Educational Support for Saudi Students with Learning Disabilities in Higher Education

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Disability laws in Saudi Arabia mandate that higher education institutions provide support for special needs learners in order to ensure educational opportunities equivalent to opportunities for their nondisabled peers. These institutions experience challenges, however, in providing the necessary support to undergraduate and postgraduate students with learning disabilities (LDs). We conducted an exploratory study to assess educational support requirements and affordances for undergraduate and postgraduate students with LDs attending institutions of higher education in Saudi Arabia. We completed semistructured interviews with 22 special needs learners diagnosed with a LD (16 undergraduate and six postgraduate). The findings suggest that additional support services are needed for undergraduate and postgraduate students with LDs attending Saudi institutions of higher education.

EDUCATIONAL SUPPORT FOR SAUDI STUDENTS WITH LEARNING DISABILITIES IN HIGHER EDUCATION

In Saudi Arabia, all individuals are expected to be provided with appropriate access to academic activities, services, and programs. Disability laws therefore mandate that higher education institutions should provide appropriate support for special needs learners to ensure educational opportunities equivalent to opportunities for their nondisabled peers (Almoady, Bokhary, Alhawas, Almayah, & Alabdullatif, 2013).

Saudi Arabian Legislation and Persons with Disabilities

The laws addressing persons with disabilities, also referred to as "Legislation of Disability," regulate the provision of services. Legislation of Disability was enacted in 1987 as the primary legal document for persons with disabilities in Saudi Arabia. Legislation of Disability encompasses several provisions that safeguard the rights of persons with disabilities by ensuring that they enjoy the same rights and privileges as nondisabled citizens. Legislation of Disability includes several articles that define disabilities and that recommend initiatives for prevention and intervention, along with protocols for evaluating and diagnosing to determine eligibility for special education services. Legislation of Disability

also requires that public institutions provide rehabilitation services and training programs that cultivate independent living (Ministry of Labor & Social Development, 2017).

A specific "Disability Code" was enacted by the Saudi government in 2000 to ensure that persons with disabilities have access to free and applicable medical, educational, psychological, rehabilitation, and social services provided by public institutions. The code further stipulates that the respective institutions assist eligible persons to secure access to health, education, habilitation, employment, training, and rehabilitation, as well as other services (Prince Salman Center for Disability Research, 2004).

Such policy directives require that persons with disabilities enjoy equal rights as well as access to free and meaningful education, as defined in the Teacher's Guide of Learning Disabilities (Ministry of Education, Saudi Arabia, 2015). Although it has been many years since the enactment of these policy and legislative provisions, they have not yet been fully implemented, especially in the context of learners with disabilities. As a consequence, there remains a notable lack of special needs education services for learners with disabilities (Alquraini, 2011).

Definition of Learning Disabilities in Saudi Arabia

Saudi Arabia's Ministry of Education defines learning disabilities (LD) as "disturbances in one or more of the basic psychological processes involving the understanding and use of written or spoken language that appear in disorders of listening, thinking, speaking, reading and writing (spelling), and mathematics, which are not due to mental, audiovisual, or other disabilities, or other types of disabilities, learning

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conditions, or family care" (Ministry of Education, Saudi Arabia, 2002).

The Teachers Guide for Learning Disabilities has provided further direction for identifying LD (Ministry of Education, Saudi Arabia, 2015). These criteria identify difficulties as LD when there is an inconsistency between mental ability and learning outcomes, when other challenges that might account for such difficulties have been excluded, and when there is a demonstrable need for specialized education services.

Navigating Higher Education in Saudi Arabia for Persons with LDs

Academic requirements and expectations often become more demanding when students with LD progress from undergraduate to postgraduate levels (Hadley, 2007). As they advance in their educational careers, students with LD may benefit from different forms of educational support, but also must learn how to advocate effectively for themselves (Hadley, 2007; Sclafani & Lynch, 2007). Owing to various factors, however, higher education institutions in Saudi Arabia experience challenges in providing the necessary support to undergraduate and postgraduate students with LD. One immediate challenge is that no previous research has identified the educational supports or services required by special needs learners in Saudi higher education. Moreover, there is no research investigating the types of educational support currently provided to Saudi undergraduate and postgraduate students with LD. In addition, no previous research has investigated whether educational support requirements differ for undergraduate and postgraduate students with LD in Saudi Arabia. Therefore, the current research investigated the types of educational support required and the types of support provided, and explored whether there might be differences in this support for undergraduate and postgraduate special needs learners attending Saudi institutions of higher education.

Students with LD experience a range of academic challenges. For instance, students with LD often must invest more time reading assigned material, studying for exams, and writing articles than their peers without LD (Ofiesh, Hughes, & Scott, 2004). Yet because students with LD are not visibly disabled, their disabilities may go unrecognized (Janiga & Costenbader, 2002). Furthermore, when these disabilities are identified, but are diagnosed as "mild," many fewer support services are available, with the result that these students may be at particular risk for academic failure, especially at the undergraduate and postgraduate levels.

