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# Assessment of Depression and Its Contributing Factors among Undergraduate Nursing Students

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**Abstract**

Depression is one of the foremost causes of social exhaustion worldwide. Nursing is a stressful profession, it is essential to scrutinize psychiatric morbidity among nursing students as various psychiatric disorders first onset is typically during study period. The aim of this study was to assess the level of depression and its contributing factors among Saudi nursing students. A descriptive correlation, cross sectional research design was utilized in this study on a convenience sample of 149 nursing students, who gave voluntary consent to participate in the study. The data collection instruments used were a demographic data sheet and Beck's Depression Inventory. Subjects were assured the confidentiality and anonymity of the collected data. The result's revealed 1.3% of the participants experienced extreme depression, 4.7% experienced severe depression, 8.1 % experienced moderate depression, 18.1% experienced mild mood disturbance, and (65.1%) had moderate normal mood. A significant relationship was evident between positive family history of depression or any psychiatric disorder, physical illness, consultation with a psychiatrist and level of depression. Therefore, it is obvious that along with physical health mental health of nursing students should also be given importance based on which the students may reflect and find healthy solutions for their distress.

**Keywords:** Depression, Nursing Students, Mental Health, Nursing Education

## Background

Depression is one of the most serious health problems that the human beings might face with. It is the fourth foremost cause of social exhaustion in the world. One in every twenty person is affected by depression at the same time in their lives. The start of depression is more frequent between the ages of 20 to 50, but the normal age for its diagnosis is almost around 40years. Depression is mirrored as a major health problem which causes decline of productivity in studies or work, cognitive, psychomotor and vegetative alterations, loss of initiative, and apathy (Nagaraja, Reddy, Ravishankar, Jagadisha & Muninarayana, 2015).

Depression is identified as one of the four major diseases in the world, which is also considered as the most common cause of disability from disease (Sarokhani, Delpisheh, Veisani, manesh & Sayehmiri, 2013). Depression is characterized by the presence of sad, empty or irritable mood, accompanied by somatic and cognitive changes that significantly affect the individual's capacity to function (American psychiatric association, 2013). Depression has noticeable effect upon eating habits, sleeping patterns and the way the person thinks. Thus, depression can cause disturbance of daily life activities (Aghakani, Nia, Eghtedar, Rahbar, Jasemi &Zadeh, 2011).

Depression, especially in the early adulthood, can cause a major effect in the academic success, future relationships, employment, and might lead to alcohol and substance abuse (Eisenberg, Gollust, Golberstein & Hefner, 2007).

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Students might develop depressive disorder due to academic stressors, such as evaluations, continuous assessment, academic performance, learning materials and examination (Inam, Saqib & Alam, 2003). As a response to this pressure, some students get depressed. They may perhaps express their distress by crying all of the time, missing classes, or separate themselves without understanding that they are depressed. Earlier research studies conveyed that depression in university students is renowned universally (Eller, Aluoja, Vasar & Veldi, 2008 & Mahmoud, Staten, Hall& Lennie, 2012). Depression during student period, can badly disrupt the professional future. Depression can lead to suicidal thoughts, suicidal attempts, poor academic achievement, physical complaints and poor working performance (Ibrahim, Kelly, Adams & Glazebrook, 2013).

Although the experience of studying nursing is beneficial, on the other hand it is also considered as a very stressful experience to study nursing, which might result in depressive disorder amid nursing students (Papazisis, 2008). The usual age of start of the disorder is also so early, creating depression a predominantly leading problem zone for university students and the prevalence seems to be increasing (Reavley andJorm, 2010).

Aspects considered as contributing factors to depression among nursing students are academic, psychological and existential stressors, character traits like perfectionism, lack of peer support and examination stress (Sidana, Kishore, Ghosh, Gulati & Anand, 2012). In addition, poor communication with others and diminished quality of care are associated with depressive disorders (Quince, Wood, Parker &Benson, 2012). Stressful life events are well-known risk factors of depression and suggested to be the major causative factor of depressive symptoms. Also there are other factors known to increase the risk of having depressive disorders among health care students such as family problems, holding responsibility, reduced supervision from adults, and being away from home for long periods or living in a separated house (Aghakani, et al., 2011).

