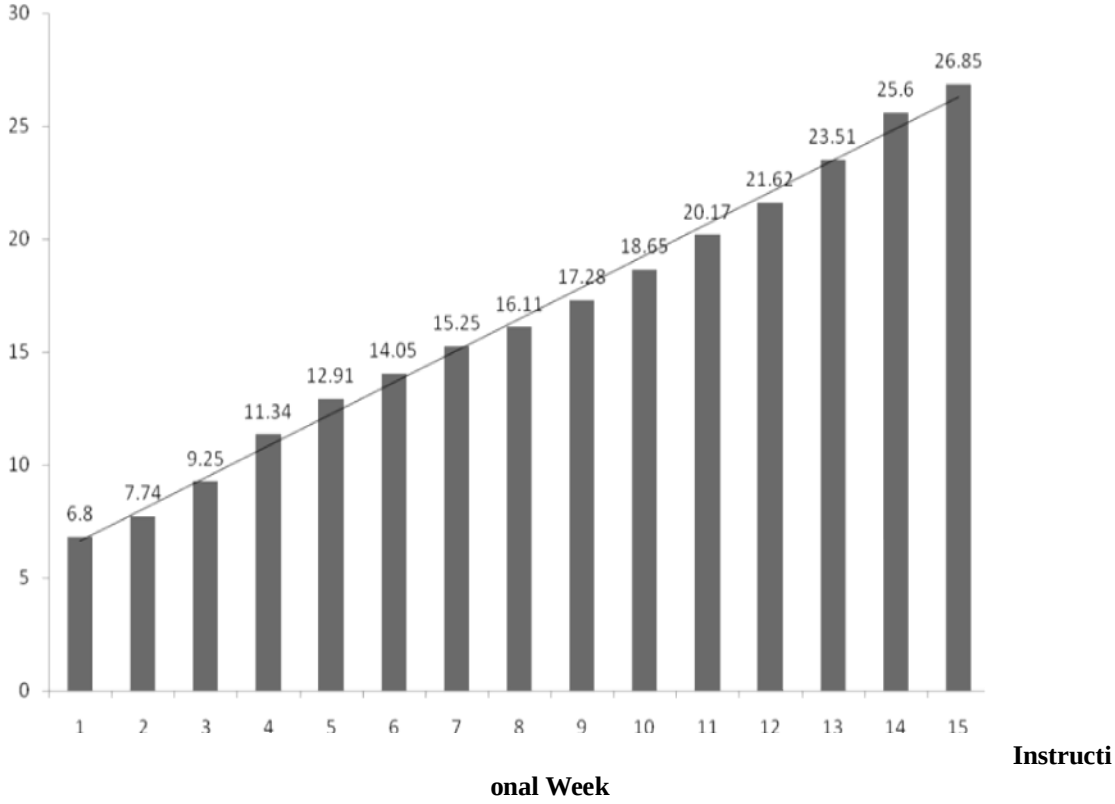

Figure 1. Graphic display of the mean performance on the M-CBM measure reported in Correct Digits in Two Minutes

Hypothesis 3: Students with SLD will develop a positive increase/trend-line in their M-CBM computation skills as a result of using M-CBM and making instructional adaptations

Due to the small number of students with Specific Learning Disability (SLD) in math, we decided to graph their progress. The trend line represents the student progress. Basically, a trend-line is a line of "best fit" in terms of showing the trajectory of the student's performance. Although a student's data may be variable (higher one day than the next day), a trend-line provides a clear picture of the overall trajectory in relationship to a student's goal-line (Hosp et al., 2007).

As it was expected, the three students progressed on their M-CBM computation skill from (5, 2, 1) correct digits in two minutes on first probe to (15, 14, 14) respectively by the last week of instruction. Figure 2 illustrates the students' weekly M-CBM computation progress. Even though these results are encouraging, these students are still extremely far behind their peers in computational skills, and will require additional remedial intervention with progress monitoring to continue closing the gap.

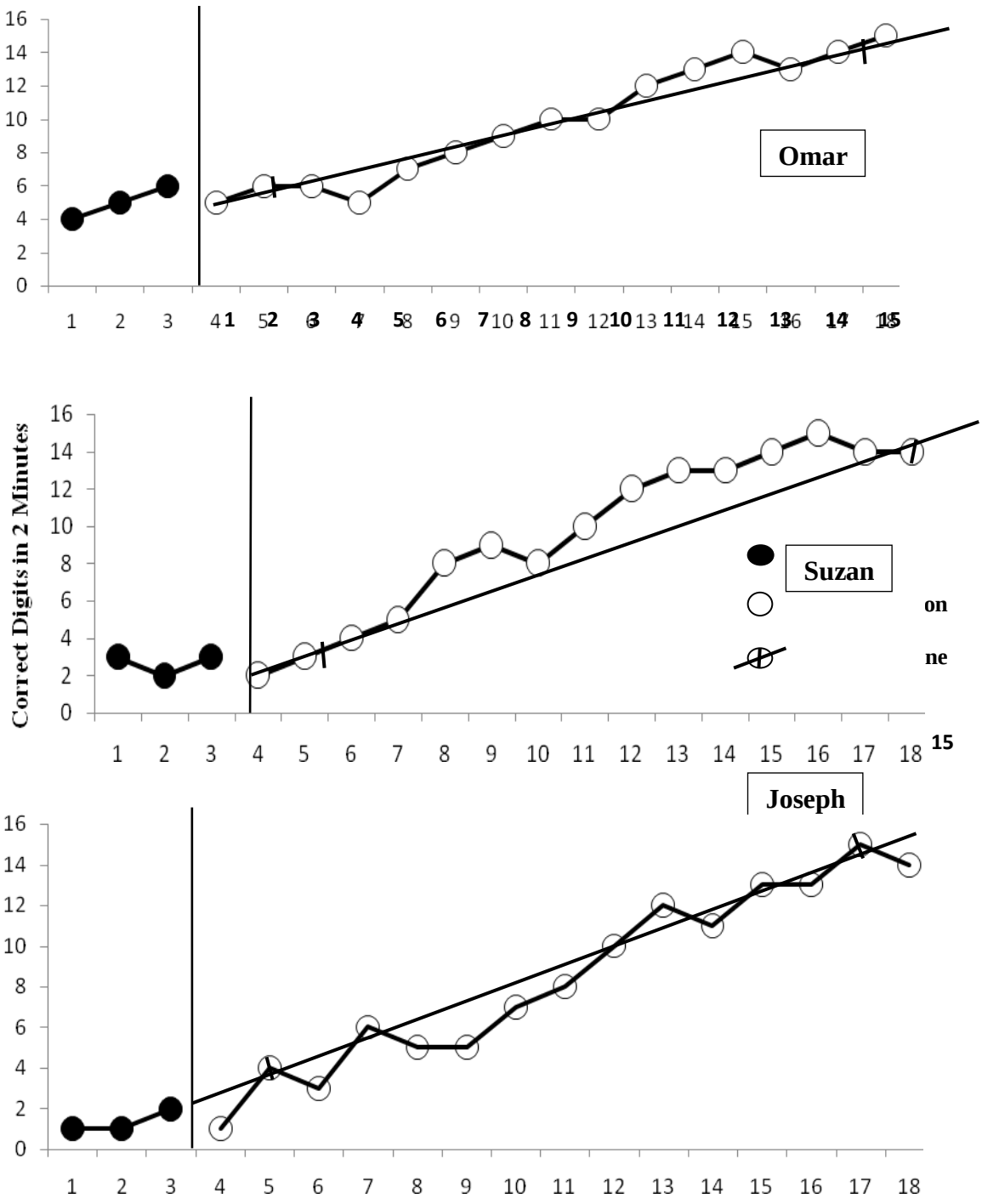

Figure 2. Results of students' M-CBM reported in Correct Digits (CD) in two minutes.

Social Validity

Evaluations of social validity focus on satisfaction with the intervention's outcomes by those who use them (Clarke, Worcester, Dunlap, Murray, & Bradley-Klug, 2002). Students with SLD and the entire class were asked individually whether they felt their math computation skills improved during the M-CBM period and whether they enjoyed the instructional program. The majority of them indicated that they enjoyed doing the work and following their own progress. In addition, students stated that they like M-CBM computation probes more than formal summative tests.

Discussion

The main purpose of this study was to assess the effects of the M-CBM computation on math achievement improvement for the third-grade students in Jordan. In general, the results indicated using

the M-CBM with third-grade students was effective. This discussion contains four sections. The first section discusses the effects of the M-CBM along with the instructional adjustments to improve students' math achievement. The second section addresses the expected growth rate of the M-CBM computational skill and how this rate can be used for identifying students with SLD in math. The third section discusses the students with SLD improvement in math due to the use of the M-CBM and systematic targeted instruction. The final section discusses the limitations and points toward directions for future research.

The Effects of the M-CBM and Instructional Adjustments in Students' Achievement

To examine the effect that M-CBM computation has on student achievement, the performance was compared between the two groups. The results indicated that students in the M-CBM computation group achieved higher grades in math compared to the control group who administered summative assessment only. Similar findings were found when post intervention M-CBM probes were administered for both groups. The difference between the two groups was significant. These findings were expected. The administration of frequent probes is a necessary component of the CBM procedures. The experimental group engaged in M-CBM computation, and therefore, participated in important instructional-level skills once every week. Consequently, students in the M-CBM group had frequent opportunities to maintain and increase their proficiency with previously acquired skills. In addition, students' responses to the social validity oral questions suggested that the M-CBM computation graphs may have served as an adequate basis for motivating students to work hard. This finding is consistent with previous research demonstrating that CBM increases student motivation (Fuchs, Fuchs, Hamlett, & Ferguson, 1992; Stecker, Fuchs, & Fuchs, 2005). Finally, as the teacher and the researchers had a weekly meeting to discuss the students' progress and suggest some data based adjustments to improve the quality of instruction, both learned which factors related to the intervention were crucial for increasing students' math achievement.

These findings concur with previous work showing that the M-CBM did contribute to the students' math achievement and can be used to predict math achievement (e.g., Baker et al., 2002; Christ & Vining, 2006). On the other hand, the results contradict the findings of Stecker and Fuchs (2000) that showed that the M-CBM did not contribute to the learning of the students. However, in that study the researchers investigated the use of M-CBM computation by itself (without data-driven instructional adjustment). Although frequent probe taking is an essential component of CBM, it does not appear to be powerful enough on its own to enhance overall student achievement.

The Expected Growth Rate of the M-CBM

The results also indicated that the M-CBM is an appropriate measure for monitoring students' academic growth in math achievement. The third-grade students showed steady growth rate during the 15 weeks of intervention. The estimated growth rate was 1.3 correct digits per week. Some researchers indicated that the expected weekly growth rate for the M-CBM in third grade is 0.5 correct digits (see Deno, Fuchs, Marston, & Shin, 2001; Fuchs, Fuchs, Hamlet, Walz, & Germann, 1993). However, other researchers have indicated that greater progress may be possible (Hosp et al., 2007). This finding can be attributed to two factors. First, the high motivation for both teacher and students to be part of this research study made them work hard for the academic semester. Second, the study participants were from a private school. In general, Jordanian private schools provide better educational services than do public ones.

The M-CBM can be used for identifying students who are at risk of academic failure. Descriptive data make it clear that growth rate is greater among students in the general education population than for those in the special education population. The M-CBM can discriminate between those students with and without academic skills problems. Results indicated that students who had difficulties in math scored significantly lower on the M-CBM computation probes when compared with students who were not identified with math probes.

M-CBM and Students with SLD in Math

The CBM is a useful tool for both general and special educators to evaluate and improve student achievement. The most recent re-authorization of the Individuals with Disabilities Education Act (IDEA, 2004) also requires schools to show that students with disabilities are progressing at the same rate as their typically developing peers to the greatest extent possible. This accountability of academic progress of students with disabilities is relatively new.

The M-CBM can be used to find two indicators of a problem: first, low performance in a key skill area; and second, low progress in the acquisition of key skills. By low acquisition we mean learning, as seen in

changes of students' performance over time. Both progress monitoring and instructional recommendations were provided to the resource room teachers in this research. In this study, the researchers used a trend line to follow up the individual progress for students' with SLD in math. The overall trajectory of students with SLD in math in this study indicated a significant improvement in their M-CBM computation skills. The M-CBM computation was sensitive to growth over short periods of time when used repeatedly for purposes of progress monitoring at the individual student level.

Limitations, Implications, and Future Research

As is the case with any research study, the conclusions drawn must be viewed within the context of the study's limitations. Foremost of the limitations was external validity. Participants were third-grade students from Jordan. The generalizability of findings to other geographic areas, grades, and students should be investigated further. External validity limitations are further compounded by the sample size of the study. Further research into the M-CBM should be done with a greater sample size and other types of CBM to investigate the reliability and validity of these measures. Finally, this study was conducted in a private school in Jordan. Additional research of the M-CBM in public schools in Jordan is certainly needed.

This study provides further support for the ongoing use of the digits correct metric for measuring computation fluency. They also provide some new directions to enhance the assessment methods that are used to guide educational decisions. The study also contributes to the international knowledge base in mathematics, as it offers evidence that the M-CBM computation can be used in languages other than English. Teachers in Jordan and other countries should consider other valid and reliable assessment tool such as the CBM to be used in both general and special education systems. A particularly important aspect of the CBM for implementation in non- English speaking countries is the inexpensive and highly efficient nature of the measures.

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THE COMPARISON OF SPECIAL EDUCATION BETWEEN THAILAND ANDTHE UNITED STATES: INCLUSION AND SUPPORT FOR CHILDREN WITH AUTISM SPECTRUM DISORDER

Doris Adams Hill
Auburn University

Sasipin Sukbunpant
Chiangmai Rajabhat University

The history of special education in the United States and Thailand has followed a similar path in many ways. Both countries made compulsory education mandatory to move in a positive direction in providing special education services to children with disabilities including the provision of services for children with ASD or Autism. In Thailand, monitoring of compliance with disability law, and negative attitudes by society overall toward individuals with disabilities hamper enforcement of law, distribution of resources, family involvement, and access to individualized education programs and inclusion of students with disabilities. While effective treatments for autism have been documented in the US, this knowledge and training on effective interventions is often not filtered to more rural US schools or outside US borders. Increased collaborations within and between countries to increase knowledge and expertise is recommended. Research based interventions should be taught and implemented in countries such as Thailand and other nations.

History of Thai Special Education

In the past, Thai education primarily revolved around two institutions, religious and royal education. Buddhist monks taught education to boys only. They studies in temples and learned both academic and religious subjects simultaneously. The other type of education was for children of the royal household and for upper class families, who were educated in order to serve in the court and govern in the provinces. During the reign of King Rama V (1863-1910 A.D.) there was increased recognition of the need for educated people to staff the growing bureaucracy. As a result, the Thai education system was modernized and made more accessible to the general public. This began with the 1898 Education Proclamation, which was strongly influenced by the British system. Later the Thai education system continued to grow and now the Ministry of Education is responsible for providing public education for Thai children (Sunsite Thailand, 2010).

Presently, education is provided by educational institutions as well as learning centers organized by individuals, families, communities, or private groups, local administration organizations, professional bodies, religious institutions, welfare institutes; and other social institutions (Office of the Permanent Secretary for Education, 2010). The Thai education system consists of 12 years of free basic education: 6 years of primary education and 6 years of secondary education. Enrollment in the basic education system begins at the age of 6. However, all preschool children will be provided with a minimum of a one-year school readiness program. Most young children of this age attend a preschool class attached to primary schools (Office of the Education Council, 2008).

The history of Thai special education has similarities to other Buddhist countries. Children with disabilities were originally seen as a symbol that the family might have committed some sin in the past (Driedger, 1989). Persons with disabilities were considered useless and worthless, with no future. Because of this perception, Thai children with disabilities were kept at home and denied an education. Even with the compulsory educational act in 1935, The Ministry of Education allowed a child to stay at home because of his/her disability condition (Sukbunpant, Shiraishi, & Kuroda, 2004).

In 1939, Genevieve Caulfield, a blind American teacher, provided initial leadership in Thai special education. She was the first person who taught children with visual impairments to live as independent, productive members of society. Caulfield and her friends established the Bangkok School for the Blind,

and the Foundation for the Blind under the patronage of Her Majesty the Queen (Thirajit, 2000). It is believed that special education in Thailand was officially organized from that time.

Since then, special education developed gradually. In 1962, children with visual impairments were first allowed to study in the regular school. Children with hearing impairments were the second group in 1984. Today, each region of Thailand has a special school for students with disabilities. There has been a broad promotion for these children to study with children without disabilities in the regular schools as much as possible. Because of this, since 1995 at least one public school in each of the 76 provinces has a mainstream class for these children (Chonlatanon, 1995). The range of school placements for students with disabilities is shown in Figure 1.

The Thai education system for children with disabilities

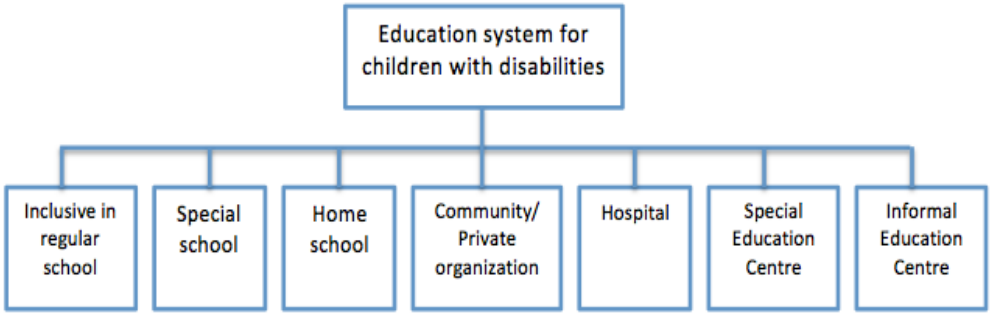

Figure 1. Education placement options for Thai children with disabilities

The Bureau of Special Education Administration, Office of Basic Education Commission is the main agency responsible for the provision of education for children with disabilities. All eligible school aged children with disabilities can be provided with related services such as hearing aids, wheelchairs and communicative electronics devices. Nine different disability categories currently exist; 1) visual impairments, 2) hearing impairments, 3) intellectual disabilities, 4) physical disabilities and health impairments, 5) learning disabilities, 6) language and communication disorder, 7) behavior disorders, 8) autism and, 9) multiple disabilities (Office of the Permanent Secretary for Education, 2008). Children with disabilities study across the Thai educational system along a continuum of placements as indicated in Figure 1 (Sub-committee for Selecting and Classifying the type of disability for Education, 2002).

