

Quality of Life of Qatar University Students with Disability and its Relation to their Academic Adjustment and Performance

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Abstract

This study aimed at assessing the quality of life of Qatar University students with disability and its relation to their academic adjustment and performance. Seventy (70) students, 31 males, and 39 females participated in the study during the spring of 2017. Participants with sensory (visual or hearing impairments) numbered 25, with physical impairment 32, and with learning disability 13 were assessed on six aspects of Quality of life, including, health, social and family, education, emotional life, mental health, and time management skills. Participants also reported their GPA and completed the academic adjustment assessment tool. Results showed medium to high levels of quality of life among students. Results showed that males' level of quality of life was higher than that of females on health, emotions, and mental health. The type of disability did not affect their level of quality of life. Further, significant relationships were found between quality of life aspects and academic adjustment. Furthermore, the quality of life

and academic adjustment predicted academic performance. Results were discussed using the contextual and cultural factors affecting students' quality of life and their academic adjustment.

Keywords: *quality of life; academic adjustment; academic performant; university students with disability.*

Introduction

The World Health Organization (WHO) defined the quality of life as “individuals’ perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a broad ranging concept affected in a complex way by the individuals’ physical health, psychological state, level of independence, social relationships, personal beliefs, and their relationship to salient features of their environment” (WHO, 1997, p.1). Precisely, the quality of life is related to a group of subjective and objective factors (Bonomi, Patrick, Bushnel & Martin, 2000). Mansy and Kazem (2010) explained that subjective factors could be seen through having a positive self-perception, being satisfied about life and work, and feeling happy. On the other hand, objective factors are related to materialistic things including income, health, housing, employment, and education.

Considerable attention was drawn to studying the quality of life of university students. Results of studies showed that the quality of life of university students is lower than working individuals from the same age group (Gilpin, White, & Pierce, 2005; Vaez, Kristenson, & Laflamme, 2003). Noy, Kaigang, Xia, Nattiporn, and Bock-Hee (2009) conducted a study aiming at examining the association between feelings, of hopelessness, suicidal behavior, and aspects of quality of life among college students in Korea, Thailand, and China. Results showed that feelings of hopelessness and suicidal behavior were significantly associated with most aspects of quality of life as reported by university students from all three countries. These results are consistent with the fact that getting in the university is not only a new step in education, but it is also a transition from adolescence to adulthood with new emotional, social, and functional aspects in life (Adams & Proctor, 2010). Consequently, students might experience mental and physical problems, because of the high expectations, challenges, and responsibilities associated with this phase of life (Ji & Zhang, 2011). Evidence from empirical studies supports the assumption that adjustment is an important predictor of students’ success at university and is related to their academic performance (e.g., Abdullah, Elias, Mahyuddin, & Uli, 2009; Wintre & Bowers, 2007). Therefore, poor adjustment to the university academic and social demands may cause dropout (Mckay & Devlin, 2016; Spratt & Florian, 2015), and may affect the psychosocial and physical health of students (Knott & Taylor, 2014).

