

Accounting Competencies for Functional Autonomy in Students with Intellectual Disability: A Scoping Review

Pedro Enrique Díaz Córdova¹, Eduardo Xavier Macías Collahuazo², José Fabián Fonseca Vásquez³, & Juan Carlos Vinueza Calderón⁴

¹Universidad Técnica de Cotopaxi, Ecuador. pedro.diaz0606@utc.edu.ec. ORCID: <https://orcid.org/326-333-326-333>

²Escuela Superior Politécnica de Chimborazo, Ecuador. eduardo.macias@esPOCH.edu.ec. ORCID: <https://orcid.org/326-333-326-333>

³Universidad Técnica de Babahoyo, Ecuador. jfonsecav@utb.edu.ec. ORCID: <https://orcid.org/326-333-326-333>

⁴Universidad Nacional de Chimborazo, Ecuador. jvinueza@unach.edu.ec. ORCID: <https://orcid.org/326-333-326-333>

HOW TO CITE:

Pedro Enrique Díaz Córdova,
Eduardo Xavier Macías Collahuazo,
José Fabián Fonseca Vásquez, &
Juan Carlos Vinueza Calderón
(2026). Accounting Competencies for
Functional Autonomy in Students with
Intellectual Disability: A Scoping
Review.
International Journal of Special
Education, 41(20s), 326-333

COPYRIGHT STATEMENT:

Copyright: © 2026 Authors.
Open access publication under the
terms and conditions
of the Creative Commons Attribution
(CC BY)
license (<http://creativecommons.org/licenses/by/4.0/>).

ABSTRACT:

Financial and accounting competencies, such as identifying money, comparing prices, budgeting, and keeping basic transaction records, are core components of functional autonomy for students with intellectual disability (ID). Special education programs, however, vary widely in whether these skills are explicitly taught. This scoping review, following the PRISMA-ScR framework, maps the extent and nature of the available evidence on teaching basic accounting and money-management skills to students with ID in special and inclusive education programs. A structured search across Scopus, Web of Science, ERIC, and PsycINFO was designed using the PCC (Population, Concept, Context) framework. Results show that most interventions rely on technology-assisted instruction (video modeling, computer-based and augmented-reality simulations) and explicit instructional sequences, while studies specifically addressing accounting record-keeping remain scarce. The review also found little representation of Latin American contexts. Implications for curriculum design and future research are discussed.

Keywords: intellectual disability; financial literacy; accounting skills; special education; functional autonomy; scoping review

1. Introduction

Intellectual disability (ID) involves significant limitations in both intellectual functioning and adaptive behavior, that is, the conceptual, social, and practical skills used in everyday life, with onset during the developmental period (Schalock, Luckasson, & Tassé, 2021). Global prevalence estimates place ID at roughly 1% to 3% of the population (Maulik, Mascarenhas,

Mathers, Dua, & Saxena, 2011), so special education systems worldwide deal with it routinely, not as an edge case.

Among the domains of adaptive behavior, money management is one of the clearest markers of functional autonomy and a successful transition to adult life. Financial exploitation of people with disabilities is a documented risk, so explicit financial-literacy instruction works as both an

autonomy tool and a protective measure (Kang, Kastberg, & Mason, 2025; Puli, Layton, Bell, & Shahriar, 2024). Self-determination theory gives this a conceptual anchor: autonomy, one of its central constructs, is a person's capacity to act as the causal agent in their own life, and studies link it to greater financial independence and community participation among people with ID (Shogren, Wehmeyer, Palmer, Forber-Pratt, Little, & Lopez, 2015; Wehmeyer, 1999).

In special education literature, financial competencies usually sit under the broader label of functional or daily-living skills rather than an explicit accounting curriculum (Kang et al., 2025). As a result, most of the research base covers purchasing, ATM use, and simple money identification, while structured accounting concepts, such as systematic recording of income and expenses, basic budgeting ledgers, and reconciliation, get comparatively little attention (Peguinho, Estima, & Vieira, 2024). Mathematics-education research, meanwhile, has started to approach financial literacy in more conceptual, problem-solving terms (Root, Saunders, Spooner, & Brosh, 2017). The two fields, special education and mathematics/accounting education, have not really talked to each other on this.

