Identifying Global Research Priorities for Learning Disabilities

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Abstract

Estimates of the global prevalence of learning disabilities (LD) range from 5-17%. A host of negative outcomes have been associated with LD, particularly for people of low socioeconomic status within developed nations and for people in developing nations. The goal of this study was to identify global research priorities that address the persistent and pervasive challenges faced by people with LD. The Child Health and Nutrition Research Initiative (CHNRI) global research priority-setting methodology was employed to generate research questions and to evaluate them according to a set of four criteria: acceptability and impact, equity, feasibility, and usefulness. Thirty-eight research questions were generated, coded into six categories. The two most critical research categories were (a) developing stronger understandings of LD across the lifespan and (b) developing more effective ways to train teachers.

Keywords: Learning Disabilities, Research, International

Learning disabilities (LD) have generally been defined as a neurological disorder that interferes with the ability to store, process, or produce information. As such, LD can significantly impact a person's ability to learn to read, write, spell, compute math, reason, or interact socially.

Global estimates of the prevalence of LD are difficult to find, and national-level estimates vary significantly. For example, a number of countries, including Germany, Australia, and the United States, report prevalence ranges from 5-17% (Child Trends Databank, 2014; Moll, Kunze, Neuhoff, Bruder, & Schulte-Körne, 2014; Prior, Sanson, Smart, & Oberklaid, 1995; Shaywitz, Morris, & Shaywitz, 2008; National Center for Education Statistics [NCES], 2016; Westwood & Graham, 2000). Other countries, such as Russia and Nigeria, report lower rates between 5-8% (Grigorenko, 2010; Onukwufor, 2016). Varying definitions of LD, the heterogeneity of the condition, and the approaches used to identify students as having a learning disability within the school system all contribute to the lack of precision in reporting prevalence rates.

Despite these obstacles, understanding the global scope and impact of LD is important because people with LD face challenges in a number of areas, including academic, quality of life, economic, health, social, and emotional. Of these, academic challenges are the most extensively documented. In the United States, for example, the National Assessment of Educational Progress (NAEP) indicates that students with LD have academic achievement scores that are significantly below those of their nondisabled counterparts in reading, math, and writing (NCES, 2016). Moreover, these achievement discrepancies tend to increase as students progress through school (NCES, 2016). While it is challenging to locate national-level data on the performance of students with LD in nations other than the United States, lower academic achievement in the affected area of learning (e.g., reading, math, writing) has been reported in students with LD in several countries (see e.g., Dirks, Spyer, van Lieshout, & deSonneville, 2008; Heikkilä, Torppa, Aro, Närhi, & Ahonen, 2016; Sideridis, Stamovlasis, & Antoniou, 2016).

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To date, much of the LD research has focused on academic achievement differences. However, recent years have witnessed an increase in the number of studies examining social and emotional issues, with consistent findings across cultures showing that students with LD tend to struggle in these areas. Specifically, studies have demonstrated strong correlations between LD and social and emotional challenges such as anxiety and depression (see, e.g., Backenson et al., 2015; Emam & Kazem, 2015; Mammarella et al., 2016).

This trend suggests a need to better understand the social and emotional needs of students with LD as a means to better support their ability to navigate the social demands of school, as well as to develop stronger self-regulation skills and abilities.

The presence of an LD can also can have significant implications for life outside of and beyond school. For example, Sakiz, Sart, Börkan, Korkmaz, and Babür (2015) found that students with LD in Turkey self-reported lower quality of life across dimensions such as physical and emotional well-being, relationships with family and friends, and school. Similar results have been noted in Hungary, Italy, India, and Israel (Balazs, Miklosi, Toro, & Nagy-Varga, 2016; Ginieri-Coccossis et al., 2013; Karande, Bhosrekar, Kulkarni, & Thakker, 2009; Margalit, Mioduser, Al-Yagon, & Neuberger, 1997. In addition, learning disabilities have also been connected to public health concerns; for example, international studies have shown poor use of public health initiatives in the population of people with LD (Jacobson, Janicki, & Ackerman, 1989; Jones & Kerr 1997; Sullivan, Hussain, Slack-Smith, & Bittles, 2003; Wood & Douglas, 2007).

Learning Disabilities and Socioeconomic Status

As is the case with many other disability conditions, the prevalence of LD varies based on socioeconomic status (SES). In the United States, for example, approximately 6% of children living at or above the poverty line are diagnosed with a LD compared to 12% of children below the poverty line (Child Trends Databank, 2014). This variation in prevalence of disabilities associated with SES is also seen globally; there is, in general, there is a higher disability prevalence in lower-income countries than in higher-income countries (World Health Organization and World Bank, 2011).