Recently, most universities support the inclusion of students with disability in their various programs (Buchanan, 2011; Konur, 2006; Newman, Wagner, Cameto, & Knokey, 2009). According to the International Convention on the Rights of People with Disabilities individuals with disabilities are conceptualized as “those who have long-term physical, mental, intellectual, or sensory impairments, which, in interaction with various barriers, might hinder their full and effective participation in society on an equal basis with others”(Division for Social Policy and Development Disability, 2009, Article.1). University experience is a great opportunity for persons with disability to achieve their potential and to improve their quality of life (Hutcheon & Wolbring, 2012; Nelson, Lovet, & Lindstron, 2015; Moswela & Mukhopabhyay, 2011). However, university students with disability may be at risk in terms of attrition, given that students with disability face the same stressors as their peers without disability, with additional challenges, including, inaccessible curricula, academic staffs’ attitudes and issues related to infrastructure (Morina, Lopes-Gavira & Molina, 2015; Oliver & Barnes, 2010). Universities usually provide different types of retention programs, services and accommodations to support the inclusion of this student cohort (Herbert, Welsh, Hong, Soo-yong, Atkinson, & Kurz, 2014). For instance, universities provide adjustments related to curricula, learning and assessment, including extra exam time, note takers in class, extra notes given by faculty, assistance with learning or studying techniques, modifications for the exam style, and assistive equipment and technologies (Egan & Giuliano, 2009; Raue & Lewis, 2011; Squelch, 2010). Some universities also assign awareness-training programs for their academic staff to develop positive attitude and to implement inclusive teaching practices in classrooms (McKay & Devlin, 2016; Morina, Lopes-Gavira & Molina, 2015; Spratt & Flotian, 2015). Challenges related to the infrastructure, such as, inaccessibility of buildings, insufficient lifts, and lack of adaptive classrooms spaces are often resolved by universities worldwide (Kilpatrick, Johns, Barnes, Fischer, McLennan & Magnussen, 2017; Morina, Lopes-Gavira & Molina, 2015). Although services are often in place, recent research indicated that these students are still facing many constraints in various aspects of quality of life emergent from disability condition (Abreu, Hillier, Frye, & Goldstein, 2016; Hamblet, 2009; Koca-Atabey, Karanci, Dirik, & Aydemir, 2011). These constrains tend to limit their academic adjustment, their full involvement in university life, and consequently affect their academic performance (Brandt, 2011; Erten, 2011; Gibson, 2012; Hopkins, 2011).

Research studies investigating the quality of life of individuals with disability have been growing in recent years. However, results are not consistent. For instance, Rēklaitiene, Karpavčiūė and Požėrienė (2010) examined quality of life of individuals with 18year-old individuals with hearing impairment as well as individuals without disabilities. Interestingly, results showed that individuals with hearing impairment perceived their social relationships, general life, and health quality higher than individuals without disabilities. Another study conducted in Saudi Arabia showed that the quality of life of students with hearing impairment is lower compared to students without disability (Abulrab & Abdulahmed, 2013). Similar results were obtained in a study comparing the quality of life of university students with visual impairment with students without disability in Saudi Arabia (Alqasiri, 2014). In another study of

psychological well-being of college students with Attention Deficit/Hyperactivity Disorder (ADHD), Buchanan (2011) found that students had low scores on total well-being, environmental mastery, personal growth, and purpose in life. However, they reported comparable levels of autonomy, self-acceptance, and positive relations with others. Findings suggested that students with ADHD were like other students in their perceptions of well-being but perceived more difficulties in their organizational and goal-oriented competencies. The lack of consistency among the results of previous studies investigating the quality of life of students with disability was one of the motivators to perform the current study.

Despite the increasing number of students with disabilities in the Gulf universities, less attention has been directed to studying how undergraduate students adjust to university life, and how they perceive the quality of life (El Ansari, Labeeb, Moseley, Kotb & El-Houfy, 2013; Mansy & Kazem, 2010). The current study extends past research in the field of inclusion of students with disability in higher education, by studying the relationship among quality of life, academic adjustment and academic performance. This study also addresses the scarcity of information related to this students' cohort in Qatar and the Arab Gulf countries.

Qatar University, the first and only national university in the state of Qatar, is committed to making its educational opportunities accessible to qualified individuals with disabilities in accordance with Law No. 2 of the year 2004, in the Constitution of Qatar: *'All citizens have the right to education, and the State shall endeavor to make general education compulsory and free of charge'* (Constitution of Qatar, Article.49, p.8). Moreover, Qatar National Vision 2030 emphasizes the significance of providing *'High quality educational and training opportunities appropriate to each individual's aspirations and abilities and accessible educational programs for life-long learning'* (General Secretariat for Development Planning, 2008, p.16), in order to equip citizens with the knowledge to achieve their aspirations and meet the needs of Qatar's society. Under these legislations, all students regardless of their abilities and disabilities have equal opportunity and have access to education in Qatar University. To make the inclusion of students with disability a reality, the university established the Inclusion and Special Needs Support Center (ISNSC). The center focuses on two schemes; the first targets the quality of services provided to students with disability, and the second targets the systemic change in educational policies, professional development, and community outreach. The current study was conducted with the collaboration of ISNSC in Qatar University. Students with different types of disability, including mobility, hearing, visual, and learning disability, utilize the center to benefit from the provided services. The center provides different types of accommodations to students depending on the disability type and specific eligibility.