In recent years few studies reported high prevalence of depression among health care students and presence of depressive symptoms over their studying years (Aghakani, et al., 2011). Many health care providers are diagnosed with major depressive disorder, however prevalence of depressive symptoms among health care students are reported as the start of this disorder, and the symptoms of depression might stay with them throughout their professional years and be developed into major depressive disorder (Quince, Wood, Parker and Benson, 2012).Prevalence of depression among health care students was identified as 12.9% in Stockholm, in Sweden 16.1% among female students, and 8.1% among male students, also it was reported that prevalence of suicide attempts was 2.7% among Karolinska Institute students as a result of depression (Dahlin, Joneborg & Runeson, 2005). In United States another study reported a positive screening of depression, 13.8% to 11.4% undergraduate students had depression (Eisenberg, Gollust, Golberstein & Hefner, 2007). A study in UK reported a prevalence of depression at Cambridge University with percentage from 2.7% to 8.2% of them had depression among the health care students in the campus (Quince, Wood, Parker & Benson, 2012). In India, a study conducted in New Delhi has shown that the prevalence of depression among health care students who were selected according to the year of study reported 7.6% to 21.6% positive depressive disorder, also it was reported that there is influence of gender, history of depression, family history of mental illnesses, social support, family structure and number of siblings on the incidence of depressive disorder (Sidana et.al., 2012). Another study conducted in Iran among health care students of Urmia University reported 10.4% to 11.3% prevalence of depression and it was found that there was no relationship between depression and age, gender, education level, duration of education or rank of birth (Aghakani, et.al, 2011). In Greece, researchers reported that the prevalence of depression were 60% and 49% among nursing and medical students respectively (Abedini, Davachi, Sahbaii, Mahmoudi & Safa, 2006). A study conducted in final year students of two nursing courses to identify the existence of depression among nursing students found that 15.4% of bachelor's degree students and 28.6% of licentiate's degree students had indications of depression, with 14% of the total having signs of moderate and severe depression (Furegato, Santos& Silva, 2010).

University students might face in their academic lives different kinds of stressors and these stressors would be much greater if they were in the middle of someone else's stressful life or experience. Nursing is one of thestressful profession, from the academic preparation onwards, the student's move in to circumstances which necessitate the taking of important decisions for patient care, the timidity and anxiety which result from this may become a cause of depression. Qualities such as a high level of cognitive skills proactive nature and attitudes are always required for nursing students (Nagaraja et.al, 2015). Nursing students are combination of people who suffer from their academic lives and they are people who are trying to share the suffering of other people who are affected with different health issues, which put them at a greater risk than any other students (Amr, Algilany, Elmoafee, Salama&Jimenen, 2011).

It is essential to scrutinize psychiatric morbidity among nursing students, as most of the psychiatric disorders have their first onset typically during the study period (Kessler, Chiu, Demler, Merikangas& Walters, 2005). Understanding and identifying nursing students' mental health issuesis animportant allegationof the campus mental health services (Cheung, Wong, Wong, Law, Ng, Tong, Wong, Ng & Yip, 2016). Literature lack references related to prevalence of depression among Saudi undergraduate nursing students, therefore the purpose of this research study is to assess the level of depression among nursing students and to identify contributing factors that might increase the risk of undergraduate nursing students to the development of depressive symptoms.

**Aim of the Study**

The aim of the current study was to assess the level of depression and its contributing factors among undergraduate Saudi nursing students in Riyadh, Kingdom of Saudi Arabia.

**Specific Objectives**

**The Specific Objectives of The Current Study Were to:**

Assess the level of depression among undergraduate nursing students. Identify factors that contribute to depression among undergraduate nursing students.Evaluate the relationship between selected demographics variables and depression levels among undergraduate Saudi nursing students.

**Materials and Methods**

**4.1 Study Area/Setting**

The study took place in the College of Nursing affiliated to King Saud bin Abdulaziz University for health sciences – Riyadh, Kingdom of Saudi Arabia.The urgency for the establishment of the College arose in response to the massive shortage of Saudi nurses. Increasing the number to meet the profession's need was one of its main objectives in the initial phase. The College started by awarding a Bachelor of Science in Nursing (BSN).Currently, the College has open its doors to postgraduate students offering a Master Degree in nurse-midwifery.