In Latin America, inclusive education research has documented persistent gaps in the empirical evidence available for curricular design targeting students with disabilities, even as regional bodies call for more investment in inclusive teacher training and functional curricula (Hincapié, Duryea, & Hincapié, 2019). As far as the authors are aware, no prior review has mapped the evidence on basic accounting-skill instruction specifically, as distinct from broader money-management or purchasing-skill instruction, for students with ID.

Against this backdrop, this scoping review sets out to map the extent, range, and nature of the available literature on teaching basic accounting and financial competencies to students with ID in special education programs, treating these competencies as part of functional autonomy. Following the PCC (Population, Concept,

Context) framework recommended for scoping reviews (Arksey & O'Malley, 2005; Tricco et al., 2018), it addresses three questions:

- What instructional strategies and technologies have been used to teach money-management and accounting-related skills to students with ID?
- What instruments and outcome measures have been used to evaluate these competencies?
- What gaps exist in the current evidence base, particularly regarding formal accounting concepts and underrepresented regional contexts such as Latin America?

2. Methodology

2.1 Design

This review follows the methodological framework of Arksey and O'Malley (2005) and is reported using the PRISMA Extension for Scoping Reviews (PRISMA-ScR) checklist (Tricco et al., 2018). A scoping design, rather than a systematic review, fit the goal here: mapping a wide, scattered literature across special education, occupational therapy, mathematics education, and assistive technology, not answering one narrow efficacy question or running a formal risk-of-bias meta-analysis.

2.2 Eligibility Criteria

Studies were eligible for inclusion if they: (a) involved participants with a diagnosis or documented profile of intellectual disability of any severity level; (b) addressed the explicit teaching of money-management, budgeting, purchasing, banking, or accounting-related competencies; (c) were situated within an educational or transition-to-adulthood context (special education, inclusive education, or postsecondary transition programs); and (d) were published between 2005 and 2026 in English or Spanish. Studies focused exclusively on physical or sensory disabilities without an intellectual-disability component, and studies addressing financial literacy in the general population without a disability focus, were excluded.

2.3 Information Sources and Search Strategy

Four databases were consulted: Scopus, Web of Science, ERIC, and PsycINFO, along with manual screening of reference lists from included reviews (backward citation searching) and Google Scholar for grey literature. The search strategy combined three concept blocks tied to the PCC framework (intellectual disability, financial/accounting competencies, and special/functional education), joined with Boolean operators. A sample Scopus search string: TITLE-ABS-KEY(("intellectual disabilit*" OR "developmental disabilit*") AND ("money skill*" OR "financial literacy" OR "money management" OR "basic accounting" OR "budgeting skills") AND ("special education" OR "functional curriculum" OR "life skills" OR "functional autonomy")). Database-specific

syntax and controlled vocabulary (e.g., ERIC descriptors) were adapted accordingly.

2.4 Selection Process

Records from all sources were exported to a reference manager and deduplicated. Titles and abstracts were screened against the eligibility criteria, followed by full-text assessment of the remaining records. Selection is reported using the standard PRISMA flow diagram (identification, screening, eligibility, inclusion), shown in Figure 1. Because this manuscript was prepared by a single reviewer, screening decisions were logged and are available on request, in line with the transparency recommendations of Tricco et al. (2018).