Assessing the quality of life of students with disability, and how they adjust to university is vital for universities to determine the most appropriate accommodations, which will help them achieve their best potential, thus making inclusion a reality. The current study extends past

research in the field of inclusion of students with disability in higher education, and addresses the scarcity of information related to this students' cohort in the Arabic Gulf countries.

Study Objectives

The current study aims at assessing the quality of life of Qatar university students with sensory (hearing and visual), mobility, and learning disability enrolled in Qatar University and its relationship with their academic adjustment and performance.

Specifically, this study attempts to answer the following questions:

1. What is the level of quality of life possessed by university students with disabilities? Are there significant differences in the quality of life of students with disability based on their gender, and type of disability (sensory, mobility, and learning)?
2. What is the level of academic adjustment of students with disability? Are there significant differences in students' academic adjustment based on their gender, and type of disability (sensory, mobility, and learning)?
3. What is the relationship between students' quality of life aspects, and their academic adjustment?
4. How do the quality of life of students with disability and their academic adjustment, influence their academic performance?

Method

Participants

A convenience sample of 70 undergraduate students with disability (N=31 males, N=39 females) participated in the study. Participants have three different types of disability including, sensory (visual or hearing disability) (N=25), mobility impairment (N=32), and learning disability (N=13). Students are from different levels of study (N=16) first year, (N=23) second year, (N=17) third year, and (N=14) fourth year. The range of their age is (18-26) years. Students were invited to participate in the study through the Inclusion and Special Needs Support Center (ISNSC) at Qatar University. Participants filled the questionnaire individually. Some of them received assistance in reading the items and/or writing their responses from the specialists working in the center or from students' volunteers.

Instruments

Two assessment tools were used to collect data:

The Quality of Life questionnaire: was developed and validated in the Arabic Language by Mansy and Kazem (2010) based on previous tools used to assess the quality of life. The

questionnaire consisted of two sections: Part I required students to provide demographic information by placing a check mark next to the item that applied to their case. Demographic information included gender, age, type of disability, field of study (program), year of study, and GPA. Part II required students to respond to 60 items to assess their perception of the quality of life on six aspects. The six aspects are health, social and family, education, emotional life, mental health, and time and management skills. Participants responded using a Likert scale of five points (ranging from 1- never, to 5 - always). Cronbach's Alpha coefficients were computed to check for the questionnaire validity. Alpha coefficient for all items was 0.91, and ranged from (0.62-0.85) for the six aspects of quality of life. All coefficients values were significant at $\alpha \leq 0.01$, reflecting acceptable levels of internal consistency.

University students' academic adjustment tool: An assessment tool of 33 items was developed by the authors based on previous tools of adjustment to university life, such as the SACQ (Baker & Siryk, 1999). Items were formatted as questions with three answers (yes, not sure, no), two points were scored for participants who answered "yes", 1 when they answered "not sure", and 0 when their response was "no". Questions are related to aspects of academic adjustment to university including, value university degree, and area of specialization; satisfied with the program, professors, and courses; motivated to study, attend classes, do assignment and prepare for the exams; and managed time and effort to fulfil study requirements. The total score on all items represent the level of academic adjustment. The high score reflects high adjustment, while low score reflects low adjustment. Six experts in the field of educational psychology reviewed the items for content validity and provided feedback to the developers of the tool. Experts' comments were taken into consideration and were incorporated in the final copy of the questionnaire. Test-retest reliability of the assessment tool using 20 university students out of the study participants, with two weeks apart period, was performed. Results showed an acceptable Test-retest reliability, with a correlation coefficient of 0.82. Cronbach's Alpha coefficient was 0.79, which reflects an acceptable level of internal consistency.

Data Analysis

Data were entered and analyzed using the Statistical Package for Social Sciences (SPSS-23). Descriptive statistics (e.g. means and standard deviations), Univariate analysis of variance, and independent t tests were used to check for significant mean differences based on students' gender and type of disability. Multiple regression was performed to assess the relationships among study variables.

