

PERSPECTIVES OF KING SAUD UNIVERSITY FACULTY MEMBERS TOWARD
ACCOMMODATIONS FOR STUDENTS WITH ATTENTION DEFICIT-
HYPERACTIVITY DISORDER (ADHD)

A dissertation submitted to the
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By

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PERSPECTIVES OF KING SAUD UNIVERSITY FACULTY MEMBERS TOWARD
ACCOMMODATIONS FOR STUDENTS WITH ATTENTION DEFICIT-
HYPERACTIVITY DISORDER (ADHD) (144 pp.)

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The purpose of the current study was to examine the perspectives of King Saud University (KSU) faculty members toward the provision of accommodations for college students with ADHD and to identify differences among participants based on gender, nationality, having previous teaching experience of students with ADHD, having a relative or family member with ADHD, and academic rank and discipline. In addition, the researcher measured the relationship between participants' perspectives toward accommodations and their assumptions about students with ADHD as well as their perception of professional development provided at KSU. Data was collected using a modification of The Accommodation of University Students with Disabilities Inventory (AUSDI) developed by Wolman, McCrink, Rodriguez, and Harris-Looby (2004). A sample of 479 male and female participants filled out an online questionnaire.

The results indicated that the perspectives of participants toward accommodations did not relate to their gender, having a relative or family member with ADHD, or academic rank and discipline. There was also no association between the participants' perspectives toward accommodations and their perception of professional development provided at KSU. However, the results suggested that the Saudi participants and the participants without previous teaching experience were more positive toward

accommodations than were non-Saudi participants and those with no previous teaching experience. There was also a weak positive correlation between the participants' perspectives toward accommodations and their assumptions about students with ADHD. Finally, the researcher discussed numerous implications of findings, limitations of the present study, and future research.

DEDICATION

I dedicate this dissertation to
My caring parents, Hussain and Husa,
My lovely and loyal wife, Sumayyah Almousa,
My beautiful children, Asyl and Deem

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First and foremost, I sincerely thank Almighty Allah for His Blessings and Guidance of me, so I could successfully complete my doctoral degree. Without Allah's support, this dissertation would not have been possible.

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CHAPTER I

LITERATURE REVIEW

Legislation and Regulations of Individuals with Disabilities in Saudi Arabia

In the last two decades, increased attention has been given to care and education for individuals with disabilities in Saudi Arabia. This attention has led to a dramatic increase in the educational services for students with disabilities. This increase has entailed the Saudi government establishing new regulations and legislation in order to guarantee the educational rights of individuals with disabilities and assert the provision of free and high-quality services for this population. As a result, the Saudi government has passed some legislation and regulations to support and guide the development of appropriate educational services. The two regulations that would have had a strong impact on the lives of individuals with disabilities were the Provision Code for Persons with Disabilities (PCPD) and the Document of Rules and Regulations for Special Education Institutes and Programs (DRRDEIP). The PCPD provides coverage from birth to death for individuals with disabilities (Prince Salman Center for Disability Research, 2001). In contrast, the DRRDEIP covers preschool and school-age individuals. Following are descriptions of these two regulations (Ministry of Education-Saudi Arabia, 2001).

The Provision Code for Persons with Disabilities (PCPD)

This code of disability, enacted in 2000, consists of 16 articles. The first defines an individual with disabilities as “one who is totally or partially disabled with respect to his/her bodily, material, mental, communicative, academic or psychological capabilities,

to the extent that it compromises the ability of that person to meet his/her normal needs as compared to his/her non-disabled counterparts” (Prince Salman Center for Disability Research, 2001, p. 20). It also identifies the types of disabilities covered under this code by stating that individuals with disabilities must have one or more of the following: Blindness, deafness, intellectual disabilities, physical disabilities, learning disabilities, speech and language disorder, emotional and behavioral disorder, multiple disabilities, or other disabilities that entail special care (Prince Salman Center for Disability Research, 2001).

Another article of this code indicates that the Saudi government shall guarantee the provision of free and appropriate medical, educational, training and habilitation, employment, and complementary services as well as other services for individuals with disabilities. The educational services will include preschool, elementary, middle, and high school as well as vocational and postsecondary education. This code also announces the establishment of a Supreme Council for the Affairs of Persons with Disabilities and states that this council will coordinate with authorities to nationally and internationally educate and train human competencies in the field of disability and to encourage the exchange of experience with Arabic and other international countries (Prince Salman Center for Disability Research, 2001).

Document of Rules and Regulations for Special Education Institutes and Programs (DRRDEIP)

DRRDEIP is the second Saudi regulation that has improved the special education services and increased the number of college students with disabilities in Saudi

Arabia. DRRSEIP was issued by the Saudi Ministry of Education in 2001 to support and lead the provision of free and appropriate education for all students with disabilities regardless of their needs. This document includes 11 chapters and many articles in each chapter. It starts by describing and identifying the goals and principles for special education services in Saudi Arabia. It also defines the types of disabilities that qualify for special education services and describes the tasks and roles of professionals in providing these services (Ministry of Education-Saudi Arabia, 2001).

In Chapter 3 of the DRRSEIP, Article 18 emphasizes that regular public school is the natural environment for educating students with disabilities unless their education will be adversely affected. It also suggests several placement options inside regular school for students with disabilities such as general classrooms with assistance from specialists, resource rooms, or self-contained classrooms. However, it requires that students with disabilities not spend more than 50% of their time in the resource rooms and other students, who are taught in the self-contained classrooms, should occasionally be included in the general education classrooms during academic and non-academic classes (Ministry of Education-Saudi Arabia, 2001).

Moreover, DRRSEIP describes the grade level and criteria of admission for each disability category. With regard to identification of students with disabilities, DRRSEIP provides detailed information about the rules and steps for identifying and diagnosing students with a variety of disabilities, the members of multidisciplinary teams, and the practical steps for the process of assessment and diagnosis. In Chapter Nine of this document, detailed information is provided about individualized education programs

(IEPs) such as goals for IEPs, components of IEPs, members of the IEP team, and the requirements for developing, implementing, and evaluating IEPs. This regulation also contains the procedures and tools for evaluating students with different needs. For instance, it indicates that oral and written tests as well as observations could be used to evaluate students with special needs, but requiring that decisions regarding the appropriate evaluation tools be based on the students' needs and nature of their disabilities (Ministry of Education-Saudi Arabia, 2001).

Finally, in this regulation, several examination accommodations have been mentioned and suggested. For example, it indicates that blind students must be tested orally or provided with readers and writers to help them demonstrate what they have learned. Further, students with reading disorders must be provided readers during math exams to make sure they understand questions. A student with LD and ADHD, if he or she is easily distracted, must be tested in a quiet room to reduce distractions and allowed to take breaks and move about during exams and then come back to complete the tests.

In sum, this regulation requires provision of free and appropriate education, early interventions, individualized programs, least restrictive environment, transition, habilitation, and related services for students with disabilities (Ministry of Education-Saudi Arabia, 2001).

Educational Accommodations

Definition of Accommodations

Accommodations are adaptations made to instruction and assessment to help students with disabilities access the content being taught in the classroom or demonstrate

what they know about the target skill being tested, without fundamentally changing the content of instruction or the target skill that the test will measure (Crawford, 2013; Missouri Department of Elementary and Secondary Education (MDESE), 2013; The National Center for Learning Disabilities (NCLD), 2013). Accommodations, therefore, provide equal access to instruction and assessment by reducing or eliminating the barriers the disabilities impose (MDESE, 2013; The IRIS Center for Training Enhancements, 2010). For example, a student with ADHD may not be able to work in a large group to complete an in-class assignment, so the student may be allowed to work individually or in a small group. Another student with ADHD may need extended time to complete a test, so that student may be provided additional time to complete the test. In these two examples, the teacher would not change or reduce the content of instruction, assignment, or test, but would adapt the way that instruction or tasks are presented to let students with disabilities learn or demonstrate the same target skills as other students in the classroom.

Accommodations versus Modifications

The terms *accommodations* and *modifications* are usually confused, so some educators may use them interchangeably. However, accommodations and modifications differ from each other (The IRIS Center for Training Enhancements, 2010). As mentioned previously, accommodations do not modify the academic performance standards. Instead, they provide equitable instruction and assessment. In contrast, modifications adversely change the content of instruction or the performance expectations (MDESE, 2013). They reduce the ability of the target skill to help a student

with disabilities make progress in the general curriculum at his or her own level (The IRIS Center for Training Enhancements, 2010). Another distinction between the two terms is that accommodations are used with students with mild or moderate needs and provided at general and postsecondary education levels, but modifications are always used with students with significant needs who cannot progress without modifying the learning expectations and modifications cannot be provided for college students. In addition, accommodations provide equal access to education for students with disabilities, so should not result in great gaps between the accommodated students and their classmates. Modifications, on the other hand, reduce the target skill that every student in the classroom must master, in order to help students with severe disabilities make progress in the general curriculum at their own level (The IRIS Center for Training Enhancements, 2010). As a result, modifications can result in significant gaps between the performances of students with significant disabilities and their typical peers (Thompson, n.d.). For example, a student with ADHD may only need breaks or a quiet room (i.e., accommodations) to successfully complete an exam whereas a student with significant needs may require having to answer only the easiest questions on an exam (i.e., modifications).

Types of Accommodations

Educators may need to provide supplementary services or support to maximize the performance of students with disabilities. One of the most important support or services that educators can provide is accommodations (The IRIS Center for Training Enhancements, 2010). In general, accommodations can be divided into either teaching

accommodations or examination accommodations. These are the accommodations most commonly used to support students with disabilities in both general and postsecondary education.

Teaching accommodations can be defined as “adaptations to the design or delivery of instruction and associated materials that do not change the breadth of content coverage and depth of knowledge of the grade-level content standards” (Elliott, Kettler, Beddow, & Kurz, 2011, p.139). Students provided teaching accommodations are expected to learn the same content as the other students in the classroom (Elliott et al., 2011; The IRIS Center for Training Enhancements, 2010). For example, some easily distracted students with ADHD can sit close to the teacher or next to students who are not distracting (Elliott et al., 2011), in order to decrease their inattentive symptoms. However, these students must learn the same target skills that other students in their class are required to learn.

In contrast, examination accommodations are adaptations made to the assessment or administration procedures that do not fundamentally change what a test is measuring (The IRIS Center for Training Enhancements, 2010). Students with reading disabilities, for instance, may require a reader only to read aloud questions and instructions in a math exam. This type of accommodation does not change the complexity of questions, but provides another way to access the exam and eliminate barriers associated with the disability since the math test would not aim to assess the students’ reading skills.

Categories of Accommodations

Generally, teaching and examination accommodations can be grouped into four categories: **Presentation, setting, timing or scheduling, and response** (Elliott et al., 2011; The IRIS Center for Training Enhancements, 2010). Educators usually use one or more of these categories during instruction and assessment. The four categories can be used individually or in combinations to meet the needs of students with a variety of disabilities (The IRIS Center for Training Enhancements, 2010).

Presentation accommodations are the first category. Presentation accommodations give students with disabilities a variety of ways to access information other than traditional means. By using presentation accommodations, educators can utilize visual, auditory, and tactile means to present instruction and directions or conduct assessments (Elliott et al., 2011; The IRIS Center for Training Enhancements, 2010). For example, **some students with ADHD may be unable to take notes during class since they have attention problems, so educators may give these students notes (i.e., a visual means) or assign a classmate to take notes for them.** Another example of presentation accommodations is the use of oral readers (The IRIS Center for Training Enhancements, 2010). Other students with disabilities may need readers (i.e., an auditory means) to complete in-class assignments or tests. Manipulative (i.e., a tactile means) is another good example of presentation accommodations (Elliott et al., 2011; The IRIS Center for Training Enhancements, 2010) because students with disabilities can touch it to learn or understand some academic skills such as addition or counting. In addition, educators can bundle visual, auditory, and tactile means of presentations to effectively meet the needs of students with disabilities (The IRIS Center for Training Enhancements, 2010).

A second category of accommodation is setting. Setting accommodations are changes in the educational setting or the structure of the environment (Elliott et al., 2011; The IRIS Center for Training Enhancements, 2010) to help students with disabilities fully participate in the instruction or to demonstrate what they have learned from a class. For instance, some students with disabilities can be tested in a quiet room if they are easily distracted or educators can remove visual and auditory distractions in the classroom (The IRIS Center for Training Enhancements, 2010) to help students with ADHD pay attention during instruction or an exam.

Timing and scheduling accommodations are an adjustment to the amount of time assigned to complete instructional activities or tests. They can be done to alter the organization of instructional time (Elliott et al., 2011). With adaptation of the timing and scheduling of activities or tests, students with ADHD are allowed to take multiple breaks or extended time to complete these tasks (Elliott et al., 2011; The IRIS Center for Training Enhancements, 2010), in order to increase their attention and decrease their stress. Educators can also schedule difficult tasks during the first periods or when the students are attentive (The IRIS Center for Training Enhancements, 2010). This effort can help the students to effectively perform their academic tasks.

The final category is response accommodations. This category provides students with disabilities alternative ways to express their knowledge and skills (Elliott et al., 2011). When using response accommodations, educators can give students with disabilities a variety of ways to respond to activities, assignments, and assessments. For example, students with disabilities can use laptops to type their reports or to answer test

questions. They can also be asked to respond orally instead of giving written responses. Augmentative communication devices, spell or grammar checkers, and calculators are other examples of response accommodations that educators can offer to help students with disabilities demonstrate what they have learned in the class (The IRIS Center for Training Enhancements, 2010).

Review of Previous Questionnaire Instruments on Faculty Members' Attitudes and Willingness to Provide Accommodation

The literature review revealed several questionnaire instruments (See Appendix A for a summary of these instruments) that have been used to assess faculty members' attitudes and willingness to provide accommodations for students with a variety of disabilities. Most of these instruments were used to measure faculty members' attitudes and willingness to accommodate students with LD as well as students with disabilities. The literature review showed only two similar instruments (Ihori, 2012; Rush, 2011) focused on measuring faculty members' willingness to provide accommodations for students with ADHD. Moreover, the number of items varied significantly from one instrument to another, from 17 to 45 items. These items were divided into factors or categories ranging from one to 12. To respond to the items, participants were given several responses choices. Some researchers used a dichotomous response or more (i.e., three or four) whereas others asked participants to respond on a Likert scale. More than 50% of the previous instruments were tested for internal reliability. The results of Cronbach's alpha, a test for reliability, for each factor or category indicated a coefficient

ranging from .18 to .92, which means that some factors or categories have high internal reliability whereas others revealed very low internal reliability.

One of the most commonly used or modified instruments revealed by the literature review was designed by Matthews, Anderson, and Skolnick (1987) to assess university faculty members' attitudes toward accommodating students with LD. This instrument was adapted from Goodin (1984) and Matthews et al. changed the term "*academic adjustments*" to "*accommodations*". There were 25 items in one category in Goodin's instrument, but the adapted form consisted of 23 items and six categories. These categories were instructional modifications (two items), assignment modifications (four items), examination modifications (six items), assignment or examination modifications (four items), special assistance (four items), and academic policy or procedural alteration (three items). Although both Matthews et al. and Goodin offered three response choices, they had different statements from which to choose. Goodin asked participants whether they would strongly advocate an academic adjustment, would not advocate it but felt it is acceptable if requested by students with LD, or it would be detrimental to the development of students with LD and/or the integrity of the university would be jeopardized. In contrast, Matthews et al. asked participants whether they would, would not, or did not know in regard to making each accommodation for students with LD. Regrettably, the reliability and validity of this instrument was not assessed. Nor did the instrument collect information about academic discipline. It collected data from participants regardless of their departments or colleges.

Consequently, Nelson, Dodd, and Smith (1990) adapted the previous instrument (Matthews et al., 1987) both to measure faculty members' willingness to accommodate students with LD and to examine the differences among faculty members across disciplines on their willingness to provide accommodations. Nelson et al.'s first modification to Matthews et al.'s instrument was to add items to collect information about academic discipline. This adapted instrument included only 18 items and four categories, with the procedural alteration category (three items) used in Matthews et al.'s instrument (1987) being eliminated from this version. The assignment or examination modifications category was also removed, but the four items in it were combined with the assignment accommodation (one item) and examination accommodation (three items) categories. Two items (i.e., one from each category) from the examination accommodation and special assistance categories were also not included in this adapted instrument. In contrast to Matthews et al. (1987), participants in Nelson et al.'s study could choose only whether they would or would not be willing to provide accommodations. Although this adapted instrument collected information about academic discipline, it did not measure whether participants had actually provided these accommodations. This entailed another modification to the previous instrument to assess the actual provision of accommodations because participants might be willing to provide accommodations, but they may not have actually provided them.

In the following studies, both Zello (1994) and Harmon (1997) further modified the preceding instruments (Matthews et al., 1987; Nelson et al., 1990) to assess faculty members' willingness to provide accommodations and their actual provision of

accommodations. Zello asked participants whether they would be willing and/or had actually provided specific accommodations (i.e., willing and/or have done). Harmon, on the other hand, provided participants with six response options. The first three asked participants about their willingness regarding provision of several accommodations (i.e., would, would not, and do not know). The other three options asked participants about their experience in providing accommodations (i.e., asked and provided accommodations, asked and did not provide accommodations, and never asked before to provide accommodations).