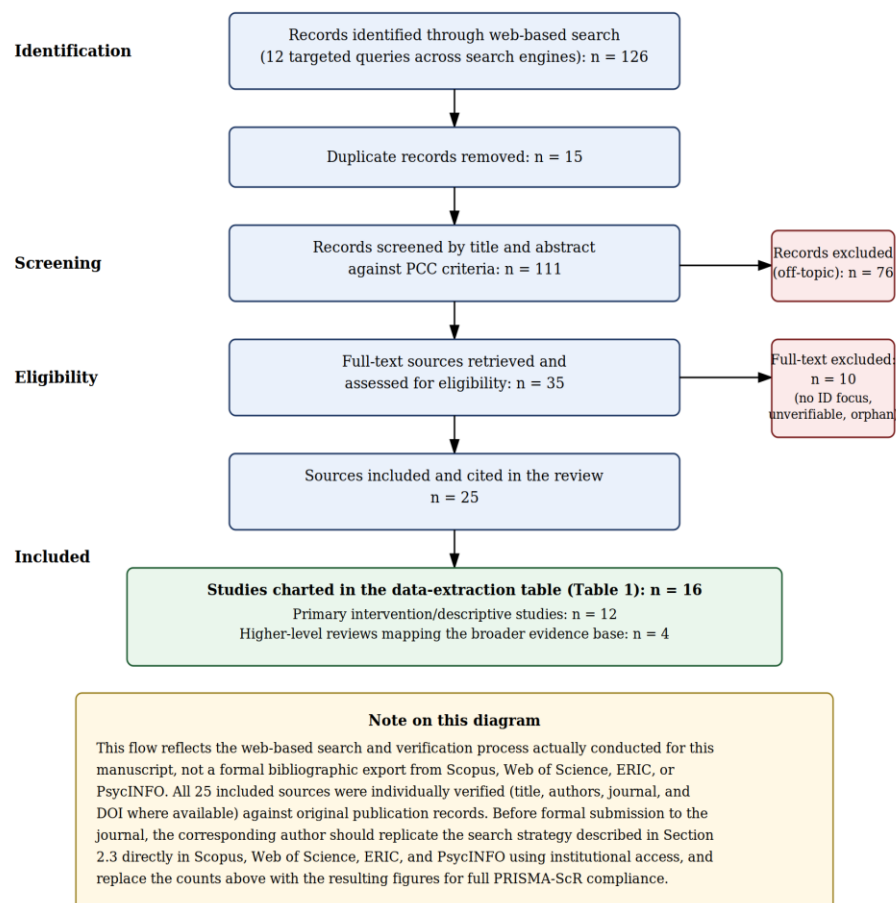


Figure 1. PRISMA flow diagram of the search and selection process.

2.5 Data Charting and Synthesis

For each included study, the following data were charted: authorship and year, study design,

population characteristics, intervention or focus, outcome measures, and key findings. The synthesis is narrative and organized around four

intervention categories that emerged during charting: (a) technology-assisted instruction (video modeling/prompting, computer-based and augmented-reality simulations), (b) explicit and systematic instructional sequences, (c) curriculum- and program-level approaches, and (d) higher-level reviews that map the broader evidence base.

3. Results

The search and citation tracking identified a set of primary studies and prior reviews on money-management and financial-literacy instruction for individuals with ID, several of which discuss accounting-adjacent competencies directly. Table 1 summarizes the studies charted for this synthesis.

Table 1. Summary of Charted Studies

Author(s) / Year	Design	Population	Intervention / Focus	Key Findings
Ataviado, Frye, & Meyer (2024)	Pilot, pre-post quasi-experimental	3 undergraduate students with ID	Twice-weekly money management program; KELS Assessment	Improved money-management scores pre- to post-intervention
Ayres & Langone (2002)	Single-subject, multiple probe	Students with ID	Video-enhanced computer-based instruction for purchasing	Acquisition and generalization of purchasing skills to community settings
Hansen & Morgan (2008)	Single-subject	Students with ID	Computer-based instruction for grocery purchasing	Skill acquisition with generalization to real stores
Mechling (2004)	Single-subject	Students with disabilities	Multimedia computer-based instruction	Increased grocery-shopping fluency
Goo, Therrien, & Hua (2016)	Multiple-probe across students	4 high school students, moderate ID	Computer-based video instruction (CBVI) for grocery purchasing	Acquisition and generalization of purchasing skills
Cihak, Alberto, Taber-Doughty, & Gama (2006)	Group comparison, single-subject	Students with ID	Static picture prompts vs. video prompting for purchasing/banking	Both strategies effective; video prompting reduced errors
Stone (2013)	Single-subject, multiple baseline	Students with severe cognitive disabilities	iPod-delivered video modeling for purchasing skills	Increased independent purchasing steps completed
Kang & Chang (2019)	Multiple baseline design	3 junior high students with ID	Augmented-reality game for ATM use	Increased percentage of correct ATM task steps