However, in the case of LD, these disparities are not always clear because methods and systems to detect, evaluate, and intervene for LD vary significantly across nations. For example, a comparison of LD policy and practice in India to Australia highlights specific ways in which students with LD in lower-income countries may be disadvantaged (Thomas & Whitten, 2012). Specifically, the authors report a lack of infrastructure and systematic support to serve students with LD within the Indian system compared to the Australian system. They also note that a lack of funding and policy guidance contributes to the constraints on equity and access within the Indian system (Thomas & Whitten, 2012). By contrast, students with LD in Australia were much more likely than their counterparts in India to receive assessment, modified or differentiated learning programs, and ongoing assistance. Furthermore, they were less likely to be stigmatized and segregated from others and were more likely to be taught by teachers who had some professional understanding of LD. Teachers in Australian schools also had significantly more classroom support and many more resources at their disposal than their Indian counterparts (Thomas & Whitten, 2012).

Policy reviews and studies from other nations report similar disparities in services based on economic status. In Turkey, for example, students with LD face challenges in school because of a lack of well-trained teachers, effective teaching methods, well-designed curricula, and inadequate educational materials (Sakiz et al., 2015). Additionally, teachers' perceptions and attitudes may negatively affect and be affected by the low academic performance of students with LD, further reducing the opportunity to reach their academic potential (Levi, Einav, Raskind, Ziv, & Margalit, 2013; Ozabaci & Ergun-Basak, 2013). Yildiz, Yildirim, Ates, and Rasinski (2012) report that Turkish students with LD experience problems interacting with teachers, family, and peers, and also encounter significant challenges with diagnostic procedures and access to services.

Clearly, the presence of learning disabilities is a global issue that affects a significant percentage of the world's population and disproportionately impacts people in lower-income countries as well

as people from low socioeconomic backgrounds within wealthier nations. When left undetected and untreated, LD can lead to lower education achievements, poor health outcomes, and higher rates of poverty (Horowitz, Rawe, & Whittaker, 2017; World Health Organization & World Bank, 2011).

Identifying Global Priorities in Learning Disabilities Research

Although a substantial amount of research has identified evidence-based practices for people with LD, much of what we currently understand comes from research that has primarily been conducted in wealthy countries, and especially from English-speaking countries – a pattern of inequity that is repeated across many areas of social sciences research (Global Forum for Health Research, 2004).

As a result, the current research base on LD may not contribute directly to improving the situation in developing nations, suggesting a need to expand the research base in several ways, including (a) developing stronger understandings of the issues related to LD as manifested within developing nations, (b) increasing applied research to determine the extent to which the existing knowledge base has relevance for developing nations, and (c) solving the problems of practice that contribute to existing disparities in access to services for poor people with LD in developed nations.

Expanding the research base to address these areas is a significant undertaking that requires determining a set of priorities to guide the work. In an effort to chart a course for this effort, the International Academy for Research on Learning Disabilities (IARLD) undertook a global research priority-setting activity. The IARLD is an international professional organization dedicated to conducting and sharing research about individuals who have LD. The IARLD consists of an elected group of scientists, educators, and clinicians in the field of LD throughout the world. Currently, 29 countries are represented among the IARLD membership. Of the represented nations, 20 are considered developed and 9 are considered developing, according to the World Economic Situation Prospects prepared by the Development Policy and Analysis Division of the United Nations (United Nations Department of Economic and Social Affiars, 2014).

Establishing global research priorities to improve our current understanding of LD, particularly in developing nations, can create an agenda that balances basic science, educational, clinical, and public health research to meet the needs of people with LD.

Methods

Following the lead of Tomlinson, Yasamy, Emerson, Officer, Richler, and Saxena (2014), who published a set of global research priorities for developmental disabilities, we adopted the priority-setting methodology manualized by the Council on Health Research for Development (COHRED; Okello & Chongtrakul, 2000) and by the Child Health and Nutrition Research Initiative (CHNRI; Rudan et al., 2008).

COHRED is a global, non-profit organization dedicated to delivering sustainable solutions to the health and development challenges of people living in low-income countries. CHNRI is a network of global partners dedicated to reducing child mortality and eradicating extreme poverty and hunger. These two organizations outlined a protocol to advance and promote the concept of essential national health research (ENHR) as a strategy to promote health and development on the basis of equity and social justice (Okello & Chongtrakul, 2000).

