Quality of Life (QOL) among University Students in Jordan: A Descriptive Study

*Khaled Suleiman, *Suhair Alghabeesh, RN, PhD, *Husein Jassem, RN, PhD, *Luai Abu- Shahroor, RN, PhD, *Raed Ali, RN

* School of Nursing, Alzaytoonah University, PO box 130, Amman 11733, Jordan
** E-mail of the correspondence author: khaledsuleiman@yahoo.com, ksuleiman@zuj.edu.jo

Abstract
Quality of life (QOL) among university students themselves in Jordan was underestimated. It was reported that among university students general population, several factors such as the academic overload in addition to the students' non-school activities may contribute to this situation. There is a lack of QOL studies among the general university students in Jordan and in the Arabic world. Thus, the aim of this descriptive study was to examine QOL among university students in Jordan. Data were obtained from 119 current university nursing students. The highest Medical Outcome Study Short Form 36 (SF 36) scores were obtained for physical functioning domain (78.1) and the lowest scores were for vitality domain (52.3). The two genders significantly differed in physical functioning (t= -2.44, p= .016). In terms of employment, there were significant differences between employed and not employed students in role physical (t= -2.11, p= .03), social functioning (t= -3.30, p= .001), and bodily pain domains (t= -3.28, p= .001). No significant differences in terms of grade point average (GPA). This study provides preliminary about nursing student's quality of life in Jordan. Findings will serve as a basis for Arab researchers to conduct future intervention studies.
Keywords: students, quality of life, employment, gender.

1. Introduction

Learning at the university is an experience of stress, satisfaction, happiness and enjoyment (Posadzki, Musonda, Debska, &Polczyk, 2009). Nursing students experience high stress toward their academic achievement that may affect the social and psychological aspect of their life. This might affect their academic performance, lowering their physical ability and reduce their quality of care at the clinical field. Consequently, safety of patients may be threatened. Thus, the assessment of QOL among nursing students is very important in the educational settings (Pekmezovic, Popovic, Tepavcevc, Gazibara, &Paunic, 2011). Researchers emphasized that several factors such as the academic overload (Paro, et al., 2010) in addition to the students' non-school activities (Pekmezovic, et al., 2011) were contributed to lower quality of life among university students general population. However, studies that examined QOL among university students in Arab world and particularly in Jordan are a few. Thus, there is a need to examine quality of life among university student in the Arab world considering Jordanian nursing students as the population of interest.

1.1 Literature review

In countries such as the U.S., there is a rich literature regarding QOL among university students. This literature base offers good opportunity for academic personnel and university administrations to recognize the problems associated with students' QOL and seek effective treatment for them. There is no similar data base in Jordan that deals with QOL issues. Thus, this study may shed the light on students' QOL which is an important element for better academic achievement. The results of this descriptive study might be utilized by educators to plan appropriate interventions that may improve QOL of nursing students.

To date, QOL among university students in Jordan was not addressed well in the literature, however, it was measured among the general population of Jordan (Khader, Hourani, & Al-Akour, 2011). In a study included 511 subjects (306 males) aged between 18 and 75 (mean= 35.8, SD= 12) from Jordanian household, the researchers set up a normative Medical Outcome Study Short Form 36 [SF-36: (Ware, Kosinski, & Dewey, 2000; Ware, Snow, Kosinski, &Gandek, 1993)] data in north Jordan (Khader et al.). Jordanians showed lower scores than USA norms in all SF-36 subscales. Older participants had significantly lower scores for physical functioning domain [PF; *p*= .010], general health domain [GH*; p*= .018], and role emotional domain [RE; *p*= .025] than younger participants. Men scored higher mean than women in social functioning subscale [SF; 66.8 (SD= 21.5), versus 65.9(SD= 23.2), *p*= .051], while women scored higher mean than men in PF subscale [69.8(SD= 26.4)] versus 64.3(SD= 29.4), *p*= .013]. Further, men scored low mean for vitality subscale [VT; 55.8 (SD= 20)] while women scored low means for the bodily pain subscale [BP; 54.6 (SD= 54.6)], although they were not significant (Khader et al.).

