

QUALITY OF LIFE OF STUDENTS WITH DISABILITIES ATTENDING JORDANIAN UNIVERSITIES

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In spite of increasing number of students with disabilities in universities, there is limited research on quality of life of these students. This study aimed to identify the quality of life level of undergraduate students with disabilities at Jordanian universities. The sample consisted of (147) students. A quality of life scale was constructed, then it was validated, and then it was administrated to the sample of the study. Results revealed that students with disabilities have a medium level of quality of life expressed in a total score of (3.48), meanwhile, the highest mean was for religious and spiritual domain (4.4) and the lowest mean was for cognitive / mental domain (2.93). Results also revealed no statistically significant differences in all domains of the scale and the total score due to disability type or severity. In addition, there are statistically significant differences in the total score due to gender in favor of females.

There has been an increased interest during recent years in the concept of quality of life (QoL) and it has become the purpose of research for psychologists, sociologist, physicians and philosophers (Moons, Budts & De Geest, 2006; Rēklaitiene, Karpavčiūė, & Požėrienė, 2010). Wagner (2000) identified six visions of a better future for individuals with disabilities; one of these important visions was quality of life (Taylor, Richards, & Brady, 2005).

There is a wide agreement that QoL is a vague concept, which is difficult to define. There is superfluity of definitions in existence; there is no concordant definition (Ball, et al., 2000; Frytak, 2000; Tsonis, McDougall, & Irwin, 2012). McDowell and Newell (1996) described the term as *intuitively familiar* (p.382), suggesting that everyone supposes that they know what it means; whereas, in actuality its meaning differs between persons (Counrey, & Duggan, 2003). Previously, the term was known as *life satisfaction* or the term *subjective well-being* was used instead of QoL (Rimmerman, & Crossman, 2004).

According to the definition of quality of life (QL) presented by World Health Organization WHO (*World Health Organization Quality of Life Group, 1998*), *QoL is defined as individuals perceptions of their position in life in the context of culture and value system in which they live and in relation to their goals, standards, and concerns* (p. 1570). Furthermore, quality of life is a comprehensive evaluation of the actual conditions of the one's life. Primary, it is a subjective perception of well-being, which includes physical, psychological and spiritual dimensions (Frytak, 2000; McDowell, 1996). It is satisfaction with one's living conditions (residential and work environment), with various other aspects of lifestyle, material well-being, social organization of society, cultural and spiritual life, relations with nearest people, with community and self-expression opportunities (Oleson, 1990).

A person's assessment of the life's satisfaction involves the degree of importance for a given domain for the person, and the degree of personal satisfaction with that domain (Rimmerman, & Crossman, 2004). Quality of life is closely connected with various spheres of life: physical, psychological, environmental, social relations, and a person's health (Rotstein, Barak, Noy, & Achiron, 2000). Definitions of QoL include both objective and subjective components (Ball, et al., 2000; Frytak, 2000).

Consequently, the expansive range of instruments used to measure QoL tend to fall into three broad categories; those which focus on objective indices, such as economic circumstances, housing, and functional status; those which measure purely subjective aspects, such as moral, happiness, and life satisfaction; and those which contain both objective and subjective dimension, such as health related quality of life (HRQL) measures (McDowell, 1996). Because of the absence of a cohesive definition and the subjective nature of this concept, the choosing of a QoL measure tends to reflect the conceptual bias of the researcher (McDowell, 1996; Arnold, 1991; Counrey, & Duggan, 2003).

Educational literature mentioned many factors that influence QoL, such as employment variables including years of seniority, monthly income and participating in non-employment activities, disability severity: percentage of medical disability (an objective measure) or person's perception of his/her severity of disability (subjective measure) (Rimmerman & Crossman, 2004). In addition, Skucas and Mockeviciene (2009) mentioned other variables: age, gender, physical activities and the level of injury. Meanwhile, Rubin and Roessler (2001) stated variables such as, rehabilitation, vocational training, and employment. Buchanan (2011) stated that research documented several demographic measures that been found related to psychological well-being, including, race, socio-economic status and academic achievement.