Students with LD must adapt to the rigors of higher education while simultaneously struggling with a lack of academic preparedness or requisite social skills and developing time-management skills to allow them to meet the more pressing academic deadlines (Parker, 2000; Wintre & Yaffe, 2000). According to Cohn (1998), this normally stressful transition to higher education can be positively traumatic for students with LD. As such students transition into college, they are not only immersing themselves in unchartered intellectual waters, but also beginning a journey that includes unique challenges in terms of developing compensatory skills, maintaining motivational drive, and developing and maintaining healthy social relationships. Previous research documents, however, that with access to appropriate services, many learners with disabilities are able to thrive academically and socially in higher education, despite being delayed by approximately a year compared to their nondisabled peers (Greenbaum, Graham, & Scales, 1996).

Without appropriate support, college students with LD endure significant difficulties meeting academic demands, dealing with criticism, adjusting to college life, and adapting to change (Mellard & Hazel, 1992; Saracoglu, Minden, & Wilchesky, 1989). Barton and Fuhrman (1994) argued that, as a consequence, college students with LD but without appropriate support are often forced to cope alone with myriad psychological challenges, including depression and anxiety.

Hoy and colleagues (1997) documented that, relative to their nondisabled peers, learners with disabilities displayed elevated levels of anxiety, persistent feelings of low self-efficacy, and telling inconsistencies in their abilities and academic performance. The findings support earlier research on college students diagnosed with LD; this research documented greater anxiety, self-doubt, self-deprecation, and lesser self-confidence than was recorded among their nondisabled peers (Gregg, Hoy, King, Moreland, & Jagota, 1992). Gregg et al. (1992) also reported that college students with LD are more likely than their nondisabled peers to experience short-term and long-term depression (see also Hatzes, 1996). Evidently, students with LD struggle with depression more often than their nondisabled peers in early childhood (Margalit, 1998), during adolescence (Reiff, Hatzes, Bramel, & Gibbon, 2001), and into adulthood (Morrison & Cosden, 1997), and this tendency is reflected in higher depression rates for students with LD in postsecondary education (Gregg et al., 1992).

Worldwide, about 9 percent of all students enrolled in higher education report a disability of some type (e.g., Lewis, Farris, & Greene, 1999); notably, LD comprises about 40 percent of these cases (Henderson, 2001). More than 25 percent of students with LD drop out during their first year of attending university (Izzo, Simmons-Reed, Jennifer Aaron, Hertzfeld, & Aaron, 2001), often as a direct result of the challenges and pressures they experience with regard to academic, emotional, and social demands related to their disabilities (Harris & Robertson, 2001).

Rationale for the Current Research

In Saudi Arabia, as in the majority of countries that maintain a system of higher education, educational institutions are mandated to provide appropriate support for special needs learners to ensure that they have educational opportunities equivalent to their nondisabled peers. Despite this mandate, however, there is scarce record of the types of support that Saudi students with LD need or receive in order to succeed at rates equivalent to students without LD (Al-Rashed, 2017). Accordingly, Saudi higher education institutions must identify and then promote educational practices that serve the needs of students with LD. What is clear from a review of the relevant literature is that educational policy may not

consistently lead to appropriate and effective educational practice. In short, educational and other types of support likely to benefit students with LD are not consistently provided by institutions of higher education in Saudi Arabia and in many other countries that maintain systems of higher education (Al-Rashed, 2017; Graham-Smith & Lafayette, 2004).

A related concern revealed by a review of the relevant literature is the dearth of empirical research investigating educational and other support practices that might best serve the needs of students with LD attending institutions of higher education as undergraduate students or postgraduate students (Tagayuna, Stodden, Chang, Zeleznik, & Whelley, 2005). What little research has been conducted has produced conflicting results, providing unclear direction for educational institutions (Tagayuna et al., 2005).

A final concern revealed by a review of the relevant literature is that more than half of published studies have included samples with different disabilities, sometimes combining groups of students with different disabilities into single samples. One consequence of this practice is that there is a lack of research addressing best support practices specifically for students with LD. Alongside these concerns, we note that undergraduate students and postgraduate students are varied groups of individuals. Within and across these groups of students, their needs with regard to educational support may differ, depending on their academic tasks and level of education. Although there is some research indicating that the needs of students with LD may differ for undergraduate and postgraduate students (Hadjioannou, Shelton, Fu, & Dhanarattigannon, 2007), educational practices appear not to address or even recognize these differences (Ganschow, Coyne, Parks, & Antonoff, 1999). The current research is an exploratory first step to identify the forms of educational support offered to undergraduate and postgraduate students with LD attending Saudi institutions of higher education.

METHOD

Methodological Framework

For research intended to examine the opinions of learners with disabilities regarding their specific experiences, phenomenography seems the most suitable approach for analysis of the interview data. Phenomenography is a research strategy that employs several methods by which phenomena are examined. The primary aim of phenomenography is to provide insight into phenomena and experiences through the identification of person-centered concepts in the surrounding environment (Marton, 1981). This method places emphasis on the experienced, the conceptualized, and the apprehended. The objective is to identify and organize expressed thoughts (ideas, opinions, observations, etc.). Phenomenography is a qualitative approach to analyzing phenomena regarding the way people perceive a particular concept, with perception being pivotal (Punch & Oancea, 2014). Phenomenographic inquiry often involves identifying relationships between individuals and various factors in their environment. Through this approach, we focused on the theme of "educational support for Saudi students with LD in higher education."