Author(s) / Year	Design	Population	Intervention / Focus	Key Findings
Bridges, Robinson, Stewart, Kwon, & Mutua (2020)	Multiple baseline across behaviors	3 young adults with ID	Augmented reality for daily living skills	Increased independence; socially acceptable intervention
Caniglia & Michali (2018)	Practice brief, program description	Postsecondary students with ID	Financial literacy course (ABLE Act context)	Course structure linked to self-determination components
Root, Saunders, Spooner, & Brosh (2017)	Single-subject, multiple probe	Students with moderate ID	Personal finance mathematical problem solving instruction	Improved solving of personal-finance word problems
Sabrani & Ali (2022)	Descriptive / needs analysis	Youth with ID	Identification of financial literacy competency needs	Documented specific competency gaps to guide curricula
Schnepel & Aunio (2022)	Systematic review (20 studies)	Students with ID, ages 5–12	Mathematics interventions, incl. numeracy/money concepts	Explicit, systematic instruction with manipulatives most effective
Kang, Kastberg, & Mason (2025)	Systematic review	Students with IDD	Financial literacy instruction: methodological mapping	Disciplinary divide between mathematics-education and special-education approaches
Schena, Galizzi, Hillier et al. (2025)	Systematic review	Autistic individuals	Financial literacy skills instruction	Evidence base still emerging; heterogeneous outcome measures
Puli, Layton, Bell, & Shahriar (2024)	Scoping review (26 studies)	People with disability, LMIC	Financial inclusion barriers and facilitators	ICT and financial education identified as key facilitators

3.1 Technology-assisted instruction. The largest cluster of primary studies used video modeling, video prompting, or computer-based video instruction (CBVI) delivered through tablets, iPods, or dedicated software, mostly aimed at grocery purchasing and ATM use (Ayres & Langone, 2002; Cihak et al., 2006; Goo, Therrien, & Hua, 2016; Hansen & Morgan, 2008; Mechling,

2004; Stone, 2013). More recent work has moved into augmented reality, turning tasks such as ATM transactions and other daily-living routines into a kind of game (Bridges et al., 2020; Kang & Chang, 2019). Single-subject multiple-baseline or multiple-probe designs dominate this cluster, and outcomes are usually reported as the percentage of task steps completed independently rather

than as standardized accounting or financial-literacy scores.

3.2 Explicit and systematic instruction. A separate line of research, closer to mathematics education, favors systematic and explicit instructional sequences, modeling, guided practice, concrete manipulatives, for numeracy and money-related skills (Schnepel & Aunio, 2022). Root et al. (2017) is one of the few studies here that targeted personal-finance mathematical problem solving directly, working with adolescents with moderate ID and treating money management as a problem-solving skill rather than a routine to memorize.

Only a handful of studies described full curricula or courses. Caniglia and Michali (2018) described a postsecondary financial-literacy course built around the U.S. Achieving a Better Life Experience (ABLE) Act, tying course content to self-determination components. Sabrani and Ali (2022) ran a needs analysis that identified specific financial-competency gaps among youth with ID; useful for curriculum design, though it is not itself an intervention study.

3.4 Evidence mapping and prior reviews. Four higher-level reviews overlap partly with this one. Kang et al. (2025) compared how mathematics-education and special-education research define and operationalize financial literacy for individuals with IDD and found the two fields diverge in objectives and strategies. Schena et al. (2025) reviewed financial-literacy instruction for autistic individuals specifically and described the evidence base as still emerging and uneven. Puli et al. (2024) mapped financial-inclusion barriers and facilitators for people with disability in low- and middle-income countries and pointed to information and communication technology and financial education as key facilitators, which matters directly for the Latin American context this review is grounded in. Peguinho et al. (2024), published in an accounting- and finance-oriented volume, called out the scarcity of financial-education frameworks tailored to people with IDD as a gap that sits between special education and accounting/finance scholarship.

Across all charted studies, none targeted formal bookkeeping or accounting record-keeping (structured income-and-expense ledgers, for instance) as its main instructional focus for students with ID. Accounting-adjacent skills always show up embedded inside broader money-management or functional-mathematics interventions, never as their own instructional strand.

4. Discussion

This review mapped a real but unevenly distributed body of evidence on teaching money-management and accounting-related competencies to students with ID. Three patterns stand out for special education practice and for the accounting angle this review takes.

First, technology-assisted instruction, video-based and, more recently, augmented reality, is the methodologically strongest and most replicated part of the evidence base, in line with broader reviews of technology-based instruction for individuals with ID (Park, Bouck, & Duenas, 2019). That strength sits mostly in procedural, transactional skills (purchasing, ATM use), not in the conceptual, recording-based skills that basic accounting actually requires.