**4.2 Study Subjects**

A convenience sample of 149 nursing students at King Saud bin Abdulaziz university for health sciences – Riyadh (academic levels 5 - 8) for spring semester 2016-2017, who accepted to voluntarily participate in the study were included in this study.

**4.3 Study Design**

A descriptive correlation cross sectional research design was used in this study, to detect the prevalence and incidence of situations, complete descriptions of phenomena, and to identify relationships between variables. Correlation design is used for the evaluation of relationships and associations among the variables within the study (Polit and Beck, 2014).

**4.4 Sample Size**

Using the sample size calculator software to determine the sample size for the current study from the total number of undergraduate nursing students who are enrolled in spring semester 2016-2017 (187 students), with a confidence level of 95% and confidence interval of 5% the calculated sample size is 385. A sample of 111 undergraduate nursing student is calculated. 149 students who accepted to voluntarily participate in the study were included in this study.

**4.5 Sampling Technique**

A non-probability convenient sampling technique was utilized to select the proposed sample of undergraduate nursing students.

**4.6 Data Collection Methods, Instruments Used, Measurements**

Data was collected using a two part questionnaire survey. Part one is the demographic data sheet which was developed by the researchers and includes variables such as: age, marital status, academic level, current GPA, living arrangement, parent education, family history of depression, previous history of depression, any past consultation with specialists, perceived family support and satisfaction with the perceived family support.

Second part is the Beck's Depression Inventory (Beck, Ward, Mendelson, Mock, Erbaugh, 1961), it is a self-reported instrument that contains 21 items with evaluation from 0-3 for each item that is used to measure the severity of depression in adults. The highest possible total for the whole test would be sixty-three. The BDI categorizes depression as scores between 1-10 are considered normal, scores between 11-16 mild mood disturbance, scores between 17-20 borderline clinical depression, scores between 21-30 moderate depression, scores between 31-40 severe depression and scores over 41 extreme depression. BDI is a gold standard tool and was used in many previous researches to measure depression severity (Thombs, Bass, Ford, Stewart, Tsilidis, Patel, Fauerbach, Bush &Ziegelstein, 2006 and Kühner, Bürger, Keller & Hautzinger, 2007). BDI's validity ranged between 0.73 and 0.96 (Wang and Gorenstein, 2012).

After obtaining all necessary ethical approvals from CON-R research unit and KAIMRC ethics committees, the principle investigator contacted each academic level coordinator to arrange with the instructors teaching at the concerned academic level and explain the nature and purpose of the study to set a plan for data collection on the convenience of the instructor and the students (before or after the scheduled classes). Data collectors explained the study to the students and obtained the consent form from those students who voluntarily agreed to participate in the study after ensuring confidentiality and anonymity of the collected data.

**Ethical Considerations**

Ethical approval from the research unit at college of nursing at King Saud bin Abdulaziz for Health Sciences was obtained. Approval of the Institutional Review Board Committee (IRB) at King Abdullah International Medical Research Center (KAIMRC) was also granted. All the participation were voluntary and subjectshad the right to withdraw from the study at any time without any penalty. The data was collected after explanation of the purpose and nature of the study. There was neither any known harm resulted from participation in the study nor any gained entitlement. The questionnaire was totally anonymous and there was no identifying data collected. All collected data were confidential and used only for the purpose of the current research.

**Data Management and Analysis Plan**

Collected data was cleaned, entered and analyzed using the Statistics Package for the Social Sciences (SPSS) version (22). Data was presented using tables and graphs,quantitative variables presented using descriptive statistics. Correlations were tested accordingly.