As suggested by Marton (1981), the researcher probes the various notions (perceptions and observations) that individuals hold, and then describes these notions individually and, if possible, organizes them into interpretable categories.

Research Approach

The aim of this study was to explore the perceptions of students with LD regarding educational support in higher education. Following Marton (1981), semistructured interviews were developed and administered to 16 undergraduate students and six postgraduate students with LD enrolled at King Abdulaziz University, with the aim of identifying their views about the types of educational support they desire or think are necessary for their optimum academic performance, and about whether any such types of educational support were, at the time of the study, being provided.

Qualitative Semistructured Interviews

As employed in the current research, a semistructured interview is an instrument for qualitative study, and is more informal and more welcoming than is often the case with a structured questionnaire. The primary aim of conducting an interview is to gain insight into an individual's experience or perspective, as it is capable of capturing a wealth of information regarding experiences, attitudes, views, and perceptions. Therefore, interviews are designed to gain indepth understanding of the interviewee's environments, as well as their perceptions of themselves and their role in their environment.

Interviews are deployed to gather information that can shed light on the actions, attitudes, and thoughts of the interviewee, in an effort to understand the specific experiences and perspective of the interviewee (Stukat, 2005). As conducted in the current research, and following Stukat (2005), the interview is designed to provide insight into personal experiences, individual perceptions associated with these experiences, and understanding of the world in which such experiences are occurring. As observed by Patel and Davidson (2011), the interview approach is appropriate when the aim of a study is to identify experiences, attitudes, and actions of individuals as members of a target population. Considering that the primary aim of this study is to examine, explain, and describe the experiences and perceptions of students with LD, the researchers determined that a qualitative semistructured interview would be the most suitable approach.

The interview questions for the present study were developed following guidelines provided by Kvale and Brinkmann (2009), as reviewed and discussed below. The aim of the interview was to collect information that would shed light on the views of students with LD regarding the kind of educational support they deemed necessary for optimum learning outcomes, and regarding which kinds of educational support, if any, were being afforded to them currently.

Procedure

Pilot interviews were conducted with several students with LD attending an institution of higher education in Saudi Arabia. Modifications were made to the interview guide, in line with the feedback from the pilot interviews, with the goal of constructing questions that were clear and easy to understand. In the main part of the study, prospective participants (identified and described in the Participants section, below) were contacted via telephone. Once they agreed to participate, participants were asked to speak freely and with confidence, as suggested by Kvale and Brinkmann (2009). Interviews lasted 35–55 minutes, with responses recorded as suggested by Berg and Lune (2017), for subsequent transcription.

The key to successful phenomenographic interviews is ensuring empathy to encourage participation and thus capture the realities surrounding the phenomena under study (Weinberg, 2002). In line with this premise, a combination of empathic responses, summaries, and open-ended questions was used to encourage participants to be honest and forthcoming with their insights. Kvale and Brinkmann (2009) note that presenting follow-up, detailed, and (mild) probing questions and incorporating well-placed silence is beneficial. The interview process followed these suggestions. Perception and actual experiences are closely linked, and the identification and classification of these phenomena are the primary aims of this semistructured interview (Berg & Lune, 2017).

Participants

Before recruiting participants, ethical approval was obtained from the Deanship of Scientific Research at King Abdulaziz University (KAU). Participants were 16 undergraduate students (age range: 18–23 years) and six postgraduate students (age range: 28–34 years) attending KAU. All participants were involved on a voluntary basis. The Special Needs Center at KAU was targeted to recruit participants as doing so was considered to be a sound method of ensuring that participants were students with documented LD, and of ensuring the validity and applicability of any insights to the population of students with LD.

In this research, the sampling frame was obtained from the Special Needs Center at KAU. This department does not diagnose LD, but it does assist researchers to recruit undergraduate and postgraduate students diagnosed with LD elsewhere, such as at hospitals, private centers, and schools. Table 1 details the participating students' demographics.

Analysis

Upon completion of the interview process, recordings were transcribed and categorized in accordance with the perceptions of the participants. The basis of the categorization, in line with the principles of phenomenography, is the perceptions as presented by participants. In order to identify conceptions and categorize them accordingly, participant responses were occasionally reread, as suggested by Weinberg (2002). The underlying perceptions were captured through

TABLE 1
Demographic Data for Undergraduate Students ($n = 16$) and Postgraduate Students ($n = 6$)

Variable		Undergraduate	Postgraduates
Gender	Male	11	2
	Female	5	4
Academic field	Scientific	4	0
	Social Science	12	6
Level of education	First Year	5	4 (Masters)
	Second Year	4	2 (High Diploma)
	Third Year	4	0
	Fourth Year	3	0
Learning disability	Dyslexia	9	6
	Dysgraphia	4	0
	Dyscalculia	3	0
Comorbid ADHD	Yes	10	3
	No	6	3

Note. ADHD, attention deficit hyperactivity disorder.

attention to the transcribed text, with the researcher afforded the responsibility to identify, interpret, and label the various categories' names. Following categorization, meaning condensation was performed to abbreviate the meanings described by the participants, using shorter statements, as suggested by Kvale and Brinkmann (2009).

Following the presentation of the key findings (below), we attempt to achieve a balance in terms of providing interpretive commentary and presenting direct quotations from participants, as outlined by Hennink, Hutter, and Bailey (2015).