On the same vein, QOL was measured among the general Arabic population (Sabbah, Drouby, Sabbah, Retel-Rude, & Mercier, 2003). Sabbah et al examined QOL in 524 participants from rural and urban population in

Lebanon. Participants reported high mean scores for PF subscale (81.3, SD= 22.8) and low mean scores for RE subscale (53.1, SD= 43.3). In terms of age, the group of > 60 years old had low significant scores in all subscales scores (p_s ranged from <.001 to <.05). Additionally, males reported higher significant scores than females in all subscales (p_s ranged from <.001 to <.05). Therefore, there is a need for further studies to confirm these results especially among young adults who attend university which support the purpose of the current study.

In non-Arabic countries, most of the studies examined QOL among the general university population of students (Bhandari, 2012; Ducinskiene, Kalediene, &Petrauskiene, 2003; Posadzki,et al., 2009; Pekmezovic, et al., 2011),while others examined QOL among specific student majors such as medical (Amini et al., 2007; Paro, et al., 2010) and pharmacy (Hirsch, Do, Hollenbach, Manoguerra, & Adler, 2009). Posadzki et al. (2009) examined QOL among 396 undergraduate students in Poland. They found that the highest scores of the SF- 36 scales were obtained for the PF subscale (M = 95.6, SD= 10.4) and the lowest SF- 36 scores were obtained for the VT subscale (M = 54, SD= 12.1). Similarly, in a general university population in Belgrade, Pekmezovic, et al. (2011) used the SF- 36 to examine functioning among 1,624 students (53.7% females) from different university majors. They found that the highest scores of the SF- 36 scales were obtained for the PF subscale (M = 93.7, SD= 12.5) and the lowest SF- 36 scores were obtained for the VT subscale (M = 64.7, SD= 21.1). Additionally, Pekmezovic, et al. (2011) found that medical students scored significantly worse in vitality than social, humanities, technology and engineering students (p= .001). Further, medical students scored significantly worse in the mental health domain (MH) than social and humanities students (p= .014) and technology and engineering students (p= .006). Additionally, technology and engineering students scored significantly better than medical students in the RE (p = .030). Similarly, medical students in Paro et al (2010) study reported highest SF 36 scores for the physical functioning subscale and the lowest for the vitality subscale.

On the other hand, Ducinskiene, et al., (2003) used the World Health Organization Quality of Life questionnaire [WHOQol-BREF (scores ranged from 4- 20, higher scores denote better functioning)] to examine QOL among 919 students from three universities in Lithuania. They found that the overall QOL score was 13.7. Further, the highest mean scores were for the physical health domain (15.0, SD= 2.0), while the lowest mean scores were for the environment domain (12.0, SD= 2.4).

Demographic variables such as gender and grade point average [GPA]) have been shown to be related to QOL; however, the findings have not been consistent. In relation to gender, several investigators found that women had lower scores than males on all SF36 domains (Bhandari, 2012; Pekmezovic et al., 2011) while others found that females scored higher than male in the general health domain (Amini et al., 2007; Paro et al., 2010). Further, Amini et al reported that females had significant lower scores on physical functioning and bodily pain domains (p<.001, p= .002 respectively). In Pekmezovic et al study, females reported significant lower scores for all SF36 domains (all Ps = .001) except for role physical domain (p= .43) although females reported lower scores (83.0 $\pm$ 26.6) than males (84.1 $\pm$ 26.6). Additionally, Ducinskiene et al (2003) who used the WHOHRQol-Bref to examine QOL found that females (14.92 $\pm$ 2.07) scored significantly lower than males (51.23 $\pm$ 1.92) in Physical domain (p<.05). It seems that QOL scores in terms of gender is Contradictory, and this warrant further investigation.

No studies were found that examined the relationship between QOL and employment and academic achievement among university students or among nursing students. Thus, further studies are needed to explore this relationship.