There is increasing number of students with disabilities at universities (Fichten et al., 2003; Buchanan, 2011; Newman, Wagner, Cameto, & Knokey, 2009). Research indicated that these students face difficulties in attaining a job, low level of independence, and low quality of life level after graduation (Doren, & Benz, 2001; Lindstrom & Benz, 2002; Madaus, 2005; Dowrick, Anderson, Heyer, & Acosta, 2005). In addition, transition to higher education and to work formulated challenge for all individuals. Moreover, research showed that students with disabilities are considered a minority that faces many constraints that limit their full involvement in university education (Erten, 2011). This growing population warrants a better understanding of its specific needs. However, there is limited research on students with disabilities in postsecondary institutions (Jorgensen, Fichten, Havel, Lamb, James, & Barile, 2005).

Research studies that investigate QOL of individuals with disability have been growing in recent years. For instance, in a study of 98 adults with multiple sclerosis (MS), Bishop, Stenhoff and Shepard (2007) found that, in spite of fatigue and limitations of MS, many participants indicated a high level of quality of life. Roberts, Macmath, Martin and Sigalet (2006) conclude that Pectus excavatum (funnel-chest) had a negative consequence on quality of life. After the Nuss procedure, all spheres of adolescent quality of life improved. Similarly, Roberts, Massie, Mortimer and Maxwell (2005) examined quality of life of students with congenital heart disease. Result indicate that to optimize the school experiences of these students, medical and school professionals who work with must consider the Five C s: communication, confidentiality, consistency, competence, and compassion.

Mayton (2005) conducted a pilot qualitative case study to investigate how QOL of a student with Asperger's syndrome was affected by her placement in an inclusive education alternative which didn't provide any specialized social skills instruction. Results showed participant satisfaction with physical safety, teacher acceptance, and access to needed materials. Meanwhile, Miller and Dishon (2006) explored the impact of patient characteristics of disability, gender and employment statuses health-related quality of life (HRQOL) in multiple sclerosis (MS). Results showed that the level of QOL of MS patients is lower than healthy individuals. While employed have higher QOL than unemployed, the former are more affected by physical disability. Noy, Kaigang, Xia, Nattiporn, and Bock-Hee (2009) conducted a study aiming to examine the association between hopeless feelings, suicidal behavior and spheres of the WHO Quality-of-Life-BREF spheres among college students (n=1,217) in Korea, Thailand, and China. Results showed that most spheres of the QOL were significantly associated with hopeless feelings among Chinese, Thai, and Korean students. Also, all spheres were significantly connected with suicidal behavior among students except the psychological sphere among Thai students.

In their study, Skucas and Mockeviciene (2009) concluded that age, gender and physical activity have an influence on QOL of individuals with a spinal cord injury. The duration of the injury didn't have an essential influence on QOL of these persons. Additional research by Rēklaitiēne, Karpavčiūtė and Požėrienė (2010) examined QOL of individuals with hearing impairment. By using the general WHOQL- instrument, quality of life of 18-years old individuals with hearing impairment as well as individuals without disabilities was assessed. The conclusion is that individuals with hearing impairment

perceive their social relationships, general life and health quality spheres higher than individuals without disabilities.

In another study, Erten (2011) conducted a qualitative study, aimed at specifying perspectives of students with disabilities studying at a postsecondary institution in Canada. Both individual characteristics, such as disability conditions, and contextual factors including attitudes of faculty members and peers were reported as challenges affecting students' full involvement in university life.

In a study of psychological well-being of college students with Attention Deficit/Hyperactivity Disorder (ADHD) Buchanan (2011) conducted a study to a (317) undergraduate students at a Southern University. Students with self-reported ADHD had lower scores on total well-being, environmental mastery, personal growth, and purpose in life. They reported comparable levels of autonomy, self-acceptance, and positive relations with others. Findings suggested that students who reported an ADHD diagnosis were similar to other students in their perceptions of well-being, but perceived more difficulties in their organizational and goal-oriented competencies.

