

## EXAMINING THE RELATIONSHIP BETWEEN MENTAL HEALTH AND ACADEMIC ACHIEVEMENT OF NURSING AND MIDWIFERY STUDENTS OF HORMOZGAN UNIVERSITY OF MEDICAL SCIENCES

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### ABSTRACT

**Introduction:** As human resources are the most valuable capital of each country, cultural, economic and social progress of the countries depends on the training of specialists, scientific growth and awareness rising among the people of that society. Moreover, one of the most important goals of educational planners of the states is examining student specific issues, successful education and providing their physical and mental health. Thus, this study was conducted to investigate the relationship between mental health and academic achievement of nursing and midwifery students of Hormozgan University of Medical Sciences.

**Methods:** This is a cross-sectional of descriptive-analytic type. The study population consisted of all undergraduate nursing and midwifery students at the Faculty of Nursing and Midwifery during the semesters of 2015-2016. All of the study population was selected as sample. Goldberg and Hillier's General Health Questionnaire was used to collect the data and the student's demographic information and average questionnaire was used to assess the degree of academic achievement. Finally, data analysis was performed using SPSS 22 as frequency and percentages by t, F, Tukey, regression and correlation tests.

**Results:** the number of nursing and midwifery was 188 including 165 nursing students and 23 midwifery students. The average grade of students' academic achievement (average) was  $15.61 \pm 43.1$  and their mean mental health score was  $45.48 \pm 10.88$ . There was a significant difference between students living with their families and students living in dormitories in mental health ( $p=0.02$ ). There was a significant difference between the mother's education and the academic achievement test of the students ( $p=0.02$ ). In addition, according to the findings, mental health and its subscales could not predict academic achievement.

**Conclusion:** Mental health and its subscales are not predictive of academic achievement. Since academic achievement and mental health are affected by many underlying factors and many of these factors were unknown in this study, it is suggested that a study be conducted to identify these factors.

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### Introduction

Since human resources are the most valuable capital of each country, the cultural, economic and social progress of the countries depends on the training of specialist personnel, scientific development, and raising the awareness of the people of that society [1]. One of the most important goals of state educational planners is to study students' specific issues, successful

education, and to provide their physical and mental health. In this regard, one of the goals of the universities is to improve the quality of education, the success and academic achievement of students since students' failure imposes many financial and spiritual costs on universities and on the students themselves [2].

Academic achievement shows the student's academic status, which may indicate the grade of a course, the average grades for a set of courses in a course or the average grades of different courses [3]. With a comprehensive approach, one can identify three factors that can influence and improve academic performance: individual factors, factors internal to the organization, and external factors. The most important intrapersonal factors are having motivation, anxiety, study method, intelligence, physical factors, behavioral incompatibility, emotional and mental conditions, and general health [4]. General health can have a significant impact on all aspects of human personality and manifestation of various behaviors [5]. Therefore, many scholars considered the relationship between mental health and academic achievement. Findings of Theiwell et al. (2007) showed that positive mood states predict 20% of variance of academic performance [6]. People with general health appear to above a higher level of personal, familial, occupational, educational and social returns [7].

Mental health is one of the important and basic concepts in psychology [8] and one of the important components of general health [9]. In a sense, the central part of the health is mental health because all health-related interactions are carried out mentally [8]. Mental problems impose a significant burden on individuals, so that it is predicted that in 2020, after heart diseases, depression would be the most expensive problem in the health system of the communities [9]. Research shows that every year in the United States, about 19 million people experience depression (roughly 1.3% of adults). According to research conducted in Iran, about 7 million people suffer from a kind of mental disorder, and about 15-25 percent of the population experience mild to severe depression. Students are also considered to be at high risk in terms of displacement and sudden separation from the family [10].