These options include
1) Inclusive education in the regular school. Children with disabilities attend the school with peers without disabilities, with support from a special education and regular education teacher. There are currently 18,618 inclusive schools, which are assisted by special schools and centers in terms of teacher training, teaching materials, and management systems. When teachers have accumulated their 200 hours training with the centre and passed the examination, the teachers who have the certificate of special education gain a benefit from extra income (around 100 AUD$/month) when teaching children with disabilities in the classroom. In addition, education coupons (to a minimum of approximately USD$70 per year) are provided by the Ministry of Education to assist towards the technology and special services needed for students with disabilities (Office of the Permanent Secretary for Education, 2008).

2) Special school for specific disability. These schools operate from kindergarten to high school. There are currently 43 special schools, which are classified into four types to serve student disabilities as follows: (1) Special Schools for those with intellectual disabilities; (2) Special Schools for those with hearing impairments; (3) Special Schools for those with visual impairments and (4) Special Schools for those with physical impairments (Office of the Permanent Secretary for Education, 2008). In practice, however, children with all types of disabilities are accepted in these schools.

3) Home school. Parents can teach their children by registering with the school network or provincial special education centre in order to receive aid and advice.
4) Community or private organization. Community groups or individuals can provide education for children with disabilities by setting up their own special education units (e.g., an early intervention class) through collaboration with a special education centre.

5) Hospital. Hospitals concentrate on supporting children with severe intellectual disabilities, autism, and psychiatric problems. Because of their associated disability conditions, such children are able to study in a hospital with a special education teacher who comes to teach them and connect with their former schools.

6) Special education center. These centers, overseen by the Ministry of Education, provide early intervention services for young children with disabilities and their parents. All Thai provinces have special education centers, which provide early intervention services promoting the child's development, referral system to a regular school, and parent training.

7) Informal educational centers and sheltered workshops. These children and their parents have the right to choose the system best suited for the student. This system is a lifelong learning for them. For example, they can study in the distance-university or train in some short course. The sheltered workshops are provided both school students and students who have left school.

Thai children with disabilities have a chance to join the educational system, in its various forms, from kindergarten to university level. For other child, education is provided in the inclusive setting.

Inclusion in Thailand

The primary influence of Thai inclusive education policy was from an international community commitment (Table 1). The 1990 Jomtien World Conference on Education for All made it their goal to make primary education accessible to all children and to massively reduce illiteracy before the end of the decade. The Salamanca Statement and Framework for Action on Special Needs Education came out of the World Conference on Special Needs Education in 1994 (Salamanca, Spain). The proclamation stated:

1) "Every child has a fundamental right to education, and must be given the opportunity to achieve and maintain an acceptable level of learning.
2) Every child has unique characteristics, interests, abilities, and learning needs.
3) Educational systems should be designed and educational programmes implemented to take into account the wide diversity of these characteristics and needs.
4) Those with special educational needs must have access to regular schools which should accommodate them within a child-centered pedagogy capable of meeting those needs. (UNESCO, 1994, p. ii)

Both the Jomtien World Conference of 1990, and the Salamanca Statement in 1994 were recognized having a great impact on establishing and developing the Thai inclusive education policy. The foundation was laid in these two events, which led to a huge revolution, which escalated, and gave momentum to the move for inclusion of Thai children with disabilities in the classroom. The rights and opportunities of those children were officially mentioned during these conferences, and fueled the movement of inclusive education in the Kingdom of Thailand.

According to the National Education Act of 1999, the rights of persons with disabilities to education aligned with their rights under the Constitution. Those people with disabilities could have 12 years of free basic education. In addition, they were entitled to other services (based on evaluation) from birth or when they were found to have disabilities. These services included early intervention, educational materials and facilities, flexibility in educational management, and home schooling supported by the government (Ministry of Education, 2002).

The National Educational Act 1999 (section 10, space 2) specified education for any child with a disability in "physical, mental, intellectual, social communication, and learning, or physical disability or cripple or those who were not self-reliance or lack of people to take care of or underprivileged. The government had to manage those people their right in obtaining facilities, service media, and other kinds of educational support (p. 8). Consequently, all individuals with disabilities had the right to an opportunity in obtaining education in basic level (Sub-committee for Selecting and Classifying the Type of Disability for Education, 2002). Therefore, 76 Special Education Centers located in every province were established. These provincial Special Education Centers are responsible for finding children with disabilities, providing them with early intervention, and transferring them to either special or mainstream schools in their local community.

Furthermore, the Thai Government proclaimed the year 1999 as the Year of Education for children with disabilities. The government mandated a movement toward inclusion of students with disabilities in regular education programs (Carter, 2006). According to government policy, there was to be a sign stating "Any disabled person, who wishes to go to school, can do so. posted in front of every school to guarantee the right of education for children with disabilities.

At the beginning of 2008, Thailand passed the first Education for Disabilities Act B.E. 2551. This national law addresses the needs of education from birth or when a child is first diagnosed with a disability. In this act the Individual Educational Plan (IEP) was mentioned for the first time as linked to inclusive education by the law. The educational institute now had a responsibility to provide and update the IEP at least once a year regarding to criteria determined by the announcement of the Thai Ministry of Education (Rajkijjanubaksa, 2008). This Act aimed to support the rights, services, and other resources of persons with disabilities to inclusive education in line with the 1999 National Education Act (Ministry of Education, 2008a).

In order to implement the policy into practice, the project of model schools for inclusion was started by The Ministry of Education in year 2004, with 390 model inclusive schools all around the country. The number of model inclusive schools increased to 2,000 the following year (Office of Basic Education Commission, 2005). The expectation was to increase in 2009-2010 the number of schools to 5,000, in order to serve over 33,000 children with all categories of disabilities. (Ministry of Education, 2008b). It seemed that implementation of Thai inclusive policy was progressing step by step.

The Ministry of Education (2004) provided six types of inclusive classrooms in the regular schools, which allowed for flexibility and suitability to all children with disabilities. Inclusive classrooms lie on a continuum from (1) Full-time inclusive classrooms or full-inclusion, (2) Inclusive classroom with consultant services, (3) Inclusive classroom with teacher outside school services, (4) Inclusive classroom with tutor teacher service, (5) Full-time special classroom where students with disabilities attend special education classrooms for the entire school day, and (6) Part-time special classroom.

In summary, the development of Act and policy, which culminated from a rise in global awareness for children with disabilities, was gradually influencing the implementation of Thai inclusive education. The National Educational Act 1999 and The Ministry of Education designation of 1999 as the "Year of Education for Disabled Persons widened educational opportunities for children with disabilities through the promotion of inclusive education in school settings and the improvement of the quality of life and social awareness of these children in Thai society.

History of US Special Education

The right to a public education in the United States is not mentioned in the U.S. Constitution; and the 10th Amendment to the Constitution states that powers not specifically granted in the Constitution are reserved for each state. Therefore public education in the US is the responsibility of each state (Yell, 2012).

Until the 1950s in the US, many students with disabilities were excluded from attending public schools, and those who did attend often dropped out. The court upheld this practice in *Beattie v. Board of Education* (1919), which ruled to exclude a student with a disability from the general classroom because his presence was harmful to the school's best interests (his physical condition was distracting and nauseating to other students), even though he could do the work and keep up with peers (LaNear & Frattura, 2007). Students with more significant disabilities were institutionalized or remained at home (Pardini, 2002). The Civil Rights movement of the 1950s and 1960s in the United States has ties with changes in educational practices for children with disabilities. The landmark case *Brown v. Board of Education* (1954) challenged the segregation of individuals by race; it was determined that separating children by race in separate schools, without similar resources, was not equal. As a result, parents of students with disabilities also asked why the principles of equal access to education did not apply to their children. The exclusion of students with disabilities because they would not profit from the public education system was challenged in the 1972 court cases *Pennsylvania Association for Retarded Children (PARC) v. Commonwealth of Pennsylvania* and *Mills v. District of Columbia Board of Education.* These cases challenged the exclusion of exceptional children from public schools and the parents prevailed. The students now had access to a school, but would they be ensured educational benefit?

Board of Education of the Hendrick Hudson Central School District v. Rowley (1982) addressed this issue. Amy Rowley was a fourth grade student who was deaf. She needed special education and related services to ensure a free, appropriate, public education. After several years with a sign-language interpreter in the classroom, the school terminated this service when it was determined that she was proficient at reading lips. The U.S. Supreme Court determined that Amy was making progress and gaining adequate educational benefit (although the definition of educational benefit has never been clearly defined). The school was no longer required to hire a full-time interpreter (Heward, 2013; LaNear & Frattura, 2007; Yell, 2012). Amy was gaining educational benefit from her program.

The outcomes of these cases would be incorporated into federal legislation, such as the Education for All Handicapped Children Act (EAHCA) of 1975, which would lead, after several reauthorizations and amendments, to the Individuals with Disabilities Education Act (IDEA) of 1990 (Hulett, 2009; Yell, 2012). The provisions of IDEA, or the Individuals with Disabilities Education Improvement Act (IDEIA) of 2004 includes the principles of a) zero reject, b) nondiscriminatory evaluation, c) appropriate education, d) least restrictive environment, e) procedural due process, and e) parent and student participation (IDEA, 1990; Turnbull, Turnbull, Wehmeyer, & Shogren, 2013). The No Child Left Behind Act (NCLB) (2001) requires increased accountability by schools to include a) increased parental choice, b) site-based management, c) research-based teaching methods, and d) highly qualified teachers and paraprofessionals in order to receive federal funding (Hill & Hill, 2012; Yell, 2006). NCLB is also under review for reauthorization (Duncan, 2012).

Inclusive Education

As specified by IDEA, students with disabilities are entitled a free, appropriate, public education in the least restrictive environment. For most students, this is the inclusion setting (general education classroom). When an individualized education plan (IEP) is developed for a student with a disability, the IEP team (including teachers, administrators, parents, others who provide related services, and the student when appropriate) determines the least restrictive environment (LRE) for that student. LRE is the setting or placement closest to the general education classroom to the maximum extent appropriate where the student can make satisfactory educational progress in his or her individualized program (Heward, 2013; Yell, 2012). Least restrictive environment can occur across a continuum that includes (from least to most restrictive) a) general education classroom, b) general education classroom with consultation from or with additional instruction/related services from a special educator, c) resource room where the student is pulled out for specialized instruction for part, but not the majority of the day, d) separate classroom where services are provided by a special educator, e) separate school with specially trained staff in a separate facility during the school day, f) residential school where the student receives education and care 24 hours a day, and g) homebound or hospital where services are provided in the home or hospital (Heward, 2013; Yell, 2012).

Inclusion can benefit the student with a disability as well typical peers in the classroom. Parents have both supported and rejected the inclusive setting (Havey, 1999). Supporters of inclusion focus on maintaining the intensity of services required as a separate piece of inclusion. They see inclusion as a right, with the extent of restricted placement being based on the student's need to make educational progress without sacrificing the right to a free, appropriate education as close as possible to that of students without disabilities. Placement should be reexamined on a regular basis as the student makes progress toward educational, behavioral, and social goals. Inclusion fosters collaboration between general and special educators and should include regular training on how to differentiate instruction for all students. Accommodations made for students with disabilities can benefit all students (Heward, 2013). Accommodations can include peer tutoring, structuring the classroom, providing scaffolded assignments, and grading rubrics, which enhance learning for all students. Visual supports help culturally and linguistically diverse students as well as students with disabilities, such as autism spectrum disorder.

There are times when the inclusion setting (or general education classroom) may not be the best placement for a student. The multidisciplinary team must weigh the factors that impact setting and student progress toward goals. When placement in the LRE has been a source of dispute, cases have been decided in the courts. The multi-disciplinary team can examine case outcomes regarding placement as a tool for placement. The most common cases cited when examining placement in the LRE include a) *Roncker v. Walter* (1983), b) *Daniel R.R. v. State Board of Education* (1989), c) *Sacramento City School District v. Rachel H.* (1994) and *d) Hartmann v. Loudoun County Board of Education* (1998).

Roncker v. Walter (1983) involved a 9-year-old boy diagnosed with moderate mental retardation. The parents wanted him to have the benefit of contact with peers without disabilities in a general education setting while the school district wanted him placed in a special school. As a result of this case, the *Roncker* portability test to determining the LRE was developed. This test states that if services that are deemed superior are offered in a segregated setting, then the feasibility of having those same services provided in a more inclusive (nonsegregated) setting should be considered. If they can be provided in that setting, than placement in a segregated setting would be inappropriate (Hill & Hill, 2012; Yell, 2012).

The *Daniel R.R. v. State Board of Education* (1989) case of determining the LRE involved a 6-year-old kindergartner with Down syndrome placed in a prekindergarten class in the morning and an early childhood special education setting in the afternoon. The school multi-disciplinary placement team met and decided the prekindergarten class with students without disabilities was inappropriate since the student failed to master any skills, was disruptive and required almost constant attention from staff. The hearing officer agreed with the school and the case went to the district and ultimately circuit court. The court developed a two-part test for determining LRE compliance. It asks a two-part question:

1) Can education in the general education (inclusive) classroom with supplementary aids and services be achieved satisfactorily, and,
2) If a student is placed in a more restrictive setting, is the student included with students without disabilities to the maximum extent possible?
3) If the school passes both parts of the question then the school's IDEA obligation to provide FAPE in the LRE has been met (Yell, 2006).

As a result of *Sacramento City Unified School District Board of Education v. Rachel H.* (1994), the court developed a four-factor test to determine FAPE in the LRE. Rachel, who was diagnosed with moderate mental retardation, was 11-years-old, and up until then had attended several special education programs. Her parents now wanted her to be placed in the general education classroom. In this case, the non-academic benefit of participation in the general education inclusive setting and the student's impact in the classroom were considered as part of determining LRE. The four factors considered in determining the LRE using the *Rachel H.* test include:

1) examining the educational benefits of the general education classroom with supplementary aids and services as compared with the educational benefits of the special classroom.
2) the nonacademic benefits of interaction with students without disabilities,
3) the effect of the student's presence on the teacher and on other students in the classroom, and
4) the cost of mainstreaming.

Finally, in *Hartmann v. Loudoun County Board of Education* (1997), focused on an 11-year-old with autism who was in a general education inclusive classroom with a full-time aid. It was determined that he was making no academic progress and his aggressive behavior was extremely disruptive to the class. The multi-disciplinary IEP team proposed that Mark be moved to a more restrictive specialized setting. The parents filed due process citing violations of the mainstreaming provisions of IDEA (Yell, 2012). The case was heard several times, and ended up in the Fourth Circuit court on appeal, where it was determined that mainstreaming is not required when:

1) a student with a disability would not receive educational benefit from mainstreaming in a general education class.
2) any marginal benefit from mainstreaming would be significantly outweighed by benefits that could feasibly be obtained only in a separate instructional setting.
3) the student is a disruptive force in the general education setting.

The multi-disciplinary team will find it useful to consider these precedents to make the best informed decision regarding placement in a least restrictive, most inclusive setting that is best for each individual student. In the case of autism, as exemplified in *Hartmann*, when the student fails to benefit from inclusion with students without disabilities, benefits from a separate setting, and is a disruptive force in the classroom (perhaps because of over stimulation), a more restrictive setting may be the least restrictive environment for that student. The traits of autism and the increase in diagnoses make the likelihood of a case such as *Hartmann* to be heard in the court system, and the decision that a more restrictive setting was the most appropriate placement for Mark.

International Connection

The histories of Thai and U.S. special education, as well as international initiatives, impacted each other as the evolution of education for students with disabilities and inclusive strategies for educating them

developed in both nations. The U. N. Declaration on Human Rights came thirteen years after Thailand made education compulsory, and the Thailand National Special Education Plan (1995) came on the heels of the World Conference on Special Needs Education (1994). In 1975, the United States passed the Education for All Handicapped Children Act, with Thailand passing the National Education Act in 1999, just as there was a global shift from the medical to the social model for disability. Important events that highlight the changes are included in Table 1.

