

Psychological Capital of Mothers of Children with Autism Spectrum Disorder and Intellectual Disability: A Comparative Study

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Background: Mothers of children with autism spectrum disorder (ASD) and intellectual disability (ID) often face unique psychological and caregiving demands. Understanding their psychological capital—an internal resource comprising hope, efficacy, resilience, and optimism—is essential for informing support systems and interventions. This study aimed to examine the levels of psychological capital among mothers of children with ASD and ID in Riyadh, Saudi Arabia, and to compare the levels between the two groups.

Materials and Methods: A descriptive research design was utilized in the study. The study participants were 297 mothers, including 140 mothers of children with ASD and 157 mothers of children with ID, from Riyadh, Saudi Arabia. The mothers, aged 40 to 62 years, had at least a secondary education and predominantly belonged to families with high socioeconomic status. Their children, aged 18 to 37 years, had mild levels of ASD or ID, with many enrolled in training and rehabilitation centers or employed. The Psychological Capital Scale, developed by the researchers, was used for data collection.

Results: Mothers in both groups showed strong psychological capital. Mothers of people with ASD and mothers of people with ID did not significantly differ in psychological capital, according to statistical analyses. These high levels of psychological well-being may have been influenced by contextual factors, such as children's involvement in school or the workforce, mild disability severity, and strong socioeconomic status.

COPYRIGHT STATEMENT: **Conclusion:** Despite the difficulties of providing care, mothers of people with ASD and ID in this sample showed significant

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psychological strengths. The results highlight the potential benefits of Saudi Arabia's governmental support systems and emphasize the need for more studies with a wider range of participants to gain a deeper understanding of the factors that influence caregivers' psychological capital.

Keywords: psychological capital, autism spectrum disorder (ASD), intellectual disability (ID), mothers, resilience, Saudi Arabia

Introduction

Autism spectrum disorder (ASD) is a neurodevelopmental disorder characterized by a triad of impairments in social interaction, communication (both verbal and nonverbal), and restricted, repetitive patterns of behavior, interests, or activities. It encompasses a range of behavioral symptoms, including stereotyped behaviors, hyperactivity, impulsivity, aggression, self-injurious behavior, and temper tantrums. Individuals with ASD often exhibit a unique set of characteristics, including difficulties understanding and using language, challenges in interacting with people, objects, and events, and limitations in social relationships, such as difficulty making friends. They may also struggle to understand and interpret others' facial expressions, leading them to avoid eye contact. Additionally, individuals with ASD may have difficulty adapting to unfamiliar environments or changes in their daily routines. Their sensory perception may also be different, experiencing the world around them in a unique way as they process information differently. Due to the challenges they face, individuals with ASD are often subjected to criticism and bullying, which can lead them to prefer social isolation and may result in self-injurious behavior or aggression towards others. [1-2]

It appears that the characteristics and behavioral challenges of children with ASD can create significant difficulties for their mothers, contributing to negative emotions and social withdrawal. Mothers of children with ASD not only need to manage these behavioral issues and understand their children's diverse needs but also must cope with anxiety, stress, frustration,

psychological and financial pressures, and low self-esteem that may arise from their children's challenges. [3-4]

On the other hand, individuals with intellectual disability (ID) face challenges across multiple domains, including physical health, cognition, social interactions, emotional well-being, and education. They are at a higher risk of developing conditions such as heart disease, digestive issues, and sensory impairments. Additionally, they may struggle with self-care and perform daily activities independently. Consequently, they require ongoing and consistent support [5].

The birth and presence of a child with an ID can evoke a range of emotional and cognitive responses within a family. It often has a significant impact on all family members, particularly mothers, due to their primary role in caregiving and raising a child with special needs. As a result, mothers may experience stress, anxiety, frustration, and increased pressure, which can lead to decreased self-efficacy, happiness, and overall life satisfaction [6].

Notably, most research has focused on children with disabilities, despite evidence suggesting that their presence in a family often affects family life, functioning, and the mental health of all members. Additionally, many studies emphasize the negative experiences of parents of children with disabilities. However, there is a growing call for research to explore the positive aspects of parenting a child with a disability, as understanding these factors can help promote psychological well-being and life satisfaction.

One such positive factor is psychological capital, which can empower parents to navigate life's challenges and cope with the demands of raising a child with a disability. Psychological capital is rooted in the principles of positive psychology, which emphasizes an individual's strengths and promotes their performance in various aspects of life [7]. Psychological capital reflects a state of positive psychological growth and refers to a set of positive attributes and abilities that serve as a powerful source of growth, development, protection against illness and disorders, and enhancement of mental health. It also makes individuals resilient, realistic, and optimistic in life, while contributing to increased self-awareness and understanding, helping them achieve their goals [8-9].