According to the priority-setting methodology, several groups of participants are required to successfully conduct a research priority-setting process, including the core group, the research question-identification participants, and the expert raters who apply the scoring criteria (Rudan et al., 2008).

Participants

Core group. The core group is responsible for overseeing and executing the priority setting process. In the current study, four researchers formed the core group, including the authors of this manuscript. Three are members of the IARLD, with two serving on its executive board. The fourth core group participant is a postdoctoral fellow completing her fellowship with the lead author of this manuscript. The core group met in person at IARLD conferences, and collaborated via technology on the processes followed, to include analysis and interpretation of data.

Research question-identification participants. Because the membership of the IARLD consists of leading international researchers, policy makers, and practitioners, we surveyed the IARLD membership to generate research questions they believed were a priority in the field of LD. Several methods were used to secure responses from members, including electronic surveys with followups, and in-person requests for submitting research questions during the annual IARLD conferences.

Current IARLD membership includes 231 members from 29 countries, with 177 at universities, 19 practitioners in school/district or state offices, and 33 "other" (including hospitals, clinics and other organizations). A total of 73 members (32%) from 19 countries submitted their priority research questions. Of those responding, 73% were from universities, 8% practitioners in school/district or state offices, and 19% other organizations.

Expert raters. Once the initial research questions are generated, the priority setting process relies on a group of experts to rate the research questions according to a predetermined set of criteria.

To recruit raters for the current study, we held a roundtable discussion at the 2016 IARLD conference to discuss the project and project goals. Representatives from seven countries attended the session and agreed to serve as expert raters. To increase the representativeness of our rater group, we emailed IARLD members from countries not represented in the rater sample; the criteria for soliciting raters included whether they were known to the core group as having expertise in research on LD and/or needs related to LD in nations beyond those of others already confirmed as raters. A total of 18 people (15 female) from 15 countries agreed to serve as raters. All raters held academic positions (e.g., researchers, professors).

Procedures

The process followed in this study consisted of the following steps:

1. **Create a core group to oversee the process.** The core group was inspired to complete the project after reading the global research-priority work for developmental disabilities conducted by Tomlinson et al. (2014). The group closely followed the process manualized by Rudan et al. (2008).
2. **Generate a list of initial research questions.** Because the membership of IARLD consists of leading international researchers, policy makers, and practitioners, we surveyed the IARLD membership group, asking each participant to generate no more than five research questions they believed were a priority in the field of LD. This activity generated an initial list of 146 questions.
3. **Review and finalize the list of research questions.** The core group reviewed the initial set of questions as follows: (a) items that were not research questions were eliminated; (b) questions that were duplicated were eliminated; and (c) questions that were similar were reviewed to determine whether they could be revised, considered to be the same question, or if both questions should be kept. This process yielded a total of 38 unique questions. A complete list of the research questions is included in Figure 1.

Category 1: Definition of Learning Disabilities
1. What are the critical and defining characteristics of LD?
2. Are the critical and defining characteristics of LD common across orthographies, languages and cultures?
3. Does the localization of cognitive processes in the brain help our understanding of LD?
4. What are the contributions of visual memory and visual discrimination to word recognition in different orthographies?
5. Should psychoemotional variables be considered as core identifying features of learning disabilities?
Category 2: Identification
6. What are the components of a reliable assessment method and criteria for identifying learning disabilities?
7. Can the assessments used within an LD identification protocol be standardized across cultures and languages?
8. What is the most effective way to identify early children who need intensive reading instruction, and does this vary by orthography?

Figure 1 continued

9. How can we reliably identify and differentiate between specific learning disabilities and language difference with limited exposure to L1 and L2?
10. How can we reliably identify and differentiate specific learning disabilities and other, overlapping conditions such as ADHD, ASD?
11. What clinical identification practices and cognitive processing assessments reliably predict bio-neurologically identifiable LD?
12. Are underachieving persons who meet low academic achievement criteria for LD but **do not** meet bio-neurological identification criteria meaningfully distinct from those who do?
13. Are there reliable subtypes of LD and are these based on common underlying cognitive processes or on academic achievement?
14. What are the key risk and protective factors for learning disabilities in the first four years of life (0-4years)?
15. Is response to intervention (RTI) an effective method of identifying students as LD?
16. What are evidence-based assessment procedures for the analysis of the specific educational needs of students with learning disabilities?