Table 1. Important Events Impacting the Evolution of US and Thai Special Education

Year	United States	**Thailand**	International
1919	**Beattie v. Board of Education* (upheld the exclusion of a student with a physical disability from a public education)		
1935		****Compulsory Education Act**	
1939		**Bangkok School for the Blind established**	
1948			UN Declaration on Human Rights (stated health was a basic human right for all)
1954	**Brown v. Board of Education* (civil rights case regarding exclusion of students from public education because of race)		
1962		**Inclusion of students with visual impairments in public school**	
1972	**PARC V. Pennsylvania* (challenged the exclusion of students with disabilities to public education)		
1972	*Mills v. District of Columbia Board of Education*(challenged the exclusion of exceptional children from Washington, DC public schools		
1973	***Rehabilitation Act, Section 504* (made it illegal for any activity or program receiving federal financial assistance to discriminate against a person with a disability; most schools receive federal funding)		
1975	**Public Law 94-142 Education for All Handicapped Children Act (EAHCA) (would become later become IDEA)		
1984		**Children with hearing impairments included in public school**	
1990	**Individuals with Disabilities Education Act (IDEA) (includes the right to a free appropriate public education (FAPE) in the least restrictive environment (LRE) with peers without disabilities)		

1990			***World Conference on Education for All took place in Jomtien, Thailand (to make primary education accessible to all children and to massively reduce illiteracy before the end of the decade).
1991		**Rehabilitation Act for Disabled Persons	
1994			**World Conference on Special Needs Education: Access and Quality (Salamanca, Spain)
1995		**National Special Education Plan (to develop education services for children with disabilities)	United Nations Human Rights Council formed
1999		**National Education Act B.E. 2542 and Amendments	Global shift from medical to social model
1999		The Year of Education for Disabled People (to provide inclusion of students with disabilities in regular school)	
2001	*No Child Left Behind Act of 2001 (increased federal funding for public schools as long as schools employ "highly qualified teachers and make adequate yearly progress)		
2002		Second National Education Act B.E. 2545 (2002)(to provide basic education without any exception)	
2004		390 model schools for inclusion established	
2008		**The first Education for Disabilities Act B.E. 2551 (to protect the rights of persons with disabilities to education and to promote inclusive education. First mention of the EP as important to the education process)	

*Court Case, **Legislation ***Conference

Autism

Autism spectrum disorder (ASD) is a developmental disability characterized by deficits in verbal and nonverbal communication, socialization, atypical responses to sensory stimulation, repetitive behavior and/or rigid adherence to rituals, and difficulty accommodating change (American Psychiatric Association, 2000). It is one of 13 disabilities eligible for special education services under the Individuals with Disabilities Education Act (IDEA, 1990) (Table 2).

Table 2. Disabilities that qualify for Special Education Services in the US and Thailand

United States	Thailand

Autism	Autism
Deaf-Blindness	
Developmental Delay (ages 3-9)	
Emotional Disturbance	Behavioral/Emotional/Social Disorder
Hearing Impairment (including deafness)	Hearing Impairments (Deaf/hard of hearing)
Intellectual Disability	Intellectual Disabilities
Multiple Disabilities	Multiple Disabilties
Orthopedic Impairment	
Other Health Impairment	Physical and Health Disabilities
Specific Learning Disability	Learning Disabilities
Speech/Language Impairment	Language and Communication Disorder
Traumatic Brain Injury	
Visual Impairmant (includes blindness)	Visual Impairments (Blind and low vision)

In the United States, the incidence of autism spectrum disorder (including autistic disorder, Asperger's disorder, and pervasive developmental disorder-not otherwise specified) is currently 1 in 88 individuals (Centers for Disease Control, 2012). In forty years, the incidence of autism has increased tenfold (Autism Speaks, 2012a). Currently diagnoses of ASDs are determined using Diagnostic and Statistical Manual-Revised (Fourth edition) in the United States (Table 3). Changes to the criteria for the diagnosis of autism are anticipated in 2013 when the Diagnostic and Statistical Manual-Fifth Edition is published (Tables 3-5).

Concerns have been addressed that the DSM-IV-TR criteria have been too broad and that children are being over-diagnosed. Other experts believe the new criteria to be too restrictive, and since Asperger's is no longer listed under the DSM-V, that higher functioning individuals will be overlooked. Regardless of diagnosis (or lack of one), these individuals will still have a need for a continuum of supports and services (Rukovets, 2012).

Table 3. Current Criteria and Definition of Autism Spectrum Disorder in the DSM-IV

A. A total of six (or more) items from (1), (2), and (3), with at least two from (1), and one each from (2) and (3):

(1) qualitative impairment in social interaction, as manifested by at least two of the following:

(a) marked impairment in the use of multiple nonverbal behaviors such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction

(b) failure to develop peer relationships appropriate to developmental level

(c) a lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (e.g., by a lack of showing, bringing, or pointing out objects of interest)

(2) qualitative impairments in communication as manifested by at least one of the following:

(a) delay in, or total lack of, the development of spoken language (not accompanied by an attempt to compensate through alternative modes of communication such as gesture or mime)

(b) in individuals with adequate speech, marked impairment in the ability to initiate or sustain a conversation with others

(c) stereotyped and repetitive use of language or idiosyncratic language

(d) lack of varied, spontaneous make-believe play or social imitative play appropriate to developmental level

(3) restricted, repetitive and stereotyped patterns of behavior, interests, and activities, as manifested by at least one of the following:

(a) encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus

(b) apparently inflexible adherence to specific, nonfunctional routines or rituals

(c) stereotyped and repetitive motor mannerisms (e.g., hand or finger flapping or twisting, or complex whole-body movements)

(d) persistent preoccupation with parts of objects

B. Delays or abnormal functioning in at least one of the following areas, with onset prior to age 3 years: (1) social interaction, (2) language as used in social communication, or (3) symbolic or imaginative play.

C. The disturbance is not better accounted for by Rett's Disorder or Childhood Disintegrative Disorder.

American Psychiatric Association, 2000, p. 75

Table 4. Proposed Criteria and Definition of Autism Spectrum Disorder in the DSM-V

Must meet criteria of A, B, C, and D

A. Persistent deficits in social communication and social interaction across contests, not accounted for by general developmental delays, and manifest by all 3 of the following:
   1) Deficits in social-emotional reciprocity; ranging from abnormal social approach and failure of normal back and forth conversation through reduced sharing of interests, emotions, and affect and response to initiation of social interaction,
   2) Deficits in nonverbal communicative behaviors used for social interaction; ranging from poorly integrated verbal and nonverbal communication, through abnormalities in eye contact and body language, or deficits in understanding the use of nonverbal communication, to total lack of facial expression or gestures.
   3) Deficits in developing and maintaining relationships, appropriate to developmental level (beyond those of caregivers); ranging from difficulties adjusting behavior to suit different social context through difficulty sharing imaginative play and in making friends to an apparent absence of interest in people.

B. Restricted, repetitive patterns of behavior, interests, or activities, as manifested by at least two of the following:
   1) Stereotyped or repetitive speech, motor movements, or use of objects; (such as simple motor stereotypies, echolalia, repetitive use of objects, or idiosyncratic phrases)
   2) Excessive adherence to routines, ritualized patterns of verbal or nonverbal behavior, or excessive resistance to change; (such as motoric rituals, insistence on same route or food, repetitive questioning or extreme distress at small changes).
   3) Highly restricted, fixated interests that are abnormal in intensity or focus; (such as strong attachment to or preoccupation with unusual objects, excessively circumscribed or perseverative interests).
   4) Hyper- or hypo-reactivity to sensory input or unusual interest in sensory aspects of environment; (such as apparent indifference to pain/heat/cold, adverse response to specific sounds or textures, excessive smelling or touching of objects, fascination with lights or spinning objects.

C. Symptoms must be present in early childhood (but may not become fully manifest until social demands exceed limited capacities)

D. Symptoms together limit and impair everyday functioning.

American Psychiatric Association, 2012

Table 5. Proposed Levels of Support for ASD

Severity Level	Social Communication	Restricted Interests and Repetitive Behaviors (RRBs)
Level 3 Requiring Very Substantial Support	Severe deficits in verbal and nonverbal social communication skills cause severe impairments in functioning; very limited initiation of social interactions and minimal response to social overtures from others.	Preoccupations, fixated rituals and/or repetitive behaviors markedly interfere with functioning in all spheres. Marked distress when rituals or routines are interrupted; very difficult to redirect from fixated interest or returns to it quickly.
Level 2 Requiring Substantial Support	Marked deficits in verbal and nonverbal social communication skills; social impairments apparent even with supports in place; limited initiation of social interactions and reduced or	RRBs and/or preoccupations or fixated interests appear frequently enough to be obvious to the casual observer and interfere with functioning in a variety of contexts. Distress or frustration is apparent

	abnormal response to social overtures by others.	when RRBs are interrupted; difficult to redirect from fixated interest.
Level 1 Requiring Support	Without supports in place, deficits in communication cause cause noticeable impairments. Has difficulty initiating social interactions and demonstrates clear examples of atypical or or unsuccessful responses to social overtures of others. May appear to have decreased interest in social interactions.	RRBs cause significant significant interference with Functioning on one or more contexts. Resists attempts by others to interrupt RRBs or to be redirected from fixated interest

American Psychiatric Association, 2012

Autism spectrum disorders are prevalent across race, culture, socioeconomic status, and region. Western Europe, Canada, Latin America, Asia, Africa, Korea, and the Middle East, have all reported a rise in the incidence of autism and the challenges associated with accessing care (Global Autism Project, 2011; Grossman & Barrozzo, 2007). In Thailand, the attention of prevalence and the definition of Autism were increasing to Thai society. It was found that 4.4 of 1000 Thai children were prone to have autism, and the prevalence rate has been 9.9 children per 10,000 in the Thai population (Poolsuppasit, 2005; Sirwannarangsun, 2003; Warnset, 2008). Children were between 1 to 5 years old at diagnoses, with every four males to one female in Thailand (Warnset, 2008). Even though there were approximately 200,000 children with autism in Thailand, there were only 0.5 % of these children who received treatment (Ministry of Education, 2006).

Currently, Thai Children with autism have been perceived as having a deficiency of physical development, communication, and social interaction with strange behaviors (Jeekratok & Chanchalor, 2012). Piravej and others (2009) found that children with behaviour problems and less effective communication skills were more commonly diagnosed with autism (Ministry of Education, 2002) (Table 2).

Support for children with autism in the classroom in Thailand

Instruction within the six types of inclusive classrooms for students with autism in the regular schools, along with parallel classrooms in general schools, is provided for children with moderate to severe autism (Tanmanee, 2012). The teacher-to-student with autism ratio in these classrooms is 2:3 or 3:5 per one parallel classroom. Two teachers are responsible for teaching at least three students (Onbun-uea, 2008). Resource rooms also provide support of children with autism in the inclusive class with materials, visual supports, use evidence based teaching strategies such as applied behaviour analysis (ABA), environmental structure, the picture exchange communication system (PECS), story-based interventions, computers with internet access, and CD ROMs for assignments in various subject areas (Warmset, 2008). In addition, education coupons are provided to assist in acquiring needed technology and special services. Each student with a disability is entitled to a coupon of minimum baht 2,000 (US$ 70) per year which can be exchanged for assistive technology as well as additional services such as occupational therapy and speech therapy (Office of the Permanent Secretary for Education, 2008).

Even though there is much support provided to children with autism in the inclusive class, there exist several obstacles of inclusion for these children. Onbun-uea (2008) argued that there is no specific curriculum for teaching children with autism. Different schools provide teaching strategies and curricula in different ways. Many schools create programs for students with autism adopted from the formal education curriculum.

Several studies found that Thai teachers in inclusive classes lack knowledge in special education, have insufficient training for teaching children with disabilities, and insufficient skills to manage the behavior of children with disabilities (Meechalard, 2003; Onbun-uea & Morrison, 2008 Pisarnsombat, 2000; Rattanosot, 2003; Sorathaworn, 2003; Sukkoon, 2003). One study from Surawattananun (1999) found that school principal in Bangkok agreed that inclusion was beneficial to children with autism in terms of social skills learning; however, those principals lacked knowledge and experiences to develop successful inclusion programs. In a similar vein, Indusuta (2003) found that preschool teachers in an inclusive

school who have prior training or experience with children with autism have insufficient understanding to create assessment and evaluation instruments.

Support for Children with Autism in the Inclusive Classroom in the US

In the U.S., autism has been considered one of the thirteen separate categories under IDEA since it's reauthorization in 1990 (Hulett, 2009; Vaughn & Boss, 2011; Yell, 2012). As more children are diagnosed with autism spectrum disorder, interventions to support them have been researched and examined for efficacy. The National Autism Center (2009) completed the multi-year National Standards Project to establish standards for effective, research-validated educational and behavioral interventions for children with autism, in order to identify treatments that effectively target the core symptoms of ASD. Many of the established and emerging treatments for autism can benefit all students, especially those who might be culturally and linguistically diverse.

Use of antecedent interventions and structuring the classroom can help students with autism and others to navigate the classroom successfully. Some antecedent interventions include use of behavioral momentum, providing choice, incorporating preferences, prompting and cueing which can subsequently be faded, environmental enrichment, modification of task demands, teaching rules and expectations using specific, observable examples, seating, proximity and adult presence, errorless learning, thematic activities, interspersal of preferred, non-preferred activities, modeling correct demonstration of a task, peer training and peer modeling, graphic organizers, story-based interventions, video modeling, scaffolding assignments, teaching self management, visual prompts and schedules incorporating pictures (National Autism Center, 2009).

Future Tasks and Recommendations

The history of special education in the United States and Thailand has followed a similar path in many ways. Both countries made compulsory education mandatory. All states within the US had compulsory education laws in place by 1918 (Yell, 2012), and in Thailand by 1935 (Ministry of Education, 2008b). Thailand's progress may have begun later, but both countries continue to move in a positive direction in providing special education services to children with disabilities.

The same can be said of the provision of services for children with ASD. Autism spectrum disorder knows no borders. While overall numbers may differ from country to country, in the US it is currently one in eighty-eight children (CDC, 2012). In Thailand, it is one in 167 (WHO, Regional Office for South-East Asia, 2011). The differences may be in how ASD is diagnosed and in the ability to reach the entire population. Even though there exists differences in diagnoses rates, the number of children diagnosed with autism continues to increase each year. The ratio of boys to girls in both countries remains the same, four boys to every girl, despite the geographic distance between the two countries.

Environmental barriers, lack of accessible transportation, services, and accommodations for individuals with disabilities continues to exist around the globe. In Thailand, monitoring of compliance with disability law and negative attitudes by service providers and society overall toward individuals with disabilities continues to impede change (Cheausuwantavee & Cheausuwantavee, 2012). Societal perceptions hamper enforcement of law, distribution of resources, family involvement, and access to programs for students with disabilities as mandated by law.

One avenue to solve the problem is through teacher training. The applied research focus on interventions and effective outcomes as documented by the National Autism Center (2009) and the Global Autism Public Health Initiative (Autism Speaks, 2012b) should be expanded across the globe (The National Autism Center's National Standards Project (2009) was limited to studies in English). While effective treatments for autism have been documented in the US, this knowledge and training on effective interventions is often not filtered to more rural US schools or outside US borders. Increased collaborations within and between countries to share research, and increase knowledge and expertise are recommended. Research based interventions should be taught and implemented in countries such as Thailand and other nations. Expansion of research regarding effective interventions for ASD globally, as the incidence becomes pandemic in proportion, can help change perceptions of children with disabilities, foster access to education and services, and expand the body of global knowledge regarding all individuals with autism and other disabilities.

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THE RELATIONSHIP OF IEP QUALITY TO CURRICULAR ACCESS AND ACADEMIC ACHIEVEMENT FOR STUDENTS WITH DISABILITIES

Tamika P. La Salle
Georgia State University

Andrew T. Roach
Arizona State University

Dawn McGrath

The purpose of this study was to investigate the quality of Individualized Education Programs (IEPs) and its influence on academic achievement, inclusion in general education classrooms, and curricular access for students with disabilities. 130 teachers from the state of Indiana were asked to submit the most recent IEP of one of their students in either elementary or middle school who (a) had an identified disability and (b) achieved the lowest level of proficiency on the statewide standardized assessment. Teachers also were asked complete the Curriculum Indicators Survey (CIS) which provided information about their student's curriculum and instructional experiences. Ratings from the IEP analysis tool developed for and used in this study suggest that students' IEP goals were of variable quality across grade bands. Academic-focused IEP goals were more likely to include sufficient information about links to the curriculum standards and progress monitoring strategies, but less frequently included sufficient information about students' present levels of performance (PLOP) and the relevance of IEP goals to the students' educational needs. Additionally, the quality of progress monitoring information in academic-focused IEP goals demonstrated a negative association with student achievement. IEP quality demonstrated no significant relationship to inclusion in general education classrooms or two measures of curricular access.

Changes in United States educational policy included in the 2004 Reauthorization of the Individuals with Disabilities Education Act (IDEA) and the No Child left Behind Act (NCLB) are intended to promote increased access to the general education curriculum and improved academic performance for students with disabilities. These policy mandates have clearly resulted in increased participation in state and district accountability systems for students with disabilities (Altman et al., 2010). However, there is less definitive evidence that these policies have resulted in improved opportunities to learn and academic gains as measured state standardized assessments for students with disabilities. McCausland's (2005) review of IEP policies and research in Ireland, Australia, New Zealand, Canada, the United Kingdom, and the United States indicated a *key aspect of IEP policies examined is that they all stipulate that children with (disabilities) for whom IEPs are developed should continue to have their education based on the standard/general curriculum* (p. 52). Thus, research that investigates the relationship between IEP quality and curricular access has potential applicability for an international audience.

Legal Foundations for Access to General Education Classrooms and Curriculum

A number of U.S. court cases have established a long-standing precedent for creating more opportunities to learn and increased access to meaningful, age and grade appropriate curricula for students with disabilities. In Debra P. v. Turlington (1981), the court recognized for the need to align curriculum content and instruction with the constructs and skills that will be measured on standardized achievement tests. In the late 1970's, African American students disproportionately failed the Florida standardized achievement test because they were not allotted access to the curriculum that was assessed on these

measures due to placement in remedial classes that did not provide instruction on grade level content. Although the court's decision mandated that all students must have an equal opportunity to learn the academic content that will be presented on achievement tests prior to testing, this case also highlighted the difficulty involved in evaluating students' opportunity to learn because it is difficult to consistently monitor the extent to which students are engaged in grade level content (Buckendahl & Hunt, 2005; Pullin & Haertel, 2008; Roach, Chilungu, La Salle, Talapatra, Vignieri, 2009).

IDEA, also know n as PL- 94142, first passed in 1975 and subsequently amended in 1997 and 2004, dictated that students with disabilities should be educated to the maximum extent possible with their peers without disabilities. IDEA requires student IEPs to address the impact of student's disabilities on their educational functioning, as well as including the goals and objectives that would be put in place to ensure that students with disabilities can be involved in and progress towards curricular goals [20 U.S.C. Sec. 1414(d)(1)(A)(iii).]. Several court cases have also addressed the extent to which students with disabilities should participate in instructional environments with peers who do not have disabilities.