Results

Means and standard deviations were computed to answer the first research question. Responses were divided into three levels of quality of life; low level with mean ranged (1-2.33), medium level (2.34-3.66), and high level (3.67-5). Table 1. shows the mean and standards deviation of students' responses on the quality of life aspects. Results showed medium to high

level on all aspects of quality of life. Among the six aspects, students rated the quality of social life as the highest, followed by Education and Mental health, while rated time management the lowest.

Table 1. Means and Standard Deviations of Students' Perceptions of Quality of Life

Quality of Life Aspect	Mean(SD)	Level
Health	3.39 (0.52)	Medium
Social	4.12(0.68)	High
Education	3.79 (0.71)	High
Emotion	3.32 (0.70)	Medium
Mental Health	3.79 (0.66)	High
Time Management	3.10 (0.48)	Medium
All aspects	3.57 (0.44)	Medium

Independent samples t- tests were conducted to find out if there were any statistical differences between males' and females' level of quality of life. Results of t-test are shown in Table 2.

Table 2. Independent samples t-test for the effect of Gender on Quality of life aspects

	Gender	Mean (Std.)	Description	T-test
Health	Male	3.69 (0.49)	High	5.03*
	Female	3.14 (0.41)	Medium	
Social	Male	4.28 (0.68)	High	1.71
	Female	3.99 (0.69)	High	
Education	Male	3.83 (0.83)	High	1.16
	Female	3.63 (0.59)	Medium	
Emotions	Male	3.72 (0.48)	High	4.95**
	Female	2.99 (0.69)	Medium	
Mental Health	Male	4.02 (0.64)	High	2.74**
	Female	3.60 (0.63)	Medium	
Time Management	Male	3.22 (0.55)	Medium	1.94
	Female	3.01 (0.39)	Medium	
Total Quality of Life	Male	3.79 (0.38)	High	4.20**
	Female	3.39 (0.40)	Medium	

Female (N=31), Male (N=39), ** = significate at $\alpha \leq 0.01$

Results showed that males' scores are higher than of females. It is worth noticing that male scores are high in all aspects except for time management, while female scores are medium in all aspects of quality of life. However, the differences are significant only for health, emotions, and mental health aspects, and on the quality of life in general.

Table 3. shows the means and standard deviations of the quality of life aspects according to the students' type of disability. As shown in table 3 below, there are some apparent differences in

the means. However, the results of the analysis of variance showed no significant differences in the quality of life in general and in all assessed aspects according to students' types of disability.

Table 3. Means of quality of life and analysis of variance according to type of disability

Quality of Life Aspects	Disability Type				Learning Disability	
	Male		Female		Male	Female
	Mean (Std)	Mean (Std)	Mean (Std)	Mean (Std)	Mean (Std)	Mean (Std)
	Health	3.67 (.44)	2.93 (.29)	3.89 (.46)	3.32 (.39)	3.50 (.67)
Social	4.39 (.60)	4.11 (.53)	4.03 (.94)	3.99 (.87)	4.32 (.54)	3.77 (.59)
Education	3.95 (.66)	3.65 (.58)	3.501 (.27)	3.75 (.65)	3.95 (.54)	3.31 (.46)
Emotion	3.65 (.45)	2.83 (.52)	3.94 (.50)	3.15 (.88)	3.65 (.54)	2.99 (.49)
Mental Health	3.96 (.49)	3.70 (.45)	4.28 (.80)	3.57 (.82)	3.85 (.79)	3.49 (.44)
Time Management	3.11 (.45)	2.97 (.18)	3.31 (.76)	3.03 (.54)	3.43 (.52)	3.01 (.38)
Quality of life total	3.79 (.37)	3.36 (.28)	3.82 (.52)	3.47 (.52)	3.78 (.25)	3.30 (.31)

To answer the second research question related to the level of academic adjustment reported by students with disability, the means and the standard deviation of the academic adjustment were computed according to gender and type of disability. Results are listed in Table 4.