Category 3: Teacher Education and Professional Development

17. What training or professional development approaches are most effective to provide teachers with the general knowledge to help prevent reading difficulties by providing strong foundational reading instruction?
18. What training or professional development approaches are most effective to ensure special educators (and teachers providing instruction to students with LD) have the specialized knowledge to provide evidence based instruction and intensive, data-guided, rigorous intervention to effectively meet the needs of students with identified LDs in their classrooms?
19. What methods are most effective in improving teachers' ability to read and interpret data to be used in data-based decision-making?
20. What training or professional development approaches are effective in developing teachers' understanding of the LD construct and understanding that students with LD need individual supports (reasonable accommodation; using tablets in classrooms etc.)?
21. What are the best and most efficient methods for training in-service teachers to work with students with learning disabilities in general education settings in developing countries and in countries that do not provide such specialized training?
22. How can we better evaluate and capture the impact of PD?

Category 4: Interventions/Remediation

23. Are there unique individualized intervention approaches for students with LD that are not appropriate or useful for other students who experience learning difficulties?
24. How can assistive technologies support the learning of individuals with learning disabilities and facilitate intervention on a wide scale, at school, and in the workplace?
25. Can effective interventions for students with disabilities be delivered within large-group settings?
26. What are evidence-based and school-based prevention strategies for learning disabilities (dyslexia/dyscalculia)?
27. Does intervention alter the underlying neurological condition and core psychological processing deficits of persons with LD?
28. What variables moderate treatment outcomes for students with LD?
29. What are evidence-based interventions for students who are LD **and** whose first language is not the societal language of their adopted country?
30. What combination(s) of rigorous intervention (reading, social/emotional support) are most helpful and feasible?
31. Can best practices established in developed countries be effectively adapted for developing countries?
32. What forms of curriculum-based progress monitoring measures are reliable across languages?

Figure 1 continued

Category 5: Understanding LD Across the Lifespan (and LD Outside of School)
33. How do learning disabilities develop or change over the life course and across contexts (e.g. school, work, home)?
34. What are the challenges parents face in supporting their children with learning disorders at home?
35. In what ways can families/caregivers and others outside the school (e.g., after school caregivers) best support children with learning disabilities?
36. What are effective strategies to support the successful transition of students with LD across school levels, and across various contexts?
Category 6: Inclusion/Advocacy
37. What are effective strategies to support students with LD to develop self-advocacy skills?
38. Can students with an LD be served equally well through full inclusion in general education or special education, or a combination?

Figure 1. Research questions by category.

4. **Categorize questions.** The core group used a process of independent coding, following a general inductive approach to condense the research questions into categories, engaging in independent parallel coding by three researchers to check for consistency (Thomas, 2006). Three researchers reviewed the questions and category definitions and then compared their analyses until reaching consensus.

   The identified categories included the following: (a) Definition of learning disabilities (5 questions); (b) Identification (11 questions); (c) Teacher education and professional development (6 questions); (d) Interventions and remediation (10 questions); (e) Understanding LD across the lifespan (4 questions); and (f) Inclusion/advocacy (2 questions).

5. **Recruit experts to review and rank identified questions according to a predetermined set of criteria, and ensure that the group of experts has adequate representation across gender, geographical focus, and stakeholder groups**. Our expert raters did not sufficiently meet our goals for representation across geographical focus (only 1 rater was from a developing nation) or stakeholder groups (88% were from universities, 12% from other organizations). The effects of the limited representation are discussed ahead.

6. **Select the criteria against which research questions can be judged.** Because the overall goal of this priority-setting activity was to identify research priorities to advance the global understanding of LD, and, in particular, to address the disparities between developed and developing nations, the core group followed the guidance of Rudan et al. (2008), and selected the following four criteria: applicability and impact; equity; feasibility; and usefulness. The definitions of these terms are included in Table 1. The process of generating and consolidating research questions resulted in 38 research questions arranged into six categories as presented in Figure 1.

Table 1
Criteria Used to Rate the Research Questions and Their Definitions

Criteria	Definition
Applicability and Impact	How likely is it that the results will be immediately applicable for guiding policies and programs and have impact on policy and practice?
Equity	How likely is it that the proposed research will benefit those who are most vulnerable to poor child development?
Feasibility	How likely is it that the cost of the proposed research will be a feasible investment?
Usefulness	Given the quality of existing evidence, how likely is it that the proposed research will fill a critical gap in knowledge?