Psychological capital consists of four key components: self-efficacy, hope, optimism, and resilience. Numerous studies have shown that psychological capital is a powerful resource that enhances an individual's ability to cope with difficult situations and stressors. It is also positively correlated with individuals' behaviors, positive attitudes, improved mental health, and reduced psychological distress, which explains the growing research interest in psychological capital in recent years [10-12].

Notably, psychological capital has received limited attention in research on mothers of children with ASD and ID. Studies exploring psychological capital in these populations in Saudi Arabia are scarce. Al Eid et al. [13] explicitly mentioned a lack of interest in studies on the families of children with ASD, "especially on mothers who represent the first breadwinner for a child who suffers from a deficit in social communication with others, reflected in their well-being". This indicates that, even in ASD, research is quite new and limited in the Saudi context. Furthermore, A recent review found that most studies on the impact of ASD in Arab countries focus on general parental mental health, stress, and quality of life—but not specifically on psychological capital as a construct

[14]. Therefore, the present study aimed to compare the psychological capital of mothers of children with ASD and those of children with ID.

Statement of the Problem

ASD is a developmental condition characterized by persistent deficits in social interaction and communication, as well as restricted, repetitive patterns of behavior, interests, or activities. ASD is often accompanied by language and communication disorders, behavioral challenges, hyperactivity, and self-injurious behavior. Symptoms may emerge after a period of typical development. Overall, effective treatments for ASD remain limited, and some existing interventions have only partial efficacy [1].

Having a child with ASD places a significant burden on parents, requiring them to take on multiple roles and responsibilities such as intervention, education, and providing lifelong care and support. Mothers, in particular, bear a greater burden of care and upbringing for their children with ASD, as they are required to exert more effort and dedicate more time to their children. This can lead to various challenges, including stress, anxiety, burnout, and decreased psychological well-being compared to fathers [7,15]. One critical factor that may help mothers of children with ASD navigate these challenges is psychological capital, which serves as a valuable resource in promoting resilience and well-being [7].

Individuals with ID face numerous challenges in physical, social, psychological, cognitive, linguistic, and academic aspects. Therefore, they require special and ongoing care throughout their lives, which becomes more complex as they age [16]. It is noteworthy that the presence of a child with an ID in a family significantly reduces mothers' ability to fulfill their family roles and leads to a deficiency in communication and interaction with their children. This can also negatively impact mothers' happiness, cognitive flexibility, emotional regulation, and expose them to various stressors.

They may not be able to adapt to the presence of their child with an ID [6]. Therefore, mothers must possess or develop a set of skills to support them in dealing with the increased demands of caring for their child with an ID. Psychological capital may serve as a crucial and positive factor in supporting their ability to cope effectively [5].

Lorenz et al. [17] argue that psychological capital is a multi-component construct that is linked to a wide range of other positive psychological variables such as psychological well-being, life satisfaction, and job satisfaction. This could make psychological capital a central focus of future research in positive psychology. Additionally, it is associated with reducing various disorders such as anxiety, stress, and burnout. Therefore, it is important to understand the level of psychological capital among mothers of children with ASD and mothers of children with ID, as it has a significant impact on raising and caring for their children.

Based on the above, the problem statement can be conceptualized in the following questions:

Q1: What is the level of psychological capital among mothers of children with ASD?

Q2: What is the level of psychological capital among mothers of children with ID?

Q3: What are the differences in the level of psychological capital between mothers of children with ASD and mothers of children with ID?

Theoretical background

Positive psychology, initiated by Martin Seligman, is a movement that has significantly shifted psychological research from focusing on psychological disorders to emphasizing human strengths, potential, and positive psychological states [18]. As a scientific approach, positive psychology studies human thoughts, feelings, and behaviors by focusing on strengths rather than weaknesses, building the good in life rather than merely fixing the bad, and enhancing overall well-

being rather than just bringing those who struggle to a normal level [4].

Psychological capital is a relatively new concept rooted in positive psychology. It is linked to an individual's mental health and can contribute to improved life satisfaction, happiness, and overall success. While the term "capital" is traditionally associated with financial resources, the social sciences have broadened its meaning to encompass human capital (what we know), cultural capital (what we do, and what we create), social capital (who we know), and psychological capital (who we are) [4,19].

Psychological capital describes individuals who maintain a positive outlook on life and increase their chances of success through perseverance and effort [20]. It focuses on positive personal psychological resources and seeks to present and enhance good and positive personality aspects that enable the individual to overcome anxiety, frustration, and face difficult situations in life with a positive attitude, and achieve their current and future goals [21].