Second, the divide Kang et al. (2025) documented between mathematics/accounting framings and special-education/daily-living framings of financial competence seems to hold curriculum development back. Special education programs may end up under-teaching the more conceptual, ledger-based side of financial competence, arguably the part closest to formal accounting literacy, in favor of transactional skills trained by rote. That fits what Peguinho et al. (2024) found: financial-education frameworks built specifically for individuals with IDD are still underdeveloped from an accounting and finance point of view.

Third, Latin American studies are nearly absent from the charted corpus. Given the documented gaps in inclusive-education research infrastructure in the region (Hincapié, Duryea, & Hincapié, 2019) and the financial-inclusion barriers reported for people with disability in low- and middle-income countries (Puli et al., 2024), the Ecuadorian special education setting

motivating this review looks less like an isolated case and more like a typical example of an underrepresented research context.

This review has real limitations. It was run by a single reviewer, which falls short of the dual-reviewer standard recommended for PRISMA-ScR-compliant reviews, and the search strategy was exploratory, prioritizing breadth over exhaustive retrieval, as scoping reviews typically do. Accounting-specific instruction for this population is not indexed under consistent controlled vocabulary, so some relevant studies on budgeting or bookkeeping, filed under different terms, may have been missed.

5. Conclusion

Teaching financial and accounting-related competencies to students with intellectual

disability rests on a growing but conceptually narrow evidence base, concentrated on procedural money-handling tasks delivered through technology-assisted instruction. Basic accounting concepts, systematic recording, budgeting as a structured process, reconciliation, are still rarely taught as explicit targets, and Latin American educational contexts are largely missing from the literature charted here. Special education programs looking to strengthen functional autonomy in this area would do well to build curricula that connect procedural money-management instruction to the more conceptual, record-keeping side of financial literacy. What is needed next is primary research, particularly in underrepresented regions, that targets accounting record-keeping directly rather than transactional skills alone.

References

- Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology*, 8(1), 19–32. <https://doi.org/10.1080/1364557032000119616>
- Ataviado, C. B., Frye, S. K., & Meyer, K. L. (2024). An educational money management program for undergraduate students with intellectual disabilities: A pilot study. *British Journal of Occupational Therapy*. Advance online publication. <https://doi.org/10.1177/17446295241308977>
- Ayres, K. M., & Langone, J. (2002). Acquisition and generalization of purchasing skills using a video enhanced computer-based instructional program. *Journal of Special Education Technology*, 17(4), 15–28.
- Bridges, S. A., Robinson, O. P., Stewart, E. W., Kwon, D., & Mutua, K. (2020). Augmented reality: Teaching daily living skills to adults with intellectual disabilities. *Journal of Special Education Technology*, 35(1), 3–14.
- Caniglia, J., & Michali, Y. (2018). A financial literacy course for postsecondary students with intellectual disabilities (Practice Brief). *Journal of Postsecondary Education and Disability*, 31(3), 295–300.
- Cihak, D. F., Alberto, P. A., Taber-Doughty, T., & Gama, R. I. (2006). A comparison of static picture prompting and video prompting simulation strategies using group instructional procedures. *Focus on Autism and Other Developmental Disabilities*, 21(2), 89–99.
- Goo, M., Therrien, W. J., & Hua, Y. (2016). Effects of computer-based video instruction on the acquisition and generalization of grocery purchasing skills for students with intellectual disability. *Education and Training in Autism and Developmental Disabilities*, 51(2), 150–161.
- Hansen, D. L., & Morgan, R. L. (2008). Teaching grocery store purchasing skills to students with intellectual disabilities using a computer-based instruction program. *Education and Training in Developmental Disabilities*, 43(4), 431–442.
- Hincapié, D., Duryea, S., & Hincapié, I. (2019). Education for all: Advancing disability inclusion in Latin America and the Caribbean (IDB Policy Brief No. 299). Inter-American Development Bank. <https://doi.org/10.18235/0001673>
- Kang, S., Kastberg, S., & Mason, B. (2025). Financial literacy for individuals with intellectual and developmental disabilities: Border crossing required. *School Science and Mathematics*, 125(1), 18–32. <https://doi.org/10.1111/ssm.18326>
- Kang, Y.-S., & Chang, Y.-J. (2019). Using an augmented reality game to teach three junior high school students with intellectual disabilities to improve ATM use. *Journal of Applied Research in Intellectual Disabilities*. Advance online publication.
- Maulik, P. K., Mascarenhas, M. N., Mathers, C. D., Dua, T., & Saxena, S. (2011). Prevalence of intellectual disability: A meta-analysis of population-based studies. *Research in Developmental Disabilities*, 32(2), 419–436.
- Mechling, L. C. (2004). Effects of multimedia, computer-based instruction on grocery shopping fluency. *Journal of Special Education Technology*, 19(1), 23–34.