1.2 Purpose of the study

Previous QOL research suggested that students in health care majors may experience lower levels of functioning than students from other majors. More studies are needed, however, to explore students of health majors physical and psychosocial functioning. Thus, the aim of the current study was to examine QOL among university students in Jordan.

2. Methods

2.1 Design

This is a descriptive study to describe QOL among nursing college students in Jordan and to compare the differences in QOL in terms of academic achievement.

2.2 Sample

The participants were full-time undergraduate Jordanian nursing students at a large private university in Amman, Jordan. The inclusion criteria were: men and women at least 18 years old, able to read and write in Arabic, and a current student in the bachelors program at the college of nursing. Students who had physical disability were excluded from the study.

2.3 Measures

All participants completed the demographic questionnaire which included questions about age, gender, academic achievement (measured by grade point average [GPA]), marital status, and clinical course enrolment. The GPA

followed a scale of 0 to 100 score with <60 considered poor while 100 is a perfect score. The 0 to 100 score that is calculated cumulatively from all of their courses was the score used in the data analysis.

QOL was measured by the Arabic version of the SF- 36 (Sabbah, et al., 2003).The SF-36 is a widely used multidimensional scale to assess health and functioning (Ware, et al., 2000; Ware, et al., 1993). This generic tool is universally valued and is not age, disease, or treatment specific. The SF-36 measures eight health domains: Physical functioning, role physical, bodily pain, general health, vitality, social functioning, role emotional and mental health. The domain scores range from 0 to 100, with higher scores denoting better functioning. The internal consistency reliabilities ranged from .85 for general health to .94 for physical functioning among 2,737 of the U.S. population (Kazis, et al., 2004). In an Arab general population (n= 1632), the internal consistency reliabilities of the subscales ranged from .70 to .90 (Sabbah, et al., 2003). In this study, the average internal consistency for all subscales reliabilities was .71.

2.4 Procedures

Approval to conduct the study was obtained from the institution IRB where the study was conducted. Participants were recruited through direct contact with the investigators at the university campus. The participants were screened for the inclusion and exclusion criteria and were invited to participate in the study. Then the investigators reassured the participants that participating in the study is voluntary. The study purpose, objectives, risks, and benefits were explained for potential participants. The participants were informed that their return of the questionnaires constituted consent. Additionally, all information regarding the participants was kept confidential in a locked file. The questionnaires were given to the students at the beginning of the class and required about 10 minutes for the students to complete.

2.5 Data analysis

The Statistical Package for Social Sciences (SPSS) version 18 was used for data analysis. All data were double checked for accuracy. Frequency distributions were examined to check for outliers and normality of distributions. Means and standard deviations for continuous variables and numbers and percentages for categorical variables were computed. The t-test was used to compare differences between groups for continuous variables.

3. Results

The demographic characteristics of the participants are illustrated in table 1. Data were obtained from 119 current university nursing students. The mean age of the participants was 24.1 (SD= 3.53). The majority of the students were single (n=100; 84%), were about half male and half female and employed (n=64; 54%). The students primarily worked as nursing assistants in either an 8 or 12 hour shift for a total of ≤40 hours per week. Most of the students (n= 89; 75.4%) were enrolled in clinical course (n= 89; 75.4%). The mean GPA for the students was 72.6 (SD= 5.5).

The mean scale scores of SF-36 in each domain among students are illustrated in table 2. The highest scores were obtained for physical functioning domain (78.1) and the lowest scores were for vitality domain (52.3).

The two genders did not differ in any of the eight domains of the SF-36 except for physical functioning (t= -2.44, p= .016) see table 3. There were no significant differences for all SF-36 domains between students in terms of enrolment in clinical courses (Ps ranged from .07 for pain to .84 for role emotional). Also there was no significant relationship between total SF-36 scores and GPA (r= .09, p= .29).

In terms of employment, there were significant differences between employed and not employed students in role physical (t= -2.11, p= .03), social functioning (t= -3.30, p= .001), and bodily pain domains (t= -3.28, p= .001) see table 4.