7. **Have the expert rater group independently rate each of the 38 questions according to the four criteria using a three-point scale of Very Likely (2 points), Somewhat Likely (1 point), and Unlikely (0 points).** Questions were presented in random order through an electronic survey administered via Qualtrics, and the raters were given four weeks to complete their ratings.

8. **Compute scores through Qualtrics.** To facilitate review of the scores and research priorities, questions were categorized into six categories to facilitate interpretation of the priorities.

Data Analysis

Data were downloaded from Qualtrics and uploaded to SPSS v 23.0 for analysis. Each research question's score for each criterion as well as a total score were computed. Analysis included rank ordering items by criteria and by total score. Correlations among criteria were also computed. Finally, mean category scores were computed by adding the total scores for the items within a category and dividing by the number of questions within that category.

Results

An overall research-priority score was calculated as the total of each criterion score. Table 2 presents the criterion and total scores for each item, along with the mean and standard deviations for each category. As illustrated in Table 2, the top-rated questions varied somewhat across criteria. The questions with the highest overall scores were the following: Question 20 – related to training and professional development to improve general education teachers' understanding of LD; Question 24 – related to scaling the use of assistive technology to support the needs of people with LD; Question 18 – related to training and professional development for special education teachers; Question 8 – related to early identification of students at risk for LD that impact reading; and Question 6 – related to determining consistent and reliable assessment methods and criteria to identify students with LD.

Table 2

Total and Mean Rating Scores of Research Questions and Categories by Criterion

Question Number	Applicability and Impact	Equity	Feasibility	Usefulness	Total
Category 1: Definition of Learning Disabilities					
1	23	17	20	25	85
2	21	18	21	23	83
3	14	13	18	24	69
4	20	20	25*	23	88
5	14	15	19	17	65
M (SD)	18.40 (4.15)	16.6 (2.7)	20.6 (2.7)	22.4 (3.13)	78 (10.29)
Category 2: Identification					
6	25*	20	23*	24	92*
7	17	18	21	20	76
8	23	21*	22	26	92*
9	22	16	21	23	82
10	25*	14	25*	25	89
11	17	15	17	19	68
12	16	14	15	16	61
13	18	17	21	21	77
14	24	20	22	23	89
15	20	15	23*	20	81
16	25*	17	21	24	87
M (SD)	21.09 (3.59)	17 (2.48)	21 (2.79)	21.9 (2.98)	84.81 (9.04)

Table 2 continued

Category 3: Teacher Education and Professional Development					
17	21	15	23*	20	79
18	23	21	23*	28*	95*
19	18	15	19	25	77
20	27*	22*	25*	26*	100*
21	25*	19	19	25	88
22	16	12	14	19	61
M (SD)	21.67 (4.17)	17.33 (3.93)	20.5 (3.98)	23.83 (3.54)	83.33 (14.09)
Category 4: Intervention and Remediation					
23	13	11	10	14	48
24	25*	23*	23*	26*	97*
25	14	14	14	17	59
26	23	16	21	23	83
27	13	8	12	20	53
28	21	16	18	24	79
29	20	21*	18	23	82
30	25*	16	18	25	84
31	20	23*	18	24	85
32	19	18	17	19	73
M (SD)	19.3 (4.59)	16.6 (4.90)	16.9 (3.92)	21.5 (3.86)	74.3 (15.85)
Category 5: Understanding LD Across the Lifespan					
33	21	18	20	30*	89
34	19	20	19	27*	85
35	20	17	18	28*	83
36	23	18	22	24	87
M (SD)	20.75 (1.70)	18.25 (1.25)	19.75 (1.70)	27.25 (2.5)	86 (2.58)
Category 6: Inclusion and Advocacy					
37	17	19	20	20	76
38	18	16	15	17	66
M (SD)	17.5 (.70)	17.5 (2.12)	17.5 (3.53)	18.5 (2.12)	71 (7.07)

Note. * Are the top five questions for each criterion. In cases where scores are tied, more than five questions are designated.

The correlations among criterion scores and totals are included in Table 3. All correlations were significant ($p < .01$), in the moderate to high range. The correlation between the equity and usefulness criteria was the lowest, with several questions rated lower for equity receiving higher ratings for usefulness. For example, Question 27, Does intervention alter the underlying neurological condition and core psychological processing deficits of persons with LD?, received a low score of 8 for equity and a 20 for usefulness. Question 19, What methods are most effective in improving teachers' ability to read and interpret data to be used in data-based decision-making?, received a low score of 15 for equity and a 25 for usefulness. Question 33, How do learning disabilities develop or change over the life course and across contexts?, received a low score of 18 for equity and a 30 for usefulness.