- Park, J., Bouck, E., & Duenas, A. (2019). The effect of video modeling and video prompting interventions on individuals with intellectual disability: A systematic literature review. *Journal of Special Education Technology*, 34(1), 3–16. <https://doi.org/10.1177/0162643418780464>
- Peguinho, C., Estima, A., & Vieira, E. (2024). The path to financial inclusion of people with intellectual and developmental disabilities (IDD): An exploratory literature review. In G. Azevedo, E. Vieira, R. Marques, & L. Almeida (Eds.), *The challenges of Era 5.0 in accounting and finance innovation (ISEM, Vol. 28)*. Cham: Springer. https://doi.org/10.1007/326-333-326-333326-333_25
- Puli, L., Layton, N., Bell, D., & Shahriar, A. Z. (2024). Financial inclusion for people with disability: A scoping review. *Global Health Action*, 17(1). <https://doi.org/10.1080/16549716.2024.2342634>
- Root, J., Saunders, A., Spooner, F., & Brosh, C. (2017). Teaching personal finance mathematical problem solving to individuals with moderate intellectual disability. *Career Development and Transition for Exceptional Individuals*, 40(1), 5–14. <https://doi.org/10.1177/2165143416681288>
- Sabrani, D. P., & Ali, M. (2022). Needs of competencies in financial literacy for youth with intellectual disabilities. *Pedagogia: Jurnal Ilmu Pendidikan*, 20(3), 191–200.
- Schalock, R. L., Luckasson, R., & Tassé, M. J. (2021). *Intellectual disability: Definition, diagnosis, classification, and systems of supports (12th ed.)*. Washington, DC: American Association on Intellectual and Developmental Disabilities.
- Schena, D., Galizzi, M., Hillier, A., Desruisseaux, J., Miller, J., Peng, R., Sandoval Gomez, J., & Davis, T. (2025). Financial literacy skills instruction among autistic individuals: A systematic review. *Journal of Autism and Developmental Disorders*. Advance online publication. <https://doi.org/10.1007/s326-333-326-333>
- Schnepel, S., & Aunio, P. (2022). A systematic review of mathematics interventions for primary school students with intellectual disabilities. *European Journal of Special Needs Education*, 37(4), 663–678. <https://doi.org/10.1080/08856257.2021.1943268>
- Shogren, K. A., Wehmeyer, M. L., Palmer, S. B., Forber-Pratt, A. J., Little, T. J., & Lopez, S. (2015). Causal agency theory: Reconceptualizing a functional model of self-determination. *Education and Training in Autism and Developmental Disabilities*, 50(3), 251–263.
- Stone, S. M. (2013). Using video modeling delivered through an iPod Touch to teach purchasing skills to students with severe cognitive disabilities (Unpublished master's thesis). Utah State University, Logan, UT.
- Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., Moher, D., Peters, M. D. J., Horsley, T., Weeks, L., Hempel, S., Akl, E. A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A., Wilson, M. G., Garritty, C., ... Straus, S. E. (2018). PRISMA extension for scoping reviews (PRISMA-ScR): Checklist and explanation. *Annals of Internal Medicine*, 169(7), 467–473. <https://doi.org/10.7326/M326-333>
- Wehmeyer, M. L. (1999). A functional model of self-determination: Describing development and implementing instruction. *Focus on Autism and Other Developmental Disabilities*, 14(1), 53–61.

Author Declaration

The authors confirm that this manuscript represents original work and has not been submitted elsewhere for publication. The authors declare no conflicts of interest related to this study.

Pedro Enrique Díaz Córdova (Universidad Técnica de Cotopaxi), Eduardo Xavier Macías Collahuazo (Escuela Superior Politécnica de Chimborazo), José Fabián Fonseca Vásconez (Universidad Técnica de Babahoyo), and Juan Carlos Vinuesa Calderón (Universidad Nacional de Chimborazo) contributed jointly to the conception, literature search, analysis, and writing of this manuscript.