4. Discussion

The results of the study indicate that the highest values of the SF-36 subscales were obtained for physical functioning and the lowest were for vitality. This is the first study to examine quality of life (QOL) among college students in Jordan using the Arabic version of the SF-36. Also, no studies were found that used the SF-36 to measure QOL among Arab students; however, two studies were found that examined QOL using the SF-36 among general Arabic populations. The first study examined QOL among Jordanian household (n= 511), where the researchers set up a normative SF- 36 data in north Jordan (Khalder et al., 2011). The researchers studied different age group. The age group ranged from 18-24 years was comparable to the current study. Students in the current study scored higher than the Jordanian normative data in all 8 SF- 36 subscales. In the second study, Sabbah et al (2003) examined QOL among the general population in Lebanon. Two hundred and eight subjects form age group 20-39 years reported the highest scores for the PF domain (89.0, SD= 17.2), while the lowest scores were for the RE domain (55.2, SD= 42.4).

QOL results in the current study were consistent with other non-Arabic studies that examined QOL among university students. Similar to the current study, students in different studies reported the highest QOL scores for the PF domain while the lower scores were for the vitality domain (Pekmezovic, et al., 2011; Posadzki, et al.,

2009). The scores for PF domain ranged from 93.7 (SD= 12.5) (Pekmezovic, et al) to 95.6 (SD= 10.4) (Posadzki, et al). Further the vitality scores ranged from 54 (SD= 12.1) (Posadzki, et al) to 64.7 (SD= 21.1) (Pekmezovic, et al). Additionally, in a large study included 919 university students in Lithuania, the researchers used WHOQol-BREF, the highest mean scores were for the physical health domain (15.0, SD= 2.0), while the lowest mean scores were for the environment domain (12.0, SD= 2.4). The reason for the results in the current study may be due to the fact that the majority of students are working as full time nurses and have adapted physically to the situation. While they have lower vitality due to extended hours they spent in the school and work.

The current study did not reveal significant differences in quality of life in terms of gender except for physical functioning domain. Although there were no significant differences between males and females in the current study, males scored higher than females in the following domains; GH, MH, BP and VT. In contrast females scored higher than males in the following domains; SF, RE, PF and RP. Similar results were reported by females in north Jordan (Khader et al., 2011). In the same age group as the current study (18-24 years), females reported higher scores than males in the following domains; PF, RP, BP, and SF (Khader et al).

In non-Arabic studies, inconsistent results were reported in terms of gender. Most of the studies reported significant lower scores for females in all SF 36 domains (Bhandari, 2012; Pekmezovic et al., 2011), while others reported that females scored higher than male in the general health domain (Amini et al., 2007; Paro et al., 2010).The reason why females in the current study scored higher than males in more SF-36 domains comes from the fact that females in Arabic countries did not have independent living until graduation. Arabic females stay with their families until they get married, then they may get worry about their own living requirement. Consequently, Arabic females may experience better quality of life than females in western culture where they become independent and responsible for their own living requirement as they attend the university.

Students, who were employed, reported lower scores than students who were not employed in all SF-36 domains except for PF. Non-employed scored significantly higher in RP, BP, SF domains. In the current study, almost half of the sample have diploma in nursing and bridging to get their bachelor degree. They are full time employees with 40 work hours per week. The work consumes a large part of the student time that may affect their quality of life. No studies were found that examined the relationship between QOL and employment among university students, however, in other populations, Barisin, Benjak, and Vuletic (2011) reported that unemployed women with disabilities reported significantly lower QOL scores than employed women in psychological health (p <.001), social relationships (p= .004), and environmental (p<.001) domains. Similarly, employment status was strongly related to better physical health (B= 6.8, 95% CI: 4.6 to 9.1) among patients with AIDS (Rueda et al., 2011).