Unfortunately, the previous instruments were not tested for the validity and reliability which would question the results of these instruments. Thus, Lewis (1998) adapted the instruments of both Matthews et al. (1987) and Nelson et al. (1990) and assessed their internal reliability. In this study, Cronbach's alpha reliability tests were conducted for each of its four categories, but, unfortunately, indicated a weak correlation coefficient ($r = .18$) for the instructional accommodations category (two items). However, higher correlation coefficients were obtained for the assignment accommodations ($r = .50$), examination accommodations ($r = .61$), and special assistance ($r = .66$) categories.

In another study, Vogel, Leyser, Wyland, and Brulle (1999) used an instrument titled "A Faculty Survey on Students with Disabilities". It was a modified and expanded version of the instrument (Leyser, 1989) previously used to assess faculty members' knowledge, attitudes, and practices regarding college students with disabilities. This modified version included new items pertaining to students with LD. It assessed faculty members' attitudes toward such students with LD and faculty members' willingness to

provide accommodations. Questions pertaining to accommodation willingness consisted of two categories-- teaching accommodations (i.e., seven items) and examination accommodations (i.e., 10 items). Additionally, another two items were devoted to assessing the level of faculty members' agreement with the fairness of providing teaching and examination accommodations for students with LD. Participants responded using a 4-point Likert type scale ranging from one ("unwillingness to accommodate" or "very low level of agreement") to four ("willingness to accommodate" or "very high level of agreement"). The validity and reliability of the instrument were addressed. Experts in LD and support centers for students with disabilities reviewed the instrument and provided input regarding some items (i.e., content validity). Cronbach alpha tests were conducted to assess the reliability of this instrument and yielded an overall coefficient of .86 whereas the Cronbach alpha coefficients for the two categories were .75 (teaching accommodations) and .80 (examination accommodations).

As mentioned previously, all prior instruments were initially developed or modified to assess faculty members' willingness to provide accommodations for students with LD and were used only inside the United States. As a consequence, there was a need for a psychometric instrument to assess faculty members' attitudes and willingness to provide accommodations for students with disabilities in two different countries. In response, Wolman, McCrink, Rodriguez, and Harris-Looby (2004) constructed a new reliable instrument to assess university faculty members' attitudes toward students with disabilities and their willingness to provide accommodations in the United States and Mexico. This instrument was initially developed in English, based on the literature

review, and then was piloted on ten faculty members at two different American colleges to assess its clarity and fluidity. After revising the piloted instrument based on feedback from participants, a qualified interpreter translated the items into Spanish. The final instrument consisted of seven reliable factors (45 items) in each language. These factors were “willingness to accommodate students with LD” (eight items), “willingness to accommodate deaf or blind students” (eight items), “willingness to accommodate students with emotional problems” (six items), “willingness to accommodate students with physical disabilities” (five items), “assumptions about students with disabilities” (four items), “professional development” (six items) and “friendship with persons with disabilities” (seven items) (p.288). The Cronbach alpha coefficients for each factor were .78, .87, .79, .73, .61, .92, and .90, respectively. This instrument will be used in the proposed study, so a detailed description of it will be provided in the method section.

Similarly, Alghazo (2008) used the “General Attitudes toward College Educational Accommodation Scale” constructed by Upton (2000) to measure university faculty members in two countries (i.e., the United States and Jordan). This instrument was originally developed to assess college students’ attitudes toward providing several accommodations for students with a variety of disabilities (Upton & Harper, 2002). It consists of two parts, the first of which includes seven items pertaining to attitudes toward providing accommodations. Participants responded to these items on a 4-point Likert scale with response options ranging from one (i.e., strongly disagree) to four (i.e., strongly agree). The second part of the instrument contains one item with ten sub-items to assess the fairness of providing specific accommodations for students with disabilities.

Participants also responded to the ten sub-items on a 4-point Likert scale (1= unfair; 4= fair). The original version of this instrument was reviewed by several faculty members and the Cronbach alpha tests revealed a coefficient alpha of .94 for the first part and .84 for the second part. The overall coefficient was .88 (Upton, 2000; Upton & Harper, 2002).

For use in Jordan, an Arabic state, this instrument has been translated into the Arabic language by a group of faculty members from the Arabic and English departments of Mu'tah University. Then, Alghazo (2008) piloted the Arabic version on ten faculty members from different departments to provide feedback regarding the clarity and appropriateness of its items. Their comments and suggestions regarding the Arabian version were then incorporated. Alghazo indicated that the Cronbach's alpha coefficient for the Arabian version was .88 and a coefficient of .85 was obtained for the English version.

To complement instruments measuring attitudes and willingness to provide accommodations, Skinner (2007) developed a new instrument to collect information about faculty members' attitudes toward providing alternative courses for students with LD to fulfill foreign language and math requirements. Participants were asked to rate their level of agreement (1= strongly disagree, 5= strongly agree) with providing alternative courses for these students. Additionally, the other part of the instrument assessed accommodation willingness and consisted of two categories (teaching accommodations and examination accommodations) with eight items in each. Faculty members were asked to respond to these items on a 5-point Likert scale ranging from one

(very unwilling) to five (very willing). With regard to reliability and validity, this instrument was validated based on feedback from faculty members in a Special Education department and the director of a disability center. However, the reliability of this instrument was not assessed.

In 2008, Murray, Wren, and Keys developed a new comprehensive instrument to measure faculty members' perception of students with LD. In addition to assessing willingness to provide teaching and examination accommodations, this instrument sought to assess knowledge of LD and disability laws as well as willingness to provide major accommodations and willingness to invest additional time to help students with LD. It consisted of 12 factors and 34 items developed based on a thorough literature review, feedback from a director of disability services, and expert faculty members in LD (i.e., content validity). These factors were "willingness to provide major accommodations" (five items), "willingness to provide examination accommodations" (five items), "fairness and sensitivity" (six items), "knowledge of LD" (two items), "willingness to personally invest" (two items), "willingness to make teaching accommodations" (three items), "resource constraints" (two items), "performance expectation" (two items), "disclosure and believability" (three items), "inviting disclosure" (two items), "insufficient knowledge" to make accommodations (two items), and "providing accommodations" (two items) (p. 98-103). The internal consistency reliability for these factors ranged from .56 to .89. Participants were provided with five response choices ranging from one (strongly disagree) to five (strongly agree).

Recently, both Rush (2011) and Ihori (2012) used the instrument of Murray et al. (2008) with minor modifications to assess faculty members' willingness to accommodate students with ADHD. For instance, they changed the term "*learning disabilities*" to "*ADHD*". To answer the research questions, Rush focused only on the results of four factors: willingness to provide major accommodations, exam accommodations, and teaching accommodations, as well as knowledge of ADHD and disability laws. She indicated that the overall alpha coefficient for willingness to provide accommodations was .81 (i.e., three factors) and a coefficient of 0.53 was obtained for knowledge of ADHD and disability laws (i.e., one factor). In contrast, Ihori included all 12 factors, but did not assess the internal reliability for the modified instrument.

The last instrument that emerged from the literature review was a survey titled "The Expanding Cultural Awareness of Exceptional Learners" (ExCEL). This instrument was developed by Lombardi and Murray (2011) to assess faculty members' attitudes and perceptions toward students with disabilities. Several items were developed based on the instrument of Murray et al. (2008); however, new items were added pertaining to the universal design for learning based on the literature review in this area. These items were reviewed by experts in special education and educational methodology. After their feedback was received, some items were refined and new items were incorporated. The result revealed eight reliable factors and 39 items. Participants responded to questions by choosing one response option out of six responses (1= strongly disagree to 6= strongly agree). The overall Cronbach's alpha coefficient was .88 and it ranged from .65 to .85 for the eight factors: (1) "Fairness in Providing Accommodations",

(2) “Knowledge of Disability Law”, (3) “Adjustment of Course Assignments and Requirements”, (4) “Minimizing Barriers”, (5) “Campus Resources”, (6) “Willingness to Invest Time”, (7) “Accessibility of Course Materials”, and (8) “Performance Expectations” (p. 47). Finally, this was the only instrument that included items pertaining to the universal design for learning. All previous instruments only assessed accommodation willingness and/or implementation, fairness of providing several accommodations, and agreement with providing alternative courses. Therefore, this instrument added to the existing literature by assessing faculty members’ willingness and attitudes toward adapting universal design principles.

Review of Previous Studies on Faculty Members’ Attitudes and Willingness to Provide Accommodation

Reviewing the literature in this area revealed several studies that examined faculty members’ attitudes and willingness to provide a variety of accommodations. Most of these studies focused on faculty members’ willingness to accommodate students with LD and several studies were conducted to measure faculty members’ attitudes and willingness to provide accommodations for students with disabilities. Only two studies were dedicated solely to assessment of faculty members’ willingness to provide accommodations for college students with ADHD. The reviewed studies will be classified into three subcategories. The first will contain a review of previous studies on faculty members’ attitudes and willingness to provide accommodations for students with disabilities. In the next subcategory, the studies that assessed accommodation willingness and implementation for students with LD will be reviewed. Studies that

focused on faculty members' willingness to provide accommodations for students with ADHD will be reviewed in the last subcategory.

Students with Disabilities

Previous studies in this area focused on university faculty members' attitudes and willingness to provide accommodations with the exception of only one study (Vogel, Leyser, Burgstahler, Sligar, & Zecker, 2006) which included both university and community college faculty members and assessed the actual provision of accommodations. In contrast to research in the area of LD and ADHD, two cross-cultural studies (Alghazo, 2008; Wolman, 2004 et al.) were conducted to compare university faculty members' attitudes and willingness to provide accommodations in two different countries and languages (American university vs. non-American university; English vs. Spanish or Arabic). In only one study (Wolman et al., 2004), the differences between faculty members' willingness to provide accommodations for students with a variety of disabilities were compared (e.g. LD vs. deafness or blindness; physical disabilities vs. emotional problems, etc.).

In 2003, Rao conducted a study to examine attitudes of university faculty members toward students with disabilities, their willingness to provide accommodations, the relationship between these two variables, and the possible impact of several independent variables. The results indicated that faculty members generally demonstrated positive attitudes toward students with disabilities and they were willing to provide accommodations to these students, but there was no significant correlation between disability attitudes and accommodation willingness. Gender, rank, personal

contact with individuals with disabilities, knowledge of the term “reasonable accommodations”, and knowledge of ADA did not significantly affect faculty members’ willingness to provide accommodations. However, academic discipline, previous teaching experience, and knowledge of Section 504 revealed significant effects. Faculty members in the College of Education and Health Professions were more willing to provide accommodations than were faculty members in all other colleges and faculty members from the College of Engineering and the School of Law were the least willing to provide accommodations. Interestingly, faculty members with no previous experience in teaching students with disabilities were more willing to provide accommodations than were experienced faculty members. Faculty members who were knowledgeable about Section 504 were unsurprisingly more willing to provide accommodations than were those without.

In another study, Vogel et al. (2006) assessed whether there were significant differences among faculty members from three different types of institutions (i.e., state university, private university, and community college) in terms of knowledge about accommodations, willingness to provide instructional and examination accommodations, and the actual provision of these two types of accommodations. The results revealed several findings. There were no significant differences among faculty members from these three institutions on knowledge about accommodations. Generally, faculty members of the three institutions expressed a high level of willingness to provide accommodations and there were no significant differences among faculty members from the three types of institutions on their willingness to provide instructional and

examination accommodations. However, there were significant differences among faculty members from the three types of institutions on the actual provision of instructional and examination accommodations. Specifically, faculty members from the private university had provided more instructional and examination accommodations than did those at the state university, but no significant differences were found between community college faculty members and faculty members in the other types of institutions (i.e., state and private universities).

Recently, Lombardi and Murray (2011) conducted a study to develop a valid and reliable instrument in order to assess university faculty members' perceptions and attitudes toward college students with disabilities. Additionally, group comparisons were conducted. The results indicated that the instrument included eight reliable factors and the construct validity was partially evident. Moreover, there were significant differences between males and females on two factors. Females scored significantly higher on the fairness of providing some accommodations and minimizing barriers for students with disabilities than males. Rank (i.e., tenure-line and non-tenure) significantly affected faculty members' perceptions and attitudes toward college students with disabilities. Non-tenured faculty members scored significantly higher on adjusting course assignments and requirements, minimizing barriers for students with disabilities, willingness to invest extra time with students with disabilities, and providing course materials in several formats than did tenure-line faculty members. With regard to academic discipline, faculty members in the College of Education demonstrated more positive attitudes than did faculty members in the other colleges on seven out of eight

factors. However, there were no significant differences among academic disciplines in terms of knowledge and satisfaction about the disability center on campus. Faculty members with previous disability training significantly displayed higher scores on knowledge of federal laws that protect the rights of students with disabilities, minimizing barriers for students with disabilities, knowledge about available resources on campus, willingness to invest extra time with students with disabilities, and expectations for performance from college students with disabilities.

In a cross-cultural study, Wolman et al. (2004) conducted a study to construct a reliable and valid instrument to assess American and Mexican university faculty members' willingness to provide accommodations, their attitudes toward students with disabilities, and the differences between the two groups. The results pointed to that the instrument was reliable to measure faculty members' attitudes and accommodation willingness. Faculty members were more willing to provide accommodations to students with LD and deaf or blind students than to those with emotional problems (EP) and physical disabilities. Nevertheless, no significant differences were found on the willingness to provide accommodations for students with LD and deaf or blind students. With regard to the differences between the two groups, American university faculty members were more willing to provide accommodations to deaf or blind students than were Mexican university faculty members. However, there were no significant differences between them on the willingness to provide accommodations for students with LD, EP, and physical disabilities. On the other hand, a gender comparison revealed significant differences between males and females on the willingness to be friends with

individuals with disabilities, with females being more willing, but there were no significant differences between males and females on willingness to provide accommodations for students with a variety of disabilities.

Similarly, Alghazo (2008) conducted a cross-cultural study to compare university faculty members attitudes toward students with disabilities, attitudes toward providing accommodations for students with disabilities, and the fairness of providing some accommodations for students with disabilities in two different countries (i.e., United States and Jordan). The results indicated significant differences between the two groups on the attitudes toward individuals with disabilities in favor of American university faculty members. However, both groups demonstrated positive attitudes toward providing accommodations and there were no significant differences between the two groups based on gender and academic discipline. With regard to fairness of providing some accommodations, there were significant differences between them in which American university faculty members agreed significantly more with the fairness of providing several accommodations. Moreover, gender and academic discipline significantly predicted American university faculty members' agreement with the fairness of providing some accommodations. Consistent with the previous studies, correlation analysis revealed no significant relationship between attitudes toward students with disabilities and attitudes toward providing accommodation to students with disabilities at the American university. However, there was a weak positive relationship between these two variables at the Jordanian university.

Students with LD

Most of the previous studies were conducted to measure university and/or community college faculty members' willingness and their actual provision of accommodations for students with LD. This included several types of accommodations ranging from minor ones (i.e., extended time on exams) to major ones (e.g. grade on a different curve). As revealed by the literature review, none of the previous studies were conducted to assess accommodation willingness and implementation for students with LD outside the United States, so cross-cultural studies were not conducted in this area. Although the results of these studies indicated different and inconsistent findings, generally most participants were willing to provide teaching and examination accommodations for students with LD.

The first study emerging from the literature review investigating faculty members' attitudes toward accommodating students with LD was conducted by Matthews et al. (1987). In this study, 100 faculty members (64% response rate) were asked about their attitudes toward making a list of 23 accommodations for students with LD. The overall results indicated that faculty members were willing to make such accommodations. Specifically they would make 17 out of the 23 listed accommodations. For instance, 87% of participants would let students with LD tape record their lectures and give these students a detailed syllabus to provide plenty of time to complete reading and writing assignments. However, several faculty members indicated that they would not provide four out of the 23 accommodations. Most of these accommodations seem to be major ones rather than regular teaching or examination accommodations. For example, almost 60% of participants indicated that they would not let students with LD

complete an extra credit assignment if it was not available to all students. Forty-six percent would not let students with LD misspell words, make incorrect punctuation, or use poor grammar without penalizing them. Additionally, 80% indicated that they would not (40%) or did not know (40%) whether they let students with LD substitute required classes with other classes. However, interestingly and unexpectedly, 45% indicated that they would not give these students a copy of the lecture notes after they attended the classes.

Although this study revealed valuable information regarding faculty members' attitudes toward providing accommodations to students with LD, the reliability and validity of the questionnaire was not addressed and the participants included a small number of faculty members from only one university. Thus, the results may be questionable and cannot be generalized to other universities. This study also did not investigate differences among faculty members from different academic departments in terms of their attitudes toward providing accommodations.

For that reason, Nelson et al. (1990) conducted a further study to examine the effect of academic discipline on faculty members' willingness to accommodate students with LD. Generally, the results indicated that many faculty members, regardless of their colleges, were willing to provide accommodations for college students with LD. For example, more than 94% of participants in all colleges were willing to allow students with LD to record their lectures. However, there were significant differences among faculty members from colleges of Education, Business, and Arts and Sciences. Faculty members in the college of Education were more willing to provide different types of

accommodations (i.e., instructional accommodations, assignment modification, examination accommodations, and special assistance) than were faculty members from the colleges of Business and Arts and Sciences. For instance, almost 90% of participants in the college of Education were willing to give students with LD extended time to complete assignments as compared to only 16% of participants in the college of Business. Also, 82% of participants in the College of Education would let students with LD use a proofreader to help them in substituting the original wording with a higher level of vocabulary whereas less than 52% of faculty members in Arts and Sciences were willing to provide the same accommodation.