**Results**

Data were collected from College of Nursing affiliated to King Saud bin Abdulaziz University for Health Sciences, Riyadh with the aim to assess the level of depression and its contributing factors among undergraduate Saudi nursing students in Riyadh, Kingdom of Saudi Arabia. Table 1 presents the demographic criteria of the study subjects. The sample consisted of 149 female from levels 5 to 8. Participants' age ranged from 19 to 26 years with a mean age of 21.57 year (SD $\pm$ 1.16).More than 80% of the students were full time students only while 11.4% had a full time job in addition to being a full time students and only six students (4.0%) had a part time job. Students' GPA ranged between 2 to 4.80 with a mean GPA score of 3.401 points (SD $\pm$ 0.665).Only seven students (4.7%) were married while 95.3% were single. 145 students (97.3%) were living with their immediate family while only 2.7% didn't live with their immediate family. More than half of the parents of the students included in the current study (61.7%) had a high school education or below while 27.5% of the parents had a graduate education and only 10.7% had post graduate education. More than one tenth (10.4%) of the students had physical illnesses including diabetes, migraine headache, anemia and asthma.

**Table 1: Sociodemographic Data of the Participants (n = 149)**

| Variable | Frequency (N) | Percent (%) |
|---|---|---|
| **Gender** | | |
| Female | 149 | 100 |
| **Age** | | |
| Mean 21.57 | | |
| SD ± 1.16 | | |
| **Marital Status** | | |
| Single | 142 | 95.3 |
| Married | 7 | 4.7 |
| Divorced | | |
| **Occupation** | | |
| Full time student | 126 | 84.6 |
| Part time job | 6 | 4.0 |
| Full time job | 17 | 11.4 |
| **Academic Level** | | |
| Level 5 | 39 | 26.2 |
| Level 6 | 40 | 26.8 |
| Level 7 | 32 | 21.5 |
| Level 8 | 38 | 25.5 |
| **Grade Point Average** | | |
| Mean 3.401 | | |
| SD ±0.665 | | |
| **Living Arrangements** | | |
| Lives with immediate family | 145 | 97.3 |
| Doesn't live with immediate family | 4 | 2.7 |
| **Parents' Level of Education** | | |
| High school and below | 92 | 61.7 |
| Graduate education | 41 | 27.5 |
| Post graduate education and above | 16 | 10.7 |

As presented in table 2, 131 (87.9%) of the students involved in the study had no family history of depression or any other psychiatric disorder while 18 (12.1%) students experienced family history of depression or any other psychiatric disorder. The majority 121 (81.2%) students had no previous history of depression symptoms while about fifth of the subjects (18.8%) had previous history of depression symptoms. Of those 17 (11.4%) students had consultation with a psychiatric consultant for their depressive symptoms.

**Table 2: Past History of Depression among Study Participants (n = 149)**

| Variable | Frequency (N) | Percent (%) |
|---|---|---|
| **Do you have family history of depression or any other psychiatric disorder?** | | |
| Yes | 18 | 12.1 |
| No | 131 | 87.9 |
| **Do you have any previous history of depression symptoms?** | | |
| Yes | 28 | 18.8 |
| No | 121 | 81.2 |
| **Have you had any consultation with a psychiatrist about depression symptoms?** | | |
| Yes | 17 | 11.4 |
| No | 132 | 88.6 |

Table 3 shows that although 125 (83.9%) of the students reported that they received enough family support only about a quarter of them (n=40, 26.8%) were extremely satisfied with the support they received from their family.

**Table 3: Satisfaction with Perceived Family Support among Study Participants (n = 149)**

| Variable | Frequency (N) | Percent (%) |
|---|---|---|
| **From your perspective, do you receive enough family support?** | | |
| Yes | 125 | 83.9 |
| No | 24 | 16.1 |
| **How much are you satisfied with the support you receive?** | | |
| Extremely satisfied | 40 | 26.8 |
| Very much satisfied | 39 | 26.2 |
| Moderately satisfied | 32 | 21.5 |
| Not at all satisfied | 38 | 25.5 |