Research Ethics

Research ethics considerations, according to Mertens and Ginsberg (2009), include four factors, with the goal of respecting the ethical responsibilities of the researcher toward participants. Research ethics exist to provide balance between meeting research objectives and protecting the ethical integrity of the research process. Therefore, research studies must be conducted to safeguard the integrity of the research, but with sensitivity to ethical implications that may arise regarding confidentiality, informed consent, and other possible ramifications for the participant (Kvale & Brinkmann, 2009).

Mertens and Ginsberg (2009) note that an important ethical concern is that participation in a phenomenographic interview is voluntary. In the current study, this provision was adhered to by disseminating a letter to each prospective participant explaining the rationale of the study, while reiterating that participation was voluntary. The voluntary nature of participation in the study was guaranteed by a declaration that participants could withdraw from the study at any time, for any reason, and without penalty.

A second ethical concern encompasses "informed consent," such that participants are provided with sufficient information about the research that allows them to make an informed decision about whether they will or will not participate in the research (Mertens & Ginsberg, 2009). During the interview process, participants were reminded about the

research objectives, and also of their option to terminate their involvement in the study at any point.

According to Ana (2008), the researcher ought to assure participants of confidentiality. In line with this principle, no one, other than the researcher, should be able to identify the participants. In the present study, participants were asked not to divulge personally identifying information. Consequently, during the transcription, no names were recorded. Participants were identified as "Interviewee 1," "Interviewee 2," and so forth. To protect the identities of the participants, only data relevant to the study concerning their backgrounds were recorded.

Reliability and Validity

Reliability is concerned with the universality of a phenomenon across participants, as well as with whether the questions are applicable across participants. Therefore, greater reliability implies that similar research would produce similar findings (Weinberg, 2002). An important element of reliability in the context of phenomenographic interviewing concerns whether or not similar findings might be produced by different researchers (Kvale & Brinkmann, 2009). In the present study, a professional and/or personal relationship was presumed to exist between the researcher and the participant. Encouraging researcher–participant engagement may increase the validity of the information secured (Kvale & Brinkmann, 2009). During the interview, researcher–participant interaction was kept professional by limiting conversation to the phenomena under study. Transcription of the recorded interviews was performed with focused attention to every word, with subsequent rereading and listening to minimize errors.

According to Kvale and Brinkmann (2009), validity should be assessed occasionally throughout the study. The findings should be subjected to control tests and questioning, with the researcher performing theoretical interpretation. The consideration of validity is not outcome oriented; rather, it lies in planning, design, interviewing, transcribing, and data handling. In the current study, control testing of the interview questions was conducted through the deployment of the pilot study. Participant responses in the main study were probed in a manner that provided opportunities to clarify, control, and validate responses. In transcribing the recordings/text, deliberate efforts were made to ensure that the pre-agreed language style was maintained. In sum, the interviews were conducted to ensure that participants' attitudes and perceptions were accurately captured and portrayed.

RESULTS

The reported perceptions of special needs learners in relation to the forms of educational support available at KAU could be categorized into two groups of issues: (1) issues with identifying the information needed in order to secure educational support, and (2) issues with securing approval for disability services needed to complete coursework and satisfy program criteria. The participant quotes presented below were selected for their direct relevance to a specific research question, and because these quotes reflected high-frequency comments, providing a reasonable summary assessment of perceptions and experiences shared by participants.

Those students identified as having LD through hospitals, private centers, or schools communicated concerns over needing to be formally diagnosed in order to be provided with educational support services. It was suggested by one of the undergraduate students (U5) that a test for identifying learning disorders at the university should be readily available. The student states that "I spent most of the academic year waiting to be tested, diagnosed, or receive the services with no response from the Special Needs Center at KAU." Another undergraduate student (U11) provided the following statement: "Because of the diagnosis, when I was in [high] school, I was able to complete my exams in a special room with more time. It should be the same in the university."

Another undergraduate student (U2) stated that "There were various problems associated with receiving approval from the Special Needs Center at KAU, such as in regard to seeking a professional advocate to support my need for specific support mechanisms." These problems were apparently due to the fact that there are no clear rules for receiving LD services at KAU. One postgraduate student (P4) explained the problems in securing support: "The department in question has a great deal of responsibilities and, therefore, cannot provide the necessary support." Another postgraduate student (P2) stated that "There should be degrees of educational support, with provisions according to individual needs." Importantly, individuals with LD are not considered in the provision of educational support alongside other students with special educational needs, such as students with visual or hearing impairment.

Views held by students with regard to faculty perspectives on educational support were also addressed, with several students noting negative attitudes by professors when a request was made for educational support. One undergraduate student (U14) explained that "There is a clear disinclination among faculty to provide educational support." With this lack of faculty supportiveness, student ability to succeed academically is likely to be further reduced. This frustration was communicated by one postgraduate student (P3) as follows: "I have come to experience a great deal of resistance from my professors owing to the fact they do not believe in LD; however, to some degree, this is a pointless battle." An undergraduate student (U1) provided his views on the attitudes held by faculty, stating that, "There is an unwillingness to invest additional efforts for special needs learners." Accordingly, this student commented that "Faculty workshops centered on teaching about LD and how these can be handled in terms of educational support should be provided as this could benefit the process of learning." The perceptions of students with regard to the forms of educational support and whether they are offered are presented in Table 2, with a number of methods recognized as beneficial. The administrative supports that could prove valuable in learning, as highlighted by the students, and the students' perceptions as to whether they are offered, are presented in Table 3.