Unfortunately, the prior two studies did not consider the effects of several independent variables such as gender, age, and experience with students with LD on faculty members' willingness to provide accommodations or the actual provision of accommodations. They included faculty members from only one university, rather than participants from several universities nor did they include community college faculty members. Therefore, to fill the gap in the literature, Zello (1994) conducted a comparative study to examine whether there were significant differences between university and community college faculty members in terms of accommodation willingness and implementation. In addition, Zello's study investigated the effects or the relationship among several variables (e.g. knowledge of LD and federal laws, academic discipline, gender, age, years of teaching experience, etc.) and the number of accommodations made or willingness to make by faculty members. The results of this study revealed several findings. First, the most popular accommodations many (84%)

faculty members provided were letting students with LD tape their lectures while 75% were willing to let students with LD use taped textbooks. Moreover, there was a significant positive correlation between faculty members' knowledge of LD and of disability laws and the number of accommodations that had been made or faculty members' willingness to provide to students with LD. Community college faculty members had made a higher number of accommodations as compared to university faculty members. However, there were no significant differences between the two groups with regard to willingness to provide accommodations. The study also found no significant differences among academic departments (i.e., physical sciences/math, social sciences/letters, and business) in the numbers of accommodations faculty members had made or been willing to make. There were no relationship between accommodation willingness and implementations and the following variables: Gender, age, the number of years in college teaching, the importance of teaching versus research, previous contacts with students with LD, attitudes toward teaching students with LD, and the perception of adequate resources available for making accommodations.

In correlation studies, Harmon (1997), Lewis (1998), and Malangko (2008) assessed the relationship between the attitudes toward students with disabilities (Lewis, 1998) or students with LD (Harmon, 1997; Malangko, 2008) and faculty members' implementation or willingness to accommodate students with LD. Additionally, Harmon examined the correlation between community college faculty members' knowledge of disability laws and their accommodation willingness and implementation. The results revealed no significant relationship between faculty members' attitudes toward students

with disabilities (Lewis, 1998) or students with LD (Harmon, 1997; Malangko, 2008) and their willingness to provide accommodation (Harmon, 1997; Lewis, 1998; Malangko, 2008) nor their actual experience in providing accommodations (Harmon, 1997). There was also no significant correlation between community college faculty members' knowledge of disability laws and their accommodation willingness and implementation (Harmon, 1997). Lewis found that types of accommodations (i.e., instructional accommodations and examination accommodations) varied across the five academic discipline (i.e., Education, Computer/Engineering, Arts and Sciences, Health Sciences, and Business). Faculty members in Computer/Engineering were the least willing to provide instructional and examination accommodations, but the five academic discipline did not significantly differ on willingness to provide assignment accommodations and special assistance. Malangko further studied the impact of several variables (i.e., age, gender, educational level, number of years of teaching, contact with students with LD, having taught students with LD, disability training, knowledge of federal laws, knowledge of campus disability center, and academic discipline) on accommodation willingness and found none of these variables to be significantly related to faculty members' willingness. However, contact with a disability center was significantly related to accommodation willingness in which faculty members who had had contact with the disability center were more willing to provide accommodations than were those who had not had such contact.

A study by Vogel et al. (1999) measured faculty members' willingness to provide two types of accommodations for students with LD. Generally, faculty members were

willing to provide teaching accommodations (TA) and examination accommodations (EA). For instance, 93% of participants were willing to clarify or review parts of lectures or assignments on a one-on-one basis for students with LD (i.e., TA) and to provide extended time for these students to complete their exams (i.e., EA). As for the fairness of providing the two types of accommodations, most faculty members agreed regarding the fairness of providing TA (91%) and EA (87%). Additionally, Vogel et al., studied several factors that might impact faculty members' willingness to provide accommodations and found that younger faculty members were more willing to provide some accommodations than were older faculty members with the exception of only providing alternative formats of exams which older faculty members were more willing to do. Faculty educational levels (i.e., with a doctorate or without a doctorate) and rank (i.e., instructor, assistant professors, etc.) also impacted willingness to provide accommodations. Interestingly, faculty members without doctorates, as well as instructors and assistant professors, were more willing to provide accommodations than were faculty members with doctorates and those with higher rank. Academic discipline played an important role in increasing the willingness to provide accommodations because faculty members from the college of Education were more willing to provide accommodations than were faculty members in other colleges. In this study, no significant difference was found between faculty members with experience in teaching students with LD and those without experience, with the exception of only one accommodation (i.e., additional time on exams) in which experienced faculty members

were more willing. Gender also did not affect faculty members' willingness to provide accommodations.

Similarly, Skinner (2007) examined faculty members' willingness to provide instructional and examination accommodations. However, he additionally investigated faculty members' agreement with offering foreign language and math course alternatives for students with LD. The overall findings indicated that faculty members were willing to provide instructional and examination accommodations with one exception, instructional accommodation, in which faculty members were unwilling to give extra-credit assignments for students with LD when they were not available to all students. Although faculty members in most schools demonstrated willingness to provide accommodations, faculty members in the School of Business were neutral. It appeared that these faculty members were willing to provide accommodations that did not require faculty members' time and effort, such as taking tests in alternative locations and using laptops to take notes during class. As for offering course alternatives, faculty members were neutral regarding their agreement with offering alternative courses for students with LD. Rank did not significantly affect the level of faculty members' agreement with providing alternative courses, but academic discipline did, with many faculty members from the School of Business disagreeing with providing this accommodation.

Murray et al. (2008) conducted a study in order to develop a valid and reliable instrument to measure faculty members' perception of college students with LD. They also investigated correlations among factors and group differences. The results indicated that the instrument was reliable to measure faculty members' attitudes, beliefs, and

practice regarding teaching students with LD. Moreover, the correlation analysis revealed a positive relationship between the willingness to provide several types of accommodations and faculty members' agreement with the fairness of providing accommodations as well as their sensitivity to the needs of students with LD. Knowledge of LD was also positively related to the willingness to provide examination accommodations as well as the actual provision of accommodations. However, there was no relationship between teaching accommodations and knowledge of LD. In this study, gender of faculty members significantly affected their willingness to provide accommodations. Females were more knowledgeable about LD and more willing to provide examination accommodations than were males. There were also significant differences among academic disciplines. Faculty members in the College of Education were more willing to provide teaching and examination accommodations than were faculty members in the other colleges such as Commerce and Liberal Arts and Sciences. Analysis of rank showed significant differences between instructors and associate professors in terms of willingness to provide major accommodations in favor of instructors. Also, instructors and assistant professors were more willing to provide teaching accommodations than were associate professors. The overall findings suggested that participants were willing to provide accommodations and they had provided accommodations.

In the following year, Murray, Wren, and Keys (2009) further assessed the relationship between previous disability training and university faculty members' perception of college students with LD. They also studied the impact on faculty

members' perception of students with LD of types of previous disability training (i.e., no disability training, workshops or courses, and another form of disability training), the number of types of previous training, the duration of previous training, and when faculty members attended the previous disability training (i.e., last year, one to two years ago, etc.). The results indicated that those with previous disability training scored higher on knowledge of LD, accommodation willingness and implementation, and fairness of providing accommodations than did those without the previous disability training. Furthermore, faculty members who attended workshops or courses scored higher on factors pertaining to accommodation willingness and implementation than did those without previous disability training, but no significant differences were found between faculty members who attended workshops or courses and those who attended another form of disability training, with the exception of knowledge of LD in which the workshop or course group was more knowledgeable. Finally, only the types of previous disability training and the duration of that training were able to predict the university faculty members' attitudes and perception, but length of time since they attended the previous disability training did not.

Students with ADHD

Unfortunately, only a few studies focused on willingness to accommodate students with ADHD. The literature review revealed only four studies in this area. Three of them (Iron, 2012; Joles, 2007; Vance & Weyandt, 2008) assessed both university and community college faculty members' perception and willingness to provide accommodations whereas only one (Rush, 2011) included just university faculty

members. None of the previous studies in this area were conducted outside the United States nor did they include non-English speakers.

Joles (2007) conducted a survey study to investigate the attitudes of some Illinois and Indiana community college faculty members towards providing instructional as well as evaluation and material accommodations for students with ADHD and LD. With a response rate of 26%, participants were generally willing to provide accommodations, confident that the accommodations would support these students, and believed that they would not threaten the integrity of the class. Additionally, a comparison analysis among groups revealed that the number of years in college teaching did not significantly affect faculty members' attitudes toward accommodations. Gender, however, significantly affected accommodation willingness, confidence, and belief. Females were more positive toward instructional accommodations than males; however, no significant differences were found between genders on the evaluation and material accommodations. In this study, training also played an important role. Faculty members with additional training were more positive toward accommodating these students than were those without previous training. Participants who attended coursework scored significantly higher only on willingness to provide instructional accommodations than did those with no previous training. Tenured faculty members were more willing just to provide evaluation and material accommodations than were non-tenured individuals.

In the following year, Vance and Weyandt (2008) conducted a comparative study to investigate the perceptions of university and community college faculty members of college students with ADHD. Specifically, it examined the effects on the faculty

members' perceptions of educational level (i.e., a doctoral degree or a master's degree), number of years in college teaching (i.e., more than 20 years, 10 to 20, etc.), the college in which they taught, previous experience with students with ADHD, and prior ADHD training toward students with ADHD. Results pointed out that the previous independent variables did not significantly affect the faculty members' perceptions. Moreover, descriptive analyses showed that almost 60% of faculty members scored as most agreed to somewhat agreed that students with LD are equivalent to students with ADHD.

However, 12% of faculty members indicated that college students with ADHD should not be given special accommodations in the classroom and, interestingly enough, most of this group were in the College of Education and Professional Studies. Twenty-six percent of participants also most agreed to somewhat agreed that professors should not provide copies of their lecture notes or accept alternative assignments from students with ADHD.

A few years later, Rush (2011) conducted another study to assess the effects of several independent variables on faculty members' willingness to provide accommodations for students with ADHD and the relationship between knowledge of disability laws and accommodation willingness. The overall findings indicated that faculty members were more willing to provide teaching and examination accommodations than provide major accommodations (e.g. grading on a different curve or reducing reading load). For instance, 90% or more of the participants either strongly agreed or agreed to provide extended time on exams (i.e., emanation accommodation) and to extend deadlines for completing assignments (i.e., teaching accommodation). However, 85% of participants either disagreed or strongly disagreed to grading these

students on another curve (i.e., major accommodation). In this study, gender and previous experience with ADHD significantly affected faculty members' willingness. Females were more willing to accommodate students with ADHD than males. Faculty members with previous experience with ADHD were also more willing to provide accommodations than those without. Nevertheless, examination of teaching status and academic discipline revealed no significant differences among groups. Furthermore, investigation of the relationship between willingness to provide accommodations and knowledge of legal requirements indicated that knowledge of legal requirements was able to predict the faculty members' willingness to accommodate students with ADHD.

Recently, Iron (2012) conducted a study to compare faculty members' attitudes towards college students with ADHD and their willingness to accommodate these students at three types of institutions (community college vs. university; public university vs. private university, etc.) to determine whether there were significant differences among these groups of faculty members. The results indicated that the type of institution did not affect faculty members' attitudes towards students with ADHD or their willingness to provide accommodations because there were no significant differences among faculty members from the three types of institutions. Additionally, several analyses were conducted beyond the purpose of the study. They indicated no significant differences between males and females on the attitudes towards college students with ADHD and willingness to accommodate these students. Nonetheless, faculty members with high levels of experience (i.e., more than six years) were more willing to provide accommodations than were those with no experience. Furthermore, faculty members

with previous experience displayed higher levels of fairness and sensitivity regarding provision of some accommodations than did those with no experience.

Summary of Factors Affecting or Relating to Faculty Members' Attitudes and Willingness to Provide Accommodations

Gender

The literature review revealed several studies had assessed the influence of gender on faculty members' attitudes and willingness to provide accommodations. Most of these studies indicated that gender did not significantly affect faculty members' attitudes and willingness to provide accommodations (Alghazo, 2008; Malangko, 2008; Rao, 2003; Vogel et al., 1999; Wolman et al., 2004; Zello, 1994) and the actual provision of accommodations (Zello, 1994). However, some researchers indicated that females were more willing to provide accommodations to students with disabilities (Lombardi & Murray, 2011), students with LD (Joles, 2007; Murray et al., 2008), and students with ADHD (Joles, 2007; Rush, 2011) than males were. For instance, Lombardi and Murray (2011) found that females significantly scored higher on fairness of providing some accommodations and minimizing barriers for students with disabilities than did males. Moreover, Murray et al. (2008) pointed out that females were more knowledgeable about LD and more willing to provide examination accommodations than males.

Age

A few research examined the effect and correlation between age and accommodation willingness and implementation. Three studies found no significant relationship between age and accommodation attitudes and willingness (Alghazo, 2008;

Malangko, 2008; Zello, 1994) as well as implementation (Zello, 1994). Only Vogel et al. (1999) indicated a significant effect of age. The results indicated that younger faculty members were more willing to provide teaching accommodations than older faculty members; however, older faculty members were more willing to only provide an alternative format of exam than younger faculty members.

Academic Discipline

Previous research extensively assessed the effect of academic discipline on faculty members' attitudes and willingness to provide accommodations for students with a variety of disabilities. Many researchers found significant differences among faculty members from different discipline in terms of their willingness to provide accommodations for students with disabilities (Rao, 2003; Lombardi & Murray, 2011) and students with LD (Lewis, 1998; Nelson et al., 1990; Murray et al., 2008; Skinner, 2007; Vogel et al., 1999). Faculty members from the College of Education were more willing to provide accommodations than were faculty members in other colleges (Vogel et al., 1999; Murray et al., 2008). In contrast, faculty members in the School of Business (Skinner, 2007), the School of Law, and the College of Engineering (Rao, 2003) were least willing to provide accommodations. However, some research studies found no significant differences among academic discipline in the numbers of accommodations that had been made (Zello, 1994) or faculty members' attitudes and willingness to make accommodations for students with disabilities (Alghazo, 2008), students with LD (Malangko, 2008 ; Zello, 1994) and students with ADHD (Rush, 2011; Vance & Weyandt, 2008).

Rank and Teaching Status

Previous studies examined this factor in a variety of ways. Some researchers grouped participants into assistant professors, associate professors, and full professors (Alghazo, 2008; Murray, et al. 2008; Rao, 2003; Skinner, 2007; Vogel et al., 1999). Others divided participants based on their educational levels, so faculty members with doctorates were in one group and faculty members without doctorates were in the other (Malangko, 2008; Vogel et al., 1999; Vance & Weyandt, 2008). In only three studies, were faculty members divided as adjunct, non-tenure, or tenured (Joles, 2007; Lombardi & Murray, 2011; Rush, 2011). The results revealed significant differences among groups. Murray et al. found that instructors and assistant professors were more willing to provide major and teaching accommodations than were associate professors. Similarly, Vogel et al. indicated that faculty members without doctorates, instructors, and assistant professors were more willing to provide accommodations than were faculty members with doctorates and those in the higher ranks. In a different study, Lombardi and Murray (2011) found that non-tenured faculty members scored significantly higher on adjusting course assignments and requirements, minimizing barriers, willingness to invest extra time, and providing course materials in several formats than tenure-line faculty members did. Joles, however, indicated that tenured faculty members were more willing to provide evaluation and material accommodations than were non-tenure. Nevertheless, several studies indicated no significant impact of rank (Alghazo, 2008; Rao, 2003; Skinner, 2007), teaching status (Rush, 2011), or educational levels (Malangko, 2008; Vance & Weyandt, 2008).

Previous Contacts with Students with Disabilities

The literature review revealed five studies that investigated faculty members' attitudes and willingness to provide accommodations based on previous contacts with students with disabilities (Alghazo, 2008; Rao, 2003), students with LD (Malangko, 2008; Zello, 1994), and students with ADHD (Rush, 2011). Most of these studies found that this factor did not significantly affect faculty members' attitudes and willingness to provide accommodations for students with disabilities (Alghazo, 2008; Rao, 2003) and students with LD (Malangko, 2008; Zello, 1994). Only one study found that previous experience with ADHD significantly affected faculty members' willingness. Faculty members with previous experience with ADHD were more willing to accommodate these students than were those without (Rush, 2011).

Attitudes toward Students with Disabilities

Attitudes toward students with disabilities are assumed to relate to faculty members' attitudes and willingness to provide accommodations. Therefore, several researchers investigated this relationship. Three studies examined the relationship between attitudes toward students with LD and accommodation willingness (Harmon, 1997; Malangko, 2008; Zello, 1994) and implementation (Zello, 1994) and they found no significant relationship between attitudes toward students with LD and faculty members' willingness to provide accommodations (Harmon, 1997; Malangko, 2008; Zello, 1994) and the actual provision of accommodations (Zello, 1994). Similarly, Alghazo (2008), Lewis (1998), and Rao (2003) indicated no correlation between faculty members' attitudes towards students with disabilities and their attitudes and willingness to provide

accommodations at American universities. However, one study found a weak positive relationship between attitudes toward students with disabilities and Jordanian university faculty members' attitudes toward providing accommodations for students with disabilities (Alghazo, 2008).