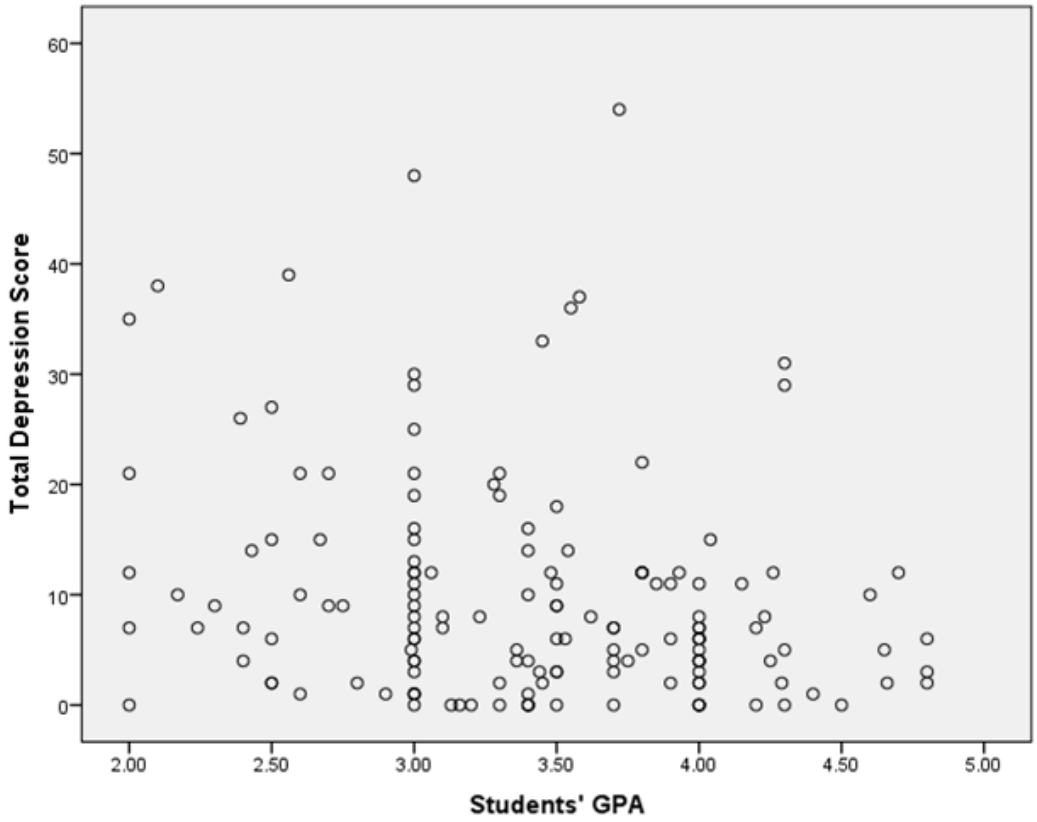
The total possible Beck's Depression inventory score range between 0 and 63 with higher scores indicating higher levels of depression. Participants total Beck's Depression inventory scores ranged from 0 to 54 with a mean score of 9.91(±10.206). Participants were distributed to six different levels according to their depression inventory scores: scores between 0 and 10normal mood, 11 – 16 mild mood disturbance, 17 – 20borderline clinical depression, 21 – 30 moderate depression, 31 – 40 severe depression and scores of 41 and above reflect extreme depression. Based on this classification, analysis of data as represented in table 4 revealed that only 1.3% experienced extreme depression, 4.7 % of the participants met the criteria for severe depression, 8.1 % experienced moderate depression, 18.1 % of the participants experienced mild mood disturbance, almost two thirds of the participants (65.1%) classified as having moderate normal mood and experience no depressive symptoms.

**Table 4: Distribution of the students by Levels of Depression (n = 149)**

| Variable | Frequency (N) | Percent (%) |
|---|---|---|
| Normal Mood (BDI score 0 – 10) | 97 | 65.1 |
| Mild Mood Disturbance (BDI score 11 – 16) | 27 | 18.1 |
| Borderline Clinical Depression (BDI score 17 – 20) | 4 | 2.7 |
| Moderate Depression (BDI score 21 – 30) | 12 | 8.1 |
| Severe Depression (BDI score 31 – 40) | 7 | 4.7 |
| Extreme Depression (BDI score 40 and above) | 2 | 1.3 |

In examining the relationship between depression scores and students' age, Pearson's R revealed none statistically significant relationship ($r = 0.045$, $p = 0.582$) which indicating that depression scores had no relation with participants' age.

**Relationship between Beck's Depression Inventory Score and Students' GPA (n = 149)**




Pearson's R revealed a negative statistically significant relationship (r = -0.224, p = 0.006**) between depression scores and students Grade Point Average, reflecting lower depression scores among the students with high GPA scores and vice versa.Using Spearman's correlation to examine the relationship the parents' level of education and depression scores among the students, indicated a statistically significant negative correlation (r = -0.203, p = 0.013) indicating that those students whose parents were highly educated experienced low scores of depression.