Daniel R.R. v. State Board of Education (1989) was one of the first court cases to establish that students with disabilities should be educated in the least restrictive environment to the maximum extent possible. The Circuit Court developed a two-prong test to ensure school districts' compliance with the requirements set forth by IDEA; they were to establish if students with disabilities could be educated in the general education classroom with supplemental aids and services, and if that was not possible, then districts were to establish that the child had been mainstreamed to the maximum extent possible. The same procedures were implemented in *Greer v. Rome City School District* (1992) in order to determine if the costs of educating a student with disabilities in the general education classroom would be too substantial to maintain. The courts upheld that students with disabilities, who would otherwise benefit from the general educational curriculum, cannot be denied such access because of the added cost of supplemental aids and services. *Oberti v. Board of Education of the Borough of Clementon School District* (1993) upheld that students with disabilities should be educated in their home school, and placed the burden to meet the requirements set forth by IDEA on the school districts and not the families. This case upheld that *inclusion is a right, not a special privilege for a select few* (Oberti v. Board of Education of the Clementon School District, 1993). Additionally, the case also upheld that the federal regulations require schools to supplement and modify resources and practices that, in the absence of supplements and modification would otherwise result in unnecessary segregation of students with disabilities.

Access to Grade-Level Curriculum for Students with Disabilities

While the inclusion of students with disabilities in general education classrooms is a positive initial step, further action must be taken to ensure that students are engaged in meaningful and intentional grade appropriate instructional content. Otis-Wilborn, Winn, Griffin, and Kilgore (2005) examined the attempts of special education teachers to promote access to the general education curriculum and participation in general education programs. Eighty-percent of teachers interviewed reported facing significant barriers in implementing the aforementioned IDEA 1997 requirements. Specifically, the special educators reported that they struggled to gain access to comparable curricular tools that were provided to general educators, taught in classrooms segregated from the general education classrooms and curricula, and that students with disabilities had limited opportunity to interact with their peers (Roach et al., 2009). Additionally, results of the study also found that special educators had a difficult time consulting with general education teachers because of limited time set aside for joint instructional planning.

The reauthorizations of IDEA have expanded the expectations for students with disabilities from simply being present in general education classrooms to include participate in meaningful, grade appropriate instructional content. While being present in the general education setting increases the likelihood that students with disabilities will have increased exposure to grade level content, the nature of a student's disability may inhibit students' meaningful involvement in curriculum and instructional tasks (Browder, Wakeman, Flowers, 2006); Browder, Wakeman, Flowers, Rickelman, Pugalee, & Karvoven, 2007; Wehmeyer, Lattin, Lapp-Rincker, & Agran, 2003). Wehmeyer et al. (2003) conducted an observational study to examine the amount of time that students with disabilities spent engaged in tasks linked to grade level standards in both general and special education settings. Wehmeyer and colleagues found that students who were included in general education classrooms were engaged in tasks linked to the grade content standards during 90% of observation intervals. Conversely, students with disabilities who were educated in the special education setting (e.g. resource room, special day class) were engaged in tasks linked to grade level content only 50% of the time. The results of this study suggest that inclusion in the

general education setting, for students with disabilities, appeared to increase the amount of time spent on instructional tasks that are linked to grade level content.

Fisher, Roach, and Frey (2002), as part of their review of inclusion literature, asserted that there is evidence beginning from the late 1980s that suggest that the segregation of students with disabilities in separate classes is injurious to their learning. Fisher and colleagues also indicated that students with disabilities who are educated in general education classes generally perform better than average in the regular classroom (p.71). For example, Waldron and McLeskey (1998) compared the performance of 71 elementary students with learning disabilities who were educated in the inclusive setting and 73 students who were educated in a special education setting. The students performed similarly on pre-test measures in reading, math, and on cognitive measures. However, post-test results indicated that students who received instruction in the general education setting showed significant gains in reading compared to students who were educated in the small group setting; in some cases, the rate of growth among these students approached the rate of growth for their counterparts without disabilities. The same results were not observed in math achievement; difference in findings among content areas may be attributed, in part, to a lack of specialized instruction across inclusion classrooms. However, these differences further illuminate that access to the general classroom, in and of itself, may not be sufficient to yield changes in student performance. Baker and Zigmond (1995), in their case study analysis of five students with learning disabilities, found that, while the students did appear to make some progress towards academic goals, they did not consistently receive instruction in the inclusive setting that was linked to grade level content standards. These studies further demonstrate the need to continuously collect data to ensure that students with disabilities have access to the general curriculum and are engaged in tasks that are linked to grade level content standards.

IEPs Link to Curricular Access and Student Performance

Federal regulations require that students with disabilities have access to the general curriculum and work towards the same goals as all students; however, the unique needs of students with disabilities must also be taken into account in designing appropriate services. Thus, students' IEPs must include documentation regarding consideration of the most appropriate levels and modes of access to the general curriculum (Roach & Elliott, 2006). The process of designing an educational program based on individual student needs is intended to address all aspects of the educational experience *including formal and informal curriculum (what), instruction (how), and placement (where)* (Wehmeyer, Lattin, & Agran, 2001, p. 333). The Office of Special Education and Rehabilitative Services (OSERS, July 2001) reported that the IEP process is one of the most critical tools in ensuring that effective teaching, learning, and increased achievement occurs for all students with disabilities (Thompson, Thurlow, Whetstone, 2001). Unfortunately, little research regarding the effect of IEP quality on student access to the general curriculum and student performance on standardized assessments is available.

The 2004 amendments to IDEA were intended to transform IEPs from documents that reflected procedural compliance monitoring and were developed as parallel or separate curricular frameworks for students with disabilities, to programs that increasingly reflect educational goals and services that are in place to aid students in their learning of core academic content and skills (Thompson et al., 2001). As Karvonen and Huynh (2007) asserted, understanding the relationship between IEPs and large-scale assessments for students with disabilities provides evidence about students' opportunities to learn the general curriculum and how such opportunities subsequently influence performance on standardized assessments.

Purpose

The purpose of the present study was to investigate the quality of IEPs and provision for curricular access for students with disabilities. Specifically, this study examined the relationship between the percentage and quality of standards-based IEP goals and teacher-reported curricular access for students with disabilities. In light of the significant attention that has been given to curricular access and accountability for students with disabilities, it was hypothesized that IEP quality would be associated with (a) improved student performance on the state standardized test; (b) the time that students with disabilities spend in general education classes, and (c) access to the general curriculum as measured by scores on nationally recognized measure of the curricular experiences of students with disabilities.

Method

As part of a larger study to validate modified test items for possible inclusion on an alternate assessment based on modified achievement standards (AA-MAS), teachers from across the state of Indiana were

asked to submit data for one of their students. Students identified for data collection (a) had an identified disability and (b) had achieved minimum proficiency on the Indiana Statewide Testing for Educational Progress (ISTEP) during the fall 2008 admission. Under the proposed federal guidelines, these students would have been eligible for participating in AA-MAS. Teachers of participating students also were asked complete the Curriculum Indicators Survey (CIS), which provided information about the student curriculum and instructional experiences. In addition to the completed surveys, teachers were also asked to submit a copy of the student's most recent IEP. All extant student data reviewed by the research team was de-identified by the Indiana State Department of Education.

Participants

Teachers (n = 130) from the state of Indiana were asked to submit data regarding one of their students. Purposive sampling was used to ensure that participating teachers represented districts from all regions of the state and urban, suburban, and rural communities. The majority of the teachers in the sample were White (94.6%) and female (86%). Additionally, 93.0% of participants had special education teaching credentials and 85.4% obtained a master's degree or higher.

The majority of the students in this study were White (86.2%) and male (66.9%), which approximated the gender imbalance in the state's Special Education placements. The most frequent disability categories represented in the sample were Learning Disabilities (53.8%), Speech/Language Impairments (24.6%), Intellectual/Cognitive Disabilities (19.2%), and Autism Spectrum Disorder (10.8%). These numbers also appear to approximate the representation of disability categories among Indiana students in special education, with the exception of students with specific learning disabilities who appear to be over-represented in this sample compared to prevalence rates for the special education population. The over-representation of students with LD in the sample was, however, reflective of the group of students expected to qualify for the proposed AA-MAS.

Measures

Curriculum Indicators Survey. The Curriculum Indicators Survey (CIS) was developed by Karvoven, Wakeman, Flowers, and Browder, (2006) as a teacher-report measure of the curricular access. The CIS asked teachers to describe their expectations for student performance and their perceptions of student skill levels as well as the extent to which students are engaged in grade-level instruction. The questionnaire includes two sections intended to measure the implemented curriculum in grades K-12. The first section of the survey includes information about the teacher's background, training and professional development, classroom characteristics, instructional resources, use of assessments, and instructional influences. Teachers' responses are intended to reflect their perceptions of the curriculum and instruction provided to students on their caseloads or in their classrooms. The second part of the CIS was completed with regard to the education experiences of the student that was selected for this study. This section of the CIS lists specific topics related to either mathematics or English/Language Arts (ELA) and specific content within those areas. Teachers rate the intensity of coverage of each item within the topics, the highest performance expectation or cognitive demands that the teacher believes that the students can achieve, grade level(s) from which instructional materials are adapted, and the intensity of use for a variety of instructional activities. For the purpose of this study, the teachers provided ratings for the intensity of instructional coverage for a series of concepts and skills in the domains of Language, Reading, Writing, and Media. For each concept or skill, ratings range from *0 = no coverage* to *4 = intense/systematic coverage.*

IEP analysis tool. An IEP analysis tool (see appendix) was created for use in this study. The evaluative ratings were based on guidelines for creating standards-based IEPS developed by the National Association of State Directors of Special Education (2007). The IEP analyses tool included 4 items which asked raters to evaluate the extent to which each IEP goal (a) aligned with state standards, (b) provided data on presented level of performance, (c) identified students' educational needs, and (d) described methods for documenting student progress. Ratings on content alignment item focused on whether the IEP goal clearly specified a corresponding content standard and addressed skills and concepts that closely matched or aligned to the identified standard. The present level of performance item asked raters whether the IEP goal included specific assessment data describing the student's current performance on goal-related concepts and skills. Ratings on the educational needs item indicated whether an IEP goal included an explanation of how the student's disability adversely affected progress towards the skills and concepts addressed by the IEP goal as well as grade-level content standards. The Progress monitoring item asked raters whether the IEP goal defined the baseline level of performance and included reasonable rigorous targets or outcomes in measurable terms. A 3-point Likert scale was used

to rate the extent to which each IEP goals included each of the aforementioned components with a rating of *2* indicating full attainment of the criteria, *1* indicating partial attainment, and *0* indicating non-attainment.

Procedure

Students' IEP goals were evaluated by a research team comprised of one faculty member and three advanced graduate students in school psychology; three of the team members also had extensive experience as special education teachers. Prior to completing ratings of the *research* IEPs, the team used the IEP analyses tool to evaluate *practice* IEPs (collected as part of a previous study). Each team member individually used the tool to evaluate these *practice* IEPs, then the team met to compare ratings, and discuss and resolve any discrepancies. This process continued until inter-rater agreement exceeded 90% for ratings on all components of the IEP analysis tool. At this point, two members of the research team independently rated each IEP, this process resulted in 74.8% inter-rater agreement across dimensions. Any discrepancies in the independent ratings were reviewed and discussed by the first and second authors who then reached consensus on the most appropriate final rating.

Results

Descriptive statistics (means and standard deviations) were calculated for the IEP analyses tool for the entire sample and for each grade band (i.e., elementary and middle school). In addition, one-sample t-tests were conducted to identify significant differences in the means for each grade band. Participating students' IEPs had between three and four IEP goals (mean = 3.5) with 73% of those goals addressing academic content (Table 1). The mean percentage of academic-focused IEP goals was significantly greater for elementary school students' IEPs (79.0%) than for middle school students' IEPs (64.3%). The mean ratings on the IEP analysis tool for academic-focused goals suggested variation in attainment of the quality criteria. Academic-focused IEP goals on participating students' IEPs received a mean rating of 1.6 on the Curricular Access criterion and 1.4 on the Progress Monitoring criterion, suggesting these are areas of relative strength in teachers' IEP goal development. Conversely, mean ratings on the Present Level of Performance (0.6) and Educational Needs (0.6) dimensions were lower for academic-focus IEP goals. In addition, a statistically significant difference also was observed between elementary (1.6) and middle school students' (1.3) mean Progress Monitoring ratings on the academic-focused IEP goals.

Table 1. Descriptive Statistics for IEP Analysis Tool

	IEP Goals			Academic-Focused IEP Goals IEP Analysis Ratings			
Grade Band	Total *M (SD)*	Academic-Focused *M (SD)*	Percent Academic-Focused* *M (SD)*	Curricular Access *M (SD)*	PLOP *M (SD)*	Educational Needs *M (SD)*	Progress Monitoring *M (SD)* *
Elementary *(n = 76)*	3.5 (2.2)	2.6 (1.8)	79.0 (28.6)	1.6 (0.7)	0.6 (0.7)	0.7 (0.6)	1.6 (0.6)
Middle School *(n = 54)*	3.4 (1.5)	2.3 (1.3)	64.3 (31.6)	1.6 (0.8)	0.5 (0.7)	0.6 (0.6)	1.3 (0.8)
Total *(N = 130)*	3.5 (2.0)	2.5 (1.6)	73.0 (30.6)	1.6 (0.7)	0.6 (0.7)	0.6 (0.6)	1.4 (0.7)

* $p < .05$

Descriptive statistics (means and standard deviations) were calculated for the CIS results (table 2) for the entire sample and for each grade band (i.e., elementary and middle school). The CIS also required teachers to identify the intensity of instructional coverage for a series of 27 concepts and skills Language Arts (including Oral Language, Reading, Writing, and Media). Intensity of coverage was rated on a four point scale, ranging from *0 = no coverage (not an expectation for this topic this school year)* to *4 = intensive/systematic coverage (daily or almost daily instruction throughout the year).* The mean total Intensity of Coverage rating for Language Arts skills and concepts was 2.23, which indicates that the rated topics generally received *moderate coverage (11-20 lessons over the course of the year).* In addition, the CIS asked teachers to report the amount of time spent on a series of 18 Language Arts instructional activities (e.g., engaging in read aloud activities, engaging in the writing process) as well as

level of student participation in each of these activities. Instructional time ratings ranged from *0 = none* to *4 = Considerable, 8 or more hours/week.* The mean rating for participating students' time on instructional activities was 1.63, which was between the *little* (1 hour or less/week) and *some* (2 to 4 hours/week) ratings. There was no significant difference between the mean CIS ratings across the two grade bands. Teachers reported that participating students spent approximately three-fourths of their time in general education contexts (table 2). Although the difference was not statistically significant, teachers did report that middle school students spent more time (77.3%) in general education contexts than elementary school students (69.6%).

Table 2. Descriptive Statistics for Curricular Indicators Survey

	CIS Intensity of Coverage *M (SD)*	CIS Time on Instructional Activities *M (SD)*	Percent Time in General Education *M (SD)*
Elementary *(n = 76)*	2.25 (0.66)	1.68 (0.51)	69.6 (26.4)
Middle School *(n = 54)*	2.19 (0.56)	1.54 (0.57)	77.3 (20.1)
Total *(N = 130)*	2.23 (0.63)	1.63 (0.54)	72.7 (24.2)

Is IEP Goal Quality Predictive of Students' ISTEP Performance?

Multiple regression analysis was used to examine the influence of IEP quality on the students' ISTEP scores. The following predictors were entered into the model: 1) percentage of academic-focused IEP goals and mean ratings for academic-focused IEP goals for each of the following criterion 2) curricular access, 3) educational need; 4) present level of educational performance; and 5) progress monitoring . Predictors were entered in forward fashion with a .05 significance cut-off. Table 3 provides a summary of the results of the analysis. The results indicate that the mean Progress Monitoring rating for academic-focused IEP goals accounted for a small amount (R^2 = .04) of variation in students' ISTEP performance. The regression coefficient for the Progress Monitoring ratings was negative, indicating that the inclusion of progress monitoring procedures in students' academic-focus IEP goals was associated with lower performance on the statewide achievement test.

Table 3. Variables That Predict Students' ISTEP Performance

	Partial Regression Weights		
Predictor	Raw	Standardized	Sig.
ELA Expectations	-23.483	-.20	.04
Intercept	405.9		
Summary Statistics	R = -.20	R^2 = .04	

Is IEP Quality Associated with Curricular Access and Inclusion in General Education?

A series of three multiple regression analyses was used to examine the relationship of IEP quality to teacher-reported percentage of time in the general education classroom and to two measures of students' curricular access: (a) CIS Instructional Intensity ratings; and (c) CIS Time of Instruction ratings. The following predictors were entered into the model: 1) percentage of academic-focused IEP goals and mean ratings for academic-focused IEP goals for each of the following criterion 2) curricular access, 3) educational need; 4) present level of educational performance; and 5) progress monitoring. Predictors were entered in forward fashion with a .05 significance cut-off. The results indicated that none of the IEP quality metrics were significantly associated with time spent in general education classrooms or the two measures of curricular access.

Discussion

As schools and educators work towards increased expectations for greater access to and improved performance on general education skills and concepts, it is important to review and examine the factors that aid students with disabilities in attaining these goals. The results of this study provide evidence

regarding the quality of IEPs and provision for curricular access for students with disabilities. Ratings on the IEP analysis tool suggest that students' IEP goals are of variable quality. Academic-focused IEP goals were more likely to include sufficient information about links to the curriculum standards and progress monitoring strategies, but less frequently included sufficient information about students' present levels of performance (PLOP) and the relevance of IEP goals to the students' educational needs. Supporting better data collection and reporting about students' PLOP may be an important training objective because it appears to influence access to the general curriculum and also the type of instructional tasks they are provided. In his review of various nations' IEP policies, McCausland (2005) suggested that policymakers endorse the use of a variety of assessment strategies rather than solely relying on standardized assessments. In particular, he highlighted the key principals of assessment identified by the New Zealand Ministry of Education, including the following:

1. The assessment process should be part of the learning process whenever possible;

2. Assessment methods and contexts may vary according to the needs of individual students; and

3. No single assessment procedure should be used as the sole means of identifying the needs of a student (p. 25).

Helping teachers utilize a variety of classroom-based assessment and data collection strategies (e.g., curriculum-based measurement, portfolios, anecdotal records) remains a challenge regardless of national context.