Hosseini Ghomi et al. [16] view psychological capital as a positive psychological state that emphasizes strengths over weaknesses and promotes a realistic and flexible approach to life. Hussain [22] and Tahvilian et al. [23] describe psychological capital as a positive state characterized by self-efficacy, optimism, hope, and resilience, enabling individuals to manage their thoughts and emotions effectively and cope with challenges. Shi [24] identifies these four components as the core elements of psychological capital, suggesting that they can be developed and managed to enhance performance and well-being.

Sarwar et al. [11] suggest that parental psychological capital is a parent's positive psychological state characterized by hope (perseverance towards parental goals), self-efficacy (confidence in parenting abilities), optimism (positive attributions

about parenting success), and resilience (ability to recover strongly from parental setbacks).

Psychological capital is a multi-faceted construct, composed of four key components: self-efficacy, hope, optimism, and resilience. Self-efficacy refers to an individual's belief in their ability to succeed and overcome challenges, reflecting confidence in one's own capabilities. Hope is a positive motivational state that drives individuals to pursue their goals and persevere in the face of challenges; hopeful individuals find alternative paths and focus on successes rather than failures. Optimism refers to a positive outlook on life and a belief in future success, with optimists expecting good outcomes. Resilience is the ability to overcome obstacles, problems, failures, and difficult situations, to restore balance, recover, and emerge stronger after stressful events, involving persevering through challenges until success is achieved [10,25-26].

The study by Srichumpon et al. [27] found that the psychological capital of parents of children with disabilities is composed of four key elements: resilience, hope, optimism, and self-efficacy.

It is important to note that the structure of psychological capital is well-supported by both theory and empirical evidence. The components of psychological capital—hope, self-efficacy, resilience, and optimism—are interconnected and form a unified construct. Research has shown that each component has its own unique characteristics and contributes to a sense of control, intentionality, and goal-directed behavior, which are all core aspects of psychological capital [28]. While these components work together synergistically, they also have distinct effects on behavior, health, and well-being [29].

Researchers have only recently begun to explore the interplay between the four components of psychological capital—hope, self-efficacy, resilience, and optimism. Previous studies tended to examine these components in isolation. However, some argue that psychological capital is

a more complex construct that may encompass additional positive psychological resources beyond these four core components [26-31].

Dudasova et al. [28] propose that psychological capital is a second-order construct that benefits from the overlap and mutual reinforcement among its four components: hope, self-efficacy, resilience, and optimism. While it is generally assumed that these components are highly correlated (e.g., individuals high in self-efficacy are likely to be high in hope), it is important to recognize that each component represents a distinct construct. This means that individuals may have varying levels of each component, and it is possible to be low in one or more components while being high in others.

Research has consistently shown that psychological capital is a dynamic and malleable construct that can be developed and improved. It has a positive impact on individuals, enhancing their cognitive, emotional, and social functioning, and promoting overall well-being. Individuals with high levels of psychological capital are better equipped to cope with challenges, achieve their goals, and experience greater life satisfaction [8,12]. Additionally, psychological capital has been linked to improved academic performance, as it provides students with the resources needed to overcome obstacles and achieve their goals [31].

It is worth noting that numerous research studies have indicated a relationship between psychological capital and various variables. For instance, Manzano-Garcia & Ayala [1] confirmed that psychological capital significantly impacts psychological well-being and that in a work environment, psychological capital should lead to reduced burnout, which in turn should result in higher levels of psychological well-being among direct support staff for ASD services. Razaq et al. [15] found a positive relationship between psychological capital and mental health, and a negative relationship between psychological capital and burnout among professionals working in ASD

centers (behavior therapists, speech therapists, special education specialists). Furthermore, Pareek & Jain [4] found no correlation between psychological capital and parental stress, but a negative correlation between psychological capital and locus of control, meaning that as psychological capital increases, locus of control decreases, and vice versa, among parents of children with special needs. Chiracu et al. [5] showed that self-efficacy, hope, and resilience are positively associated with quality of life. Additionally, they found that optimism is positively associated with psychological well-being, and that the overall effects of psychological capital on psychological well-being were positive. The study also found that quality of life mediates the relationship between psychological capital and psychological well-being among mothers of children with Down syndrome. Additionally, Gharati et al. [6] found an indirect, significant, and moderate relationship between the psychological resources provided by psychological capital and happiness, mediated by resilience. The study concluded that mothers of children with intellectual disabilities are less resilient in dealing with issues and problems and struggle to accept their children's challenges.

It is important to note that psychological capital can be improved and developed through training interventions, making it a useful construct capable of positively impacting individuals' lives. Numerous research studies have indicated its association with improved mental and physical health, and reduced psychological problems and disorders [17]. For example, Reisiee et al. [32] found that enhancing psychological capital helped improve adaptation, tolerance, and reduced psychological stress among mothers of children with cerebral palsy. Hosseini Ghomi et al. [16] demonstrated the effectiveness of teaching and training mothers of children with intellectual disabilities on psychological capital in acquiring problem-focused coping strategies, reducing the use of emotion-based coping strategies, and

improving the interaction between mothers and their children with intellectual disabilities.