In the current study, there was no significant relationship between QOL and academic achievement. No studies were found that examined the relationship between QOL and academic achievement among university students which make the comparison difficult. However, Sweileh et al. (2011) studied the relationship between sleep disturbances and academic achievement among 400 medical students. They measured academic achievement on a four point scale: excellent, good, satisfactory, and poor. They reported that students with a higher frequency of nightmares had lower academic achievement (r= .40, p= .02). The insignificant results in QOL in terms of GPA in the current study could be due to eustress which might encourage students to have better academic achievement in order to have a job post-graduation. This job might enhance the students' financial status which will positively improve the other QOL domains. Thus, further studies are needed to explore the relationship between QOL and academic achievement among university students.

5. Conclusion

The collected data in the current study indicate that the average scores of nursing students QOL were close to Jordanian normative data and less than data that was reported by the general population. Results from this study suggest QOL has a relationship with some student's demographic variables. Among factors that significantly influence QOL in our sample, employment was prominent. Therefore, in future research, attention should be paid on the improvement of financial status of the students. Nursing students work full-time to fulfill their financial academic requirements. Academic institution may offer more scholarship for the students to help them to overcome their academic financial requirement and consequently improve their QOL so that students do not have to work while attending school. These findings emphasize that the college administrative personnel and the faculty have to incorporate QOL into academic curriculum. This will allow nursing students to receive more knowledge about QOL and ways to improve their QOL. Further, more descriptive and intervention studies is needed to address the specific issues that are related to student's QOL in Jordan.

Limitations and future research

Although this study is the first to investigate QOL among nursing students, there are several potential limitations. First, this study utilized a convenience sample of nursing students from a single university. Therefore, the results could not be generalized to the general population of university students in Jordan. Future research may

include students from more than one university to provide opportunity for generalization of the results. Additionally, future experimental research may allow for randomization and control that enhance the generalization. Second, the measures were self-report instruments that may increase the possibility of bias. Future research may utilize more than one QOL instrument, and conduct correlational comparisons to overcome the bias. Third, the sample was not representative for all university students. The current study sample was from nursing students only. Future research may include students from other university majors. This will allow for comparisons and give insight for QOL among the general university population. In the current study, the data were collected by the students' professors. This may raise the possibility for social desirability operating in the students' responses in that they reported they functioning better than they actually were.

References

Amini, M., Ardekani, S., Golkar, A., Jafari, P., Alhashemi, H., Moghadami, M.m et al. (2007).Quality of life of medical students in different stages- A multi-center study.*Journal of medical education, 11*(1), 13-19.

Bhandari, P. (2012). Stress and healthrelatedquality of life of Nepalesestudentsstudying in South Korea: A crosssectionalstudy. *Health And Quality Of LifeOutcomes, 10*: 26.

Barisin, A., Benjak, T., &Vuletic, G. (2011). Health- related quality of life of women with disabilities in relation to their employment status. *Croatian Medical Journal, 52*: 550-556.

Ducinskiene, D., Kalediene, R., &Petrauskiene, J. (2003).Quality of life among Lithuanian university students.*ActaMedicaLithuanica, 10*(2), 76-81.

Khader, S., Hourani, M., & Al-Akour, N. (2011). Normative data and psychometric properties of short form 36 health survey (SF-36, version1.0) in the population of north Jordan. *Eastern Mediterianean Health Journal, 17*(5), 368-374.

Kazis, L., Lee, A., Spiro, A., Rogers, W., Ren, X., Miller, D., et al. 2004. Measurement comparison of the Medical Outcome Study and Veterans SF-36 Health Survey. *Health Care Finance Review, 25*(4), 43-58.

Paro, H., Morales, N., Silva, C., Renzende, C.,Pinto, R.,Morales, R., et al. (2010. Health–related quality of life of medical students. *Medical Education, 44*, 227-235.

Pekmezovic, T., Popovic, A., Tepavcevc, D., Gazibara,T. &Paunic, M. (2011). Factors associated with health-related quality of life among Belgrade University students. *Quality of Life Research, 20*, 391-397.

Posadzki, P., Musonda, P., Debska, G., &Polczyk, R. (2009). Psychosocial conditions of quality of life among undergraduate students: A cross sectional survey. *Applied Research In Quality of Life, 4*: 239-258.