Knowledge of Disability Laws

Knowledge of disability laws that protect the rights of college students with disabilities was also examined in the previous research. Researchers studied the effect of the relationship between this variable and faculty member's willingness to provide accommodations for students with disabilities, students with LD, and students with ADHD. Fifty percent of these studies revealed no significant correlation between community college faculty members' knowledge of federal laws and their willingness to accommodate students with LD (Harmon, 1997; Malangko, 2008) and their actual experience in providing accommodations (Harmon, 1997). In contrast, Rush (2011) indicated that knowledge of legal requirements was able to predict faculty members' willingness to accommodate students with ADHD. Rao (2003) found that knowledge of Section 504 revealed a significant effect. Faculty members who were knowledgeable about Section 504 were more willing than those without to provide accommodations for students with disabilities; however, knowledge of ADA did not significantly affect faculty members' willingness to provide accommodations.

Teaching Experience

Teaching experience was examined in two different ways. Iron (2012), Joles (2007), Malangko (2008), Vance and Weyandt (2008), and Zello (1994) studied the

effect or the relationship between number of years of teaching in college and faculty members' willingness to provide accommodations. Other studies investigated the effect of teaching students with LD (Malangko, 2008) or students with disabilities (Rao, 2003). Iron indicated that faculty members with a high level of experience (i.e., more than six years) were more willing to provide accommodations for students with ADHD and displayed a higher level of fairness and sensitivity regarding the provision of some accommodations than did those with no experience. However, Rao found that faculty members with no previous experience in teaching students with disabilities were more willing to provide accommodations for them than experienced faculty members were. In three studies about students with LD, the results revealed neither the number of year teaching (Joles, 2007; Malangko, 2008; Zello, 1994) nor having taught students with LD (Malangko, 2008) were significantly related to faculty members' willingness to provide accommodations. Vance and Weyandt (2008) also found no significant effects of this variable on faculty members' perception toward students with ADHD.

Disability Training

Previous disability training might play a critical role in changing faculty members' willingness and attitudes toward providing accommodations for students with a variety of disabilities. So, one might suppose several studies would have investigated how previous disability training affected or related to faculty members' attitudes and willingness to provide accommodations or the actual provision of accommodations. However, the literature review revealed only five studies included this variable. In two of them, previous disability training was not significantly related to faculty members

willingness (Malangko, 2008; Vance & Weyandt, 2008) whereas other studies indicated a significant effect from previous disability training on faculty members' willingness to provide accommodations for students with disabilities (Lombardi & Murray, 2011), students with LD (Joles, 2007; Murray et al., 2009) and students with ADHD (Joles, 2007). For instance, Murray found that faculty members with previous disability training scored higher on knowledge of LD, accommodation willingness and implementation, and fairness of providing accommodations than did those without previous disability training. In another study, Lombardi and Murray (2011) pointed out that faculty members with previous disability training significantly displayed higher scores on knowledge of federal laws that protect the rights of students with disabilities, minimizing barriers for students with disabilities, knowledge about available resources on campus, willingness to invest extra time with students with disabilities, and expectations for performance from college students with disabilities.

With regard to the type of training, faculty members who attended workshops or courses scored higher on factors pertaining to accommodation willingness (Joles, 2007) and implementation than those without the previous disability training, but no significant differences were found between faculty members who attended workshops or courses and those who attended another form of disability training, with the exception of knowledge of LD about which workshop or course group attendees were more knowledgeable (Murray et al., 2009). Moreover, only the types of previous disability training and the duration of that training predicted the university faculty members' attitudes and

perception, but elapsed time since faculty members attended previous disability training did not (Murray et al., 2009).

Types of Institutions

Several comparative studies were conducted to compare faculty members' willingness to provide accommodations and the actual provision of accommodations among faculty members from different types of institutions (i.e., community college vs. university; public vs. private, etc.). The results of these studies revealed no significant effects of the types of institutions in which faculty members work on their willingness to provide accommodations for students with LD (Vogel et al., 2006; Zello, 1994) and ADHD (Iron, 2012). However, faculty members from different types of institutions significantly differed on the actual provision of accommodations. Community faculty members had made a greater number of accommodations for students with LD as compared to university faculty members (Zello, 1994). In another study, faculty members from a private university had provided more instructional and examination accommodations for students with disabilities than those in the public university, but no significant differences were found between community college faculty members and those in the public and private universities (Vogel et al., 2006).

Country or Nationality

A few cross-cultural studies have been conducted to compare faculty members' attitudes and willingness to provide accommodations in two different countries. In only two studies, Wolman et al. (2004) and Alghazo (2008) compared American and non-American university faculty members on their attitudes and willingness to provide

accommodations. Wolman et al. compared American and Mexican university faculty members on their willingness to provide accommodations and found that the American university faculty members were more willing to provide accommodations for deaf or blind students. However, there were no significant differences between the two groups on willingness to provide accommodations to students with LD, EP, and physical disabilities. In Alghazo's (2008) study, the groups (i.e., American and non-American) did not significantly differ on faculty members' attitudes toward providing accommodations for students with disabilities. They both demonstrated positive attitudes.

Type of Disability

The type of disability may significantly affect faculty members' attitudes and willingness to provide accommodations for students with disabilities. For instance, some faculty members may be willing to accommodate students with visible disabilities, but they may question the fairness of providing accommodations for students with hidden ones. However, the literature review revealed only one study assessed the effects of this variable. In this study, Wolman et al. (2004) found that faculty members were more willing to provide accommodations for students with LD and for deaf or blind students than for those with emotional problems and physical disabilities. Interestingly, no significant differences were found between faculty members on their willingness to provide accommodations for students with LD (hidden disabilities) and deaf or blind students (visible disabilities).

Knowledge of and Contact with Disability Centers

Only one study assessed the effect of knowledge of and contact with disability centers at institutions. This study found that such contact was significantly related to faculty members' willingness to provide accommodations and that members who had had contact with disability centers were more willing to provide accommodations for students with LD than were others. However, knowledge of disability centers was not significantly related to faculty willingness to provide accommodations (Malangko, 2008).

Finally, the literature review discovered that little research has been conducted to assess faculty members' attitudes and willingness to accommodate students with ADHD and none of these studies were neither conducted outside the United States nor included Arabic speakers. In fact, most Saudi studies were conducted to assess educators' attitudes towards inclusion in general classrooms of elementary students with a variety of disabilities (e.g. Al-Ahmadi, 2009; Al-Faiz, 2006; Alquraini, 2011). As revealed by the literature review, previous studies did not investigate the attitude and willingness of Saudi university faculty members to provide accommodations for students with ADHD. Such a study may reveal valuable information because accommodating a college student with ADHD is optional in Saudi Arabia, so the faculty members' perspectives toward accommodations may affect their actual provision of instructional and examination accommodations. Therefore, there was an urgent need to conduct a new study to assess Saudi university faculty members' perspectives toward provision of accommodations for college students with ADHD. With this in mind, this study was conducted at King Saud University in Saudi Arabia. Following is a detailed description of the study.

CHAPTER II

METHOD

Setting and Participants

This study was conducted at King Saud University (KSU). KSU is located in Riyadh, Saudi Arabia, and is the oldest and one of the largest universities in Saudi Arabia. Because of its location and reputation, numerous members of the national business community as well as several political and academic elites, including members of the royal family have been educated at this university (Academic Ranking of World Universities [ARWU], 2012). KSU offers associate, bachelor, and graduate degree in a variety of fields such as natural and social sciences as well as the humanities. It provides totally free education for Saudi students and scholarships are available for international students (ARWU, 2012). In fact, bachelor students receive a monthly financial bonus to complete their degrees (King Saud University, 2012b). Arabic is the main medium of instruction in undergraduate and graduate programs; however, English is used in subjects such as medicine, engineering, and some business programs. KSU is located on a large, modern campus and is furnished with the latest educational technology (ARWU, 2012). There are 22 colleges, divided into five major colleges, namely, Humanities Colleges (i.e., Arts, Education, Law and Political Science, Languages, Tourism & Archaeology, Arabic Language Institute, Teaching, and Physical Education & Sports), Science Colleges (i.e., Engineering, Science, Food and Agricultural Sciences, Computer and Information Sciences, Architecture and Planning, and Business Administration), Health Colleges (i.e., Medicine, Dentistry, Pharmacy, Applied Medical Sciences, Nursing,

Health Science, and Prince Sultan College for Emergency Medical Services), Community Colleges (i.e., Applied Studies and Community Service and Community College in Al-Riyadh), and Female Colleges (i.e., Center for Female Scientific and Medical Colleges and Olayasha Center for Girls) (King Saud University, 2012a).

Furthermore, there are now 66,020 male (55%) and female (45%) students (Ministry of Higher Education-Saudi Arabia, 2013a), compared to 21 students in 1957 (Royal Embassy of Saudi Arabia in Washington, DC., 2013). Ninety percent of these students are undergraduate (i.e., associate and bachelor degrees) and the remaining students are graduate (i.e., master and doctorate degrees) (Ministry of Higher Education-Saudi Arabia, 2013a). The number of students with disabilities is unpublished, but several blind and deaf students and students with physical disabilities have been officially admitted to study at this university and they receive bonuses and some academic assistance (King Saud University, 2012c). In contrast, students with invisible disabilities (e.g. LD, ADHD, and emotional/behavioral disorders [EBD]) may complete their degrees at this university, but they may not be officially provided with teaching or examination accommodations.

The faculty members total approximately 6860 males (66%) and females (34%) including teaching assistants, lecturers, assistant professors, associate professors, and full professors (Ministry of Higher Education-Saudi Arabia, 2013b), compared to just nine instructors in 1957 (Royal Embassy of Saudi Arabia in Washington, DC., 2013). In Saudi Arabia, it is inappropriate to group people based on their ethnic background; they are, instead, grouped based on their nationality (i.e., Saudi vs. non-Saudi). The Saudi

Ministry of Higher Education (2013b) indicated that Saudi faculty members represent 72% of faculty members and the remaining are non-Saudi. Table 1 provides detailed information about faculty members' background information. As seen in the table, teaching assistants represent 32% of the faculty members at this university, reflecting the preference of Saudi universities to hire teaching assistants and then let them complete their post-bachelor degrees under the university's supervision and expense. So, teaching assistants may be asked to specialize in specific subjects and complete their degree at particular institutions inside or outside Saudi Arabia.

Table 1

Characteristics of Faculty Members

Rank	Females	Males	Nationality
Teaching Assistants	1,005	1,125	Saudi
	1	57	Non-Saudi
Lecturers	587	283	Saudi
	63	240	Non-Saudi
Assistant Professors	250	663	Saudi
	197	687	Non-Saudi
Associate Professors	54	428	Saudi
	70	350	Non-Saudi
Full Professors	32	483	Saudi
	42	243	Non-Saudi
Total	1928	2982	Saudi
	373	1577	Non-Saudi

Variables

There were several independent variables and dependent variables in this study. The independent variables were gender, nationality (i.e., Saudi vs. non-Saudi), previous teaching experience with ADHD, having a relative or family member with ADHD, academic rank, and academic discipline. The dependent variable in this study was faculty members' perspectives toward accommodations for college students with ADHD.

For questions eight and nine, there were three continuous variables: Faculty members' perspectives toward accommodations for college students with ADHD, faculty members' assumption about students with ADHD, and faculty members' perspectives regarding professional development provided at their institution.

Research Questions

1. What are the general perspectives of faculty members toward accommodations for college students with ADHD?
2. Are there significant differences in faculty members' perspectives toward accommodations for college students with ADHD based on gender (i.e., male vs. female)?
3. Are there significant differences in faculty members' perspectives toward accommodations for college students with ADHD based on nationality (i.e., Saudi vs. non-Saudi)?
4. Are there significant differences in faculty members' perspectives toward accommodations for college students with ADHD based on previous teaching experience with ADHD (i.e., yes vs. no)?
5. Are there significant differences in faculty members' perspectives toward accommodations for college students with ADHD based on having a relative or family member with ADHD (i.e., yes vs. no)?
6. Are there significant differences in faculty members' perspectives toward accommodations for college students with ADHD based on academic rank (i.e.,

- teaching assistants, lecturers, assistant professors, associate professors, and full professors)?
7. Are there significant differences in faculty members' perspectives toward accommodations for college students with ADHD based on academic discipline (i.e., Humanities Colleges, Science Colleges, Health Colleges, Community Colleges, and Female Colleges)?
 8. Is there a significant relationship between faculty members' perspectives toward accommodations for college students with ADHD and their assumption about students with ADHD?
 9. Is there a significant relationship between faculty members' perspectives toward accommodations for college students with ADHD and their perspectives regarding professional development provided at this institution?

Research Design

In education, there are several types of research methods. Generally, these research methods can be classified into three main categories: quantitative research, qualitative research, and mixed-method research (Ary, Jacobs, Razavieh, & Sorensen, 2010). A quantitative research method was used in this study. Specifically, this study was conducted using a non-experimental survey research design. The survey design is one of the most commonly used non-experimental designs across disciplines. It collects data from participants using survey instruments composed of multiple choice and/or essay questions (Paul, 2008). Participants can complete the questionnaire instruments by filling out either mailed or emailed questionnaires (Ary et al., 2010). Since the current

study targeted all faculty members at KSU, an electronic questionnaire was utilized to collect data from a large number of participants and within a short period of time.

Following is a description of the questionnaire that was used in this study.

Questionnaire

Since this study was conducted using a survey design, a questionnaire was used to collect data from participants. As mentioned in the literature review above, several questionnaires have been used to measure faculty members' attitudes and willingness to provide accommodations. This study utilized a modification of "The Accommodation of University Students with Disabilities Inventory (AUSDI)," developed by Wolman et al. (2004) to assess university faculty members' attitudes toward students with disabilities and the willingness of faculties in two countries (i.e., the United States and Mexico) to provide accommodations.

After this instrument was developed, based on the literature review, the English version was piloted on ten faculty members at two American colleges to assess its clarity and fluidity and the feedback was incorporated into the instrument. A qualified translator then translated the items into Spanish. The final questionnaire consisted of seven factors and 45 items in both languages.

The first four factors assess faculty members' willingness to accommodate students with LD (eight items), deaf or blind students (eight items), students with emotional problems (six items), and students with physical disabilities (five items). These factors have similar and different items. For instance, in each factor participants were asked whether they would allow these students to tape record lectures. In contrast,

faculty members were asked whether they would allow a blind or deaf student to have an interpreter in only one factor (i.e., willingness to provide accommodations for deaf or blind students). The results indicated that the Cronbach alpha coefficients for these four factors ranged from .73 to .87. The fifth factor was faculty members' assumptions about students with disabilities (four items). This factor assessed faculty members' attitudes toward teaching students with disabilities (one item), deaf students (one item), and students with LD (two items). The Cronbach alpha coefficient for this factor was .61. The next factor (factor five) assessed professional development provided at institutions (six items). For example, participants were asked whether they had been provided training about students with disabilities or received written information about accommodating these students. The last factor was friendship with individuals with disabilities (seven items). It asked participants whether they would become friends with individuals with invisible (i.e., LD and ED) and visible (i.e., deafness, blindness, speech disorders, and physical and intellectual disabilities) disabilities. The Cronbach alpha coefficients for the last two factors were .92, and .90, respectively.

This questionnaire instrument was used for several reasons. First, it has been reliably used in two different languages and countries. Also, in contrast to other questionnaire instruments, it assesses faculty members' assumptions about students with disabilities and their perspectives regarding professional development offered at institutions, as well as examining their willingness toward accommodations for college students with ADHD. So, it would not only help to gather information about faculty members' perspectives toward accommodations, but it would also collect valuable

information about their assumptions and perspectives regarding students with ADHD and professional development offered at this institution. This questionnaire included the most commonly used and recommended accommodations for students with ADHD, so using it could help the researcher learn how faculty members view the provision of these accommodations for students with ADHD. For instance, Weyandt, & DuPaul (2008) indicated that use of a notetaker, extended time for examinations, and different forms of examinations are typically recommended for students with ADHD. Fortunately, these accommodations were included in this questionnaire.

The modified questionnaire for this study consisted of two parts. The first collected demographic data from participants (See Appendix C for the English version of the questionnaire and Appendix E for the Arabic version). This part contained seven items pertaining to gender, age, nationality, academic rank, academic discipline, previous teaching experience with ADHD, and having a relative or family member with ADHD. Participants responded to these items by selecting the appropriate response option from a list of choices.

The second part of this questionnaire consisted of three categories: Faculty members' perspectives toward accommodations for college students with ADHD, assumptions about students with ADHD, and professional development (See Appendix C for the English version of the questionnaire and Appendix E for the Arabic version). Since the purpose of this study was to assess faculty members' perspectives toward accommodations only for students with ADHD, the first four factors of the original questionnaire (i.e., willingness to accommodate students with LD, deafness or blindness,

emotional problems, and physical disabilities) was combined into a single category (i.e., perspectives toward accommodations for college students with ADHD). So, some items from the original factors was eliminated either because they were duplicated or were not appropriate for students with ADHD. For example, having an interpreter inside the classroom was removed from the modified instrument because it was not appropriate for students with ADHD. The remaining items from these factors and two additional items (i.e., items four and five) from the previous instruments (Lewis 1998; Murray et al., 2008) were modified to assess participants' perspectives toward accommodations for college students with ADHD. For instance, "*I would*" or "*I would not*" and "*students with ADHD*" were added to each statement in this category. In addition, the second category in this part of the modified questionnaire (i.e., assumptions about students with ADHD) included the same number of items (i.e., four) as the original questionnaire, but the term "*learning disabilities*" or "*disabilities*" was replaced with "*ADHD*". The word "*interpreter*" was changed to "*note-taker*". In the last category of this part (i.e., professional development), the statements remained the same with the exception that "*students with disabilities*" was changed to "*students with ADHD*". Finally, the factor about friendship with individuals with disabilities was eliminated from the modified version since this questionnaire only focused on students with ADHD. In sum, the second part of the modified questionnaire contained 20 items and three categories. Participants responded on a 5-point Likert scale ranging from one (strongly disagree) to five (strongly agree).