It was stated by both undergraduate and postgraduate students that administrative, examination, and other

TABLE 2
Educational Support Measures for Undergraduate Students (*n* = 16) and Postgraduate Students (*n* = 6)

Types of Educational Support	Undergraduate Students		Postgraduate Students	
	Number/Percentage	Offered or Not	Number/Percentage	Offered or Not
Handouts	1 (6 percent)	No	3 (50 percent)	Sometimes
Lecture notes	3 (19 percent)	Sometimes	3 (50 percent)	Sometimes
Lecturers knowledgeable about LD	12 (75 percent)	No	5 (83 percent)	No
Extended time for assignments	3 (19 percent)	No	6 (100 percent)	No
Extended time for exams	4 (25 percent)	No	6 (100 percent)	No
Private rooms for testing	8 (50 percent)	No	3 (50 percent)	No
Review sessions	5 (31 percent)	No	5 (83 percent)	No
Practice tests	4 (25 percent)	Sometimes	4 (67 percent)	No
Study skills workshops	3 (19 percent)	Sometimes	5 (83 percent)	Sometimes
Time management workshops	2 (13 percent)	Sometimes	5 (83 percent)	Sometimes
Proofreading and editing services	6 (38 percent)	No	6 (100 percent)	No

Note. LD, learning disability.

TABLE 3
Administrative Supports for Undergraduate Students (*n* = 16) and Postgraduate Students (*n* = 6)

Types of Administrative Supports	Undergraduate Students		Postgraduate Students	
	Number/Percentage	Offered or Not	Number/Percentage	Offered or Not
Disability-based financial support	9 (56 percent)	No	3 (50 percent)	No
English and math requirement waivers	10 (63 percent)	No	4 (67 percent)	No
One-to-one assistance	3 (19 percent)	No	6 (100 percent)	No
Priority in course scheduling	4 (25 percent)	No	6 (100 percent)	No

educational supports are necessary to ensure fulfillment of program requirements and completion of coursework. Nonetheless, mixed feelings were apparent among the students with regard to whether such educational supports would prove useful throughout their education. Overall, however, students considered them beneficial. One postgraduate student (P1) stated that "Such accommodations enable improvements in grades," and an undergraduate student (U15) commented that, should these accommodations not have been made, the student would have failed their classes. Two undergraduate students (U13 and U9) noted that, as a result of accommodations made for their LD, they were able to work alongside their non-LD peers with greater confidence and feelings of worth. One undergraduate student (U6) commented that "Accommodations are valuable in ensuring that I maintain the same pace of learning as other students." A postgraduate student (P3) stated the same, with similar improvement in academic performance, causing the student's academic confidence to grow.

It was also noted by both undergraduate and postgraduate students that some educational support measures recommended and approved by the KAU Special Needs Center were not honored or adopted by faculty. For example, it was stated by one undergraduate student (U8) that "The department identified the accommodations I would need and informed my professors, but these were not accommodated. I did not receive any support from the department, meaning I did not get any further assistance." Dissatisfaction was also voiced by a postgraduate student (P1), who emphasized the difficulties

associated with administration of support services: "It can be humiliating as professors do not like to provide accommodations of any sort. The system and process are not very useful. It would be better if the relevant department spoke to professors and ensured the necessary accommodations were made." Accordingly, educational supports are recognized as valuable only when the relevant department and faculty work in concert to ensure appropriate administration of the recommended support services.

A number of preexisting conditions that warranted educational support were highlighted by the students, including problems in completing exams and course assignments. Table 4 presents a summary of these issues. The findings showed a number of inconsistencies between the support services requested by students and the measures approved and implemented by faculty. These findings further emphasize the importance of cooperation among the relevant departments, faculty, and students to ensure successful delivery of the appropriate support services.

DISCUSSION

The findings of the current exploratory, qualitative, semistructured interview study suggest that it may be useful to distinguish the educational support needs of undergraduate and postgraduate students with LD. With the progression from undergraduate to postgraduate programs, there may be an increase in the support requirements for students with

TABLE 4
Preexisting Conditions for Undergraduate Students (*n* = 16) and Postgraduate Students (*n* = 6)

Types of Preexisting Conditions	Undergraduate Students Number/Percentage	Postgraduate Students Number/Percentage
Need to have more time to facilitate subject-matter learning	8 (50 percent)	2 (33 percent)
Inability to focus on exams and lectures while completing assignments	4 (25 percent)	3 (50 percent)
Difficulties with reading and comprehension	6 (38 percent)	3 (50 percent)
Inability to complete reading on time	4 (25 percent)	6 (100 percent)
Problems copying from the board	7 (44 percent)	2 (33 percent)
Difficulties recording notes	3 (19 percent)	2 (33 percent)
Problems adjusting to coursework demands	6 (38 percent)	6 (100 percent)

LD (Hadley, 2007). Although postgraduate students reported some academic support, they also reported a clear need for further support, given the increasing demands of postgraduate programs compared to undergraduate programs. And although there is evidence that successful undergraduate students with LD develop personal strategies for overcoming some of their disabilities (e.g., Reis, McGuire, & Neu, 2000), these coping strategies can be insufficient in more demanding postgraduate programs (Skinner & Lindstrom, 2003). The current findings also indicate that both undergraduate and postgraduate students might be better informed of services and accommodations available to students with LD.