Ratings on the IEP analysis tool generally did not suggest differences in quality of IEP goals across grade bands. There was, however, a significant difference in the mean percentage of academic-focused IEP goals with elementary students' IEPs including a greater percentage of academic-focused goals. This may be due to the inclusion of more transition-focused goals at the middle school level or the difficulties of making middle school reading, mathematics, and social studies concepts accessible for students with disabilities. The inclusion of transition-related plans and services is a concern of a variety of nations' IEP policies. McCausland (2005) makes a number of recommendations for including transition elements in IEPs, including *ensuring that students with disabilities have access to the full range of general education curricular options and learning experiences* (p. 54). Additional work is needed to help secondary teachers identify resources and modifications that facilitate students' access to grade-level curricular concepts and skills.

The quality of IEP goals demonstrated a very limited relationship to students' large-scale test performance. In fact, greater specification of progress monitoring strategies was associated with lower performance on the ISTEP. Moreover, IEP quality ratings demonstrated no significant association with a variety of measures of curricular access and inclusion. These results are disappointing in light of the resources many educational systems commit to professional development and resources to support IEP quality. In addition, these results represent a disconnect with national policies (Ahern, 2006; McCausland, 2005: USDE, July 2007) that promote standards-based IEPs as a pathway to curricular access and improved student performance. For example, in the United Kingdom, the effectiveness of IEPs are evaluated on whether educational services *close the gap in attainment between a student and his/her peers—or stops the gap growing* (McCausland, 2005, p. 62). If, as our results suggest, there is a limited relationship between IEP quality and test scores, the utility of this metric for evaluating IEP effectiveness is questionable.

Potential Limitations and Future Directions for Research

The sample in this study may limit its generalizability to the larger population of special education teachers and students with disabilities. The participating teachers were not randomly sampled but rather selected to represent the different geographic regions of a single state in the United States—Indiana. In addition, these teachers had an average of 13.9 years of teaching experience. It is possible that the inclusion of less-experienced teachers in the sample may have resulted in different IEP characteristics and reported levels of curricular access. Additional investigations could include a random sample of special educators, drawn from a variety of states or nations. This study was conducted as part of a larger study to validate potential test items for use on an alternate assessment based on modified achievement standards (AA-MAS). Because of this, the IEPs of persistently low-achieving students (as defined by the federal guidelines for AA-MAS) were selected for analysis. The focus on this sub-group of students may have resulted in a restricted range for the outcome measures of interest (i.e., state test results, CIS

ratings). Future research using the IEP analysis tool should include the IEPs of a stratified random sample of students with disabilities.

Conclusions

Across a variety of nations, educational policy for students with disabilities is intended to lead to greater access to the curriculum and grade level standards for students with disabilities. Results of this study that IEP quality was not a significant predictor of test performance or curricular access. Results from this study reflect previous research that suggests that IEP practices do not consistently impact students' access to or involvement in the general education curriculum. For example, Fisher and Frey (2001) found a disconnect between information found in students' IEPs and the actual curriculum and instruction provided to students in inclusive settings. In order for IEPs to serve as the primary means of facilitating curricular access and to improve student academic outcomes for students with disabilities, educational systems need to provide professional development and increased IEP quality monitoring to ensure that the goals and services outlined in the IEP are monitored and implemented as planned (Roach et al., 2009). The promotion of the standards-based IEPs in policy and regulations only increases the need for additional research and professional training to support quality IEP goal development.

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Appendix

Student ID:	**Grade Level:**	**School District:**						
Directions Step 1. Determine whether each IEP goal is academic-focused (i.e. addresses reading, language arts, mathematics, science, or social studies content). Step 2. For each IEP goal, complete the ratings for content alignment, present level of performance, educational need, and progress monitoring. Step 3. Calculate goal-level and overall IEP scores								
Evaluation Criteria	**Goal 1**	**Goal 2**	**Goal 3**	**Goal 4**	**Goal 5**	**Goal 6**	**Acad Goals (Mean)**	**All Goals (Mean)**
Academic-Focused IEP Goal *Does this goal address language arts, mathematics, science, or social studies content and/or skills?*	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No		
Content Alignment *2 = IEP goal clearly specifies a corresponding content standard and addresses skills/concepts that closely match or align to the identified standard.* *1 = IEP goal clearly specifies a corresponding content standard and addresses skills/concepts are a partial match (e.g., related or prerequisite) to the identified standard.* *0 = IEP goal does not identify a corresponding content standard, or IEP goal addresses skills/concepts that are not related the identified standard.*								

Present Level of Performance *2 = IEP goal includes specific assessment data describing the student's current performance on goal-related concepts and skills.* *1 = IEP goal includes a general description (without assessment data) of student's current level of performance.* *0 = IEP goal does not include any assessment data or description of student's current level of performance.*								
Educational Needs *2 = IEP goal includes an explanation of how the student's disability adversely affects progress towards (a) skills and concepts addressed by the IEP goal; and (b) grade-level content standards.* *1= IEP goal includes an explanation of how the student's disability adversely affects progress towards skills and concepts addressed by the IEP goal, but does not connect this information to grade-level content standards.* *0 = IEP goal does not include an explanation of how the student's disability adversely affects progress toward skills and concepts addressed by the IEP goal.*								
Progress Monitoring *2 = IEP goal defines the baseline level of performance AND reasonable rigorous target/outcomes in measurable terms.* *1 = IEP goal does define EITHER baseline level of performance OR reasonable rigorous target/outcomes in measurable terms (but not both).* *0 = IEP goal does define NEITHER baseline level of performance NOR reasonable rigorous target/ outcomes in measurable terms.*								
Total Score for Goal								

THE TRANSITION FROM PRIMARY TO SECONDARY SCHOOL: PERSPECTIVES OF STUDENTS WITH AUTISM SPECTRUM DISORDER AND THEIR PARENTS

Elizabeth F. Hannah
Keith J. Topping
University of Dundee

The perspectives of students with an autism spectrum disorder (ASD) during the period of transition from mainstream primary to mainstream secondary school are under-researched. This paper reports a longitudinal investigation into the feelings, expectations and experiences of nine students and their parents during such a period. Employing student and parent perspectives, students' expectations of the move to secondary school were generally negative; there was a combination of positive and negative feelings prior to the move; and their experience of the move was better than expected. Findings are considered in the context of the literature on transition for the general student population and the restricted literature for students with autism spectrum disorder. Comparisons are drawn between the students' and parents' perspectives of transition experiences and support. Limitations of the research are considered. Implications for policy makers, professionals and researchers are discussed.

The majority of compulsory education systems involve a move between primary and post-primary stages (Le Métais, 2003), a transition which can be construed as a significant life event for students, parents/carers and other family members (Lohaus, Elben, Ball, & Klein-Hessling, 2004). Changes associated with this move can present both opportunities and challenges to children (Pietarinen, Soini, & Pyhältö, 2010) and their families. Families can offer welcome support during this time (Ashton, 2008). Typical changes experienced by students include those of the physical environment (usually involving a move to a larger school with a more complex organisational structure and physical layout) (West, Sweeting, & Young, 2010; Zeedyk et al., 2003); the curricular environment (new subjects, a wider range of teachers, and different teaching methods) (Ashton, 2008; Tobbell, 2003) and the social environment (different peers, teachers, and other adults) (Ashton, 2008; Graham & Hill, 2003; Ward, 2000).

This paper will present the findings from a small-scale study into the perspectives of a group of students with an autism spectrum disorder (ASD) and their parents during the period of transition to secondary school. It will draw on resilience and ecological theories of human development to conceptualise educational transition; apply this to the experiences of students with a pervasive developmental disorder; highlight new theoretical insights; and consider the implications for educational policy and practice. Legislative and policy imperatives and the theoretical importance of seeking the views of key stakeholders, such as parents and children, are considered.

Ecological perspective and transition

Ecological theories of human development emphasise the dynamic and bi-directional nature of the interaction between an individual and his/her environment; the role of proximal and distal systems; and the interplay between those systems. Bronfenbrenner's ecosystemic conceptual framework, originally developed more than thirty years ago and subject to ongoing revision, comprises four nested systems: microsystem, mesosytem, exosystem and macrosystem (Bronfenbrenner, 1979, 1992). The microsystem represents contexts in a child's immediate environment, such as the home or school; the mesosystem denotes interactions between settings in which a child can be located; the exosystem describes an interaction between an immediate setting, such as the home, and a remote but influential setting, such as the parent's work situation; and the macrosystem, which takes account of the potential impact of such

factors as culture and beliefs on a child's development. In the 1980s, Bronfenbrenner incorporated the chronosystem, which took account of temporal elements. This enabled account to be taken of the impact of experiences in a child's life, both normative (e.g. starting secondary school) and non-normative (e.g. parental divorce) (Bronfenbrenner, 1988).

The ecological systems perspective has been influential in educational transitions research, including the transition to school (e.g. Hannah, Gorton, & Jindal-Snape, 2010; Margetts, 2007) and the transition from elementary to middle school (e.g. Akos, 2010). It has the flexibility to be employed as a sole theoretical framework or in an integrated fashion, for example with resilience theory (Waller, 2001).

Resilience theory and transition

Resilience has been defined as *a phenomenon or process reflecting relatively positive adaptation despite experiences of significant adversity or trauma* (Luthar, 2006, p. 742). Early work on resilience focused on the identification of individuals, and their associated personal attributes, who appeared able to adapt despite being exposed to potentially detrimental circumstances. Later and contemporary work has seen a shift from a focus solely on personality traits, which protect the child in the face of significant adversity, to an interactionist perspective which takes account of risk and protective factors in the individual and the environment. Newman and Blackburn (2002), based on an extensive review of the resilience literature, identified three dimensions within which risk and protective factors operate: the child, the family and the environment.

The definition of resilience has two key constructs, namely the experience of *significant adversity* and *positive adaptation*, which has been the subject of debate. Although an extensive account of this discussion is beyond the scope of this paper, it is pertinent to consider these concepts in the context of primary-secondary transition. In particular, it is legitimate to ask whether transitions can be construed as times of significant adversity. Newman and Blackburn (2002), from an examination of extant literature, construe transitions as *any episode where children are having to cope with potentially challenging episodes of change* (p.1). Similarly, Jindal-Snape and Miller (2008) argue that for some children transition can be considered *a challenge of living* and that there should be a greater focus on social and personal experiences at such times.

Students with a pervasive developmental difficulty, such as ASD, are at greater risk of experience of *significant adversity* during the transition to secondary school due to the presence of risk factors at the individual level. However, these factors will be moderated by the presence or absence of risk and protective factors in the family and the environment. Luthar (2006) argues for research into the processes within families and communities which underpin resilience with the aim of informing interventions. Furthermore, he proposes the utilisation of qualitative methodologies to supplement and complement quantitative methodologies. Similarly, Waller (2001) proposes that *narrative approaches which tap into subjective experience may reveal protective factors not apparent even to participant-observer researchers* (p. 295) and are critical to understanding resilience.

Listening to Stakeholders and Inclusive Practice

Educational policy and practice should be informed by the views of all key stakeholders, including those of children. From a children's rights perspective, Article 12 of the United Nations Convention on the Rights of the Child holds that *state parties shall assure to the child who is capable of forming his or her own views the right to express those views freely in all matters affecting the child* (United Nations, 1989). An international drive towards inclusive practice such as the influential Salamanca Statement (UNESCO, 1994) has led to an increased interest in listening to the views of key stakeholders, including children, and developing appropriate methodologies (Barrow & Hannah, 2012). Furthermore, listening to children's views provides a more holistic picture of educational practices, avoiding the pitfall of over-reliance on the views of one group. For example, in a recent review of 88 studies, Topping (2011) found that teachers and pupils had different perspectives on primary-secondary transition.

International and national legislative and policy imperatives (Education (Additional Support for Learning) (Scotland) Act 2004; Standards in Scotland's Schools Act 2000; UNESCO, 1994) resulted in an increased focus and drive within the host local authority to develop more inclusive educational practices. The move from primary to secondary school had been identified as representing a period of potential risk for students with additional support needs (ASN) (Education (Additional Support for Learning) (Scotland) Act 2004), indicating a need to evaluate existing authority transition practices and if necessary develop new structures and systems.

Experiences of students moving to secondary school

Research into the experiences of students in transition in the general population (utilising prospective and retrospective accounts), has identified both positive and negative features (anticipated and actual) associated with the move to secondary school. Positive expectations and experiences of secondary school include the breadth and variety of subjects; learning new things; finding work easier; having a range of teachers; increased opportunities for movement; and making new friends (Besley, 2004; Chedzoy & Burden, 2005; Fouracre, 1993; Graham & Hill, 2003; Mizelle, 1999; Pointon, 2000; Tobell, 2003). Negative expectations and experiences include the size and layout of the school; the potential for getting lost; the number and range of teachers; higher expectations of secondary school teachers; different approaches to classroom management; the level and amount of work and homework; students' organisational skills; a sense of loss of ownership of personal space; leaving the stability of peer relationships formed in the primary school to the insecurity of forming new social groups in the high school; not knowing anyone; and being picked on, teased or bullied (Ashton, 2008; Chedzoy & Burden, 2005; Fouracre, 1993; Graham & Hill, 2003; Jindal-Snape & Foggie, 2008; Johnstone, 2001; Mizelle, 1999; Pointon, 2000; Tobbell, 2003; Ward, 2000; West et al., 2010; Zeedyk et al., 2003). Students report a mixture of positive feelings about moving to secondary school (such as happiness, excitement and anticipation) and negative feelings (such as sad, lonely, scared, and anxious) (Ashton, 2008; Johnstone, 2001; Lucey & Reay, 2000; Pratt & George, 2005). Such heightened feelings of anxiety and associated levels of stress have been construed by some researchers as fulfilling a positive and adaptive function during periods of change (Lucey & Reay, 2000).

Transition experiences of students with ASD

Moving school presents a particular challenge to students with an autism spectrum disorder (ASD), given the nature of their language and communication difficulties (Wing, 1993). ASD is used here to embrace a range of diagnostic labels including classical autism, atypical autism and Asperger Syndrome. Underlying the behaviour of individuals with ASD, regardless of their level of intelligence or any additional difficulties, is the *triad of impairments.* This term was originally coined by Wing and Gould (1979) and refers to difficulties in social interaction, social communication, and imagination. It forms the basis for the ASD diagnostic criteria employed in the *International Classification of Diseases 10th edition (ICD-10) (WHO, 1993) and the Diagnostic and Statistical Manual 4th edition (DSM-IV;* American Psychiatric Association, 2000). Associated with the impairment in imagination, individuals with ASD experience difficulties with environmental change, resulting in an insistence on routines (Mesibov & Shea, 2010; Wing, 1992; Wing, 1993).

In educational contexts, of course, students experience changes on a daily basis. Pietarinen et al., (2010), drawing on students' reflections, provided a useful conceptualisation of horizontal and vertical dimensions of transition. The latter referred to normative transitions such as moving between school stages and the former to the adjustments that students make in response to the *more unpredictable and non-normative transitions in their everyday life* (p. 147). Both dimensions are significant for students with ASD, who need predictability in their lives (American Psychiatric Association, 2000).

There appear to be few published studies that have considered the perspectives of children with ASD moving from primary to secondary school. Only three studies were found none of which drew on an ecological perspective or resilience theory. All were in the UK and involved small samples, considering students' retrospective(Johnstone & Patrone, 2003; Larney & Quigley, 2006) or prospective (Jindal-Snape, Douglas, Topping, Kerr, & Smith, 2006) views of transition support arrangements. The studies also provided suggestions for improvements to practice. Larney and Quigley (2006) noted that although pupils were generally positive, they sought *ongoing consultation with them throughout the transition process* (p.3). Similarly, Johnstone and Patrone (2003) report that pupils would have liked adults to have taken more time to listen to their questions and concerns. In addition, the children wanted to be included in decisions about transition and sought greater social continuity (peers and adults). Jindal-Snape et al., (2006) report that students valued the preparation for transition, including school visits, particularly where these involved active engagement in school activities.

Aims of study

It cannot be assumed that the experiences of students with ASD mirror those of students in general, although there may be some commonalities. Given the difficulties associated with the triad of impairments, it is likely that ASD students will require more and/or different forms of support during periods of transition. One way in which practitioners can achieve a better understanding of students' experiences of the transition from primary to secondary school is through investigating their

perspectives. This will help them tailor interventions to the specific needs of this group and provide a basis for evaluation of the impact of support strategies.

The present paper reports on the experiences of a small group of students with ASD moving from primary to secondary school in Scotland (where this transfer typically takes place between the ages of 11yrs 6m and 12yrs 5m). Addressing limitations in previous studies, it considers the students' views at three time points, thus providing a longitudinal perspective. Furthermore, it compares the students' views with those of their parents. It has been suggested that there is a causal relationship between parental concerns and those of their children (Zeedyk et al., 2003). This study provided an opportunity to explore this question.