Numerous studies have employed diverse therapeutic approaches to enhance psychological capital. For instance, studies by Rava [7] and Behnouieh et al. [9] indicated the efficacy of Acceptance and Commitment Therapy (ACT) in improving psychological capital among mothers of children with ASD. Bagheri & Mousavi [3] demonstrated the effectiveness of reality therapy in enhancing psychological capital, emotional regulation, and reducing anxiety sensitivity in mothers of children with ASD. Seidi & Dastani [33] demonstrated the efficacy of reality therapy in improving mental health, boosting psychological capital, and enhancing psychological well-being among mothers of children with intellectual disabilities. Furthermore, Mehdi et al. [34] found that mindfulness training was effective in improving psychological well-being and components of psychological capital among mothers of intellectually disabled, educable children.

Finally, it is important to note that the growing interest in psychological capital has led to the emergence and conduct of numerous experimental, correlational, and cross-sectional studies across various cultures and contexts. Additionally, there has been a surge in cross-cultural research, the publication of specialized journals, meta-analyses, and critical reviews [35].

Materials and Methods

Study Design and Setting: The research employed the descriptive research design, which is widely used in social sciences and educational research to describe phenomena as they naturally occur and to analyze relationships among variables without manipulating study conditions. This design was appropriate because the aim of the study was to examine the level of psychological capital among mothers of children with ASD and mothers of children with ID. Descriptive research designs are

particularly suitable for examining psychological and social constructs—such as psychological capital—in real-life contexts, as they enable researchers to quantify participants' perceptions and identify patterns and associations within naturally existing groups [36-37].

Study Participants and Sampling:

The current study sample consisted of 297 mothers, including 140 mothers of children with ASD and 157 mothers of children with ID. The mothers' ages ranged from 40 to 62 years, and they held at least a secondary education. The majority belonged to families with a high socioeconomic status. Their children, aged between 18 and 37 years, had mild levels of ASD or ID. Most of the individuals with disabilities were enrolled in training and rehabilitation centers in Riyadh, Saudi Arabia, and some were already employed. Participants were recruited using a purposive sampling strategy targeting mothers of children with ASD and mothers of children with ID in Riyadh, Saudi Arabia. Recruitment was carried out through training and rehabilitation centers that agreed to assist in disseminating the study invitation. Administrators in these centers distributed an electronic invitation containing a brief description of the study, eligibility criteria, and a link to the study tool. Additionally, the invitation was shared in parent support groups and WhatsApp communities for families of children with ASD. Mothers who met the inclusion criteria and voluntarily agreed to participate completed the scale anonymously. No incentives were provided, and participation was entirely voluntary.

Data Collection Tool and Technique:

The researchers utilized the Psychological Capital Scale (developed by the authors for this study) for data collection. The scale is designed to assess psychological capital in mothers of children with ASD and ID. The researchers developed the scale based on the study's theoretical framework, previous research, and detailed explanations of

psychological capital. They also consulted established instruments for assessing psychological capital, including the Short Universal Measure of Psychological Capital [18], the Compound Psychological Capital Scale – Japanese Version [30], and the Psychological Capital Questionnaire – Polish Version [19].

To ensure its suitability for the study sample, the initial version of the scale was reviewed for cultural appropriateness, clarity, and relevance by a panel of five special education, psychology, and mental health experts who had all worked extensively with Saudi families of individuals with ASD and ID. They offered comments on construct representation, cultural sensitivity, and wording. In accordance with their recommendations, redundant or culturally inappropriate expressions were removed, and some items were reworded to ensure that they accurately reflected psychological capital as experienced within the Saudi social environment. This procedure guaranteed content validity based on the Saudi context.

To assess the psychometric properties of the scale, it was administered to a sample of 212 mothers, including 98 mothers of children with ASD and 114 mothers of children with ID. The mothers' age ranged from 39 to 63 years, while their children's ages ranged from 16 to 39 years of age.

Correlation coefficients were calculated between each item and the total score of its respective dimension to ensure that the items measured the same construct. Additionally, correlation coefficients were computed between the total scores of the four dimensions and the overall scale score to confirm that each dimension contributed consistently to the total score. Tables 1 and 2 present the internal consistency of the scale.