**Table 5: Relationship between History of Depression and Levels of Depression (n = 149)**

| Variables | | Level of Depression | | | | | | $X^2$ | P |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | | |
| Do you have family history of depression or any other psychiatric disorders? | No | 91 | 20 | 3 | 9 | 6 | 2 | | |
| | Yes | 6 | 7 | 1 | 3 | 1 | 0 | 10.868 | 0.05 |
| Do you have any previous history of depression symptoms? | No | 84 | 19 | 4 | 7 | 5 | 2 | 9.866 | 0.07 |
| | Yes | 13 | 8 | 0 | 5 | 2 | 0 | | |
| Have you had any consultation with a specialized provider about depression? | No | 90 | 24 | 3 | 7 | 6 | 2 | 13.604 | 0.01 |
| | Yes | 7 | 3 | 1 | 5 | 1 | 0 | | |

Chi square revealed statistically significant relationship between positive family history of depression or any other psychiatric disorder, consultation with a specialized provider about depression and the experienced level of depression among the participants included in the current study ($x^2$= 10.868, 13.604, P = 0.05, 0.01 respectively). No statistically significant relationship was detected between having any previous history of depression symptoms and the experienced level of depression among the students included in the current study ($x^2$= 9.866, P = 0.07).

**Table 6: Relationship between History of Physical Illnesses andLevels of Depression (n = 149)**

| Variables | | Level of Depression | | | | | | $X^2$ | P |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | | |
| Do you have any physical illness | No | 89 | 24 | 4 | 10 | 5 | 0 | | |
| | Yes | 8 | 3 | 0 | 2 | 2 | 2 | 19.374 | 0.002 |

A very highly statistically significant relationship was documented between having a diagnosis of physical illness and the experienced level of depression among the students included in the current study (x2= 19.374, P = 0.002). One way ANOVA indicated no significant relationship between student's employment status and their depression score (F = 3.164, p = 0.077).

In testing the relationship between satisfaction with social support and depression scores among the students, Spearman's correlation indicated a highly statistically significant negative correlation (r = -0.520, p = 0.000) indicating that those students who were highly satisfied with the social support they receive experienced low scores of depression and vice versa.

## Discussion

This study examined the prevalence of depression, and its contributing factors among undergraduate nursing students. A concept about nursing college is that it is considered as a stressful environment that put forth strain on the academic performance, psychological well-being and physical health of the university student (Sarkar,Sengupta, manna, Chattopadhyay &mundle, 2013&Romeo, Sta, Maria, Estanislo& Rodriguez, 2013). The results of the current study indicated that among 149 participants 1.3% experienced extreme depression, 4.7 % experienced severe depression, 8.1 % experienced moderate depression and 18.1 % experienced mild mood disturbance.

In relation to the present study the research done by Abedini, Davachi, Sahbaii, Mahmoudi&Safa (2006) revealed that 38.7% of the nursing students had mild to severe depression. Also, in another study researchers examined the depression symptoms among nursing students and stated that 44% of them had mild to severe depression (Halikiopoulou, Tsiga, Khachatryan&Papazisis, 2011). Azizi, Khamseh, Rahimi&Barati(2013) reported that among the 130 nursingstudents, who were included in their study, 30.8% were mildly depressed, 17.7%were moderately depressed, and 6.3%were severelydepressed, as well they specified that the prevailing stress augmented the feeling of anxiety and decreased the performance level of the nursing students.