Translation

Several previous studies have translated English instruments into different languages (Chang, Chau, & Holroyd, 1999). These studies used a variety of methods to determine the accuracy and equivalence of the translated instruments. One of the most commonly used methods is foreword-only translation with or without testing (Maneesriwongul & Dixon, 2004). In this method, a researcher or translator would translate an instrument from its original language into a target language with or without piloting the translated instrument. However, this method has been criticized because the equivalences between the original instrument and the translated version may not be verified (Maneesriwongul & Dixon, 2004). Therefore, a back-translation technique, with or without piloting, is recommended and preferred (Brislin, 1970; Jones & Kay, 1992). This method requires hiring two bilingual translators. The first will translate the original instrument into the target language and the second will then translate the instrument from the target language back into the original language. The two versions of the instruments will then be compared to determine if they are identical or equivalent (Brislin, 1970; Jones & Kay, 1992; Maneesriwongul & Dixon, 2004). Finally, the instrument might be piloted on monolingual participants, bilingual participants, or both monolingual and bilingual participants to test its clarity, appropriateness, and semantic equivalence (Brislin, 1970; Maneesriwongul & Dixon, 2004).

Since this study would be conducted in Saudi Arabia, the English-modified questionnaire had to be translated into the Arabic language. A back-translation technique with piloting was used. This was done by following several steps. First, the questionnaire was sent to a Saudi doctoral student in Translation Studies at Kent State

University to be translated from English into Arabic and another Saudi doctoral student translated it back into English. Then, the two versions of the English questionnaire were compared to evaluate the translation process. The comparison between the two versions revealed that they were equivalent. In addition, two Arabian doctoral students in Translation Studies at Kent State University reviewed the Arabic and English versions of the questionnaire to verify the equivalences between the English instrument and the translated version. They each verified the equivalences between the two versions of the questionnaire (See Appendix F). Then, the Arabic version was shared with several Saudi and Arabian faculty members to make sure that the Arabic version of the questionnaire was clear and understandable before the study was conducted. The input and suggestions regarding the Arabic questionnaire were incorporated.

Questionnaire Distribution and Data Collection

For this study, Qualtrics (www.qualtrics.com) was used to design and create a link for an online questionnaire. Then, emails were sent to all official email addresses for KSU faculty members to invite them to participate in this study. The email included information about the purpose of the study, the importance of faculty members' participation, confidentiality and voluntary participation, as well as the link for the online questionnaire. The researcher included his name, contact information, advisor's name, and contact information for his advisor (See Appendix B for the English informed consent form and Appendix D for the Arabic form). After the emails were sent, the researcher waited a few weeks and then sent a reminder to those who had not responded.

However, there was still a low rate of response, so another email was sent to encourage faculty members who had not yet participated in this study.

The online questionnaire was preferred in this study for many reasons. First, the purpose of this study was to target all faculty members at KSU, so the number of participants was huge, representing 22 colleges in different locations at this university. It would be difficult to reach participants in a short period of time using a mailed questionnaire (Ary et al., 2010; Greenlaw & Brown-Welty, 2009). Furthermore, participants could quickly and easily fill out and return an online questionnaire at their convenience, which would result in a higher response rate than would using a mailed questionnaire (Greenlaw & Brown-Welty, 2009; Griffis, Goldsby & Cooper, 2003; Hunter, 2012). According to the Saudi Ministry of Higher Education (2013b), more than 49% of faculty members are teaching assistants and lecturers who are usually required to complete their post-bachelor degrees outside Saudi Arabia. Using an online questionnaire would help the researcher reach these faculty members regardless of their locations (Hunter, 2012). Finally, collecting data online can save time and effort associated with entering data (Ary et al., 2010) and prevent missing data as well as data entry mistakes (Hunter, 2012) since participants can be forced to respond to all items and the data are entered automatically.

Data Analysis

Statistical Package for the Social Sciences (SPSS) was used to analyze the data in this study using a significant level of $P 0.05$. Specifically, descriptive statistics (i.e., mean and standard deviation) and three statistical tests were run in order to answer the

nine research questions. The mean and standard deviation were used to find out the general perspectives of KSU faculty members toward accommodations for students with ADHD (i.e., research question 1). A two independent samples t-test, one-way analysis of variance (ANOVA), and Pearson correlation (i.e., statistical tests) were used to assess the difference between groups or the relationship between variables. When needed, post hoc tests would be conducted.

There were one dependent variable and one independent variable in questions two, three, four, and five. The dependent variable was faculty members' perspectives toward accommodations for college students with ADHD. Gender (i.e., male or female), nationality (i.e., Saudi or non-Saudi), previous teaching experience with ADHD (i.e., having teaching experience or having no teaching experience), and having a relative or family member with ADHD (i.e., having relationship with a person with ADHD or having no relationship with a person with ADHD) were the independent variables in these questions. These independent variables included only two levels. Therefore, the two independent samples t-test was used to answer these research questions (i.e., Q2, Q3, Q4, and Q5). This test helped the researcher to examine whether there were significant differences between the two groups in terms of faculty members' perspectives toward accommodations for college students with ADHD.

However, before this test was conducted, several assumptions must have been met. First, the two independent variables must have been categorical or nominal variables whereas the dependent variable must have been a continuous (interval or ratio) variable (i.e., non-statistical assumptions). Also, participants' scores on the dependent

variable must have been independent of each other (i.e., assumption of independence) and should have been normally distributed within each group (i.e., assumption of normality). The assumption of normality was tested using the Normal Q-Q Plot and the values for Skewness and Kurtosis for each group. This assumption was satisfied if the data points were roughly distributed along the diagonal line in the Normal Q-Q Plot for each group as well as if the z-scores for Skewness and Kurtosis were less than 2.50 for all groups. The last assumption for this test was homogeneity of variance in which the variation of participants' scores in the two groups is not significantly different. Levene's Test was used to test this assumption. The result of this test needed to indicate no statistically significant differences (Dimitrov, 2009).

Similarly, faculty members' perspectives toward accommodations for college students with ADHD was the dependent variable in questions six and seven. Nevertheless, there were two independent variables (i.e., academic rank and discipline) with five levels in each variable. Academic rank included teaching assistants, instructors, assistant professors, associate professors, and professors whereas the academic discipline contained Humanities Colleges, Science Colleges, Health Colleges, Community Colleges, and Female Colleges. Therefore, ANOVA was used. When ANOVA indicated significant differences among groups, the post-hoc test would be run to examine where significances lie. This could be done by using the Tukey method. With regard to the assumptions of this test, the independent variables must have been nominal variables and the dependent variable must have been an interval or ratio (continuous) variable (i.e., measurement assumptions). Further, the assumption of independence, assumption of

normality, and assumption homogeneity of variance must have been met before conducting this test. The assumption of normality was satisfied if the data points were roughly distributed along the diagonal line in the Normal Q-Q Plot for each group and if the z-scores for Skewness and Kurtosis were less than 2.50 for all groups. The results of the homogeneity of variance test (i.e., Levene's Test) must have revealed no statistically significant differences (Dimitrov, 2009).

Finally, Pearson's Correlation Coefficient was used to answer the last two research questions (i.e., eight and nine). It would assess the correlation between the faculty members' perspectives toward accommodations for college students with ADHD (i.e., a continuous variable) and the other continuous variables: Assumption about students with ADHD (i.e., question eight) and faculty members' perspectives' regarding professional development provided at this institution (i.e., question nine). The results of this test would indicate whether there was a positive, a negative, or no relationship between each two continuous variables. Finally, several assumptions must have been tested to determine the appropriateness of using the Pearson's Correlation Coefficient. First, both variables must have been continuous (interval or ratio) variables (i.e., non-statistical assumption). Also, scores on the dependent variable must have been independent of each other (i.e., assumption of independence) and scores on both continuous variables should have distributed themselves normally (i.e., assumption of normality). The other assumption is linearity in which variables are linearly related. These assumptions would be tested by looking at scatterplot and histogram information (Dimitrov, 2009).

CHAPTER III

RESULTS

This chapter will demonstrate the results of this study in several subsections. The first will focus on the number of participants and their characteristics. This will include their gender, age, nationality, academic ranks and disciplines, and previous contact with individuals with ADHD. The second will show the results of the assumption of statistical tests used in this study, which contain the non-statistical and statistical assumptions. Finally, the third part will show the results for the nine research questions.

Number and Demographic Information of Participants

A sample of 497 faculty members participated in the study. However, some (4%) returned incomplete surveys, so their responses were removed. As can be seen in Table 2, the number of male and female faculty members was roughly equal. Specifically, the results indicated that 53% of the participants were female; the remaining participants (47%) were male. This indicated that the female faculty members were more than male faculty members, as compared to their percentages in the population (33.5% and 66.5%, respectively).

Table 2

Frequency and Percentage of the Participants by Gender

Variable	Level	Frequency	Percent
Gender	Male	223	47%
	Female	256	53%
Total		479	100%

As displayed in Table 3, participants ranged in age from 22 to 74 years. Most (70%) were below the age of 44 (i.e., 22 to 43). In contrast, 22% of participants were between the ages of 44 and 54 and only 8% were above age 55. The age mean of participants was 38 years.

Table 3

Frequency and Percentage of the Participants by Age

Variable	Group	Frequency	Percent
Age	22 to 32	185	39 %
	33 to 43	150	31 %
	44 to 54	106	22 %
	55 to 74	38	8%
Total		479	100%

With regard to the nationality of participants, the results showed that most (81%) were Saudi and the remaining participants (19%) were non-Saudi faculty members (Table 4).

Table 4

Frequency and Percentage of the Participants by Nationality

Variable	Level	Frequency	Percent
Nationality	Saudi	386	81%
	Non-Saudi	93	19%
Total		479	100%

The data in Table 5 show that many participants have not yet taught students with ADHD (77%) nor had a relative or family member with ADHD (74%). However, almost one quarter (23%) of participants indicated that they have had previous teaching experience with students with ADHD. A similar percent (26%) revealed having a relative or family member with ADHD.

Table 5

Frequency and Percentage of the Participants by the Previous Teaching Experience of Students with ADHD and Having a Relative or Family Member with ADHD

Variable	Level	Frequency	Total	Percent	Total
Previous Teaching Experience of Students with ADHD	Yes	112	479	23%	100%
	No	367		77%	
Relative or Family Member with ADHD	Yes	124	479	26%	100%
	No	355		74%	

The number of participants in this study varied between the five major colleges of King Saud University (KSU). However, Table 6 indicates that most participants (35%) were from the Humanities colleges. In contrast, the smallest number of participants came from the Female colleges (10%) and Community colleges (5%). A roughly equal number of participants were from the Science colleges (23%) and the Health colleges (26%).

Table 6

Frequency and Percentage of the Participant by Academic Discipline

Variable	Level	Frequency	Percent
	Humanities Colleges	170	35%
	Science Colleges	112	23%
Academic Discipline	Health Colleges	125	26%
	Community Colleges	22	5%
	Female Colleges	50	10%
Total		479	100%

With regard to the academic ranks, the results displayed in Table 7 show that the participants came from all academic ranks, including teaching assistants (27%), lecturers (26%), assistant professors (23%), associate professors (13%), and full professors (12%). More than half of the participants (53%) did not hold doctorate degrees (i.e., teaching assistants and lecturers) whereas others (47%) did. A large number of participants were teaching assistants, lecturers, and assistant professors (76%) and the smallest group were associate professors and full professors (25%).

Table 7

Frequency and Percentage of the Participant by Academic Ranks

Variable	Level	Frequency	Percent
Academic Rank	Teaching Assistants	128	27%
	Lecturers	126	26%
	Assistant professors	108	23%
	Associate Professors	60	13%
	Full Professors	57	12%
Total		479	100%

Testing Reliability of the Questionnaire Instrument

In this study, the Cronbach's alpha test was run to measure the internal consistency of reliability of the questionnaire instrument. The internal consistency of reliability referred to how consistently the items on the questionnaire instrument measured the perspectives of faculty members toward accommodations for college students with ADHD (Ary et al., 2010; Johnson, Christensen, 2004). The results indicated that the coefficient alpha of all items together as one category was .693, which showed an acceptable reliability (Ary et al., 2010). In addition, the coefficient alphas for the three categories (i.e., perspectives toward accommodations for students with ADHD, assumption about students with ADHD, and perspectives regarding professional development) were assessed to determine whether the items in each category were measuring the same concept (Ary et al., 2010; Johnson, Christensen, 2004). The first

category revealed a coefficient alpha of .683, also indicating acceptable internal consistency (Ary et al., 2010). However, the coefficient alpha of the second category was .462, which was poor (Ary et al., 2010; Dimitrov, 2009; Johnson, Christensen, 2004). In contrast to the first and second categories, the last category had very good internal consistency, with a coefficient alpha of .901 (Dimitrov, 2009). Table 8 provides detailed information about the results of the Cronbach's alpha test.

Table 8

The Cronbach's Alpha for the Questionnaire Instrument

Category	No. of Items	α	N
All Categories	20	.693	479
Category 1(Items 1 to 10)	10	.683	479
Category 2 (Items 11 to 14)	4	.462	479
Category 3 (Items 15 to 20)	6	.901	479

Testing Assumptions of Statistical Tests

As mentioned previously in the method section, several measurement and statistical assumptions must be met before conducting statistical tests. In this study, use of the two independent samples t-tests, ANOVA and Pearson correlation, was proposed. Therefore, their measurement and statistical assumptions were assessed after the negative items were recoded. The results indicated that the measurement assumptions for the two independent samples t-test and ANOVA were met because the independent variables were categorical variables and the dependent variable was a continuous variable. The

statistical assumptions (i.e., assumption of independence, assumption of normality, and assumption of homogeneity of variance) for these tests were also met. The results of the Levene's test (i.e., the assumption of homogeneity of variance) will be demonstrated under each research question (i.e., Q2, Q3, Q4, Q5, Q6, and Q7).

With regard to Pearson correlation, the measurement assumption was met since both variables were continuous. The statistical assumptions (i.e., assumption of normality and assumption of linearity) were also met for question eight. However, the statistical assumptions for question nine were violated. Therefore, the nonparametric test, Spearman's rank order, was used instead of the Pearson correlation in order to answer this research question. Following are the results of the statistical tests using a significance level of .05.

Results of the Research Questions

Research Question 1

What are the general perspectives of faculty members toward accommodations for college students with ADHD?

This question consisted of ten negative and positive items (i.e., items one to ten) and each was measured on a Likert scale that ranged from one (i.e., Strongly Disagree) to five (i.e., Strongly Agree). The negative items were recoded before analyzing the data from them. The minimum score on this category was 10 and the maximum possible score was 50. A high score on this category (i.e., more than 35) indicates a positive attitude toward accommodations for college students with ADHD. In contrast, a low score (i.e., less than 25) indicates a negative perspective. The midpoint was 30 (or close

to 30), indicating that a participant neither agreed nor disagreed regarding providing accommodations for college students with ADHD.

Descriptive statistics (i.e., means and standard deviations) were calculated to answer this research question. The mean was preferred because the outliers that would significantly distort the value of the mean were not detected and the data were not skewed. As reported in Table 9, the overall mean of the general perspective of faculty members toward accommodations for college students with ADHD was 36.05 with a standard deviation of 5.48. This result suggested that KSU faculty members held a positive attitude toward accommodations for college students with ADHD.

Table 9

Descriptive Data for the General Perspectives of Faculty Members toward Accommodations for College Students with ADHD

Variable	μ	SD	<i>N</i>
Perspectives toward Accommodations for College Students with ADHD	36.05	5.48	479

When the perspectives of faculty members were divided based on the type of accommodation (i.e., examination accommodations and teaching accommodations), the faculty members demonstrated similar perspectives. The results indicated a mean score for examination accommodation (i.e., items one to five) of 3.58 with a standard deviation of .62 and a mean score for teaching accommodation (i.e., items six to ten) of 3.62 with a standard deviation of .61 (Table 10). This result suggested that the attitudes of KSU

faculty members were somewhat positive toward accommodating college students with ADHD regardless of the type accommodation.

Table 10

Descriptive Data for the Perspectives of Faculty Members toward Accommodations for College Students with ADHD by the Type of Accommodations

Variable	# of items	μ	SD	<i>n</i>
Examination Accommodations	5	3.58	.62	479
Teaching Accommodations	5	3.62	.61	479

However, the results indicated that faculty members felt more positive toward some accommodations than others. Tables 11 and 12 present the five most favorable and the five least favorable accommodations for KSU faculty members. Starting with the most favorable (Table 11), providing additional time to complete exams was the accommodation most favored by faculty members, with a mean of 4.16. The second most favored accommodation was tape recorded lectures. This received a mean of 3.83. Following these were proctored exams taken in a supervised location and extended deadline for completion of projects or papers. These two accommodations obtained similar means (i.e., 3.75 and 3.74, respectively). Providing copies of lecture notes was the last most favored accommodation with a mean of 3.65.