Table 1: Correlation Coefficients between the Score of Each Item and the Total Score of its Respective Dimension

Dimension	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8
Self-Efficacy	0.72	0.70	0.75	0.70	0.77	0.68	0.65	0.59
Hope	0.7	0.2	0.9	0.4	0.0	0.9	0.2	0.2
Optimism	0.76	0.82	0.82	0.79	0.78	0.77	0.78	0.78
Resilience	0.3	0.2	0.6	0.9	0.7	0.1	0.4	0.4
	0.79	0.79	0.85	0.87	0.83	0.78	0.81	0.81
	0.2	0.3	0.1	0.2	0.5	0.1	0.9	0.9
	0.61	0.69	0.78	0.74	0.79	0.85	0.78	0.69
	0.4	0.1	0.2	0.2	0.7	0.0	0.2	0.5

Table 2: Correlation Coefficients between the Total Score of Each Dimension and the Total Score of the Scale

Dimension	1st	2nd	3rd	4th	Total Score
1st	1	0.731**	0.543**	0.550**	0.807**
2nd		1	0.633**	0.686**	0.886**
3rd			1	0.726**	0.855**
4th				1	0.877**
Total					1

Tables 1 and 2 show that the correlation coefficients between each item's score and the total score of its respective dimension, as well as between the total score of each dimension and the overall scale score, are significant at the 0.01 level. This indicates a high degree of internal consistency, demonstrating that items within the same dimension are strongly correlated and that the

different dimensions align well in measuring the overall construct of the scale.

The researchers also assessed the reliability of the scale using Cronbach's Alpha and the split-half method. These coefficients were calculated for each dimension of the scale as well as for the entire scale. Table 3 presents the calculated values for these coefficients.

Table 3: Reliability Coefficients Using Cronbach's Alpha and Split-Half Method

PsyCap Scale	Cronbach's Alpha	Split-Half Method
Self-Efficacy	0.849	0.856
Hope	0.901	0.882
Optimism	0.917	0.897
Resilience	0.883	0.916
Total	0.953	0.962

The preceding table shows that the reliability coefficients for the scale's dimensions ranged from 0.849 to 0.917 based on Cronbach's alpha and from 0.856 to 0.916 using the split-half method. The overall reliability coefficient was 0.953 for Cronbach's alpha and 0.962 for the split-half method. These high values indicate strong internal consistency, confirming the scale's validity and effectiveness in measuring psychological capital among mothers of children with ASD and ID.

Therefore, the final version of the scale consists of 30 items, distributed across four dimensions: self-efficacy (8 items), hope (7 items), optimism (7 items), and resilience (8 items). All items are positively worded. The study employed a 5-point Likert scale to measure the four dimensions, with a score of 5 indicating the highest level of agreement and a score of 1 indicating the lowest.

Statistical Analysis Method:

The data were analyzed using Statistical Package for the Social Sciences (SPSS) version 25 (IBM Corp. (2017). IBM SPSS Statistics for Windows, Version 25.0. Armonk, NY: IBM Corp.) to address the research questions. The analysis involved calculating means and standard deviations to assess psychological capital levels. Given the non-parametric nature of the data, the Mann-Whitney U test was used to examine differences in psychological capital between the two groups

Results

The results section presents the findings of the statistical analyses conducted to examine the levels of psychological capital among mothers of children with ASD and mothers of children with ID, and to compare the levels between the two groups. Descriptive analyses were conducted to assess

overall psychological capital in both groups, followed by inferential tests to determine whether significant differences existed between them. The findings provide insight into the psychological strengths of mothers caring for individuals with developmental disabilities and highlight patterns associated with demographic and contextual factors. The following subsections present these results in detail.

Q1: To address this question, the researchers calculated the means and standard deviations of the psychological capital scale for mothers of children with ASD. This analysis was conducted for each item within each dimension separately, followed by an overall calculation for the four dimensions of the scale. The results of this analysis are presented in Table 4.

Table (4) Means and Standard Deviations of the Psychological Capital Scale Dimensions for Mothers of children with ASD.

PsyCap Scale	Mean	Std. Deviation
Self-efficacy	4.06	0.59
Hope	3.94	0.72
Optimism	4.03	0.88
Resilience	3.87	0.71
Total	3.98	0.63

Table 4 shows that mothers of children with ASD exhibit a high level of psychological capital. The highest mean score was observed in the self-efficacy dimension ($M = 4.06$, $SD = 0.59$), followed by optimism ($M = 4.03$, $SD = 0.88$), hope ($M = 3.94$, $SD = 0.72$), and resilience ($M = 3.87$, $SD = 0.71$).

Q2: To address this question, the researchers calculated the means and standard deviations of the psychological capital scale for mothers of children with ID. This analysis was conducted for each item within each dimension separately, followed by an overall calculation for the four dimensions of the scale. The results of this analysis are presented in Table 5.

Table (5) Means and Standard Deviations of the Psychological Capital Scale Dimensions for Mothers of children with ID.