In a more recent study, Filce and Laverne's (2012) study aimed at identifying the effect of a one-week residential program on 89 individual with bowel and/or bladder dysfunction in QOL. Results indicated that the health-related independence domain of Knowledge about Your Condition and quality of life domain of Self were significantly impacted and were sustained 2-4 months after the program. Additional research by Tsonis, McDougall and Irwin (2012) was conducted to examine QOL of individuals who were childhood cancer survivors. Researchers used Grounded Theory to analyze in-depth interviews. Findings indicate that participants use a process of specific procedures and intervening conditions to deal with impacts and effects, resulting in life enjoyment, or good QOL. The identification of this process has led to an emergent theory titled Interrelated Processes toward Quality of Life Theory.

Significance of the Study

Educational literature considers QoL as a current trend in special education and its final goal. However, there is no Arabic or Jordanian study that has been conducted to investigate this concept, this necessitates conducting research to identify QoL of persons with disabilities in general, or undergraduate students with disabilities attending universities in specific. In spite of the increasing number of students with disabilities in Jordanian universities, there has been few research that examining the in-depth status of undergraduate students with disabilities, including hearing, visual and physical disabilities. Yet, this phase is considered crucial for transition to adulthood and prepares students for future career.

Furthermore, educational literature and practitioner notices indicate that students with disabilities suffer from the lack of services, opportunities, and a lot of problems in variance aspects of QoL emergent from disability condition. Through QoL, we will provide insights into the level of QoL of these students.

Overall, this paper describes results of a survey aimed to examining the level of quality of life of undergraduate students with disabilities in Jordanian universities. This study attempted to answer the following questions:

1. What is the level of quality of life of undergraduate students with disabilities in Jordanian universities?
2. Do the level of quality of life of undergraduate students with disabilities in Jordanian universities differ due to student's gender, type of disability, and severity of disabilities?

Methods

Participants and Settings

Study sample was assigned by contacting the deanship of students' affairs to obtain a list of all students with disabilities (n=200) who attending three Jordanian universities during the academic year of 2012/2013. Purposeful sample was used to choose all students with disabilities who are in contact with the deanship of students' affairs (n=147). Table 1 reflects distribution of participants.

Table 1: Distribution of Participants According to Gender, Education Level, Years of Experience and Type of Disability

<i>Variable</i>	<i>N (%)</i>
Gender	
<i>Males</i>	84 (57.1%)
<i>Females</i>	63 (42.9%)
Type of disability	
<i>Hearing Disabilities</i>	35 (25.7%)
<i>Visual disabilities</i>	41 (30.1%)
<i>Physical Disabilities</i>	57 (41.9%)
Severity of disability	
<i>mild</i>	29 (19.7%)
<i>moderate</i>	62 (42.2%)
<i>sever</i>	56 (38.1%)
Academic level	
<i>1</i>	31 (21.1%)
<i>2</i>	37 (25.2%)
<i>3</i>	42(28.6%)
<i>4</i>	32 (21.8%)
<i>More than 4</i>	5 (3.4%)
Marital status	
<i>Never Married</i>	130 (88.4%)
<i>Widowed</i>	3 (2.0%)
<i>Divorced</i>	4(2.7%)
<i>Married</i>	10 (6.8%)

Instrumentation and Implementation

QoL scale was developed to identify the level of quality of life of undergraduate students with disabilities in Jordanian universities. This scale was consisted of two sections: Part I required students to provide demographic information by placing a check mark next to items that applied. Part II prepared to gather information about students' perception about the level of quality of life, this section was consisted of six dimensions, covering (69) items. These dimensions are: physical (1-16), psychological (17-33), cognitive (34-40), social (41-53), spiritual and religious (54-61) and university life domain (62-69). Then an individual meeting is made with students, and items are recited to them to choose the answer, which corresponds with their perception of QoL levels, at a 5 point Likert-type scale, (ranged from (1) indicating *never*; to (5) indicating *always*).