Table 11

Descriptive Data for the five most favorable Accommodations for Faculty Members

Accommodation	Type	μ	SD	<i>n</i>
Provide additional time to complete exams	Examination	4.16	.80	479
Tape record lecture	Teaching	3.83	1.10	479
Take proctored exams in a supervised location	Examination	3.75	1.08	479
Extend deadline for completion of projects or papers	Teaching	3.74	1.01	479
Provide copies of lecture notes	Teaching	3.65	1.00	479

It can be seen from the data in Table 12 that having note-takers, taking oral exams instead of written exams, and providing alternative written exams (e.g., multiple-choice instead of essay tests) obtained the lowest means in the list of least favorable accommodations. They similarly received a mean of 3.28. The second lowest mean in this list was allowing for misspellings, incorrect punctuation, and poor grammar on tests without penalty. The mean score for this accommodation was 3.48. The last among the least favorable accommodations was giving oral presentations instead of written projects, with a mean of 3.62.

Table 12

Descriptive Data for the five least favorable Accommodations for Faculty Members

Accommodation	Type	μ	SD	<i>n</i>
Have note-takers	Teaching	3.28	1.18	479
Take oral exams instead of written exams	Examination	3.28	1.07	479
Provide alternative written exams (e.g., multiple-choice instead of essay tests)	Examination	3.28	1.25	479
Allow misspellings, incorrect punctuation, and poor grammar, on tests without penalizing	Examination	3.48	1.10	479
Give oral presentations instead of written projects	Teaching	3.62	1.08	479

Research Question 2

Are there significant differences in faculty members' perspectives toward accommodations for college students with ADHD based on gender (i.e., male vs. female)?

To answer this research question, a two independent samples t-test was used. It was conducted to compare the means of male and female faculty members on their perspectives toward accommodations for college students with ADHD, to determine if there were statistically significant differences between the two groups. The Levene's test indicated that the assumption of homogeneity of variance was met because the p value was not statistically significant, $F(1, 477) = .005, p = .941$.

Table 13 shows the results of the analysis considering the effects of gender on the perspectives of faculty members toward accommodations for college students with ADHD. The results suggested that there was no statistically significant difference between males and females in regards to their perspectives toward accommodations for college students with ADHD, $t(477) = -1.776, p > .05, d = -0.16$. This would indicate that the gender of faculty members did not significantly affect their attitudes toward accommodations for college students with ADHD. However, this finding suggested the possibility that female faculty members might have held somewhat more positive attitudes than did male faculty members.

Table 13

Two Independent T-test and Descriptive Data by Gender

Gender	μ	SD	n	t	d	Sig.
Male	35.58	5.58	223	-1.776	-0.16	.076
Female	36.47	5.36	256			

Research Question 3

Are there significant differences in faculty members' perspectives toward accommodations for college students with ADHD based on nationality (i.e., Saudi vs. non-Saudi)?

A two independent samples t-test was also used to answer this question. This test was conducted to compare the means of Saudi and non-Saudi faculty members on their perspectives toward accommodating college students with ADHD to determine if there

were statistically significant differences between the two groups. The Levene's test indicated that the assumption of homogeneity of variance was met because the p value was not statistically significant, $F(1, 477) = .307, p = .580$.

Table 14 demonstrates the results of the analysis considering the effects of nationality on the perspectives of faculty members toward accommodations for college students with ADHD. The results suggested that there was a statistically significant difference between Saudi and non-Saudi faculty members in regards to the perspectives toward accommodating college students with ADHD, $t(477) = 2.296, p < .05, d = 0.27$. The Saudi faculty members ($M = 36.33, SD = 5.50$) had more positive perspectives toward accommodations for college students with ADHD than did non-Saudi faculty members ($M = 34.89, SD = 5.24$).

Further, Cohen's d (i.e., effect size) was calculated to measure the magnitude of mean differences (statistical significance) using the following formula: $(\text{mean group1} - \text{mean group2}) / [(\text{SD group1} + \text{SD group2}) / 2]$ (Cohen, 1988)

$$\text{Cohen}'d = \frac{M1 - M2}{SD \text{ pooled}}$$

According to Cohen's guidelines (1988), the effect size is considered small if $d = 0.20$, medium if $d = 0.50$, or large if $d = 0.80$. The effect size for this analysis ($d = .27$) was found to be small (Cohen, 1988). This result indicated that the nationality of faculty members affected their perspectives toward accommodations for college students with ADHD. However, the practical significance was small.

Table 14

Two Independent T-test and Descriptive Data by Nationality

Nationality	μ	SD	n	t	d	Sig.
Saudi	36.33	5.50	386	2.296	0.27	.022
Non-Saudi	34.89	5.24	93			

Research Question 4

Are there significant differences in faculty members' perspectives toward accommodations for college students with ADHD based on previous teaching experience of students with ADHD (i.e., yes vs. no)?

The researcher used a two independent samples t-test in order to answer the research question. This test was conducted to compare the means of faculty members with previous teaching experience of students with ADHD and those without on their perspectives toward accommodations for college students with ADHD to determine if there were statistically significant differences between the two groups. The Levene's Test indicated that the assumption of homogeneity of variance was met because the p value was not statistically significant, $F(1, 477) = .348, p = .556$.

Table 15 reveals the results of the analysis considering the effects of previous teaching experience of students with ADHD on the perspectives of faculty members toward accommodations for college students with ADHD. The results suggested a statistically significant difference between faculty members with and those without previous teaching experience of students with ADHD in regards to their perspectives

toward accommodating college students with ADHD, $t(477) = -2.466, p < .05, d = -0.27$. The faculty members without previous teaching experience ($M = 36.39, SD = 5.47$) had more positive perspectives toward accommodations for college students with ADHD than those with previous teaching experience ($M = 34.94, SD = 5.35$).

According to Cohen's guidelines (1988), the effect size is considered small if $d = 0.20$, medium if $d = 0.50$, or large if $d = 0.80$. The effect size for this analysis ($d = -0.27$) was found to be small (Cohen, 1988). This would indicate that the previous teaching experience of students with ADHD affected the perspectives of faculty members toward accommodations for college students with ADHD. However, the practical significance was small.

Table 15

Two Independent T-tests and Descriptive Data by Previous Teaching Experience

Previous Teaching Experience	μ	SD	n	t	d	Sig.
Yes	34.94	5.35	112	-2.466	-0.27	.014
No	36.39	5.47	367			

Research Question 5

Are there significant differences in faculty members' perspectives toward accommodations for college students with ADHD based on having a relative or family member with ADHD (i.e., yes vs. no)?

As with the previous questions, a two independent samples t-test was used to answer this research question. This test was conducted to compare the means of faculty members who have a relative or family member with ADHD and those without such experience on the perspectives toward accommodations for college students with ADHD to determine if there were statistically significant differences between the two groups. The Levene's Test indicated that the assumption of homogeneity of variance was met because the p value was not statistically significant, $F(1, 477) = .009, p = .923$.

Table 16 presents the results of the analysis considering the effects of having a relative or family member with ADHD on the perspectives of faculty members toward accommodations for college students with ADHD. The results suggested that there was no statistically significant difference between faculty members with a relative or family member with ADHD and those without such contact in regards to their perspectives toward accommodating college students with ADHD, $t(477) = -.613, p > .05, d = -0.06$. This indicated that **having a relative or family member with ADHD did not affect faculty members' perspectives toward accommodations for college students with ADHD.**

Table 16

Two Independent T-test and Descriptive Data by Having a Relative or Family Member with ADHD

Relative or family member with ADHD	μ	SD	n	t	d	Sig.
Yes	35.79	5.34	124	-.613	-0.064	.540
No	36.14	5.53	355			

Research Question 6

Are there significant differences in faculty members' perspectives toward accommodations for college students with ADHD based on academic ranks (i.e., teaching assistants, lecturers, assistant professors, associate professors, and full professors)?

This research question was answered by using ANOVA. ANOVA was conducted to compare the means of teaching assistants, lecturers, assistant professors, associate professors, and full professors on their perspectives toward accommodations for college students with ADHD to determine if there were statistically significant differences among the five groups. The Levene's Test indicated that the assumption of homogeneity of variance was met because the p value was not statistically significant, $F(4, 477) = .802, p = .524$.

The results of the analysis considering the effects of academic rank on the attitude of faculty members toward accommodations for college students with ADHD are shown in Table 17. These results suggested that there was no statistically significant differences on the perspectives toward accommodations for college students with ADHD among the five groups, $F(4, 474) = 1.226, p > 0.05, \eta^2 = .010$. Academic rank did not significantly affect the faculty members' perspectives toward accommodations for college students with ADHD. As a result, there was no need to conduct a post-hoc test to find out where the significant differences lie.

Table 17

One-Way ANOVA of Perspectives toward Accommodations by Academic Rank

Source	<i>df</i>	F	η^2	<i>P</i>
Rank	4	1.226	.010	.299
Subjects Within Group (Error)	474			

Table 18

Descriptive Data by Academic Rank

Rank	μ	<i>SD</i>	<i>n</i>
Teaching Assistants	35.85	5.35	128
lecturers	35.92	5.47	126
Assistant Professors	35.53	5.30	108
Associate Professors	37.36	5.64	60
Full Professors	36.42	5.87	57

Research Question 7

Are there significant differences in faculty members' perspectives toward accommodations for college students with ADHD based on academic disciplines (i.e., humanities colleges, science colleges, health colleges, community colleges, and female colleges)?

ANOVA was used to answer this research question. This test was conducted to compare the means of faculty members from humanities colleges, science colleges, health colleges, community colleges, and female colleges on their perspectives toward accommodations for college students with ADHD to determine if there were statistically significant differences among the five groups. The Levene's Test indicated that the assumption of homogeneity of variance was met because the p value was not statistically significant, $F(4, 477) = .674, p = .610$.

Presented in Table 19 are the results of the analysis considering the effects of academic disciplines on the perspectives of faculty members toward accommodations for college students with ADHD. The results suggest that there were no statistically significant differences in the attitudes toward accommodations for college students with ADHD among the five groups, $F(4, 474) = .421, p > 0.05, \eta^2 = .004$. The academic disciplines did not significantly affect the faculty members' perspectives toward accommodations for college students with ADHD. Therefore, there was no need to conduct a post-hoc test to find out where the significant differences lie.

Table 19

One-Way ANOVA of Perspectives toward Accommodations by Academic Discipline

Source	<i>df</i>	F	η^2	<i>P</i>
Academic Disciplines	4	.421	.004	.794
Subjects Within Group (Error)	474			

Table 20

Descriptive Data by Academic Disciplines

Academic Disciplines	μ	SD	n
Humanities Colleges	36.10	5.64	170
Science Colleges	36.08	5.35	112
Health Colleges	36.34	5.66	125
Community Colleges	34.81	5.02	22
Female Colleges	35.70	5.00	50

Research Question 8

Is there a significant relationship between faculty members' perspectives toward accommodations for college students with ADHD and their assumption about students with ADHD?

The Pearson correlation test was conducted to answer this research question. The test assessed the relationship between the perspectives of faculty members toward accommodations for college students with ADHD and their assumption about students with ADHD. The results indicated that the correlation coefficient ($r = .225, p = .000$) was statistically significant. There was a weak positive relationship between the faculty members' perspectives toward accommodations for college students with ADHD and their assumption about those students, $r(477) = .225, p = .000$. The result suggested that as the scores of faculty members' perspectives toward accommodations for college

students with ADHD increase, their scores on the assumptions about students with ADHD tend to increase also. This indicated that faculty members with high scores (i.e., more accurate understandings of ADHD) on the assumptions about students with ADHD also tend to have high scores (i.e., positive perspectives) on the perspectives toward accommodations.

Table 21

Descriptive Statistics for the Continuous Variables

Variable	μ	SD	N
Perspectives toward Accommodations (X)	36.05	5.48	479
Assumption about Students with ADHD (Y)	13.25	2.56	479

Research Question 9

Is there a significant relationship between faculty members' perspectives toward accommodations for college students with ADHD and their perspectives regarding professional development provided at this institution?

A Spearman's rank-order correlation was used to answer the final research question. The Spearman's rank-order correlation assessed the relationship between faculty members' perspectives toward accommodations for college students with ADHD and their perspectives regarding the availability and usefulness of professional

development provided at KSU. The results indicated that the correlation coefficient ($\rho = .020, p = .660$) was not statistically significant. There was no relationship between the faculty members' perspectives toward accommodations for college students with ADHD and their perspectives regarding professional development provided at this institution, $\rho(477) = .020, p = .660$. This indicated that faculty members with high scores (i.e., positive perspectives) or low scores (i.e., negative perspectives) on the perspectives regarding professional development did not tend to have high scores (i.e., positive perspectives) or low scores (i.e., negative perspectives) on the perspectives toward accommodations.

Table 22

Descriptive Statistics for the Continuous Variables

Variable	μ	SD	N
Perspectives toward Accommodations (X)	36.05	5.48	479
Perspectives regarding Professional Development (Y)	13.25	2.56	479

CHAPTER IV

DISCUSSION

This chapter will start with a brief summary of the current study and its results. Then, the findings of the research questions will be discussed based on the existing literature. The researcher will also demonstrate the implications of research findings. The limitations of the current study and direction for future research are then presented in detail. Finally, this section will end with a conclusion that summarizes the major points of the current study.

Overview of the Study and Findings

The purpose of this study was to assess and identify differences among King Saud University (KSU) faculty members with regard to their perspectives toward the provision of accommodations for college students with ADHD. To collect data from participants, this study utilized a modification of “The Accommodation of University Students with Disabilities Inventory (AUSDI)” (Wolman et al., 2004). The questionnaire was developed online using Qualtrics and then distributed to the official email addresses for faculty members at KSU. A sample of 479 faculty members completed the online questionnaire. The number of participants in this study is consistent with or higher than the number of responses found in several Saudi studies conducted on KSU faculty members (e.g. Althoaihi, 2008; Alturki, 2010; Hussein, 2011).

After the KSU faculty members’ perspectives toward accommodations were compared across different groupings, the results indicated that gender, having a relative or family member with ADHD, academic rank, and academic disciplines did not affect

the perspectives of faculty members toward accommodations for college students with ADHD. There was also no correlation between the perspectives of faculty members toward accommodations for college students with ADHD and their perception regarding the availability and usefulness of professional development provided at KSU. However, the results suggested that nationality and previous teaching experience of students with ADHD did affect their perspectives toward accommodations for college students with ADHD. The Saudi faculty members were more positive toward accommodations for college students with ADHD than were non-Saudi faculty members. Similarly, the faculty members without previous teaching experience demonstrated more positive attitudes toward accommodations than did the faculty members with previous teaching experience. There was also a weak positive relationship between the faculty members' perspectives toward accommodations for college students with ADHD and their attitudes toward students with ADHD.

Discussion of Research Question Findings

The first result of this study indicated that faculty members generally demonstrated positive and similar perspectives toward instructional and examination accommodations for students with ADHD. This is consistent with the results of several studies examining the attitudes of American (e.g. Murray et al., 2008; Rush, 2011; Skinner, 2007; Lewis, 1998) and non-American participants (Alghazo, 2008; Wolman, 2004) regarding accommodations for college students with disabilities. For instance, Rush (2011) indicated that more than 90% of participants either agreed or strongly agreed to extend time for college students with ADHD in order for them to complete their

exams. Similarly, Skinner (2007) found that faculty members were willing to allow students with LD to tape record their lectures. This finding might be related to a requirement that KSU faculty members generally must complete their graduate education in developed countries (e.g. the United States and the United Kingdom). Thus, they might have been exposed to the fact that western institutions are committed to equality of educational opportunities for all students, including students with disabilities, for which the institutions provide academic accommodations and services for students with disabilities to ensure they have equal access to education and can fully participate in college life. In addition, some faculty members indicated that during their master's and doctorate programs they had classmates with disabilities who were able to successfully participate in the classroom activities and demonstrate what they had learned during exams after they received appropriate accommodations. For instance, a faculty member pointed out that having an interpreter (i.e., an instructional accommodation) in the classroom enabled his deaf classmate, to participate and successfully complete her class.

Moreover, the results of group comparisons revealed that there was a slight difference in this study between males and females on their perspectives toward providing accommodations for college students with ADHD; however, the difference was not statistically significant. This is consistent with several samples of previous research (Malangko, 2008; Rao, 2003; Vogel, 1999; Wolman, 2004; Zello, 1994). For instance, Wolman et al. (2004) conducted a study to assess university faculty members' willingness to provide accommodations and the results indicated no significant differences between males and females. Malangko (2008) also found that gender was not

significantly related to the willingness of community college faculty members to provide accommodations for students with LD. However, this finding differed from other research findings in the literature that found female faculty members were more willing than males to provide accommodations for students with a variety of disabilities (Joles, 2007; Lombard, 2011; Murray, 2008; Rush, 2011).