In addition to examining the individual items, we computed mean scores for each criterion and total for every category (see Table 2). The rank order of categories (highest to lowest) by the mean total score for each criterion varied, with no category consistently ranked highest or lowest across criteria. The category ranking for the overall total from high to low was as follows: (a) Understanding learning disabilities across the lifespan, (b) Teacher education and professional development, (c) Identification, (d) Definitions of LD, (e) Intervention, and (f) Inclusion and advocacy.

Table 3
Correlations Among Criterion and Total Scores

	Applicability	Equity	Feasibility	Usefulness	Total
Applicability		.623	.717	.681	.898
Equity			.601	.546	.807
Feasibility				.578	.854
Usefulness					.831

Note. All correlations based on $N = 38$ and are significant, $p < .01$.

Discussion

Learning disabilities affect a substantial percentage of the population in significant ways, and differentially impact people from SES within developed nations and those from developing nations. Although a sizable research base has examined a variety of issues related to LD, a majority of studies have been conducted in wealthy, English-speaking countries, suggesting that their results may have limited relevance to advancing our understanding of LD for those living in poverty and for people with LD in developing countries.

We applied the CHNRI priority-setting methodology (Rudan et al., 2008) to identify global research priorities in the field of LD. The results of this process indicated that the critical priorities for future research relate to the need for a stronger understanding of the manifestation of LD across the lifespan, as well as a need for identifying and scaling effective teacher education and professional development programs. Additional research areas were also articulated, such as the need for more consistent, reliable, and valid approaches to identification, greater consensus on definitions of LD, and effective interventions and methods for including students with LD in the general classroom.

Through the use of an established process, we involved a number of experts with limited geographical, stakeholder, and gender balance representation. The limitations of this approach largely relate to the potential for sampling bias. Although 73 experts from 19 countries generated questions that were subsequently rated by 17 research experts representing 15 countries, it is highly likely that a different sample of question generators and expert raters would have yielded different results.

The research questions and their subsequent ratings reflect biases in the sampling of experts included within this study. Although the IARLD is comprised of experts whose research and practice include an international focus, our sample did not contain a significant number of practitioners, nor did it reflect a comprehensive set of developing nations; finally, it excluded people who do not speak English. The sample also did not include a large number of policy makers or parents, who may have unique views on the research needs to address important issues and challenges.

Although these limitations impact the generalizability of the results, this priority-setting activity makes an important contribution to identifying global research priorities and towards beginning a conversation about a global research agenda for LD. The number of participants as well as adherence to a standard protocol to protect against potential bias reduce the probability that a similar group of experts would produce materially different results. To an extent, this is reflected in the initial list of 146 questions and the overlap that allowed this list to be distilled to a final set of 38 questions. However, it is recommended that continued refinement of a global research agenda actively seek participation from underrepresented nations and stakeholder groups.

Interesting, the area of LD research identified as being of the highest priority was to develop a stronger understanding of LD across the lifespan. Questions in this category related to both the need for early identification and intervention and developing stronger understandings of how LD continue to impact people in the workplace and in areas beyond school. Additionally, across the 38 questions, most related to solving problems of practice, particularly within the school setting.

LD are somewhat unique as a disability, in that their primary impact is conceptualized within the context of school. Given reported prevalence estimates suggesting that as many as one in five students within a classroom may be impacted by LD and that students with LD tend to spend the majority of their school day within an inclusive setting, it is imperative that teachers are equipped with an understanding and practical knowledge of LD as well as the interventions that are most successful in meeting the needs of students with LD (International Dyslexia Association, 2017).

Conclusion

A search for research on LD in academic databases returns initial lists of tens of thousands of hits. But despite this extensive knowledge base, persistent and pervasive problems of practice persist, as evidenced by the continued academic, social, health and quality-of-life challenges faced by people with LD as well as the disparity of the impact of LD on individuals from low socioeconomic status or from developing nations.

Although research funding agencies apply objective criteria to evaluating the research they fund, those criteria are often limited to answerability and novelty approach rather than assessing the potential to contribute to the reduction of the persisting disease burden (Rudan et al., 2008). The global research priority-setting methodology employed in this study is systematic, transdisciplinary, and incorporates principles ranging from public health, social, public opinion, ethical, and economic disciplines (Rudan et al., 2008). The identified research priorities resulting from this activity highlight the need to address the continued disparities that people with LD encounter.

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