The first author, working in close collaboration with an experienced teacher and speech and language therapist, developed and evaluated a transition programme which complemented the host local authority transition arrangements (these typically involved exchange of information, preparatory visits for students, and transition planning meetings). The structure of the transition programme was informed by Bronfenbrenner's ecological systems model (Bronfenbrenner, 1979; Bronfenbrenner, 1992); including elements of the microsystem, mesosystem and exosystem. The importance and role of parents (student-home microsystem) was incorporated through parent information sessions and homework activities to encourage parent-child discussion and consolidate session activities. The role of primary and secondary teachers (student-school microsystem) was captured through information exchange about the programme and individual students, and by providing resources (e.g. school maps and timetables) in the group sessions. Peers (student-peer group microsystem) played a significant role in the six group sessions, and the students were encouraged to share contact details and communicate outside the formal sessions. The programme supplemented existing communication practices between primary and secondary school staff (primary school-secondary school mesosystem) and provided opportunities for parents to meet, share experiences and issues (parent-parent exosystem). Drawing on understanding of the nature of difficulties associated with ASD and evidence of effective teaching and support strategies for students with ASD, the programme incorporated six two-hour sessions in school. These offered a mixture of individual and group activities, designed to enhance students' knowledge of secondary school; understanding of expected behaviour in school; understanding ASD and personal insights; and developing social communication, organisational and emotional regulation skills.

This paper considers those aspects of the study which explored students' and parents' views about secondary school, including expectations and reality; feelings associated with the move; and support provided. The findings will be discussed in the context of previous transitions research, an ecosystemic perspective and resilience theory.

Research Questions

1. What feelings do the students' experience during the transition to secondary school?
2. What are the students' expectations of secondary school?
3. What are the students' experiences of secondary school?
4. What are the students' views of the support provided during the transition to secondary school?
5. What are the parents' views of the support provided during the transition to secondary school?

Method

Design

The study employed a longitudinal design with the aim of exploring students' and parents' perspectives of transition. There was no control or comparison group; all participants participated in the transitions programme.

Setting

This study took place in a large, inner city in Scotland which faces challenges due to the levels of deprivation within its locality. The number of pupils registered for Free School Meals, as a proxy

indicator of socio-economic status, placed the host authority in the top 25% of local authorities in Scotland (Scottish Government, 2010).

Sampling

A sample of students was purposively selected from the population of all students with a diagnosis of ASD, attending the last year of a mainstream primary in two quadrants of the city (which was served by one local authority) and eligible to transfer to a mainstream secondary school in a locality served by that authority. It should be noted that applications had been made to specialist provision attached to mainstream secondary schools for some of the pupils, but that the outcome of those applications was not known before the start of the transition programme. A potential drawback was the reliance on full and accurate information. Other sources, such as speech and language therapy records, provided a cross-checking mechanism improving the reliability of the method.

Participants

Nine male students participated, all of whom had a diagnosis of Asperger Syndrome. The absence of females in the sample is not surprising as typical prevalence levels (male to female) range from four to one (across the whole spectrum) to eight or nine to one (higher functioning individuals) (Mandy et al., 2011). In addition, one student had an additional diagnosis of Tourette syndrome. Participants' ages at commencement of the study ranged from 11 years 3 months to 12 years 4 months (*Mean* = 11 years 8.9 months; *Standard Deviation* = 4.6 months). There was some attrition over the period of the investigation. Due to parental disengagement after completion of the six-session transition programme (completed before the summer break), data was not available for one of the participating students post-transfer. His pre-transfer data is included in the findings. Details of participants by gender, age at commencement of the study, diagnosis and school provision are shown in Table 1.

Table 1: Details of Participants

Student No.	Age at Start of study	Diagnosis	Primary School Placement	Secondary School Placement
1	11 years 8 months	Asperger syndrome	Mainstream primary	Secondary communication support unit
2	11 years 3 months	Asperger syndrome	Mainstream primary	Secondary communication support unit
3	12 years 2 months	Asperger syndrome	Mainstream primary	Mainstream secondary
4	11 years 6 months	Asperger syndrome	Mainstream primary	Mainstream secondary
5	11 years 10 months	Asperger syndrome Tourette syndrome	Mainstream primary	Mainstream secondary
6	12 years 4 months	Asperger syndrome	Mainstream primary	Mainstream secondary
7	12 years 1 month	Asperger syndrome	Mainstream primary	Mainstream secondary
8	11 years 5 months	Asperger syndrome	Mainstream primary	Secondary communication support unit
9[a]	11 years 5 months	Asperger Syndrome	Mainstream primary	Mainstream secondary

[a] Data for this student is available pre-transfer but not post-transfer

Measures and Procedures

Ethics. Relevant permissions were obtained from senior managers within the local authority. The principal researcher complied with the British Psychological Society Code of Ethics and Conduct (British Psychological Society, 2009). Written informed consent was obtained from all participants. Hard data was stored in a locked filing cabinet and electronic data was stored and retrieved through a password

protected computer. Issues of confidentiality and anonymity in dissemination of findings were communicated to all participants.

Transition questionnaire: pre-transfer. Students completed a pre-transfer questionnaire (see Appendix A), with support as required from teaching and non-teaching staff, during the first session of the transition programme (in May prior to the move to secondary school). This included the question *What three things would most help you with the move from primary to secondary school?*, thus providing insight into their perceived support needs. Parents completed a pre-transfer questionnaire (based on the student questionnaire in Appendix A) which incorporated the question *In your opinion what are the three things that would most help your child with the transfer between primary and secondary education?* at the information session in March (academic session before the move).

Group activity: post-transfer. Two months following the transfer to secondary school, eight students and parents were invited to a reunion meeting after school hours (the ninth student and his parent were not invited due to apparent disengagement from the research). The aims of this meeting were to share their views and experiences of the transition process; discuss whether further support could be provided during the transition period; and use the shared information to inform future developments of the programme. Six students and six parents attended and all three members of the transition programme team were present, namely the first author, a senior educational psychologist, the principal teacher (PT) autism unit (AU) and the AU speech and language therapist (SALT). During the first part of the session, the group was sub-divided into parents and students. The first author facilitated the parents' group while the PT (autism unit) and SALT facilitated the students' group in a separate room. The two groups reconvened at the end of the session to share views and discuss similarities and differences in their responses.

The group activity drew on the methodology of group interviewing. It has been suggested that the group interview is particularly useful with children as it enables the use of familiar language and encourages group interaction (Cohen, Manion, & Morrison, 2007); addresses issues of power and status typical of individual interviews (Kellett & Ding, 2004); and offers a supportive environment (Jones & Tannock, 2000). Participants were asked *What has helped you/your son in the transition from primary to secondary school?* They worked in pairs identifying factors which had assisted the transition process; noted them on flip chart paper; and then prioritized them through the allocation of stickers. Each participant was provided with fifteen stickers. They were encouraged to think about all aspects of the transition process and not just the transition programme. Participants were also asked *What else could have helped you/your son in the transition from primary to secondary school?* Responses were collated on flip chart paper.

Interviews: post-transfer. Letters to parents outlining the purpose and nature of the interviews were distributed six months following the transfer to secondary school. Between late February and early April, the first author conducted interviews with eight students and nine parents (one was a joint parent interview) in their homes at convenient times.

Semi-structured interviews were used to explore the students' and parents' perspectives on the move from primary to secondary school. The relevant extract from the student interview schedule is shown in Appendix B; the parent interview schedule being along similar lines. The perceived advantages of using interviewing as a data collection method were the facility to address any misunderstandings on the part of the interviewee; enable further exploration of ideas through the use of prompts and probes; and provide rich information. Students and parents were asked to evaluate prior conceptualisations of secondary school against experiences such as:-

1. When you/your son were/was at primary school, what did you/he imagine secondary school would be like?

2. How does secondary school compare to your/his expectations of it?

3. What feelings do you/did your son associate with the transition from primary to secondary school?

There are specific issues to consider when interviewing children, including the power differential between the interviewer and the interviewees (Kellett & Ding, 2004); aspects pertaining to children's linguistic and cognitive development (Dockrell, Lewis, & Lindsay, 2000); and children's ability to recall

information (Greig, Taylor, & MacKay, 2007). The use of techniques such as an open question format and avoiding recurrent probing for detail have been suggested as ways of enhancing the effectiveness of methods used to question children (Dockrell et al., 2000). These aspects were incorporated into the procedures in this study.

The interview schedules were carefully planned and structured for ease of clarity. A preamble reminded each interviewee of the purpose of the interview; each section had an introduction explaining the purpose and focus; and various prompts and probes supplemented the main questions. The interview was piloted with a young person with Asperger Syndrome and his parent who were not involved in the study. This resulted in minor changes, such as ensuring adequate space to record verbatim responses; noting any additional prompts or probes; and asking a final *Any other comments?* at the end of the interview.

A number of potential threats to the validity of interviewing as a data collection method are acknowledged. Attempts were made to minimize the amount of bias by checking the interviewees' understanding of questions; using prompts and probes to check that the interviewer understood the responses; and conscious awareness on the researcher's part of the dangers of seeking answers that supported preconceived ideas (Cohen et al., 2007). Threats to reliability were addressed through utilization of the same interview content and format; and the same interviewer.

It is generally recommended that interviews are audio taped as they provide a permanent record and enable the interviewer to focus on the interview (Robson, 2002). However, the use of an audiotape recorder has the potential to constrain respondents (Cohen et al., 2007). It was the first author's opinion that the introduction of a recording device in these one-to-one interviews could be unsettling and anxiety provoking. Therefore, it was decided to make contemporaneous notes of the interviews, recording as far as possible all verbatim comments and any significant non-verbal communication (e.g. smiling, frowning) made by the respondents. The first author had ascertained during the pilot stage of interview development that it was possible to make contemporaneous notes whilst maintaining the flow of the interview. A potential threat to the reliability of this recording method was the selection of comments, as it was not possible to record every utterance.

Data Analysis

Transition Questionnaire: pre-transfer. The responses to the three things question were subject to content analysis (Robson, 2002) using meaningful phrases as the recording unit. Categories were generated inductively but to be mutually exclusive. This procedure was also completed by an independent coder not involved in the research. Interater reliability was calculated using Cohen's Kappa (K), with values of 0.88 and 0.82 for student and parent data respectively. Any minor anomalies were addressed, resulting in an agreed final analysis.

Group Activity. Analysis of group activity data followed a similar procedure to that used with the pre-transfer transition questionnaire. Another independent coder was used, not involved in the research. Inter-rater reliability for the two questions was calculated using Cohen's Kappa (K). Values of 0.95 and 0.75 were obtained for the student data; 0.91 and 0.73 for the parent data. Any minor anomalies were addressed, resulting in an agreed final analysis.

Follow-up Interviews: post-transfer. Analysis of interview responses, with student data and parent data considered separately, followed a similar procedure to that used with the pre-transfer transition questionnaire. With regard to students' and parents' views of the move from primary to secondary school (three questions) and the utility of the transition programme (one question), two sets of interview data were randomly selected and subject to content analysis by an independent coder (as for the pre-transfer questionnaire). Inter-rater reliability for the four questions was calculated using Cohen's Kappa with values of 1.0 for student and parent data. Following agreed revision of the categories, the first author conducted a content analysis of the entire interview data set.

Results and Discussion

Feelings experienced by students during the transition to secondary school

In retrospective interview accounts, the majority of students (5/8) and parents (7/8) made reference to feeling *nervous/ frightened* about the move to secondary school (see Table 2).

Table 2: Feelings Associated with the Transition from Primary to Secondary School

Category	Students	Parents
Nervous/frightened	5	7
Not seeing peers/friends from primary school	2	1
Not knowing where to go in new school	2	0
Missing primary school	1	0
Wider range of activities	1	0
Interested in activities in secondary school	0	2
Fun	1	0
Excited	1	0
Feeling welcomed	1	0
Support of the unit	1	0
Not mentally stimulating	1	0
Looking forward to new school	0	4

Two students and one parent commented on not seeing peers from primary school, and on friends going to a different school (child-peer microsystem). These negative feelings were balanced with positive feelings about the move, such as feelings of excitement and enjoyment of the new experience. Half of the parents noted that their children looked forward to the new school and were interested in the activities. Students used phrases such as *fun, excited, feeling welcomed* and a *wider range of activities*. A student who attended a specialist unit made reference to positive feelings about the support provided (child-school microsystem).

This combination of feelings of anxiety and fear mixed with those of excitement has been reported in research with the general student population. Lucey and Reay (2000) use the term 'fearful excitement' to describe this mix of emotions. There does not appear to be equivalent literature pertaining to students with ASD making the transition to secondary so these findings provide original insights. Theoretically, Lucey and Reay (2000) view the function of anxiety in a positive light seeing it as being necessary to the growth and development of the 'self' through helping the individual adapt to difficult circumstances and new experiences. Whether anxiety serves a similar function for students with ASD is not known and would be worthy of further research, perhaps employing similar qualitative methodology to that used by Lucey and Reay (2000).

Expectations and experiences of secondary school

Follow-up individual interviews in the Spring Term of first year of secondary school investigated students' and parents' views on students' prior conceptions of secondary school and their evaluations of secondary school experience in relation to these expectations.

Perceptions prior to the move were negative in tenor. Students expressed concerns about physical and organizational aspects of secondary school (getting lost), academic and curricular aspects (getting harder work, having stricter teachers), and social aspects (being teased). Parents' comments encapsulated similar concerns. These findings mirror those identified in other studies involving students with ASD (Johnstone & Patrone, 2003; Jindal-Snape et al., 2006).

Experience of secondary school (child-school microsystem) contrasted with expectations. Only one student said it was worse than expected whereas four said it was better than expected. Describing specific aspects of secondary school life, two of the students said it was easy to get around; and there were mixed comments about the nature of the work and the teachers. The majority of parents' comments were positive e.g. *likes variety, talks about what he enjoys in subjects, primary school is static in comparison.*

Support during the transition to secondary school
Pre-transfer, students and parents were asked to comment on the three things which would most help with the move to secondary school. The findings are presented in Table 3.

Table 3: Responses to Three Things Question

Category	Students	Parents
Preparation of students	7	11
Transition group	2	1
Information	2	3
Friends	2	0
Support	1	8
Social cognition	0	3
Behaviour	0	2
Other	2	3

The category *Preparation of the students* had the highest frequency for both groups. Student comments included: *Learning about the school; Getting to know new teachers*; and *Go for a visit*. Parent statements included *visits to school prior to starting, meeting teachers for his year*; and *to have an in-depth understanding of different teachers/classes and subject system*. The value placed by ASD students on preparatory activities was found in a previous study (Jindal-Snape et al..(2006). Preparation for significant, potentially challenging, events such as moving school is seen as fulfilling a protective function through developing an individual's self-efficacy (Gilligan, 2000).

The category *Support*, focusing on desired provision in the secondary school (child-school microsystem), was prominent in the parents' responses, but less so in those of students. Typical parent wishes were *a safe area to go to in secondary school* and *someone he can go to if he has any problems* One possible reason for the absence of the *support* category in students' responses could be their limited knowledge and awareness of the secondary school environment, possible support arrangements, and difficulty imagining their needs in that context.

Following transfer, the group activity and interviews provided retrospective accounts of transition support. In the group activity, responses to the question *What has helped you/your son in the transition from primary to secondary school?* are presented in Table 4.

Students focused on the support offered prior to the move. They valued the support offered by the enhanced transition programme (child-school microsystem), which both complemented and supplemented typical transition support arrangements. The most helpful factor *programme activities*, comprised specific components of the programme, and the second highest ranked category of *personal benefits* illuminated the perceived benefits of the activities, such as *made transition easier, killed bad habits* and *more help with dealing with bullies*. Parents placed most emphasis on *transition information* (35) e.g. *knowing where he was going to school* (home –school mesosystem) followed by *transition group support* (30) e.g. *meeting with other kids/parents in same situation through transition group*

(child-peer microsystem, and parent-parent exosystem) then by *general school support* (18) e.g. *Additional help for those subjects child has problems with* (child-school microsystem).

Table 4: What has Helped in the Transition from Primary to Secondary School

Category	Students	Parents
Programme activities	36	0
Personal benefits	15	0
Meeting other people with ASD	9	1
Meeting people in general	8	0
Support from external professionals	7	0
Transition information	6	35
Transition group support	0	30
General school support	0	18
Miscellaneous	0	3

An interesting finding was the perceived benefit of being with other children with Asperger Syndrome going through a similar experience (child-peer microsystem). In the student group activity, *meeting other people with ASD,* was the third highest category. This was noted in the comments of one of the three pairings *introduced others with ASD* and *discussing AS with people with AS*. In the post-transfer interviews, this feature was commented upon by the majority (6/8) of parents. For example, one parent commented *meeting with other boys who were similar used to come back and talk about it*. The protective role of positive peer relationships has been highlighted in the resilience literature (e.g. Luthar, 2006; Newman & Blacburn, 2002; Waller, 2001). However, it is acknowledged that the nature and function of peer support for students with ASD during transition requires further research.

Identifying areas for improvement as part of the group activity, the majority of students' comments (13) were grouped under the category *programme activities*, reflecting a desire for more activities, and validating the value placed on these activities (child-school microsystem). Some parents and students would have liked more information and opportunities to visit the new school (child-school microsystem and home-school mesosystem). Delays in the decision making process in the authority appear to be a contributory factor. Identification of the secondary was a category in the parents' responses e.g. *knowing which school the child was going to sooner***.** These findings resonate with those of Jindal-Snape et al. ,(2006), which drew on the views of parents and professionals. The present study suggests that students are sensitive to the impact of authority practices.

Conclusions

This study provides original insights into the primary to secondary school transition experiences of students with ASD utilising students' and parents' perspectives. The employment of a longitudinal perspective is a perceived strength, as it enabled comparison between expectations and experiences. The potential utility of employing an ecosystemic perspective and resilience theory to aid understanding of transition and to inform educational policy and practice is assessed.

Expectations of the move to secondary school were generally negative, mirroring findings from previous studies involving students with ASD (Johnstone & Patrone, 2003; Jindal-Snape et al., 2006) and with the general population (e.g. Chedzoy & Burden, 2005; Zeedyk et al., 2003). Experience of the move was better than expected. Students, based on parents' and children's accounts, experienced a combination of positive and negative feelings prior to the move, similar to that found in the general population (e.g. Pratt & George, 2005).

The importance of preparatory information, transition activities and support were highlighted by all participants, with parents placing more emphasis on wider support mechanisms. Some of the parents and students commented on delays in receiving information about the secondary school; associated with the decision making process about specialist placements in the host authority. These findings provide further evidence of the importance of careful transition planning and support for students and their parents.