PsyCap Scale	Mean	Std. Deviation
Self-efficacy	4.20	0.60

PsyCap Scale	Mean	Std. Deviation
Hope	3.94	0.79
Optimism	4.26	0.74
Resilience	4.04	0.77
Total	4.11	0.62

Table 5 shows that mothers of children with ID exhibit a high level of psychological capital. The highest mean score was observed in the optimism dimension ($M = 4.26$, $SD = 0.74$), followed by self-efficacy ($M = 4.20$, $SD = 0.60$), resilience ($M = 4.04$, $SD = 0.77$), and hope ($M = 3.94$, $SD = 0.79$).

Q3: To address this question, non-parametric statistical tests were employed. Specifically, the Mann-Whitney U test was used to compare differences between the two groups of mothers—those with children with ASD and those with ID—on each dimension of the scale and the overall scale score. The Kolmogorov-Smirnov and Shapiro-Wilk tests confirmed that the data did not follow a normal distribution. The results pertaining to the third question are presented in Table 6.

Table 6: Mann-Whitney U test for differences in PsyCap and its components between the two groups of mothers (ASD/ID).

Components	Mother Groups	N	Median Rank	Sum of Ranks	Z	Sig.
Self-Efficacy	ASD	40	45.19	1807.50	1.120	0.263
	ID	57	51.68	2945.50		
Hope	ASD	40	47.73	1909.00	0.376	0.707
	ID	57	49.89	2844.00		

Components	Mother Groups	N	Median Rank	Sum of Ranks	Z	Sig.
Optimism	ASD	40	44.78	1791.00	1.245	0.213
	ID	57	51.96	2962.00		
Resilience	ASD	40	44.00	1760.00	1.469	0.142
	ID	57	52.51	2993.00		
PsyCap	ASD	40	44.91	1796.50	1.199	0.230
	ID	57	51.87	2956.50		

Table 6 shows no statistically significant differences in mean ranks between mothers of children with ASD and those with ID across all dimensions of the psychological capital scale and the total scale score. The Z-scores ranged from 0.376 to 1.469, all below the critical value of 1.96 at the 0.05 significance level. This indicates that the level of psychological capital was not significantly different between the two groups.

Discussion

The results of the current study indicated a high level of psychological capital among mothers of children with ASD. This finding may be attributed to the mild severity of ASD in the individuals studied and their relatively advanced ages.

Additionally, the majority had completed high school or secondary education, which contributed to the development of various skills that positively influenced their overall growth. They were able to understand and express their emotions, communicate with others, and exhibit fewer behavioral problems. These factors likely enabled mothers to interact and engage with their children more effectively, fostering a sense of self-efficacy in caring for them and meeting their needs.

Furthermore, the future of individuals with ASD appeared promising, particularly in terms of employment, which contributed to higher levels of hope and optimism among their mothers. Most individuals with ASD in the sample were employed in jobs suited to their abilities, reflecting the substantial national investment in specialized training, rehabilitation, and employment pathways for people with disabilities. According to the Ministry of Human Resources and Social Development [38], the Saudi government provides vocational internships, rehabilitation services, and employment programs designed to promote independence and facilitate the integration of individuals with disabilities, including autism. In the present study, many participants were enrolled in vocational and rehabilitation centers that assisted them in securing employment through partnerships with various companies. This support enabled mothers to engage in their preferred activities and lead a more balanced life, rather than dedicating most of their time to caregiving. As a result, they experienced reduced stress, anxiety, and pressure, allowing them to better adapt to their children's needs. Consequently, these mothers felt more confident and self-efficacious, fostering greater hope, optimism, and overall life satisfaction. In turn, this likely enhanced their psychological capital and ability to cope effectively.

These findings are consistent with previous studies, particularly those examining the components of psychological capital. For example, Khan et al. [39] found that mothers of children with ASD exhibited

higher resilience levels than mothers of children without disabilities. Similarly, Mohammed et al. [40] reported that mothers of children with ASD were more optimistic than those of children without disabilities. Sarwar et al. [41] also identified high levels of optimism among mothers of children with ASD. Additionally, Manicacci et al. [42] found that mothers of children with ASD demonstrated greater resilience than mothers of children without ASD. Likewise, Arnous & Yeo [43] reported that parents of children with ASD exhibited higher resilience levels.

However, this result contrasts with the findings of several previous studies, particularly those examining the components of psychological capital. For example, Srivastava & Mukhopadhyay [44] found that parents of children with ASD had lower levels of optimism compared to parents of children without disabilities. Similarly, Keane [45] reported lower levels of hope among parents of children with ASD. Khorshidian & Dousti [46] found that mothers of children with ASD had lower life expectancy levels compared to mothers of children without disabilities. Additionally, Srivastava & Mukhopadhyay [44] also reported lower optimism levels among parents of children with ASD, while Goodarzi et al. [47] found reduced cognitive flexibility, resilience, and life expectancy in this population.