To investigate the validity for the survey, ten experts and reviewers were asked to review items and provide feedback to authors. All reviewers' comments and suggestions were taken into consideration and were incorporated in the final survey. To add more validity to the construct of the survey, person correlation matrix was also used. The correlation among all the dimensions of scale and the total score ranged from (0.32-0.80) which was significant at 0.05. Reliability indicators were determined by using Cronbach's alpha, the coefficient alpha statistics was 0.86, reflecting good levels of internal consistency.

The implementation process included contacting the deanship of students' affairs in 3 universities to provide a list of students with disabilities studying in these universities and to facilitate the implementation process. Then the sample was selected purposefully. Survey instruments were filled later on. Then data were entered and analyzed.

Data Analysis

Data were entered and analyzed using the Statistical Package for the Social Sciences (SPSS-16.0). Descriptive statistics (e.g., means and standard deviations) were presented in the results section. In addition, one-way ANOVA and independent samples t test were used to check for any significant mean difference according to student s' gender, type of disability, and severity of disability.

Results

To answer the first question, means and standard deviations were obtained. The scale used to measure the sample's responses was divided into three categories; Low level of QoL with a mean range of (1-2.33), average level of QoL ranged (2.34-3.67) and high level of QoL ranging (3.68-5.00).

Table-2 shows students' perceptions regarding the level of QoL. As indicated, students with disabilities cited average level of QoL. Students rated spiritual and religious domain as the best domain of QoL. Meanwhile, cognitive domain cited as the lowest domain of QoL.

Table 2. Means and Standard Deviations of Students' Perceptions of QoL

<i>Domain</i>	<i>M (SD)</i>
<i>Physical</i>	3.20(0.80)
<i>Psychological</i>	3.52(0.80)
<i>Cognitive</i>	2.93 0.95)
<i>Social</i>	3.46 0.66)
<i>Spiritual and religious</i>	4.04 0.61)
<i>University life</i>	3.73 0.63)
<i>Total</i>	3.48 0.47)

Two independent sample t-tests revealed statistically significant mean differences between males and females in level of QoL seen by students with disabilities in favor of female ($t = -2.35$, $p < 0.02$).

On the other hand, a one-way ANOVA was used to determine the influence of severity and type of disability on the total level of QoL variable. The omnibus ANOVA statistic for this analysis revealed no statistically significant differences due to type of disability on the total QoL variable for students with disabilities ($F = 0.11$, $p = 0.89$).

Finally, ANOVA revealed no significant differences due to severity of disability related to QoL for students with disabilities ($F = 2.27$, $p = 0.107$).

Discussion

This study aimed to explore the level of quality of life of undergraduate students with disabilities at Jordanian universities. Findings suggested that students with disabilities have medium level of quality of life as reflected in the total scores. Rimmerman and Crossman (2004); Roberts et al. (2006) confirmed that disability affects QoL. Also, these finding replicate earlier findings that suggested that individuals with disabilities pointed to that their level of QoL as being lower than individuals without disabilities (R klaitiene, et al., 2010). However, Antonovsky (1992) suggest that in developed countries, with a better rehabilitation system, people with disability don't experience major psychological discomfort and their quality of life does not suffer.

We can interpret that this level was medium not low by what mentioned by Skucas and Mockeviciene (2009) who concluded that QoL is higher in age 21-24, and this is the age of participants of our current study. In addition, this result can be interpreted considering that the Jordanian universities concern with those student. This is clear in the presentence of offices for students with disabilities. Field, Sarver and Shaw (2003) reported that learning to locate and make use of supportive services is vitally important for students with disabilities who may struggle in a postsecondary educational setting. And, more importantly, arriving to university approves that those students were provided with support and resources from their families and communities which helped, and enhancing their QoL.

Students rated religious and spiritual domain as the highest mean of QoL domains. This result is inconsistent with R klaitiene et al. (2010), who mentioned that individuals with disabilities rated their QoL at a low level in a religious and spiritual domain. These findings were not surprising since we live in religious' commitment community; as there are a lot of principles and guidelines that induce to disability acceptance and rights of individuals with disabilities.