Postgraduate students are typically expected to complete more demanding assignments and tasks than is usually required of undergraduate students (Skinner & Lindstrom, 2003). Accordingly, postgraduate students report greater need for one-on-one assistance and subject tutoring than is reported by undergraduate students. We suspect that this need translates into greater relative need for educational support for postgraduate students compared to undergraduate students with LD (Graham-Smith & Lafayette, 2004).

The current research also suggests that, among students with LD, postgraduate students need more assistance with writing compared to undergraduate students. As noted by Miller and Irby (1999), a larger volume of reading and writing assignments is required in postgraduate than in undergraduate programs. Postgraduate students are often expected to demonstrate advanced writing and synthesis skills to complete their program of study (Hadjioannou et al., 2007). Students with LD often report particular difficulties with reading, writing, and synthesis, and this difficult may account for the more frequent requests by postgraduate students (relative to undergraduates) with LD for faculty to provide feedback on numerous drafts of articles and assignments (Ganschow et al., 1999).

Previous work indicates that students with LD can benefit from access to online technological support services (Tagayuna et al., 2005), and the reports of several participants in the current research are consistent with these findings. In addition, the current research suggests that, among students with LD, postgraduate students, in particular, recognize the need for greater support in completing writing-intensive examinations than is reported by undergraduates (Larson, 2006). This recognition on the part of postgraduate students might also account for the finding in the current

research that postgraduate students, more than undergraduate students, emphasized a need for exams to occur more frequently but cover a smaller volume of information (see Sharpe, Johnson, Izzo, & Murray, 2005).

The findings of the current research corroborate previous research indicating the importance of other types of administrative support provided by institutions of higher education for students with LD (Graham-Smith & Lafayette, 2004). The need for assistance in priority course scheduling is especially important, according to postgraduate students. Special needs learners seek to enroll in courses with faculty whose methods of teaching are consistent with the needs of the students (Honigsfeld & Dunn, 2006). Furthermore, those with LD with comorbid ADHD diagnoses may require their courses to be scheduled during particular times of day—namely, when they are more likely to attend lectures and are better able to concentrate. Moreover, those with LD who receive additional time for completing tasks and exams often recognize the need to schedule courses sufficiently separated in time to allow breaks and to prevent courses from overlapping with one another when there is a need for extended time.

The current findings are consistent with the recommendations of Dowrick, Anderson, Heyer, and Acosta (2005) that disability services should have staff available who can provide administration, examination, and educational supports necessary for special needs learners, both undergraduate and postgraduate. Such supports might include lecture outline and reviews, audio-recorded lessons, and one-to-one teacher–student tutoring sessions. Furthermore, more frequent exams covering less material, and with the provision of more frequent breaks, could be offered as part of examination support. Administrative support might include priority course scheduling, course waivers, early registration, and modified schedules. In Saudi Arabia, as in the vast majority of countries that maintain institutions of higher education, academic support services for students with LD are incomplete and/or inconsistently offered, often without regard for the specific needs of special needs learners (Norton, 1997).

In Saudi Arabia in particular, as revealed in the current research, there is a clear need for improved awareness among faculty and administrators of the needs of students with LD, at both the undergraduate and postgraduate levels. In-service programs for administrators and faculty, as well as for those with LD, can be effective in this regard (Bourke, Strehorn, & Silver, 2000). Disability services can be provided through

seminars that contribute to the knowledge of faculty with regard to disability laws, the needs of students with LD, and the measures of educational support that are or should be available (Vogel, Leyser, Wyland, & Brulle, 1999). In addition, disability services could provide a means for special needs learners to improve their self-advocacy abilities to thereby better access measures of educational support. The provision of in-service programs for both students and faculty improves awareness of the need for educational supports (Bourke et al., 2000).

Limitations and Suggestions for Future Research

Although the current research assessed expectations, difficulties, and desires of students with LD enrolled in Saudi Arabian undergraduate and postgraduate programs, the findings corroborate previous work with students enrolled at universities in other countries. This work indicates that there is a profound need for educational support that is commonly disregarded or neglected despite laws mandating appropriate support services for students with LD, in Saudi Arabia and elsewhere.

Institutions of higher education need to do more to respect the rights of students with LD, but the current work suggests that there also may be a need for these students to become better advocates for themselves. This need is an area for future research. We also suspect that exploratory, qualitative, semistructured interview studies conducted in other countries that maintain institutions of higher education would reveal parallel findings to those presented in the current research. This possibility is another avenue for future research.

We note that a clear limitation of the current research is our relatively small sample of undergraduate and postgraduate students. Furthermore, none of our postgraduate students were majors in scientific fields; all were majors in social science fields. The findings for postgraduates may be peculiar to social science majors. We also recognize that our small samples are unlikely to be representative of the relevant populations. Finally, we recognize that the current findings may not generalize to students who would not participate in research such as this (e.g., students with LD who are not comfortable or not interested in speaking with a researcher about their experiences in higher education).