In contrast to the previous finding, the results of this study suggested that the nationality of faculty members affected their attitudes toward accommodations for college students with ADHD because the Saudi faculty members had higher positive perspectives toward such accommodations than did non-Saudi faculty members. A possible explanation is related to the finding in this study that there was a positive relationship between the perspectives of faculty members toward accommodations for college students with ADHD and their assumption about such students. The Saudi faculty members obtained higher scores (i.e. positive attitudes) on their assumption about students with ADHD than did non-Saudi faculty members. Therefore, their higher scores might have positively affected their scores on the perspectives toward accommodations. Another possible explanation for this is that accommodations may be prohibited for students with disabilities in their countries or they may believe that students with ADHD do not deserve accommodations. This is similar to reports by Wolman et al. (2004) who found that American university faculty members were more willing to provide accommodations for deaf or blind students than Mexican university faculty members were. However, Wolman et al. found no significant differences between the two groups on willingness to provide accommodations to students with LD, emotional problems, and

physical disabilities. Alghazo (2008) indicated that American and Jordanian faculty members did not significantly differ in their attitudes toward providing accommodations for students with disabilities.

The current study revealed an interesting finding related to the previous experience teaching students with ADHD. There was a significant difference between faculty members with previous teaching experience of students with ADHD and those without concerning their perspectives toward accommodations for college students with ADHD. Surprisingly, the faculty members without previous teaching experience were more positive toward provision of accommodations for college students with ADHD than were those with previous teaching experience. This finding is inconsistent with a previous study that found faculty members with previous experience with ADHD were more willing to accommodate these students than were those without (Rush, 2011). This finding also conflicted with other studies, which explored the effect of teaching students with LD (Malangko, 2008) or students with ADHD (Vance & Weyandt, 2008) on the faculty members' perception and willingness to provide accommodations. The studies found no significant effects of this variable. In one study, however, Rao (2003) found findings similar to the current study in which faculty members with no previous experience teaching students with disabilities were more willing to provide accommodations than were experienced faculty members. A possible reason for the current finding of this study is that the participants might have had unsuccessful experiences in teaching some students with ADHD. As a result, there is a possibility that such negative experiences might have negatively affected their perspectives toward

accommodations for students with ADHD. Another reason for this finding could be that dilatory students may have used ADHD as an excuse to get more time on exams or projects or to not be penalized for misspellings and poor grammar on tests.

Furthermore, the results revealed no significant differences between faculty members with a relative or family member with ADHD and those without regarding their perspectives toward accommodations for college students with ADHD. This would suggest that having a relative or family member with ADHD does not affect faculty members' perspectives toward accommodations for college students with ADHD. This finding is supported by a previous study conducted by Zello (1994) who found that personal contacts with students with LD (e.g., relatives) did not significantly affect faculty members' willingness to provide accommodations.

In this study, academic rank did not significantly affect perspectives toward accommodations for college students with ADHD. This was consistent with earlier studies that found no significant impact of rank (Alghazo, 2008; Rao, 2003; Skinner, 2007). However, Murray et al. (2008) and Vogel et al. (1999) found that instructors and assistant professors were more willing to provide accommodations than were those in the higher ranks.

Another interesting finding of the current study was that the academic disciplines did not significantly affect the faculty members' perspectives toward accommodations for college students with ADHD. This finding is inconsistent with several previous studies, in which academic disciplines did have a significant effect on the faculty members' willingness to provide accommodations for students with various disabilities (Lombardi

& Murray, 2011; Rao, 2003) and students with LD (Lewis, 1998; Nelson, 1990; Murray, 2008; Skinner, 2007; Vogel, 1999). In a recent study, Lombardi and Murray (2011) found that the faculty members in the College of Education demonstrated greater willingness to accommodate and adopt universal design principles for students with disabilities than did faculty members in the other colleges (i.e. Arts and Sciences, Business, Architecture and Allied Arts, Music and Dance, Journalism, and Honors). Similarly, in a study about college students with LD conducted by Murray et al. (2008) the results indicated that the faculty members in the College of Education were more willing to provide teaching and examination accommodations than were faculty members in other colleges such as Commerce and Liberal Arts and Sciences. Yet, some research studies found results similar to the present study in that the academic disciplines did not affect the number of accommodations that had been made (Zello, 1994) nor the attitudes and willingness of faculty members to make accommodations for students with disabilities (Alghazo, 2008; Malangko, 2008; Rush, 2011; Vance & Weyandt, 2008; Zello, 1994). For example, Rush (2011) conducted a study similar to the current study and found that academic disciplines did not influence the faculty members' willingness to provide accommodations for students with ADHD.

Turning now to the correlation between variables, the results indicated that there was a weak positive relationship between the perspectives of faculty members toward accommodations for college students with ADHD and their assumption about such students. This finding indicated that as the scores of faculty members' perspectives toward accommodations for college students with ADHD increase, their scores on the

assumptions about students with ADHD tend to increase also. The faculty members with high scores (i.e., more accurate understandings of ADHD) on the assumptions about students with ADHD also tend to have high scores (i.e., positive perspectives) on the perspectives toward accommodations. This is consistent with the previous research conducted by Alghazo (2008) which explored the relationship between Jordanian university faculty members' attitudes toward providing accommodations and their attitudes toward students with disabilities and found a weak positive relationship between these variables. However, this finding is inconsistent with previous American studies that found no significant relationship between these two variables. (Alghazo, 2008; Harmon, 1997; Lewis, 1998; Malangko, 2008; Rao, 2003; Zello, 1994).

The final finding of this study was that there was no significant correlation between the perspectives of faculty members toward accommodations for college students with ADHD and their perspectives regarding the availability and usefulness of professional development provided at KSU. This is both consistent and inconsistent with earlier findings. Vance and Weyandt (2008) and Malangko (2008) found that participation in previous disability training programs was not significantly related to faculty members' willingness to provide accommodations for students with ADHD and students with LD. Nevertheless, other studies indicated a significant effect of professional development on the willingness of faculty members to provide accommodations for students with a variety of disabilities (Joles, 2007; Lombard, 2011; Murray, 2009). For instance, Joles (2007) conducted a study to examine the attitudes of community college faculty members towards providing accommodations for students

with ADHD and LD and found professional development played a significant role.

Faculty members with additional training were more positive toward accommodations for these students than were those without previous training.

Implications of Research Findings

This study contributes to the literature by beginning to address the existing gap around the topic of providing accommodations to students with ADHD in Saudi Arabia.

The findings of this study could be used to guide the development and provision of support services and professional development programs at KSU and similar universities.

For example, the results of this study indicated that KSU faculty members, in general, held positive perspectives toward accommodations for students with ADHD. This would indicate that faculty members generally accept the idea of providing reasonable accommodations and might be ready to start doing so. However, willingness of faculty members to provide accommodations for students with disabilities does not mean they are guaranteed to do so. In fact, faculty members may need guidelines that regulate their relationships with students with disabilities. As a result, KSU may enact some legislation that details the rights of students with special needs who require faculty members to provide reasonable accommodations for students with disabilities. When faculty members are required to make such provisions, all students with special needs, regardless of the visibility of their disability, would receive equal access to education that depends on regulations instead of the willingness of faculty members.

In addition, the findings indicated that more than one-third of the participants (33%) neither agreed nor disagreed that students with ADHD are not able to develop

critical thinking skills. This would indicate that some faculty members might not have enough knowledge about students with ADHD. However, almost 60% of participants strongly disagreed or disagreed that KSU provided training to faculty or administrators about ADHD. Thus, this finding can lead to an initiative to create a professional development program for faculty members in order to improve their knowledge about students with ADHD and about reasonable accommodations for college students with special needs. This initiative may help to encourage faculty members to accept these students in their classrooms, to believe in their abilities to succeed, and to provide them reasonable accommodations.

Another way to increase the knowledge of faculty members about students with ADHD is to improve the website for the center for students with special needs at KSU. Review of the current website revealed that it contains insufficient information about students with a variety of disabilities. It mainly focuses on blind and deaf students. Therefore, this website might be improved to include information about students with hidden disabilities and their needs. This information may include, but is not limited to, an overview of disabilities (i.e. definitions, characteristics, needs, etc.), effective ways of teaching students with different types of disabilities, descriptions of practical accommodations, and frequently asked questions and answers about dealing with students with disabilities.

Finally, the establishment of student disability advocacy organizations may also serve to increase knowledge about students with disabilities and to support them on campus. For instance, these organizations could raise awareness of issues about students

with disabilities among other students and faculty members. They might also advocate for the rights of students with disabilities and support an inclusive environment for these students on the campus. Equally important, they may also advocate for effective instruction for students with disabilities. Another idea worth considering is that the student organizations arrange activities for students with disabilities and faculty members, where they can talk to each other about effective ideas to meet the students' needs and improve their academic skills. For instance, they could share their knowledge about evidence-based practices and how they could be used in the classroom. This group of students may also provide some opportunities for students with disabilities to meet with each other regularly in order to share their academic experiences about college life and successful academic strategies, and to support each other.

Limitations

This study revealed useful information about the perspectives of KSU faculty members toward accommodations for college students with ADHD, though there are some limitations to the findings of this study. The first limitation of this study is that the participants were faculty members at KSU. Therefore, the results are limited to this population and cannot be generalized to other faculty members in different universities in the same city nor faculty members across the nation. Second, the questionnaire instrument was sent to the official email addresses (i.e. @ksu.edu.sa) for KSU faculty members. However, faculty members at KSU are not required to use the official emails to communicate with others (e.g. students and colleagues). This means some faculty members may not have received the questionnaire instrument because they may not use

official KSU email or only seldom check their official emails. In addition, some faculty members may prefer hardcopy questionnaires, so participation in this study might be limited to those who accept on-line questionnaires. Another limitation of this study is that participation was on voluntary basis. Therefore, there is a possibility that participants may have more interest or knowledge about students with ADHD as well as accommodations for them than other faculty members who did not participate in the study. Moreover, the questionnaire instrument was only used to collect data from participants. For that reason, study results would reflect the self-reported perspectives of the participants rather than the real behavior of faculty members in the classroom. Thus, some participants may have responded positively to the survey items, but in reality, they might refuse to provide accommodations. Finally, this study focused on the perspectives of KSU faculty members toward the provision of accommodations only for college students with ADHD. Therefore, the results may not be generalized to other students with similar disabilities (e.g. LD and EBD) or other students with different disabilities (e.g. deaf students and blind students).

Future Research

This research study was conducted to examine faculty members' perspectives toward provision of accommodations for college students with ADHD at KSU. Additional research in this area is needed in order to advance our understanding about accommodations for college students with disabilities in Saudi Arabia. For instance, the findings reported in this study were from a small sample of faculty members at one Saudi university. Future research may consider replicating the current study but include a

larger number of participants and include faculty members from several Saudi universities. In addition, future researchers could include faculty members from different types of institutions such as private universities, technical colleges, and colleges of telecom and information. Perhaps future studies might look at differences in perspectives between faculty members from these universities and colleges (e.g. public universities vs. private universities; community colleges vs. universities, etc.). This study included only faculty members; therefore, future research might explore the perspectives of staff, typical students, and parents toward accommodations for students with disabilities.

Another area of research that may need future attention is the use of a variety of data collection methods (e.g. interviews, observations, and document analysis) instead of only using survey to collect data. Observations, for instance, would help future researchers compare between the self-reported perspectives of faculty members and their actual practices in the classroom. Interviews could also help future researchers to understand why several KSU faculty members with previous experience teaching students with ADHD held negative perspectives toward accommodations for these students. They might also support future researchers to find out the reasons behind the negative perspectives demonstrated by several non-Saudi faculty members in this study.

Since this study focused only on students with ADHD, future research may study the perspectives of Saudi university faculty members toward accommodations for students with other disabilities such as LD and EBD as well as deaf and blind students. In addition, future research may compare the willingness of faculty members to provide accommodations for students with visible and invisible disabilities. For instance, future

researchers might study the differences among faculty members concerning their perspectives toward accommodations for students with ADHD and blind students and discover how the visibility of disability might affect faculty members' perspectives toward accommodations.

Finally, and more importantly, future research could go further to examine the effect of in-service training programs on the attitudes of faculty members toward students with disabilities and accommodations for these students. For instance, some researchers may offer training programs (e.g. workshops) about college students with disabilities and then assess how these programs can change negative perspectives of faculty members about students with disabilities. This effort could also provide an opportunity to study the effects of several independent variables such as attitudes toward students with disabilities, knowledge of disability, and the relationship between these variables and perspectives toward accommodations for students with disabilities.

Conclusion

This study assessed the perspectives of KSU faculty members concerning accommodations for students with ADHD. The results showed that no significant differences were found between KSU faculty members based on gender, having a relative or family member with ADHD, academic rank, and academic disciplines. However, two variables (i.e. nationality and previous teaching experience of students with ADHD) revealed significant differences between KSU faculty members in favor of Saudi faculty members and those without previous teaching experience of students with ADHD. With regard to the relationship between variables, the current study found no relationship between the perspectives of KSU faculty members toward accommodations for college students with

ADHD and their perspectives regarding the availability and usefulness of professional development provided at KSU. Nevertheless, a weak positive correlation was found between the perspectives of KSU faculty members toward accommodations for college students with ADHD and their attitudes about students with ADHD. Finally, several implications of findings, limitations of the current study, and future research were discussed.

APPENDIXES

APPENDIX A

SUMMARY OF PREVIOUS QUESTIONNAIRE INSTRUMENTS ON FACULTY

MEMBERS' ATTITUDES AND WILLINGNESS TO PROVIDE

ACCOMMODATION

Appendix A

Summary of Previous Questionnaire Instruments on Faculty Members' Attitudes and Willingness to Provide Accommodation

No.	Study	Source	Number of factors or categories	Number of items	Number of response options	Reliability
1	Goodin (1984)	Literature review	One	25	Three (strongly advocate it, would not advocate it but felt it is acceptable if requested, or detrimental to the development of students and/or the integrity of the university would be jeopardized)	No
2	Matthews et al. (1987)	Goodin (1984)	Six	23	Three (would, would not, or did not know)	No
3	Nelson et al. (1990)	Matthews et al. (1987)	Four	18	Two (would or would not)	No
4	Zello (1994)	Nelson et al. (1990)	Three	23	Two (Wiling to or have done)	No
5	Harmon (1997)	Matthews et al. (1987)	One	23	Six The first three (i.e., would, would not, and do not know) The second three (i.e., asked and provided it, asked and did not provide it, and never asked before to provide it)	No

6	Lewis (1998)	Matthews et al. (1987) Nelson et al. (1990)	Four	22	Two (would or would not)	Yes Ranged from .18 to .66
7	Vogel (1999)	(Leyser, 1989)	Two	19	4-point Likert type scale (“unwillingness to accommodate” or “very low level of agreement”) to 4 (“willingness to accommodate” or “very high level of agreement”)	Yes Overall = .86 1 st category = .75 2 nd category = .80
8	Rao (2003)	Matthews et al. (1987) Nelson et al. (1990) Lewis (1998)	One	18	Two (would or would not)	Yes Overall = .68
9	Wolman et al. (2004)	Literature review	Seven	45	No information	Yes Ranged from .61 to .92
10	Skinner (2007)	By the researcher	Two	17	A 5-point Likert scale ranging from 1 (very unwilling or strongly disagree) to 5 (very willing or strongly agree)	No
11	Alghazo (2008)	Upton (2000)	Two	Eight	A 4-point Likert scale ranging from 1 (i.e., strongly disagree or unfair) to 4 (i.e., strongly agree or fair)	Yes Overall for Arabia = .88 Overall for English = .85

12	Murray (2008)	Literature review	12	34	A 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree)	Yes Ranged from .65 to .89
13	Lombardi and Murray (2011)	Murray et al. (2008) and others	Eight	39	A 6-point Likert scale (1= strongly disagree to 6= strongly agree)	Yes Overall = .88 Ranged from .65 to .85 for the eight factors

APPENDIX B

ENGLISH INFORMED CONSENT FORM TO PARTICIPATE IN THE

RESEARCH

Appendix B

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Informed Consent to Participate in a Research Study

Study Title: Perspectives of King Saud University Faculty Members toward Accommodations for Students with Attention Deficit-Hyperactivity Disorder (ADHD)

Principal Investigator: Abdulkarim Alhossein

You are being invited to participate in a research study. This consent form will provide you with information on the research project, what you will need to do, and the associated risks and benefits of the research. Your participation is voluntary. Please read this form carefully. It is important that you ask questions and fully understand the research in order to make an informed decision.

Purpose: The purpose of the study to assess King Saud University faculty members' perspectives toward provision of accommodations for college students with ADHD

Procedures

If you choose to participate in this study, I would like you to respond to several statements regarding your perspectives toward accommodations for students with ADHD, assumptions about students with ADHD, and professional development offered by the university. If you choose to participate, the survey will take between 10 and 15 minutes to complete.

Benefits

This research will not benefit you directly. However, your participation in this study will help King Saud University to better understand how the faculty members view the provision of educational accommodations for students with ADHD.

Risks and Discomforts

There are no anticipated risks involved in participating in this research.

Privacy and Confidentiality

No identifying information will be collected in this study.

Voluntary Participation

Taking part in this research study is entirely up to you. You may choose not to participate or you may discontinue your participation at any time without penalty or loss of benefits to which you are otherwise



entitled. You will be informed of any new, relevant information that may affect your willingness to participate in this study.