The transition to secondary school for students with ASD is viewed as a potentially challenging event in these children's developmental trajectory. Consideration of risk and protective factors across ecosystemic levels has proved valuable in this study in understanding the perspectives of the participating students and parents. It is argued that this conceptual approach has application to other contexts.There The authors acknowledge a number of methodological limitations with this study. The small sample (students and parents) which was drawn from one (not representative) local authority limits the generalisability of the findings to other populations in Scotland. The use of content analysis as the preferred data analysis method leads to some loss of data richness. The group activity, whilst developed as a creative and innovative group interview method, was not piloted. The retrospective nature of some of the interview questions could have been hampered by the poor recall and difficulties with imagination associated with ASD (American Psychiatric Association, 2000). The participants were involved in a transition programme designed to enhance and complement existing arrangements and it is reasonable to ask to what extent their views were influenced by that experience.

Notwithstanding these methodological limitations, it is anticipated that the findings and the conclusions will be of interest to an international audience of policy makers, practitioners and researchers given the interest in educational transitions for students with disabilities, including ASD. The utilisation of resilience theory and an ecosystemic perspective to interpret the perspectives of students with ASD and their parents is innovative and offers potential for future research in educational transitions. Insights into protective factors and processes which will assist these students will be beneficial to professionals working in education in different contexts. It is recommended that future research should build on the insights offered by this study through the utilisation of larger samples; longitudinal research designs; incorporating the views of other professionals; and undertaken in different educational contexts.

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Appendix A
Transition Questionnaire:
Student Information about Secondary School

1. Have you been told anything about the secondary school you will attend in August?

Yes _____ No _____ Don't know _____

If Yes, what information have you been given? *(Please tick all that apply)*

Name of school	____
Address of school	____
How I will get to school	____
Layout or map of the school	____
Name of the head teacher	____
Name of my pastoral care teacher	____
Start/finish times	____
Clubs/activities	____
What to wear	____
Other *(please comment)*	____

Personal Passports

1. Do you have a personal passport? (a booklet or leaflet which has information about you which is shared with your parent(s), teacher(s) and classroom assistants)

Yes _____ No _____ Don't know _____
If Yes, are there plans to change the personal passport before you go to secondary school?
Yes _____ No _____ Don't know _____
2. If you answered Yes to Q2, who has seen your personal passport? *(please tick all that apply)*

Head teacher _____
Class teacher)s) _____
Classroom assistant(s) _____
Other _____

Understanding of Autism Spectrum Disorder
1. Do you have a diagnosis?

Yes _____ No _____ Don't know _____

If Yes, please rate the following statements.

I have a good understanding of my diagnosis.
Strongly agree 1 2 3 4 5 6 Strongly disagree

I have a good understanding of how it affects me.
Strongly agree 1 2 3 4 5 6 Strongly disagree

Understanding of Expected Behaviour in Secondary School
1. How good is your understanding of how people behave in secondary school?

Very good 1 2 3 4 5 6 Very poor

Social Skills
1. How would you rate your ability in these social skills?

Please complete the table below *(please tick one box for each skill)*
Very poor 1 2 3 4 5 6 Very good

Skill	1	2	3	4	5	6
Understand facial expression, gesture, and body posture						
Use facial expression, gesture, and body posture						
Understand personal space						
Respond to criticism						
Share an activity with other children						
Share an activity with an adult						
Share in others' enjoyment/pleasure						
Respond to praise						
Choose a partner or a group to work with						
Mix with other children in a group						
Make friends						
Follow instructions given by adult when on my own						
Follow instructions given by adult when one of a group						
Start a conversation						
Finish a conversation						
Keep a conversation going						
In a conversation, show awareness of listener's interests						
In a conversation, show interest in listener's interests						
Turn-taking						

Avoid making inappropriate statements about people						
Have a range of interests/hobbies						
Share my interests/hobbies with others						
Change my behaviour according to the situation						
Accept changes in rules, routines or procedures						
Accept others' points of view						
Plan an event or a task						

2. What three things would most help you with the move from primary to secondary school? *(please write these below)*

   (a) _____

   (b) _____

   (c) _____

Do you want to add anything else?
_____
_____
_____
_____

Thank you for completing this questionnaire

Appendix B
Extract from follow-up interview schedule: student

Section 2: The move from primary to secondary school
In this section, I want to find out what you think about the move from primary to secondary school.

Question 9: When you were at primary school, what did you imagine secondary school would be like?
*Pr*ompts
Repeat question/rephrase
Anything else?
Probes
Who did you talk to?
What did they tell you?
Did you get a chance to visit your school?
How did that help you?
What other information did he get?

Question 10: How does secondary school compare to your expectations of it?
Prompts
Repeat question/rephrase
Anything else?
Probes
Is it different to what you expected?
In what ways is it different?

Question 11: What feelings do you associate with the transition from primary to secondary school?
Prompts
Repeat question/rephrase
Anything else?
Probes
Were these helpful feelings?

Section 3: The transition programme

In this section, I want to find out what you think about the transition programme. In particular, I am interested in whether you think the transition programme helped you in the move from primary to secondary school

Question 12
In what ways (if any) did the transition programme help you in the transition from primary to secondary school?
Prompts
Repeat question/rephrase
Anything else?
Particular topics?
Particular activities?
Probes
Were there aspects that you found helpful?
In what ways were they helpful?
What makes you think that?

WHAT IS THE PROBLEM? – EXPLANATIONS OF SCHOOL DIFFICULTIES BY EIGHT OCCUPATIONAL GROUPS

Claes Nilholm
Malmö University

Lena Almqvist
Kerstin Goransson
Mälardalen University

Gunilla Lindqvist
Jönköping University

Data from four different questionnaires are analyzed. Explanations of school problems are compared for chief education officers, principals (in municipal and independent schools), subject teachers, class teachers, special teachers, special educational needs coordinators (SENCOs), and assistants. Explanations involving deficits tied to the individual child were by far most common. Teachers and principals were the groups least likely to view teachers as a cause of school problems. Principals were even less likely to do so than the teachers themselves, and this was also the group that was least likely to consider the functioning of classes as an explanation of school difficulties. A school-leadership paradox *is identified, meaning that principals discern causes of school problems that are not within their influence.*

Children and youth spend more time than ever before in educational environments. In several countries, education has emerged as a prerequisite to finding work in the labor market. In this way, school failure might to an even higher degree than before lead to negative consequences as regards the pupils involved. Political reform has not been able to change the fact that many children experience failure and disappointment in schools. It goes without saying that this phenomenon needs a multifaceted research approach in order to be properly understood. Some researchers suggest that the issue does not so much concern what works but rather to apply working procedures that are backed up by research findings (Hattie, 2009, Mitchell, 2007). However, evidence-based research is one thing and school reality another. Several scholars suggest that it is crucial to understand the thinking of the participants involved in school settings in order to understand what is going on there (for example, van Manen, 1993).

Thus, it seems necessary to investigate how different school professionals explain school problems in order to further our understanding of school failure. It appears, for example, that a prerequisite to be able to help children with problems is that professionals in school settings believe that they can influence the outcome of schooling. In the present article, data from four questionnaires is used in order to investigate how different groups in the Swedish school system explain school problems. More specifically, explanations of school problems are explored and compared for chief education officers, principals (in municipal and independent schools), subject teachers, class teachers, special teachers, special educational needs coordinators (SENCOs) and assistants. Altogether, explanations of school problems are compared for eight different groups at different levels of the school system. Before turning to the empirical investigation, we will discuss the notion of school problems and relevant prior research as well as provide an account of the Swedish school system and the role of the groups studied within it.

Explanations of school problems

Ainscow (1998) distinguishes between three different types of explanations of school problems: 1) deficit; 2) interactive; and 3) curriculum-based explanations. The first category refers to explanations of school problems that localize the cause of the problem within the child. Thus, the child is the reason as to why problems appear in schooling. Such deficits could be seen as intrinsic qualities of the child and/or as

consequences of upbringing. In interactive approaches, on the other hand, school problems are explained as emerging in the interaction between the individual child and the school environment. Evidently the explanation of school problems will vary along a dimension where weight could be put either on the deficits of children or on shortcomings in the school environment. Finally, the curriculum view radically challenges traditional ways of explaining school problems. It takes its point of departure in the belief that differences between children are natural and that differences should be celebrated. Thus, the curriculum has to be adapted to handle the differences between children. In this way, school problems are signs of a poorly functioning learning environment.

In their famous book *Pygmalion in the classroom*, Rosenthal and Jacobsen (1968) argued that teacher expectations are very influential in determining school achievement. As is well known, their methodological approach has been much criticized (Spitz, 1999). However, Stevenson and Sigler (1992) maintain that different conceptions concerning children's learning account for wide differences between the educational systems in Japan and the USA. They claim that the former system takes its point of departure in the idea that all children can learn while the latter explains individual differences as the outcome of given talents of a more or less biological origin. In recent years there has been a renewed interest in the consequences of teacher expectations (Weinstein et al., 2002). In summarizing research about teacher expectations, Hattie (2009, p 124) concludes: *Based on this evidence, teachers must stop overemphasizing ability and start emphasizing progress*. Expectations seem to be no less important when the concern is children who struggle at school. Consequently it seems important to further investigate how teachers account for school problems. However, other groups in the school system are also influential regarding children who are at risk of school failure. School leaders at different levels of the school system, as well as support staff, are key actors in this area. Thus, there is a need for large studies of how these groups account for the reasons for school problems. The way school problems are explained is closely linked to assumptions about the possibilities that schooling can make a difference (cf. Stevenson & Sigler, 1992). If school problems are seen to be caused by deficits within the child, for example, the scope for schools to influence the development of pupils seems to be restricted.

Occupational groups and school problems

Forlin and Rose (2010) point out the importance of cooperation in order to create more inclusive practices for children who experience problems in schools. Such cooperation would presumably be more profitable if different groups in schools define school problems in similar ways. However, Ball (1987) points to the *micro-politics* of schooling implying that different groups might have different views and interests. For example, teachers are at times of the opinion that school problems are a concern for support staff rather than for themselves (McLeskey & Waldron, 2007; for an exception see citation Nilholm & Alm, 2010), while special educational needs coordinators (SENCOs) in several countries are trained to localize school problems in the whole learning environment, that is, to use the interactive perspective described above (see, among others: Abbot, 2007; Cole, 2005; Hargreaves et al, 2007; and Malmgren-Hansen, 2002). However, some SENCOs describe their work as a *war zone* especially when it comes to convincing teachers that children with support needs also are their responsibility (Hargreaves et al., 2007). Thus, we could expect that different occupational groups in schools might define reasons, and consequently also responsibilities, for school problems in different ways (Skrtic, 1991, Dyson & Millward, 2000). The well-recognized problem to establish more inclusive practices (e.g. McLeskey & Waldron, 2007, Nilholm, 2006) might be associated with the way school problems are understood by different occupational groups in schools. Forbes (2009) discusses professional groups' thinking, knowledge bases and practices, and suggests that old professional alliances have to be questioned and identities as co-working practitioners developed (cf. Lave & Wenger, 1991) in order for schools to be better able to deal with children experiencing problems (Norwich, 1993).

To sum up what has been said this far: Several scholars point out the significance of expectations in schooling. Moreover, a number of researchers point out the importance of cooperation among different occupational groups for schools to adequately deal with children experiencing problems. However, it is also well recognized that different actors in the school system may have different views on explanations and responsibilities as regards school difficulties. Against this background, it seems to be important to investigate both the general understanding in school systems regarding why children encounter problems in education, as well as the specific understandings of different occupational groups. The present study is to our knowledge the first to address these issues in a study involving several levels of the school system and a large number of occupational groups.

The Swedish school system

General compulsory school (age 7-16) in Sweden is regulated by a) the Education Act (Public Law 1100. 1985), b) the General Compulsory School Ordinance (Public Law 1194, 1994), and c) the Curriculum for the Compulsory School System, the Preschool Class and After-School Program (Government Office, 1994). In the Swedish system, schools and municipalities are given goals by the political system and state authorities. However, *how* the goals should be accomplished has been the responsibility of the municipalities and schools. The goal structure of the Swedish system is quite complex since there are very many goals as regards knowledge, social skills and democratic and other values. In practice, the knowledge goals of Swedish or Swedish as a second language, Math and English play important roles since they are decisive for eligibility to upper secondary education (16-19 years) (Göransson, Nilholm & Karlsson, in press).

In addition to municipal schools there are also independent schools which are not operated by the municipalities but are within the Swedish system. Independent schools abide to the same legislative framework as the municipal schools (Public Law 1206, 1996) and are financed in a similar way. However, independent schools are allowed to make profits. About ten per cent of the pupils within the compulsory school system attend independent schools. In contrast to the U.S., independent schools in the Swedish system were never discussed as a way of increasing equity by offering a choice for socio-economically disadvantaged families (cf. Wong & Shen, 2006). They have rather been debated in terms of possible negative consequences, especially in terms of possible increased segregation. The Swedish school system is at present going through changes involving, among other things, a new curriculum, a new grading system, more explicit knowledge goals, and more testing.

As a general rule, a disability-based classification is not needed according to the legislation in order to receive special support in the Swedish school system for pupils aged 7-16. There are three exceptions to this general rule: 1) Special programs for pupils with an intellectual disability (1.4 % of all pupils aged 7-16) 2) Special schools (involving very few children); and 3) Entitlement for services from the National Agency for Special Needs Education and Schools is dependent on a disability-based system. Instead, the concept of *pupil in need of special support* (Public Law 1100. 1985) is crucial. A pupil who is considered to be at risk of not reaching the goals is defined as a *pupil in need of special support*. Although not explicit in the legislation, this is often interpreted as relating to the goals in the three *core* subjects of math, Swedish or Swedish as a second language, and English. In addition, children defined as having concentration problems or behavioral difficulties are often provided with special support (Swedish National Agency for Education, 2003). More than 40 per cent of the pupils in general compulsory school receive such support at least once and about 17 per cent of the pupils receive special support at any particular point in time (Göransson, Nilholm, & Karlsson, in press, Swedish Agency for Education, 2003).

Method

The data for this study is collected from four different questionnaires. Six questions appearing in all four questionnaires having to do with how school problems are explained are singled out for analysis. The questionnaires have been used for other analysis before but for the first time the explanations of school problems are compared across questionnaires. This makes it possible for us to compare how different occupational groups in schools explain children´s difficulties which, as has been argued, are a very important research topic. More specifically, we can compare how chief education officers, principals in independent schools, principals in municipal schools, subject teachers, class teachers, SENCOs, special teachers and assistants explain school problems. For some analysis, we will combine the first three groups (school leaders), the next two (teachers) and the last three (resource staff). Thus, the data will show how the occupational groups that are most important in Swedish school understand school problems.

The questionnaires

Thus, data from four different questionnaires are compiled here. The questionnaires were sent to: 1) All chief education officers in Swedish municipalities (Nilholm, Persson, Hjerm & Runesson, 2007); 2) All school leaders in Swedish independent schools (Göransson, Magnusson & Nilholm, submitted); 3) All school leaders in one Swedish municipality (Lindqvist & Nilholm, in press); and 4) All preschool and school staff in one Swedish municipality (including subject teachers, class teachers, SENCOs, special teachers, preschool teachers and assistants) (Lindqvist, Nilholm, Almqvist & Wetso, in press). An overview of the 4 questionnaires is provided in table 1.

Table 1. Summary of questionnaires used in the analysis/study

Questionnaire	Participants	Population	Response rate
1	Chief education officers, n = 262	All chief education officers in municipalities in Sweden N = 290	90.3%
2	Principals of independent comprehensive schools n = 546	All principals in comprehensive independent schools in Sweden N = 686	79.6%
3.	Principals of municipal preschools and municipal comprehensive schools n = 45	All principals in a Swedish municipality N = 45	100%
4.	Preschool and school staff n = 940	All staff in one Swedish municipality N = 1297(subject teachers, class teachers, Sencos, special teachers, assistants, preschool teachers)	72.5%

Six questions having to do with how school difficulties are explained appearing in all four questionnaires are analyzed here. Each of these six questions concerned how common the respondents believe a certain explanation for children's need of special support is. Each question provided five response alternatives: 1) very common; 2) rather common; 3) rather uncommon; 4) very uncommon/never occur; 5) no opinion. The six explanations were presented in the following order in all four questionnaires: a) The goals are too difficult for these pupils; b) These pupils have individual deficiencies; c) Schooling is poorly adapted to handle children's differences; d) These pupils have deficiencies in their home environment; e) Some teachers have deficiencies; f) Some classes function badly.

Also, it was possible to suggest other explanations. However, these suggestions were both few in number and divergent and as such are left out of the present analyses. Two of the explanations concern the individual child (b and d), two involve the school system itself (a and c), and two pertain to the classroom level (e and f). It should also be noted that explanations e) and f) are quite conservatively formulated (that is, *some* teachers/classes).

A short description is provided below of the questionnaire, the participants, the procedures, and the response rate for each questionnaire. All questionnaires were preceded by pilot studies. Details differing between the administrations of the questionnaires were most often due to demands particular to the questionnaire. Only the questionnaires to principals in municipal schools were distributed electronically, i.e. the other three questionnaires were distributed in a paper-format through the regular mail system. As shall be seen, rather elaborate steps were taken in order to achieve an acceptable response rate. Overall, the response rate is exceptionally good which we interpret as an indication that work with children in need of special support is considered an important task in the Swedish school system. All data from the participants was treated with confidentiality.

Questions were asked about the work with children in need of special support in the municipality. The questionnaire contained 30 questions. The participants consisted of the school chief education officer (the highest ranking school administrative employee) in the municipality was asked to complete the questionnaire. Two separate mailings were made. Swedish municipalities who did not respond after two mailings were contacted by telephone. The response rate was 90.3% (262 out of 290 municipalities).