The results also indicated a high level of psychological capital among mothers of children with ID. This finding can be explained similarly to the previous result. The degree of ID among the individuals was mild, and their ages were relatively advanced. Additionally, most had completed high school or secondary education, which contributed to the development of various skills that positively influenced their overall growth. They were able to communicate effectively, care for themselves, and perform daily living activities independently while exhibiting fewer behavioral problems. These factors enabled mothers to interact with their

children more effectively, fostering a sense of self-efficacy in caregiving and meeting their needs.

Similar to individuals with ASD, the future of individuals with ID also appeared promising, particularly in terms of employment. This contributed to higher levels of hope and optimism among their mothers. Most individuals with ID in the sample were employed in jobs suited to their abilities, supported by significant government initiatives for training and employment centers. Many participants in the study were enrolled in programs that offered vocational training and job placement assistance. This support allowed mothers of children with ID to engage in activities outside of caregiving, reducing stress and enhancing self-efficacy. As a result, they felt more confident in their ability to care for their children and developed a more positive outlook on the future. This, in turn, strengthened their resilience and improved their ability to cope with the challenges of parenting.

These findings are consistent with several previous studies, particularly those examining the components of psychological capital. For example, McCol [48] found that parents of individuals with intellectual disabilities exhibited higher levels of hope. Agusthia et al. [49] reported that more than half of the mothers of children with intellectual disabilities in their study demonstrated high levels of self-efficacy. Similarly, Laçin & Doğan [50] found that parents of children with intellectual disabilities had higher self-efficacy levels compared to parents of children without disabilities. Additionally, Salsabila et al. [51] indicated that the self-efficacy of mothers of children with moderate intellectual disabilities was at a moderate level. Furthermore, Chiracu et al. [5] indicated that mothers of individuals with Down syndrome exhibited high levels of psychological capital, with hope ranking highest, followed by resilience, optimism, and self-efficacy.

However, this result contrasts with the findings of several previous studies, particularly those examining the components of psychological capital. For example, Lloyd & Hastings [52] found that parents of children with intellectual disabilities exhibited lower levels of hope. Similarly, Sarıçam et al. [53] reported that parents of children with disabilities had lower levels of hope and resilience compared to parents of children without disabilities. Additionally, Singh & Kumar [54] indicated that mothers of children with intellectual disabilities had lower resilience than mothers of children without disabilities and those with physical disabilities.

The results of this study also revealed no statistically significant differences in psychological capital between mothers of children with ASD and those of children with ID. This finding may be attributed to Saudi Arabia's extensive efforts in providing comprehensive health, educational, and social services for all individuals with disabilities and their families. Additionally, the government offers substantial financial support to families and to centers responsible for training, rehabilitating, and employing individuals with disabilities. These supports may substantially reduce families' unmet needs, which Cadman et al. [55] identified as a key predictor of caregiver burden. Cadman and colleagues demonstrated that caregivers' stress was influenced less by the child's diagnostic label or symptom severity and more by the extent to which their needs for support, services, and daily structure were met. These conclusions are reinforced by Sarwar et al. [11], who found that when mothers of autistic children receive strong social support, they experience greater optimism, confidence, hope, and resilience—key components of psychological capital. Taken together, these findings suggest that the robust support system in Saudi Arabia may help equalize the psychological experiences of mothers across both diagnostic groups by minimizing unmet needs and enhancing the social support structures that foster psychological capital.

Furthermore, the children in the study had mild cases of ASD or ID, with many having completed secondary education and enrolled in vocational training programs or secured employment. These factors likely enhanced the mothers' ability to cope with their children's needs, fostering a sense of self-efficacy and optimism. The mothers' educational background and higher socioeconomic status also contributed to greater psychological resilience. These observations align with the findings of Hameed and Kotian [56], who reported that parents of intellectually disabled children with higher socioeconomic status tend to experience better psychological well-being due to increased financial stability, greater educational resources, and better access to support services and specialized programs. Such advantages reduce stress and facilitate more effective coping. Collectively, these factors may have enabled the mothers in the present study to navigate challenges, set goals, and maintain a positive outlook, ultimately leading to higher levels of psychological capital.