Table 4. Means and Standard Deviations of Academic Adjustment of students with disability gender and disability type

Disability Type	Gender	N	Mean	Std. Deviation	Description Of Mean
Physical	Male	17	38.7059	13.13281	Medium
	Female	15	37.2000	8.87372	Medium
	Total	32	38.0000	11.18755	Medium
Sensory	Male	8	45.5000	11.04536	High

	Female	17	34.8235	11.06930	Medium
	Total	25	38.2400	11.96272	Medium
Learning Disability	Male	6	34.3333	14.61050	Medium
	Female	7	30.5714	6.39940	Medium
	Total	13	32.3077	10.64099	Medium
Total	Male	31	39.6129	13.08861	Medium
	Female	39	34.9744	9.62313	Medium
	Total	70	37.0286	11.43979	Medium

As shown in the table above, the mean of academic adjustment for all students, males, females and of all disability types ranged from (30-45). These values are considered medium given that the academic adjustment takes values from (0-66), therefore, values (0-21) can be considered low adjustment, (22-44) medium adjustment, and (45-66) high adjustment. It is worth noticing that males' adjustment scores are higher than females' scores in general, and in all disability types. Regarding adjustment scores for students of different disability types, physical, and sensory, were similar, 38, 38.24, respectively, and 32 for students with learning disability. Figure (1) presents the mean scores of students' adjustment according to their gender and type of



disability.

Figure 1. Means of Academic adjustment according to gender and disability type

Univariate analysis of variance was performed to assess if the apparent differences were significant. The analysis showed no statistical differences on students' academic adjustment based on their gender and disability type.

To address the third research question, what is the relationship between students' quality of life and their academic adjustment? Zero-Order correlations were performed between academic adjustment and the six aspects of quality of life, followed by a standard multiple regression. Table 5. shows the results.

Table 5. Correlation and Multiple Regression

Predictor Variables	Correlation with			
	Academic Adjustment	β	b	t
Health	0.267*	1.136	0.052	.398
Social	0.284**	1.468	-0.09	-.538
Education	0.196	1.776	0.111	.808
Emotion	0.397**	3.169	0.196	1.226
Mental Health	0.467**	6.831	0.395	2.426*
Time Management	0.184	2.032	0.086	-.658
	$R^2 = .26$	Intercept =		-1.738

Dependent variable: Academic Adjustment

* = significant at $\alpha \leq 0.05$, ** = significant at $\alpha \leq 0.01$

Summary of Results

As shown in Table 5. four of the predictor variables had significant ($p < .05$) zero-order correlation with academic adjustment, but only Mental health had significant ($p < .05$) partial effects in the full model.

The six predictors model was able to account for 26% of the variance in academic adjustment, $F(6, 63) = 3.629$, $p < .004$.

Finally, a standard multiple regression analysis was performed to address the fourth research question: How do the quality of life of students with disability and their academic adjustment influence their academic performance?

Students' academic performance was measured by their self-reported GPA. The GPA of students' with disability ranged from [1.7-3.9] with mean 2.39 and Std. Deviation 0.49. The model $R^2 = 0.21$ reflects a significant relatively modest overall relationship between students' academic performance and the predictor variables $F=2.296$, $df = 7$, $P=0.03$. The adjusted $R^2 = 0.16$ and Std Error of Estimate was 0.461. The effects of the individual predictor variables on students' academic performance are shown in Table 6.

Table 6. Multiple Regression Results

Independent Variables	Unstandardized		Standardized Coefficient	t	Sig.
	B	Std. Error			
(Constant)	1.98	.526		3.765	.000
Academic Adjustment	.007	.006	.153	1.162	.250
Quality of Health	.018	.128	.019	.141	.889
Quality of Social Relations	.183	.122	.263	1.501	.139
Quality of Education	.066	.099	.096	.666	.508
Quality of Emotion	.305	.117	.441	2.614	.011
Quality of Mental Health	.152	.132	.206	1.159	.251
Quality of Time Management	.233	.139	.229	1.684	.097

Dependent Variable: GPA

As shown in Table 6., only the quality of emotions contributed significantly to the students' academic performance measured by students' GPA.