Recommendations for Practice

The findings of the current research indicate that improving access to measures of educational support for special needs students, in the context of institutions of higher education, is critical if these students are to successfully fulfill their course requirements. This appears to be the case for undergraduate students as well as postgraduate students. And although the current research was conducted in Saudi Arabia, we suspect that these conclusions apply to students with disabilities attending institutions of higher education in other countries. Educational assistance and access to appropriate support services can be improved through collaborative participation among students with LD, faculty, disability

services, and administration (Houck, Asselin, Troutman, & Arrington, 1992).

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

ACKNOWLEDGMENTS

REFERENCES

Al-Rashed, G. (2017). Educational services and support for students with learning disabilities at the undergraduate level in Saudi Arabia. *Journal of Scientific Research in Education*, *18*, 165–196.

Almoady, S., Bokhary, Y., Alhawas, M., Almayah, S., & Alabdullatif, S. (2013). *The guidebook for teachers of learning disabilities*. Riyadh, Saudi Arabia: Ministry of Education.

Alquraini, T. (2011). Special education in Saudi Arabia: Challenges, perspectives, future possibilities. *International Journal of Special Education*, *26*, 146–156.

Ana, S. (2008). *Research ethics*. London: Routledge.

Barton, R. S., & Fuhrman, B. S. (1994). Counseling and psychotherapy for adults with learning disabilities. In P. J. Gerber & H. B. Reiff (Eds.), *Learning disabilities in adulthood: Persisting problems and evolving issues* (pp. 82–92). Austin, TX: Pro-Ed.

Berg, B. L., & Lune, H. (2017). *Qualitative research methods for the social sciences*. Boston, MA: Pearson.

Bourke, A. B., Strehorn, K. C., & Silver, P. (2000). Faculty members' provision of instructional accommodations to students with LD. *Journal of Learning Disabilities*, *33*, 26–32.

Cohn, P. (1998). Why does my stomach hurt? How individuals with learning disabilities can use cognitive strategies to reduce anxiety and stress at the college level. *Journal of Learning Disabilities*, *31*, 514–516.

Dowrick, P. W., Anderson, J., Heyer, K., & Acosta, J. (2005). Postsecondary education across the USA: Experiences of adults with disabilities. *Journal of Vocational Rehabilitation*, *22*, 41–47.

Ganschow, L., Coyne, J., Parks, A. W., & Antonoff, S. J. (1999). A 10-year follow-up survey of programs and services for students with learning disabilities in graduate and professional schools. *Journal of Learning Disabilities*, *32*, 72–84.

Graham-Smith, S., & Lafayette, S. (2004). Quality disability support for promoting belonging and academic success within the college community. *College Student Journal*, *38*, 90–99.

Greenbaum, B., Graham, S., & Scales, W. (1996). Adults with learning disabilities. *Journal of Learning Disabilities*, *29*, 167–173.

Gregg, N., Hoy, C., King, M., Moreland, C., & Jagota, M. (1992). The MMPI-2 profile of adults with learning disabilities in university and rehabilitation settings. *Journal of Learning Disabilities*, *25*, 386–395.

Hadjioannou, X., Shelton, N. R., Fu, D., & Dhanarattigannon, J. (2007). The road to a doctoral degree: Co-travelers through a perilous passage. *College Student Journal*, *41*, 160–177.

Hadley, W. M. (2007). The necessity of academic accommodations for first-year college students with learning disabilities. *Journal of College Admission*, *195*, 9–13.

Harris, R., & Robertson, J. (2001). Successful strategies for college-bound students with learning disabilities. *Preventing School Failure*, *45*, 125–131.

Hatzes, N. M. (1996). *Factors contributing to the academic outcomes of university students with learning disabilities* (Unpublished doctoral dissertation). Mansfield, CT: University of Connecticut.

Henderson, C. (2001). *College freshmen with disabilities: A biennial statistical profile*. Washington, DC: Heath Resource Center.

Hennink, M., Hutter, I., & Bailey, A. (2015). *Qualitative research methods*. London: SAGE Publications.

Henry, B. R., Nanette, M. H., Michael, H. B., & Thomas, G. (2001). The relation of LD and gender with emotional intelligence in college students. *Journal of Learning Disabilities*, *34*, 66–78.

Honigsfeld, A., & Dunn, R. (2006). Learning-style characteristics of adult learners. *Delta Kappa Gamma Bulletin*, *72*, 14–31.

Houck, C. K., Asselin, S. B., Troutman, G. C., & Arrington, J. M. (1992). Students with learning disabilities in the university environment: A study of faculty and student perceptions. *Journal of Learning Disabilities*, *25*, 678–684.

Hoy, C., Gregg, N., Wisenbaker, J., Manglitz, E., King, M., & Moreland, C. (1997). Depression and anxiety in two groups of adults with learning disabilities. *Learning Disability Quarterly*, *20*, 280–291.

Izzo, M. V., Hertzfeld, J., Simmons-Reed, E., & Aaron, J. (2001). Promising practices: Improving the quality of higher education for students with disabilities. *Disability Studies Quarterly*, *21*, 251.

Janiga, S. J., & Costenbader, V. (2002). The transition from high school to postsecondary education for students with learning disabilities: A survey of college service coordinators. *Journal of Learning Disabilities*, *35*, 463–470.