Limitations and Recommendations

This study, while providing valuable insights into the psychological capital of mothers of children with ASD and ID in Saudi Arabia, is subject to several limitations. The specificity of the sample restricts the generalizability of the findings. Conducted within a single cultural context, the results may not be applicable to other regions with differing social norms and support systems. Furthermore, the focus on mothers of children with mild disabilities, who also predominantly had high socioeconomic status, limits the scope of the conclusions to a specific demographic, potentially overlooking the experiences of those facing more severe challenges or from less privileged backgrounds. Additionally, the study's focus on mothers also overlooks the experiences of fathers and other caregivers, limiting a comprehensive understanding of family dynamics. Therefore, it is important to consider these factors when

interpreting the findings, and addressing these limitations in future research will contribute to a more comprehensive understanding of psychological capital in parents of children with disabilities.

To address these limitations, the study recommends that future research include larger samples from diverse cultures, societies, and contexts. Longitudinal studies on psychological capital among mothers and its predictive factors are also needed. Moreover, future research could examine family psychological capital by incorporating the perspectives of all family members, including fathers and siblings. Qualitative studies using in-depth interviews may also provide a deeper understanding of psychological capital among mothers. Further, investigations should consider psychological capital among mothers from different social and economic levels, as well as explore the relationship between psychological capital and certain psychological disorders among mothers.

Based on the study's findings, several recommendations are proposed to further enhance the well-being of individuals with disabilities and their families. Firstly, it is imperative to maintain and enhance the comprehensive governmental support system in Saudi Arabia. This includes expanding access to vocational training and employment opportunities, ensuring continuous financial assistance, and providing readily available health, educational, and social services. Secondly, a focus on early intervention programs is crucial to address the needs of children with ASD and ID from a young age. Promoting educational opportunities for these individuals will also enhance their skills and independence. Thirdly, targeted programs should be developed to specifically support mothers of children with disabilities. These programs should focus on providing stress management and coping strategies, offering peer support and networking opportunities, and ensuring access to mental health

services. Fourthly, further research is needed to explore the long-term effects of interventions on psychological capital, examine the influence of cultural and socioeconomic factors, and investigate the reasons for contrasting results with previous studies. Additionally, research should be conducted to see if the psychological capital of the mothers translates into better outcomes for the children. Fifthly, public awareness campaigns should be launched to promote understanding and acceptance of individuals with disabilities, reducing stigma and fostering an inclusive society. Finally, increased training for professionals working with children with disabilities and their families is essential to enhance the quality and effectiveness of support services.

Conclusions

The current study revealed a significant finding: mothers of children with both ASD and ID exhibited high levels of psychological capital. This indicates that despite the inherent challenges associated with raising children with these conditions, these mothers possess substantial psychological resilience and strengths. Several factors contributed to this positive outcome. The mild severity of the disabilities in the children, coupled with their relatively advanced ages, played a crucial role. Furthermore, the high educational attainment of the children, alongside the availability of employment opportunities and vocational training, significantly enhanced their independence and reduced the caregiving burden on their mothers. The comprehensive governmental support services provided in Saudi Arabia, including financial assistance and access to health, educational, and social services, also played a vital role. Additionally, the mothers' own educational backgrounds and higher socioeconomic status contributed to their enhanced psychological resilience. Notably, the study found no statistically significant differences in psychological capital between mothers of children with ASD and those with ID, suggesting similar levels of psychological

well-being across both groups. However, it is essential to acknowledge that the study's findings present a mixed picture when compared to previous research, highlighting the complexity of factors influencing psychological capital in these populations.

Abbreviations

PsyCap: Psychological Capital; ASD: Autism Spectrum Disorder; ID: Intellectual Disability; SPSS: Statistical Package for the Social Sciences; MHRSD: Ministry of Human Resources and Social Development.

Declarations

Ethics approval and consent to participate:

This study was reviewed and approved by the Research Ethics Committee of the Center for Research and Consulting Studies at Arab East Colleges. The study received approval under reference number [MHRASC171125-4]. The committee confirmed that the study met all institutional requirements for ethical compliance and adhered to the standards approved by the Colleges. The research was conducted in accordance with the ethical principles outlined in the 1964 Declaration of Helsinki and its later amendments, as well as the regulations of the National Committee of Bioethics (NCBE) in Saudi Arabia. Informed consent was obtained from all participating mothers of children with ASD and mothers of children with ID after providing them with a full explanation of the study's nature and purpose. Participation was entirely voluntary, and participants retained the right to withdraw at any stage without penalty. Confidentiality and anonymity were strictly maintained throughout all stages of the research.

Consent for publication

Not applicable

Availability of data and materials

The datasets used and analyzed for the current study are available from the corresponding author upon reasonable request. The confidentiality and security of data and materials were ensured through all stages of the study.

Competing interests

The authors declare no competing interests.

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Authors' contributions

EYM contributed to the conceptualization and methodology of the study, prepared the original

draft, and supervised the research. MAH contributed to the investigation, data curation, and formal analysis, and was responsible for reviewing and editing the manuscript.

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