The questionnaire contained 36 questions concerning independent schools' work with pupils in need of special support. The participants consisted of all principals of Swedish independent schools. Four different mailings were made and in the case of no response an additional attempt to reach the principals by telephone was made. The response rate was 80% (546 out of 686 independent schools).

The questions focused on the views of principals regarding children in need of special support in general compulsory schools and in preschools. Fifty-nine questions were asked. The participants were all educational leaders in one Swedish municipality. Only those responses by principals of compulsory schools (N=29) are analyzed in this study. The questionnaire was constructed as a web survey and was sent by e-mail to the participants. The questionnaire was part of a developmental project in the

community and intended to survey opinions before intervention. The municipality has 55,000 inhabitants (the average for Swedish municipalities is slightly more than 30,000 inhabitants). The response rate was 100 % (45 out of 45 educational leaders; only compulsory school leaders (N=29) are incorporated in the analysis of the present paper).

The questions focused on the views of staff in compulsory schools and preschools regarding children in need of special support. Sixty-one questions were asked by all staff working in compulsory schools and preschools in a single municipality. The questionnaire was part of a developmental project and intended to survey opinions before intervention. Staff was permitted to answer the questionnaire during work time. The response rate was 72.5 %. The responses of preschool teachers are not included in the present analysis. This consisted of one hundred twenty-three subject teachers, 147 class teachers, 35 SENCOs, 22 special teachers, and 56 assistants responded. The municipality provided a list of the total number of participants in each occupational category. The proportion of questionnaires returned within each occupational category corresponded to the proportion of staff within that category.

Groups studied and their roles within the school system
Altogether, explanations of special support needs are studied in eight occupational groups. Three groups consist of educational leaders (chief education officers and principals in independent and municipal schools, two of teachers (subject teachers and class teachers) and three of support staff (special teachers, SENCOs and assistants). We will present a short description of each group and their role within the educational system.

Educational leaders
School chief officers have an overarching responsibility for the educational system of a municipality. In the Swedish context, the average size of a municipality is slightly above 30,000 inhabitants with a substantial amount of variation between municipalities. Other educational leaders studied are principals in municipal schools and principals in independent_schools. Both of these groups have an overarching responsibility at the school level. The educational leaders have specific responsibilities according to the steering documents concerning children in need of special support.

Teachers
Class teacher's work with children aged 7 to 13 in primary schools. They teach most subjects within the frame of the class and are responsible for the class. Subject teacher's work most often with pupils aged 13 to 16. They teach one or more subjects. This group is responsible for grading the pupils in eighth grade which, at the time of the study, was the first time the pupils received grades.

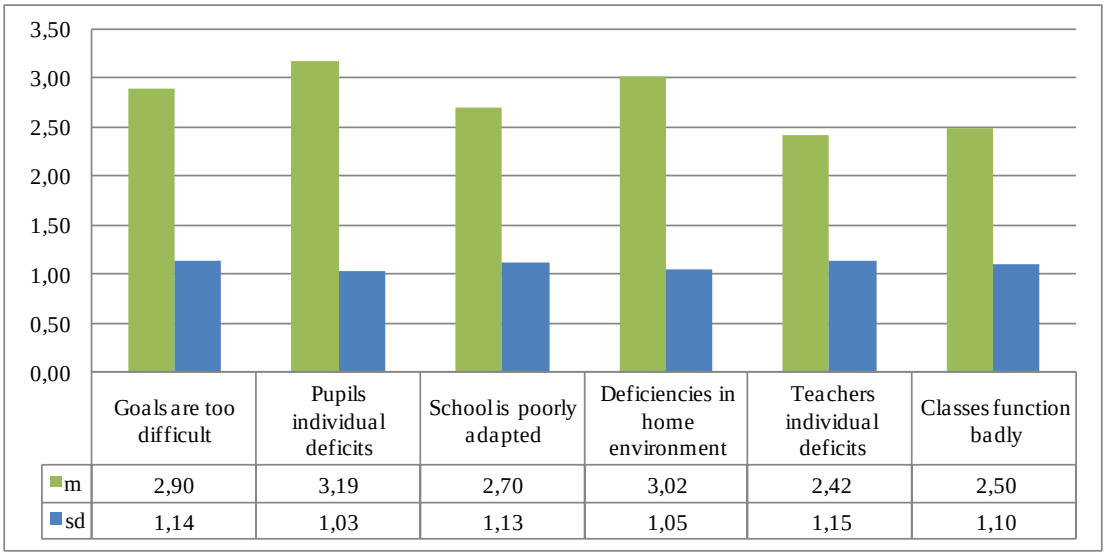
Resource staff
SENCOs (special educational needs coordinators) (in Swedish: Special pedagogues) teach pupils in need of special educational support as well as supervising teachers and staff, carrying out documentation work, assessments, and completing evaluations, and at times helping with organizational development in schools and preschools. (SENCO is actually a term used in Great Britain. However, the roles of SENCOs and Special pedagogues are alike in that both groups are supposed to work with the whole learning environment.) Special teachers are, to a larger extent than SENCOs, supposed to work directly with children and/or with small groups of children. Special teachers only work in schools. Assistant resource staff works close to children between 1 and 16 years of age.

Results
Answers in the *No opinion* category will be left out of the analysis for the sake of simplicity in presenting a complex data pattern (less than 10% used this response alternative in every group for a given factor). Firstly, the general response pattern will be described. Then comparisons between all the occupational groups studied will be presented. Finally, the eight groups will be combined into three: school leaders; teachers; and support staff, and the response pattern of the combined groups will be examined.

Means for particular explanations were calculated for each group. Thus, each of the response alternatives in the questionnaires: (1) very common 2) rather common 3) rather uncommon 4) very uncommon/never occur) were assigned a numerical value (1-4) and averages over group members for each explanation were calculated. The scales presented in the results section are inverted:4) very common 3) rather common 2) rather uncommon and 1) very uncommon/never occur. No inferential statistics were used since all of the questionnaires involved whole populations.

General pattern

As can be seen in figure 1 where the weighed mean for all the groups (that is, each group carries the same weight) is shown, employees in Swedish compulsory schools tend to judge the child's own shortcomings as the most common explanation for school problems. Goal difficulty is seen as an almost as common explanation as children's individual deficits. Pointing out goal difficulty as an explanation of school problems can be interpreted as a way of saying that some children will not be able to reach the goals, that is, as a less direct version of a *deficit view*. It might also, in contrast to the more direct deficit view, imply that the goals of school need to be changed. The views that schools are poorly adapted to handle children's differences, and deficits in the home environment, were virtually as common explanations of children's need of special support as pupils' individual deficits, and that the goals are too difficult. Less weight is put on teacher, or the functioning of school classes, as reasons for school problems.



	Goals are too difficult	Pupils individual deficits	School is poorly adapted	Deficiencies in home environment	Teachers individual deficits	Classes function badly
m	2,90	3,19	2,70	3,02	2,42	2,50
sd	1,14	1,03	1,13	1,05	1,15	1,10

Figure 1. Explanations to why children are in need of special support – general pattern. Weighted mean for all groups (1=very uncommon/never occur, 2=rather uncommon, 3=rather common, 4=very common).

Explanations involving factors attached to the individual child and to the system level appear to be seen as the most common explanations of school difficulties. Least common are explanations involving factors at the school level that is the functioning of classes and teacher deficits. Thus, employees in the Swedish school system tend to view factors that are hard to influence as the ones that cause the need for special support. The two factors that any individual school is best able to influence, that is the quality of teachers and the functioning of classes, are the ones that are seen as the least common causes of school problems. It should also be kept in mind that these explanations were quite conservatively formulated (*some* teachers/classes).

Comparisons between all occupational groups

Table 2 shows the mean of each explanatory factor for each occupational group studied. Subject teachers and assistants are the groups that most often view individual deficits as an explanation of school problems even though this explanation is regarded as the most or second most common by all of the groups except for the principals in municipal schools. The tendency that the dominating explanations are those either directly grounded in deficits (pupil's individual deficits, deficiencies in the home environment), or indirectly tied to the individual child (goals are too difficult), holds for all groups with some variations between groups. In addition, the system-level explanation that school is poorly adapted to handle children's differences is quite common among all groups.

The most noteworthy differences between groups emerge when comparing the explanations involving teacher deficits and class functioning. Class teachers and subject teachers and principals in municipal and independent schools are the groups that least often consider that some teachers have deficits to be a common explanation for school problems. Assistants are most prone to view teacher's deficits as an explanation of school problems. The explanation that some classes function badly is least often considered as a cause of school problems by principals in municipal and independent schools. Chief

education officers are also less prone to point out the functioning of classes as an explanation of school problems. Assistants and special teachers are most likely to view the functioning of classes as explaining school difficulties.

Table 2. Explanations to why children are in need of special support – comparison between all occupational groups.

SCO	PMS		PIS		CT		ST		SENC		SPEC		ASS		
	m	*sd*	*m*	*sd*	*m*	*sd*	*m*	*sd*	*m*	*sd*	*m*	*sd*	*m*	*sd*	*m*
Goals are too difficult	2.93	.77	3.38	.97	2.79	.94	2.87	.93	3.02	1.16	3.41	.96	3.32	.78	3.06
Pupils individual deficits	2.93	.83	3.10	1.14	3.31	.80	3.18	.84	3.32	1.12	2.93	.74	3.27	.77	3.28
School is poorly adapted	2.84	.78	3.2	.94	2.49	1.13	2.76	.91	2.93	1.12	2.91	.92	3.18	.80	3.04
Deficiencies in home environment	3.04	.80	3.00	1.12	3.03	1.04	2.91	.86	3.00	1.09	2.85	.74	3.09	.68	3.15
Teachers individual deficits	2.59	.82	2.33	1.35	2.27	.92	2.44	1.13	2.43	1.14	2.51	.74	2.59	.85	2.80
Classes function badly	2.49	.84	2.19	1.12	2.40	1.04	2.63	.98	2.58	1.08	2.56	.66	2.86	.71	2.91

Note. Range 1-4 (1=very uncommon/never occur, 2=rather uncommon, 3=rather common, 4=very common).
SCO=School chief officers, PMS=Principals in municipal schools, 3=Principals in independent schools, CT=Class teachers, ST=Subject teachers, SENC=SENCOS's, SPEC=Special teachers, ASS=Assistants

As can be seen in table 2, within group standard deviances for all variables vary between .53 and 1.35. Seventeen out of 48 standard deviations exceed 1.0. Sixteen out of these 17 appear among principals in municipal (4) and independent schools (3), subject teachers (6) and assistants (3). Thus, there seems to be more divergent opinions among these groups in comparison to the other groups as regards explanations of why children encounter problems in schools.

Combined groups
Table 3 shows the weighted averages of the responses of school leaders, teachers, and resource staff. The rank order of the level of commonness attached to the different explanations is fairly similar between the three groups. Thus, all groups consider pupils individual deficits as the most or second most (resource staff) common reason for school difficulties. Moreover, factors tied to the individual child are generally seen as more common explanations of school difficulties than the factor tied to the system level (school is poorly adapted). However, school leaders and resource staff consider the system level factor to a more common explanation of school problems than the home environment. Across all three groups, explanations tied to the classroom (teachers, the functioning of classes) are least often considered as reasons for school difficulties. School leaders are least prone to identify explanations of school problems at this level.

Table 3. . Explanations to why children are in need of special support – combined groups.

School leaders	Teachers	Resource staff		
	m	*sd*	*m*	*sd*	*m*
Goals are too difficult	2.85	.89	2.92	1.02	3.22
Pupils individual deficits	3.18	.84	3.23	.95	3.18
School is poorly adapted	2.63	1.04	2.82	.99	3.03
Deficiencies in home environment	3.03	.89	2.94	.95	3.05
Teachers individual deficits	2.94	.98	2.44	1.23	2.67
Classes function badly	3.05	.98	2.61	1.02	2.79

Note. Range 1-4 (1=very uncommon/never occur, 2=rather uncommon, 3=rather common, 4=very common).
Weighted mean for school leaders, teachers and resource staff.

Discussion
Summarizing the results, it seems that explanations tied to individual children's deficits are the most common regarding support needs and school problems in the Swedish compulsory school system. Moreover, factors that are hard for individual schools and staff to influence are considered to be major causes of school problems. In other words, the scope of agency with regard to school problems is considered to be limited. The two factors that individual schools can to some extent control, that is teaching and the classroom environment, are considered to have a lesser role in the genesis of support needs. This pattern is especially apparent among principals, whether in municipal or independent schools. However, this pattern is not shared by the chief education officers. In addition, teachers are less prone to view teachers' deficits as explanations of school problems. In the remainder of the paper we will discuss possible reasons first for the general pattern found, secondly for the differences between the different occupational groups, and lastly the consequences of the observed patterns.

Why is the deficit view so influential?
The deficit view indeed has a strong tradition internationally (Ainscow, 1998) as well as in Sweden (Göransson, Nilholm, & Karlsson, in press, Haug, 1999), even though it has been repeatedly challenged at the policy level. For example, in Sweden this is evidenced by the fact that three official reports proposed a change of wording in the Education Act from *pupils with special educational needs* (e.g. OSGR 121, 1997) to *students in need of special support*. However, there are also signs of a lack of unambiguous political steering in the Swedish context (e.g. Ekström, 2004, Göransson, Nilholm, & Karlsson, in press) which means that a lot of decision making regarding special needs is located at the school level (Forbes, 2009, Lindqvist et al., in press). In this way, tradition may have become unchallenged. Moreover, medical discourses evidently play an important role in the individualization of school problems (e.g. Skrtic, 1991), not least given the increased influence of DSM-4 (American Psychiatric Association, 1994) as can be seen in the increased use of *neuropsychiatric diagnoses* (Baughman & Hovey, 2006). On the other hand, explanations involving the school system also seem comparatively common. Clark, Dyson & Millward (1998) point out that the well-established deficit view of special needs has been partly challenged, at least by the research community. There are some signs of this challenge in the empirical data in the present investigation. On the other hand, explanations involving the school level have, in a sense, the same implications as the deficit view, that is that individual schools find it difficult to make a difference.

How can group differences be explained?

Against the background that explanations involving the individual pupil and/or the system level dominate in all groups, it is very interesting to focus on group differences regarding the role of teachers and classes in the genesis of school problems. Perhaps it is not unexpected that teachers do not generally see themselves or their colleagues as causes of school problems. It is well known that teachers often consider special needs to be the responsibility of support staff (see for example Persson, 1998, Skrtic, 1991). SENCOs are, on the other hand, trained to localize school problems in the whole learning environment (Cole, 2005, Hargreaves et al, 2007). The most surprising finding is that principals (both in independent and municipal schools) are the groups least likely to find deficits in teaching and the functioning of classes as a common explanation with reference to special needs. We would like to label the phenomenon that principals believe that school problems are caused by factors that they cannot influence as the *school-leadership paradox*. One hypothesis in explaining this state of affairs concerns the fact that principals work in close proximity to teachers and are responsible for the schools and the functioning of teachers as well as of classes. Following this line of reasoning, the principals' role as *defenders* of the their schools might account for their response pattern.

Consequences of the observed pattern

There are several aspects of the empirical data that indicate that it is hard to change the view that pupils are very often considered as the locus of school problems. It has been pointed out repeatedly that principals are very influential regarding inclusive and special education (e.g. Dyal et al., 1996; Stanovich & Jordan, 1998;Heimdahl, Mattson & Malmgren; Hansen, 2009; see Riehl, 2000, for an extensive overview). However, *principals neither in municipal nor in independent schools believe that factors that the local school is in a position to control play an important role in the genesis of school problems*. Since the influential group of teachers (cf. Dyson & Millward, 2000) does not generally consider teaching to be involved in the genesis of school problems, it appears that there does not seem to be much room for the views of resource staff who believe that teaching is a quite common explanation of school problems. We should therefore not be surprised that it has proven difficult for special education teachers to establish a new role in schools (Abbot, 2007, Cole, 2005, Hargreaves et al, 2007, Malmgren-Hansen, 2002). Interestingly, chief education officers are more prone to localize problems at the school level than the other school leaders. However, no group seems at a general level to be convinced that individual schools can make a big difference to pupils' learning. To reiterate, Hattie (2009, p 124) concluded after reviewing research about expectancy: *Based on this evidence, teachers must stop overemphasizing ability and start emphasizing progress*. According to the pattern found in our empirical investigation, it seems even more urgent that principals, as well as school staff in general, need to re-examine their views on the need to emphasize progress to make a difference to children´s lives. Of course, to what extent we interpret the views of the school staff studied as realistic or restraining is conditional upon our own views on individual schools' potential. Nevertheless, recent research into the response-to-instruction approach (Berkeley et al., 2009, Fletcher & Vaughn, 2009), as well as syntheses of research (Hattie, 2009, Mitchell, 2007), indicate that schools can indeed make a difference.

Concluding discussion

The data of the present investigation might lead to negative expectations as regards the development of more inclusive educational practices since the deficit perspective is so firmly established and schools have rather low trust in their ability to make a change. However, we would like to finish on a more positive note. We suggest that the response rates to the four questionnaires imply that all occupational groups believe that the work with children with school difficulties is important. Moreover, we can see some challenges to the deficit perspective in certain groups and also within each group. We believe that more research is needed in order to illustrate how schools can change their practices to become more inclusive. A prerequisite for this, as is amply illustrated by the present investigation, is that discussions between and within different occupational groups in schools about why children encounter difficulties is needed. Moreover, it does seem as more in-service training regarding these issues is needed.

From a more scientific perspective it should be noted that the questions analyzed yielded important data. However, it is of course possible to involve additional explanations in the response alternatives and/or be more specific as regards type of problem (e.g. why do children encounter problems in math?). However, we do believe that on important conclusion from the present study concerns the fruitfulness of an approach that targets the extremely important issue of how school problems are explained in larger samples of occupational groups in schools. We do hope that this investigation will be supplemented with additional studies in different contexts and/or with variations in methodology.

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