Kvale, S., & Brinkmann, S. (2009). *Interviews: Learning the craft of qualitative research interviewing*. London: Sage.

Larson, E. A. (2006). Stress in the lives of college women: "Lots to do and not much time." *Journal of Adolescent Research*, *21*, 579–606.

Lewis, L., Farris, E., & Greene, B. (1999). An institutional perspective on students with disabilities in postsecondary education. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics.

Margalit, M. (1998). Loneliness and coherence among preschool children with learning disabilities. *Journal of Learning Disabilities*, *31*, 178–180.

Marton, F. (1981). Phenomenography—Describing conceptions of the world around us. *Instructional Science*, *10*, 177–200.

Mellard, D. F., & Hazel, J. S. (1992). Social competencies as a pathway to successful life transitions. *Learning Disability Quarterly*, *15*, 251–271.

Mertens, D. M., & Ginsberg, P. E. (2009). *The handbook of social research ethics*. Thousand Oaks, CA: Sage Publications.

Miller, W. D., & Irby, B. J. (1999). An inquiry into the exigency of a beginning doctoral cohort in educational leadership. *College Student Journal*, *33*, 358.

Ministry of Education, Saudi Arabia. (2002). *Organizational rules for special education institutes and programs*. Riyadh, Saudi Arabia: Kingdom of Saudi Arabia.

Ministry of Education, Saudi Arabia. (2015). *Teacher's guide of learning disabilities*. Riyadh, Saudi Arabia: Kingdom of Saudi Arabia.

Ministry of Labor & Social Development. (2017). *Persons with disabilities*. Retrieved from https://mlsd.gov.sa/ar/services/620)

Morrison, G. M., & Cosden, M. A. (1997). Risk, resilience, and adjustment of individuals with learning disabilities. *Journal of the Division for Children with Learning Disabilities*, *20*, 43–60.

National Joint Committee on Learning Disabilities. (1994). Learning disabilities issue on definition. In *Collective perspectives on issues affecting learning disabilities: Position papers and statements*. Austin, TX: Pro-Ed.

Neuman, W. L. (2014). *Social research methods: Qualitative and quantitative approaches*. Essex, UK: Pearson.

Norton, S. M. (1997). Examination accommodations for community college students with learning disabilities: How are they viewed by faculty and students? *Community College Journal of Research and Practice*, *21*, 57–69.

Ofiesh, N. S., Hughes, C., & Scott, S. S. (2004). Extended test time and postsecondary students with learning disabilities: A model for decision making. *Learning Disabilities Research & Practice*, *19*, 57–70.

Parker, V. (2000). Developing a code of practice for disability coordinators. *European Journal of Special Needs Education*, *15*, 275–284.

Patel, R., & Davidson, B. (2011). *Forskningsmetodikens grunder: Att planera, genomföra och rapportera en undersökning* (4th ed.). Lund, Sweden: Studentlitteratur.

Prince Salman Center for Disability Research. (2004). *Kingdom of Saudi Arabia provision code for persons with disabilities*. Riyadh, Saudi Arabia: Prince Salman Center for Disability Research.

Punch, K., & Oancea, A. (2014). *Introduction to research methods in education*. London: SAGE Publications.

Reiff, H. B., Hatzes, N. M., Bramel, M. H., & Gibbon, T. (2001). The relation of LD and gender with emotional intelligence in college students. *Journal of Learning Disabilities*, *34*, 66–78.

Reis, S. M., McGuire, J. M., & Neu, T. W. (2000). Compensation strategies used by high-ability students with learning disabilities who succeed in college. *Gifted Child Quarterly*, *44*, 123–134.

Saracoglu, B., Minden, H., & Wilchesky, M. (1989). The adjustment of students with learning disabilities to university and its relationship to self-esteem and self-efficacy. *Journal of Learning Disabilities*, *22*, 590–592.

Sclafani, A. J., & Lynch, M. J. (2007). *College guide for students with learning disabilities*. Miller Place, NY: Laurel Publications.

Sharpe, M. N., Johnson, D. R., Izzo, M., & Murray, A. (2005). An analysis of instructional accommodations and assistive technologies used by postsecondary graduates with disabilities. *Journal of Vocational Rehabilitation*, *22*, 3–11.

Skinner, M. E., & Lindstrom, B. D. (2003). Bridging the gap between high school and college: Strategies for the successful transition of students with learning disabilities. *Preventing School Failure: Alternative Education for Children and Youth*, *47*, 132–137.

Stukat, S. (2005). *To write essays in education*. Lund, Sweden: Studentlitteratur.

Tagayuna, A., Stodden, R. A., Chang, C., Zeleznik, M. E., & Whelley, T. A. (2005). A two-year comparison of support provision for persons with disabilities in postsecondary education. *Journal of Vocational Rehabilitation*, *22*, 13–21.

Vogel, S. A., Leyser, Y., Wyland, S., & Brulle, A. (1999). Students with learning disabilities in higher education: Faculty attitude and practices. *Learning Disabilities Research & Practice*, *14*, 173–186.

Weinberg, D. (2002). *Qualitative research methods*. Malden, MA: Blackwell Publishers.

Wintre, M. G., & Yaffe, M. (2000). First-year students' adjustment to university life as a function of relationships with parents. *Journal of Adolescent Research*, *15*, 9–37.

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