Discussion

This study aimed to explore the quality of life of undergraduate students with disabilities at Qatar University. Interestingly, the results showed that students with disabilities reported medium and high levels of quality of life in all measured aspects. Previous studies showed that disability affects negatively the quality of life of students with disability (Rimmerman & Crossman, 2004; Roberts, Macmath, Martin, & Sigalet, 2006), and that individuals with disabilities reported lower levels of quality of life than individuals without disabilities (Abulrab & Abdulahmed, 2013; Alqasiri, 2014; Buchanan, 2011). However, our results can be explained in line with Antonovsky's (1992) study, which suggested that in developed countries, with a better rehabilitation system, people with disability receive reasonable support and their quality of life does not suffer. The state of Qatar often ranks as one of the richest countries in the world per capita. Therefore, it is expected that most of the materialistic needs and services of these students be satisfied. Qatar University is paying considerable attention to students with disability through the Inclusion and Special Needs Support Center (ISNSC) in Qatar University. 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. 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 quality of life. Likewise, students reported the social aspect of quality of life the highest among the other aspects; this is consistent with the point that the state of Qatar is considered one of the collective countries. In collective societies, social support and interaction are highly encouraged.

Interestingly, findings of this study suggested that male students reported higher level of quality of life than female students who reported medium levels on all aspects of quality of life. Further, the differences between male and female students were significant in three aspects of quality of life including, health, emotions, and mental health. These results indicated important implications for the ISNSC to plan and implement services aiming at empowering female students with disability in all aspects of life. This result is consistent with previous research that mentioned gender as an important variable affecting quality of life (Miller, & Dishon, 2006; Skucas, & Mockeviciene, 2009). Specifically, our results is similar to Skucas and Mockeviciene (2009) results which indicated that males have higher level of quality of life than females, and that quality of life domains related to aspects related to forming a family, employment, the size of income, psycho-emotional state and mobility by car is higher for males than that of females. However, our results is inconsistent with Al-Zboon, Ahmad, and Theeb (2014), and Schwartz, Keyl, Marcum and Bode (2009) studies which reported differences in quality of life due to gender in favor of females. Also, our result differs from Miller and Dishon (2006) results which indicated that there were no differences between females and males in quality of life.

Results showed no statistically significant differences due to type of disability. These results are supported by previous studies that highlighted the circumstance where individual lives as the critical factor in achieving higher quality of life rather than the disability itself (Al-Zboon,

Ahmad, & Theeb, 2014; Hallberg, Hallberg & Kramer, 2008; Nosek, Hughes, Swedlund, Taylor & Swank, 2003).

Results showed that time management was the lowest among all aspects of the quality of life; this finding highlights vital implication for the ISNSC to plan and implement training programs aiming at enhancing time management skills of students with disability.

Regarding the relationship between aspects of quality of life and academic adjustment, results showed that four aspects of quality of life are related significantly to academic adjustment including, the quality of health, social relations, emotions and mental health. Further, results showed that these aspects explains 26% of the variance in students' academic adjustment, and that mental health significantly predicted students' academic adjustment. Furthermore, quality of life and academic adjustment significantly predicted academic performance. However, among the six aspects of quality of life, the quality of emotions contributed significantly to students' performance. The results support that quality of life can be used as a reliable indicator of academic adjustment and performance. Therefore, programs targeting students' with disability adjustment to university life, should consider supporting students' emotions and mental health. Mental health difficulties, and negative emotions can be relatively mild anxiety and frustrations associated with everyday life, or severe problems affecting mood and ability to think and communicate. In most cases these difficulties are not apparent, thus it is unlikely to identify unless the student choose to discuss it. Therefore, more services need to be provided to this students' cohort including, training on how to cope with negative emotions, as well as individual and group counseling services to encourage students disclose any negative emotions and mental health issues they might experience.

Altogether, this study assessed the quality of life of students with disabilities, and identified areas of improvement. Findings of this preliminary study suggest useful implications for the university administration, and the ISNSC in Qatar University to improve the services provided to these students in order to enhance the quality of life, their academic adjustment, and their academic performance.

Limitations

The current study has some limitations that should be considered when examining findings. These limitations included the small sample size of 70 students from only one university. Because the sample was not a random, probability sample, findings must be interpreted with caution and this data may not generalize to other students in the Gulf region. Further studies with larger numbers of participants is needed. Furthermore, the study utilized a self-report questionnaire to collect data from participants. In future studies, different methods, such as interviews or observations could be conducted to achieve in-depth results regarding quality of life. We also recommend further research to compare the quality of life of individuals

with disabilities and individuals without disabilities along with other variables including students' psychosocial adjustment in addition to their academic adjustment.

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