Contact Information

If you have any questions or concerns about this research, you may contact Abdulkarim Alhossein at 001-330.672.0452 or Dr. Lyle Barton at 001-330.672.0452. This project has been approved by the Kent State University Institutional Review Board. If you have any questions about your rights as a research participant or complaints about the research, you may call the IRB at 330.672.2704.

If you understand the statements above and freely consent to participate in this study, click on the "I Agree" button to start the survey.

I Agree

I Do Not Agree

APPENDIX C

ENGLISH VERSION OF THE QUESTIONNAIRE INSTRUMENT

Appendix C

English Version of the Questionnaire Instrument

Perspectives of University Faculty Members toward Accommodations for Students with
Attention deficit-hyperactivity disorder (ADHD)

Part one: Demographic information

Please read the following questions and choose the appropriate answer that best describes you:

What is your gender? Male, Female. What is your Age?

What is your nationality? Saudi, Non-Saudi

What is your academic rank?

Teaching Assistant, Lecturer, Assistant professor, Associate professor, Full professor.

What is your academic discipline?

Humanities Colleges, Science Colleges, Health Colleges, Community Colleges, Female Colleges

Do you have previous teaching experience with students with ADHD? Yes, No

Do you have a relative or family member with ADHD? Yes, No

Part two:

Please carefully read each of the following items and select the option that you view as the best answer.

Items	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
2A: Perspectives toward accommodations for college students with ADHD					
1. I would provide additional time to complete exams for students with ADHD.					
2. I would not provide alternative written exams (e.g., multiple-choice instead of essay tests) for students with ADHD.					
3. I would allow students with ADHD to take oral exams instead of written exams.					
4. I would not allow misspellings, incorrect punctuation, and poor grammar, on tests without penalizing for students with ADHD.					
5. I would allow students with ADHD to take proctored exams in a supervised location.					
6. I would extend deadline for completion of projects or papers for students with ADHD.					
7. I would provide copies of lecture notes for students with ADHD.					
8. I would not allow students with ADHD to tape record lecture.					
9. I would not allow student with ADHD to give oral					

presentations instead of written projects.					
10. I would allow student with ADHD to have note-takers.					
2B: Assumptions about students with ADHD					
1. Having a few students with ADHD in my class may jeopardize the quality of instruction.					
2. Having a note-taker in my class could be distracting for the other students and/or myself.					
3. Students with ADHD are not able to develop critical thinking skills as well as other students.					
4. Many people with ADHD expect special treatment.					
2C: Professional development					
1. In the last five years, my institution has provided training to faculty or administrators about students with ADHD.					
2. In the last five years, my institution has provided me with written information about accommodating students with ADHD.					
3. My institution has a written policy that addresses the needs of students with ADHD.					
4. My institution has an office specifically designated to					

meet the needs of students with ADHD.					
5. My institution has an e-mail bulletin board that provides information about services for students with ADHD.					
6. Disability service staff has assisted me at least once in providing accommodations for students with ADHD.					

APPENDIX D

ARABIC INFORMED CONSENT FORM TO PARTICIPATE IN THE

RESEARCH

APPENDIX D

ARABIC INFORMED CONSENT FORM TO PARTICIPATE IN THE RESEARCH

الموافقة الواعية على المشاركة في دراسة بحثية

عنوان الدراسة: وجهات نظر أعضاء هيئة التدريس بجامعة الملك سعود حول احتواء و تقديم الدعم الأكاديمي للطلبة ذوي فرط الحركة وتشتت الانتباه

الباحث الرئيسي: عبدالكريم الحسين

انت مدعو للمشاركة في دراسة بحثية حول احتواء وتقديم الدعم الأكاديمي للطلبة ذوي فرط الحركة وتشتت الانتباه. نموذج الموافقة هذا سوف يزودك بالمعلومات الأساسية عن الدراسة، وما تحتاج عمله لإكمال استبانة البحث، وكذلك الفوائد والأخطار المترتبة على المشاركة في هذا الدراسة. مشاركتك في هذه الدراسة اختيارية. أمل التكرم بقراءة هذا النموذج بعناية للتمكن من اتخاذ قرار واعي حيال مشاركتك في هذه الدراسة.

هدف الدراسة: الهدف من هذه الدراسة هو التعرف على وجهات نظر أعضاء هيئة التدريس بجامعة الملك سعود حول احتواء وتقديم الدعم الأكاديمي للطلبة ذوي فرط الحركة وتشتت الانتباه.

الطريقة: اذا اخترت المشاركة في هذه الدراسة أمل التكرم بقراءة كل عبارة من العبارات المصنفة تحت ثلاثة محاور: (١) وجهات النظر حول احتواء وتقديم الدعم الأكاديمي للطلبة ذوي فرط الحركة وتشتت الانتباه. (٢) الافتراضات حول هؤلاء الطلبة. (٣) التطوير المهني المقدم من قبل الجامعة لمساعدة أعضاء هيئة التدريس بالجامعة على احتواء وتقديم الدعم الأكاديمي لهذه الفئة من الطلاب. في حال اخترت المشاركة في هذه الدراسة فإن إكمال استبانة البحث يتطلب ما بين ١٠ إلى ١٥ دقيقة.

الفوائد: هذه الدراسة لن تفيدك بشكل مباشر، ولكن مشاركتك فيها سوف تساعد القائمين على خدمة ذوي الاحتياجات الخاصة بجامعة الملك سعود على الفهم بشكل أفضل لرؤية أعضاء هيئة التدريس بالجامعة لاحتواء وتقديم الدعم الأكاديمي للطلبة ذوي فرط الحركة وتشتت الانتباه.

المخاطر والصعوبات: ليس هناك أخطار محتملة لمن يرغب للمشاركة في هذه الدراسة.

خصوصية المشاركين: في هذه الدراسة لن يتم جمع معلومات محددة تساعد على التعرف على هوية المشاركين.

المشاركة التطوعية أو الاختيارية: المشاركة في هذه الدراسة اختيارية لذا بإمكانك عدم المشاركة أو التوقف عن إكمال استبانة البحث في أي وقت دون التعرض للعقاب أو فقدان بعض الفوائد التي أنت محول للحصول عليها دون المشاركة في هذه الدراسة. سوف يتم تزويدك بأي معلومات جديدة لها علاقة بالتأثير على مشاركتك في هذه الدراسة.

معلومات الاتصال: اذا كانت لدي اسئلة حول هذا البحث يمكنك الاتصال بالباحث الرئيسي او الدكتور لائل بارتن على الرقم ٠٠١٣٣٠٦٧٢٠٤٥٢. كما يجدر التنبيه على ان هذا البحث قد تم إجازته من قبل لجنة أخلاقيات البحث العلمي بجامعة كنت ستيت الحكومية. اذا كان لديك أي اسئلة حول حقوقك كمشارك في هذا البحث او تود التقدم بشكوى فيمكنك الاتصال بلجنة أخلاقيات البحث العلمي بالجامعة على الرقم ٠٠١330.672.2704.

اذا كنت قد استوعبت العبارات السابقة، وقررت المشاركة في هذا البحث أمل التكرم بالنقر على زر الموافقة لبدأ الاستبيان.

غير موافق

موافق

APPENDIX E

ARABIC VERSION OF THE QUESTIONNAIRE INSTRUMENT

APPENDIX E

ARABIC VERSION OF THE QUESTIONNAIRE INSTRUMENT

وجهات نظر أعضاء هيئة التدريس بالجامعة حول احتواء وتقديم الدعم الأكاديمي للطلبة الذين يعانون من اضطراب فرط الحركة

وتشتت الانتباه

القسم الأول: المعلومات الشخصية

يرجى اختيار أو كتابة الإجابة التي تنطبق عليك:

الجنس: ذكر. أنثى. العمر: الجنسية: سعودي. غير سعودي.

الرتبة الأكاديمية: معيد، محاضر، أستاذ مساعد، أستاذ مشارك، أستاذ دكتور

المجال الأكاديمي: كليات العلوم الإنسانية، كليات العلوم، الكليات الصحية، كليات المجتمع، الكليات النسائية

هل لديك تجربة سابقة في تدريس طلبة يعانون من اضطراب فرط الحركة وتشتت الانتباه؟ نعم لا

هل لديك أحد من أفراد الأسرة أو الأقارب مشخص باضطراب فرط الحركة وتشتت الانتباه؟ نعم لا

القسم الثاني:

الرجاء قراءة البنود التالية بعناية واختيار ما تراه الخيار الأفضل برأيك.

البند	أوافق بشدة	أوافق	محايد	لا أوافق	لا أوافق بشدة
المحور الأول: وجهات نظر أعضاء هيئة التدريس حول احتواء وتقديم الدعم الأكاديمي لطلبة الجامعة الذين يعانون من اضطراب فرط الحركة وتشتت الانتباه					
١. سأقوم بإعطاء وقت إضافي للطلبة الذين يعانون من اضطراب فرط الحركة وتشتت الانتباه					
٢. لن أقوم بإعطاء اختبارات بديلة (على سبيل المثال أسئلة اختيارية عوضاً عن الأسئلة المقالية) للطلبة الذين لديهم اضطراب فرط الحركة وتشتت الانتباه					
٣. سأسمح للطلبة الذين لديهم اضطراب فرط الحركة وتشتت الانتباه بأخذ اختبارات شفوية بدلاً من التحريرية					

					٤. لن أتجاوز عن الضعف النحوي والأخطاء الإملائية وعلامات الترقيم التي يقع فيها الطلبة الذين لديهم اضطراب فرط الحركة وتشتت الانتباه
					٥. سأسمح للطلبة الذين لديهم اضطراب فرط الحركة وتشتت الانتباه بأخذ اختباراتهم في مكان خارج الفصل الدراسي ويتوفر فيه الإشراف الفردي
					٦. لا مانع من تمديد الموعد النهائي لتسليم الأوراق البحثية والمشاريع للطلبة الذين لديهم اضطراب فرط الحركة وتشتت الانتباه.
					٧. سأقوم بتزويد الطلبة الذين لديهم اضطراب فرط الحركة وتشتت الانتباه بنسخة مكتوبة للملاحظات المتعلقة بالمحاضرة
					٨. لن أسمح للطلبة الذين لديهم اضطراب فرط الحركة وتشتت الانتباه بتسجيل محاضراتي.
					٩. لن أسمح للطلبة الذين لديهم اضطراب فرط الحركة وتشتت الانتباه بتقديم عروض شفوية عوضاً عن الأوراق البحثية المكتوبة.
					١٠. سأسمح للطلبة الذين لديهم اضطراب فرط الحركة وتشتت الانتباه بإحضار شخص لتسجيل الملاحظات لهم.
المحور الثاني: افتراضات حول الطلبة الذين لديهم اضطراب فرط الحركة وتشتت الانتباه					
					١. وجود بعض الطلبة الذين لديهم اضطراب فرط الحركة وتشتت الانتباه في قاعة الدراسة قد يعرض جودة الدرس للخطر.
					٢. السماح بوجود شخص لتسجيل الملاحظات قد يسبب تشتيت الانتباه لي ولبقية الطلبة
					٣. الطلبة الذين لديهم اضطراب فرط الحركة وتشتت الانتباه غير قادرين على تطوير مهارات التفكير النقدي
					٤. العديد من الطلبة الذين يعانون من اضطراب فرط الحركة وتشتت الانتباه يتوقعون معاملة خاصة لهم.
المحور الثالث: التطوير المهني					

					١. خلال السنوات الخمس الماضية، قامت الجامعة بتوفير التدريب اللازم لأعضاء هيئة التدريس والإداريين حول طرق التعامل مع الطلبة ذوي اضطراب فرط الحركة وتشتت الانتباه
					٢. خلال السنوات الخمس الماضية، قامت الجامعة بتزويد أعضاء هيئة التدريس بتعليمات خطية حول عملية احتواء وتقديم الدعم الأكاديمي للطلبة ذوي اضطراب فرط الحركة وتشتت الانتباه
					٣. تسيير الجامعة وفق سياسة مكتوبة لتلبية احتياجات الطلبة الذين يعانون من اضطراب فرط الحركة وتشتت الانتباه
					٤. لدى الجامعة مكتب خاص لتلبية احتياجات الطلبة الذين يعانون من اضطراب فرط الحركة وتشتت الانتباه
					٥. لدى الجامعة قائمة بريدية لعرض الخدمات المتوفرة للطلبة الذين يعانون من اضطراب فرط الحركة وتشتت الانتباه
					٦- قام موظفو خدمات ذوي الاحتياجات الخاصة بمساعدتي مرة واحدة على الأقل في احتواء ومد يد العون للطلبة الذين يعانون من اضطراب فرط الحركة وتشتت الانتباه

APPENDIX F
CERTIFICATES OF ACCURATE TRANSLATION OF THE QUESTIONNAIRE
INSTRUMENT

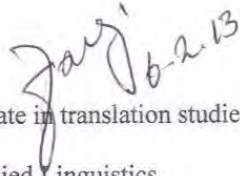
APPENDIX F

Certificates of Accurate Translation of the Questionnaire Instrument

To whom it may concern,

In my capacity as a PhD translation student and an Arabic/English accredited translator, I certify that the English-Arabic translation of the above text (A survey titled ““Perspectives of University Faculty Members toward Accommodations for Students with Attention deficit-hyperactivity disorder (ADHD)” submitted by Abdulkarim Alhossein) is true and correct.

Fawzi Hamed



Doctoral candidate in translation studies

Institute of Applied Linguistics

Kent State University

To whom it may concern,

This is to certify that the Survey Translation of Research Study title (Perspectives towards Accommodation for Students with Attention deficit-hyper Disorder (ADHA)), is true, clear and complete from the original English into Arabic. I wrote this certificate upon the researcher's, Abdulkarim Alhossein, request without any legal obligation at my side.

If you have any further queries, please do not hesitate to contact me at 330 389 5999 or malbatin@kent.edu

Mohammed Bataineh
PhD Student in Translation Studies, KSU
1583 Athena Dr.
Kent
OH

APPENDIX G

KENT STATE UNIVERSITY INSTITUTIONAL REVIEW BOARD APPROVAL

APPENDIX G

Kent State University Institutional Review Board Approval



Abdulkarim Alhossein <aalhosse@kent.edu>

IRB Level I, category 2 approval for Protocol application #13-288 - please retain this email for your records

RAGS Research Compliance <researchcompliance@kent.edu> Tue, Jun 11, 2013 at 3:43 PM
To: "aalhosse@kent.edu" <aalhosse@kent.edu>, "BARTON, LYLE" <lbarton@kent.edu>

RE: Protocol #13-288 - entitled "Perspectives of King Saud University Faculty Members toward Accommodations for Students with Attention Deficit-Hyperactivity Disorder (ADHD)"

I am pleased to inform you that the Kent State University Institutional Review Board has reviewed and approved your Application for Approval to Use Human Research Participants as Level I/Exempt research. This application was approved on **June 11, 2013**. Your research project involves minimal risk to human subjects and meets the criteria for the following category of exemption under federal regulations:

- Exemption 2: Research involving the use of educational tests, surveys, interviews, or observation of public behavior.

****Submission of annual review reports is not required for Level 1/Exempt projects.*

If any modifications are made in research design, methodology, or procedures that increase the risks to subjects or includes activities that do not fall within the approved exemption category, those modifications must be submitted to and approved by the IRB before implementation. Please contact the IRB administrator to discuss the changes and whether a new application must be submitted. *It is important for you to also keep an unstamped text copy (i.e., Microsoft Word version) of your consent form for subsequent submissions.*

Kent State University has a Federal Wide Assurance on file with the Office for Human Research Protections (OHRP); FWA Number 00001853.

If you have any questions or concerns, please contact me by phone at 330-672-2704 or by email at Pwashko@kent.edu.

Respectfully,

Kent State University Office of Research Compliance

224 Cartwright Hall | fax 330.672.2658

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For links to obtain general information, access forms, and complete required training, visit our website at www.kent.edu/research.

APPENDIX H

LETTER OF APPROVAL TO CONDUCT THE RESEARCH AT KING SAUD

UNIVERSITY

APPENDIX G

Letter of Approval to Conduct the Research at King Saud University

Kingdom of Saudi Arabia
Ministry of Higher Education
King Saud University
Code 034
College of Education
Dean's Office

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ
المملكة العربية السعودية
وزارة التعليم العالي
جامعة الملك سعود
رمزها ٠٣٤
كلية التربية
مكتب العميد

Date: ١٤٣٤/٧/١٤ التاريخ No.: ٣/٨/٤٤٣٥٥٠٠ الرقم

سعادة وكيل الجامعة للدراسات العليا والبحث العلمي
يحفظه الله
السلام عليكم ورحمة الله وبركاته

أفيد سعادتكم أن المعيد المبتعث بقسم التربية الخاصة/ عبد الكريم بن حسين الحسين
يقوم بإعداد دراسة بعنوان (وجهات نظر أعضاء هيئة التدريس الذين يعانون من اضطراب فرط
الحركة وتشتت الانتباه).
وبناءً على رغبته في تطبيق الاستبانة (المرفقة) على عينة من أعضاء هيئة التدريس في
جامعة الملك سعود.
عليه أمل من سعادتكم التكرم بالموافقة، وتسهيل مهمته.
شاكراً ومقدراً لسعادتكم حسن اهتمامكم.
وتقبلوا فائق تحياتي وتقديري ،،،

عميد كلية التربية
د. طارق بن صالح الرئيس

مح جرائمه

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