Rueda, S., Raboud, J., Mustard, C., Bayoumi, A., Lavis, J., &Rourke, S. (2011). Employment status isassociatedwithbothphysical and mental healthquality of life in people living with HIV. *AIDS Care, 23*(4), 435-443.

Sabbah, I., Drouby, N., Sabbah, S., Retel-Rude, N., &Mercier, M. (2003). Quality of life in rural and urban populations in Lebanon using SF-36 health survey.*Health and Quality of Life Outcomes, 1*, 30.

Sweileh, W., Ali, I., Sawalha, A., Abu-Taha, A., Zyoud, S., & Al-Jabi, S. (2011). Sleep habits and sleep problems among Palestinian students. *Child and Adolescent Psychiatry and Mental Health, 5*(25), 2-8.

Ware, J., Kosinski, M., & Dewey, J. (2000). *How to score version one of the SF-36 Health Survey*. Lincoln, RI: QualityMetric.

Ware, J., Snow, K., Kosinski, M., & Gandek, B. (1993). *SF-36 Health Survey: Manual & Interpretation Guide*. Boston: The Health Institute, New Medical Center.

Table 1

Sociodemographic Characteristics of the Sample

Variable	Total (N= 119)	
	Mean	SD (range)
Age	24.11	3.53 (19-40)
GPA	72.6	5.5 (54-88)
	N%	
Gender		
- Male	60 (50.4%)	
- Female	59 (49.6%)	
Marital status		
- Single	100 (84%)	
- Married	17 (14.3%)	
- Divorced	2 (1.7%)	
Employment		
- Employed	64 (54.7%)	
- Not employed	53 (44.5%)	
Enrolled in clinical courses		
- Yes	89(75.4%)	
- No	26 (22%)	

Table 2

SF-36 subscales Means and Standard Deviations (N=119).

SF-36 subscales	Mean	SD
Physicalfunctioning	78.1	23.0
Role physical	62.5	36.2
Role emotional	56.3	40.0
Vitality/ Energy	52.3	17.8
Emotionalwellbeing	55.3	20.5
Social functioning	61.7	22.4
Pain	73.1	23.4
General health	59.8	13.2

Table 3

Comparisons between males and females in all SF-36 subscales.

Scales of SF-36	Male Mean (SD)	Female Mean (SD)	P value
Physical functioning	73.08 (25.8)	83.25 (18.6)	.016
Role physical	58.8 (36.1)	66.29 (36.1)	.27
Role emotional	53.6 (39.1)	59.23 (41.1)	.45
Vitality/ Energy	53.9(17.0)	50.6(18.6)	.33
Emotional wellbeing	57.4(18.4)	53.2(22.3)	.27
Social functioning	60.7(22.5)	62.7(22.4)	.62
Pain	76.5(22.5)	69.5(24.0)	.10
General health	60.6(13.8)	58.9(12.6)	.48

Table 4

Comparisons between employed and non-employed students in all SF-36 subscales.

Scales of SF-36	Employment		*P* value
	Yes Mean (SD)	No Mean (SD)	
Physica lfunctioning	78.4(22.2)	77(24.4)	.74
Role physical	56.6(37.8)	70.6(32.3)	.03
Role emotional	53.9(41.1)	58.3(39.1)	.54
Vitality/ Energy	49.7(18.1)	55.7(17.1)	.07
Emotional wellbeing	54.2(20.2)	56.7(20.5)	.52
Social functioning	56.1(22.1)	69.4(20.8)	.001
Pain	66.6(24.2)	80.4(20.2)	.001
General health	58.9(14.4)	61.1(11.6)	.36

CALL FOR PAPERS

The IISTE is currently hosting more than 30 peer-reviewed academic journals and collaborating with academic institutions around the world. There's no deadline for submission. **Prospective authors of IISTE journals can find the submission instruction on the following page:** http://www.iiste.org/Journals/

The IISTE editorial team promises to the review and publish all the qualified submissions in a **fast** manner. All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Printed version of the journals is also available upon request of readers and authors.

IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digtial Library , NewJour, Google Scholar