On the other hand, students rated cognitive / mental domain as the lowest mean of QoL. This result is considered reasonable because disability may affects cognitive abilities, such as memory, comprehension, learning and attention (Skelton, & Rosenbaum, 2010). Odacı, Kalkan and Karasu (2009) also mentioned that cognitive errors are meaningful predictors toward a QOL of individuals with disabilities. This result differs with Daliento, Mapelli and Volpe (2005) who mentioned lack of cognitive problems of individuals with disabilities.

Interestingly, findings of this study suggested that there are statistically significant differences in the total score due to gender, in favor of females. This is consistence with previous research that mentioned sex as an important variable affecting QoL (Miller, & Dishon, 2006; Skucas, & Mockeviciene, 2009; Shephard, 1991). Also, it support Giangreco and Cloninger (1993) and Schwartz, Keyl, Marcum and Bode (2009)

who reported differences in QoL due to gender in favor of women. However, this result differs with Valderrábano, Jofré, López-Gómez, Moreno and Sanz-Guajardo (2005) who indicated that there aren't differences between female and male in QoL. Moreover, it differs with Miller and Dishon (2006) who reported similarity between female and male in QoL. Also it contrasts with Skucas and Mockeviciene (2009) who indicated that males have higher level of QoL than females. Additionally, they indicated that components of QoL depend on gender, as QoL of males in terms of making a family and living in it, employment, the size of income, psycho-emotional state and mobility by car is higher than that of females.

Results of one-way ANOVA revealed no statistically significant differences due to type of disability. These results are supported by Nosek, Hughes, Swedlund, Taylor and Swank, (2003); Hallberg, Hallberg and Kramer, (2007) who mentioned that the crucial factor in achieving higher QoL is circumstance where individual lives rather than disability itself. From another angle, this result disagrees with Crompton (2010) who reported correlation between type of disability and QoL.

Furthermore, ANOVA revealed no significant differences due to severity of disability. This result is reinforced Rimmerman and Crossman's study (2004) who revealed that there isn't any correlation between severity of disability and QoL. This finding differs with Skucas and Mockeviciene (2009) who reported that QoL of persons with a spinal cord injury depends on the level of injury, as QoL of persons with a higher level of spinal cord injury is higher than that of individuals with a lower level of injury. Also it differs with Kober and Eggleton's study (2005) which indicated better QoL for individuals with higher functional abilities.

Conclusion

This study provided further insight into the viewpoints of undergraduate students with disabilities in Jordan regarding their QoL. Despite of limitations of our study and the self-reported survey; nevertheless, students' perceptions were important to identify their QoL level. Students with disabilities who participated in the study have medium level of QoL.

The QoL instrument can be used to monitor the status of students with disabilities in physical, psychological, cognitive, social, spiritual and religious and university life for prevention of more severe negative QoL domains. Improving QoL can be achieved if we concentrate on evaluation of QoL by adopting a QoL scale to identify the level of QoL and the lowest score of it which considers an initial step that will guide the current and future enhancement processes of QoL and in the investigation of QoL among students with disabilities.

In sum, this study may provide knowledge about QoL among students with disabilities at Jordanian universities. Findings of this preliminary study may help universities administrators and disability units in Jordan to recognize and improve QoL of students with disabilities.

Limitations

Current study possesses some limitations that should be considered when examining findings. These limitations included sample size; as the sample came from three Jordanian universities during the academic year of 2012/2013. Because the sample was not a random probability sample, findings must be interpreted with caution and this data may not generalize to other regions in the Jordan in terms of QoL. So we recommended conducting additional studies and recruiting greater numbers of participants.

Therefore, differences may vary when examined in more nationally representative samples. On the other hand, this study is only a self-reported study in which only students with disabilities perceptions have been presented. In future studies, different methods such as interview or observation could be used to achieve in-depth knowledge regarding QoL. We also recommend further research to compare individuals with disabilities and individuals without disabilities related to QoL along with other variables (e.g. age, self-determination, and the duration of the disability) and investigate QoL from perspectives of families and teachers.

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