Based on current study results (18.8%) of the participants had previous history of depressive symptoms, of those 17 (11.4%) of them had consultation with psychiatric consultant for their problem. In this regard according to Cheung, et.al. (2016) in their study a fairly low percentage 12 (2%) suffered from a psychiatric disorder. Another study by Merkouris, Middleton & Karanikola (2014) revealed that students who had been admitted in a psychiatric clinic or had received a treatment for a mental health problem reported the highest incidence of clinical depressive symptoms. Regarding family history of psychiatric disorder in the current study 18 (12.1%) student's experienced family history of depression or any other psychiatric disorder. This finding is supported by the research done by Cheung, et.al. (2016) where 8.5% of respondents reported a family history of psychiatric disorder. Also it was made clear from the present study results that there is a significant relationship between positive family history of depression or any other psychiatric disorder, consultation with a specialized provider about depression and the level of depression among the participants. According to Merkouris, Middleton & Karanikola (2014) in addition to personal history, the prevalence of clinical depressive symptoms was higher among students with a positive family history of mental health disorders. Yet again a very highly statistically significant relationship was recognized between having a diagnosis of physical illness and the level of depression among participants in the current study. Usually people with physical health problems are at increased risk for mental health problems (Rathnayake & Ekanayaka, 2016). Students with poor physical and mental health were more likely to report depression than those with good physical and mental health (Cheung, et.al. 2016). Family support and satisfaction are factors that influence university students, according to the results of the current study it was discovered that 125 (83.9%) of the students received enough family support and 40 (26.8%) were extremely satisfied with the support they received from their family. In contrast Hammen (2005) in his study acknowledged that students whose parents were divorced were 1.60 times more at risk of showing clinically significant depressive symptoms.

An active family support functions as a defense against psychiatric morbidity among nursing students. Separation of parents can lead to a shrinkage of family support and become an influencing factor of stress that can cause depression in nursing students.

Based on this study result the foremost contributing factors of depression identified among undergraduate nursing students was, diagnosis of a physical illness and family history of depression or any other psychiatric disorder, other factors like GPA and parents level of education were identified to have negative correlation which shows that when GPA and parents level of education is higher, then lower will be the depression scores and vice versa. In relation to this finding a study conducted by Chatterjee, Saha, Mukhopadhyay, Misra, Chakraborty & Bhattacharya(2014) identified some factors that significantly influence depression among the nursing students were familial disharmony, disinterest in the course and insecurity about future placement. Also in concurrence with this finding a research led by Chen, Chen, Sung, Hsieh, Lee & Chang (2015) perceived that grade point average had a significant negative correlation with depressive symptoms, which is also consistent with the findings of Vogel, Hurford, Smith & Cole(2003) in which higher depression scores were associated with lower grades. Another study conducted among young nursing students in China (Xu, Chi, Chen, Qi, Zhang & Yang,2014) found academic stress was intensely associated with depressive symptoms. In terms of factors influencing depressed mood Phimarn, Kaewphila, Suttajit & Saramunee (2015)found low GPA as one of the strong factor that predisposed depressive symptoms. These psychosocial factors were considered as the causative factor of depression among this group at a vulnerable time of their lives. From the current study it is clear that depression among university students is extremely prevalent and widespread problem across country. Nursing students are special group of young people facing a transient period in which they are moving from adolescence to adulthood and can be one of the most stressful times in a person's life, so special attention and clinical services should be given to the students who show the symptoms of depression.

## Conclusion and Recommendations

The above findings urge mental health professionals to better understand the distress of nursing students. Results of this study are alarming in terms of increased risk for psychiatric morbidity like depression. Also the findings conclude that depression is highly prevalent among undergraduate nursing students. Bearing in mind the outcomes found it is obvious that along with physical health mental health of nursing students should also be given more importance based on which the students may reflect and find healthy solutions for their distress.

## Based on the Findings of this Study, the Following Recommendations are suggested

Replicate the current study on larger sample size using a combined quantitative and qualitative research approach to better understand the factors leading to depression among undergraduate nursing students. Early recognition of stress and related problems are vital, and beginning of stress management programs expanding counseling activities for nursing students are necessary. Longitudinal studies are obligatory to observe time-series changes in mental health aspects among nursing students. Regular and automatic scheduled health check-ups, mental and physical, as the default for students may lift students' psychiatric health and de-stigmatize health issues .Guidance through academic advising and counseling programs should be given more importance in nursing colleges. Providing family support and encouraging participation in social activities are recommended to prevent occurrence of depression in students.

## Ethical Approval

This research study was approved from King Abdullah International Medical Research Center (KAIMRC)SP17/031/R.

## Conflict of Interests

The authors declare that they have no conflict of interests with any organization regarding the materials discussed in this manuscript.

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