Today, university students, including nursing midwifery students, confront many stressors in their educational experiences. Some reasons such as entering a stressful complex, psychological stresses in the environment (hospital, patients' problems), large volume of courses and apprenticeships, economic and family problems, and lack of job prospects [11] can lead to more vulnerability and jeopardize mental health of students. Some other problems of this kind are related to the transition from adolescence to youth, lack of familiarity with the university environment, distance from the family, lack of interest in the field of study, and problems such as them [12].

According to foregoing, mental health is an important and influential concept in the performance of individuals [2], the identification of factors related to physical, and psychological well-being of students can help practitioners to lead educational programs and make them more aware of the affairs of the youth of the country. Thus, the aim of this study was to investigate the relationship between mental health and academic achievement of nursing and midwifery students of Hormozgan University of Medical Sciences.

## **Method**

The present study was cross-sectional of descriptive-analytic type. The research environment was Bandar Abbas Nursing and Midwifery Faculty and all the population was all undergraduate students at the Faculty of Nursing and Midwifery in the years 2015-2016 where the whole population was selected as the sample.

Moreover, inclusion criteria were students who did not have a history of known psychological illness and who also tended to participate in the study. Given the cross-sectional nature of the study, no exclusion criteria were considered. In order to achieve the research goals, Goldberg & Hiller General Health Questionnaire and a demographic information questionnaire were used and the students' average score was used to determine the degree of academic achievement. Goldberg (1979) designed Goldberg and Hiller's General Health Questionnaire. The questionnaire questions examined the psychiatric status of a person in a recent month and are used in the early and quick screening of the possibility of mental disorder in the population [13]. The questionnaire consisted of 28 questions and 4 sub-scales (depression, anxiety, social dysfunction and physical symptoms). In this test, a Likert scoring method is used that scores the options (0, 1, 2, 3) [14]. Goldberg et al. reported the validity of the questionnaire as 0.78. In Iran, the reliability of the questionnaire was reported using the three methods of test-retest, split-half, and Cronbach's alpha, respectively, 0.70, 0.93, and 0.90 [13]. The scores of this questionnaire were divided into four quartiles. The first quartile was considered as a good mental health status, the second and third as the average and the fourth quartile was considered as unsatisfactory mental health condition [14].

The student's average score of final term was considered as an indicator of academic achievement. The method of evaluating academic achievement using the average is used in many studies [11-12]. In order to assess the status of academic achievement, students' average score was divided into quarters. The first quartile that is the average less than 14 was considered as unsuccessful, the second and third quartiles (average 14 to 16.75) as average, and the fourth quartile, which included the averages over 16.75, was categorized as successful students [14].

Data analysis was performed using Spss 22 with frequency and percentages by t, F, Tukey, regression and correlation tests.

**Findings**

The number of nursing and midwifery students was 188, which included 165 nursing students and 23 midwifery students. Moreover, 77.7% were female students and 18.1 were male students. The majority of students (70.7%) were single and most of them (64.4%) lived in a dormitory.

Furthermore, 29.3% of their fathers' had high school education and 36.2% had primary school education, which included the highest rates. More than 50 percent of the students had family income of one million or more, 62.8% of the students were unemployed and 33% were employed. Among the students, 29.8% had the history of referring to the psychiatrist, 66.7% of the students had no history of any known physical illness, and 71.3% of the students were interested in their field. Moreover, 38.3% once, 46.8% twice, and 9% of them had attended the university entrance exam more than three or more times.

The average grade of students' academic achievement (average) was  $15.61 \pm 43.1$  and their mean mental health score was  $45.48 \pm 10.88$ . Table 1 shows the mean scores of subscales of mental health of the students. The mean score of subscales of physical symptoms, anxiety, social function, and depression of students is 11.65, 11.30, 13.24 and 9.27 respectively.

**Table 1.** Distribution of mean scores of sub-scales of mental health of student of Bandar Abbas Nursing and Midwifery Faculty

Subscales	Mean	SD	Minimum	Maximum	Frequency
Physical symptoms	11.65	3.4	7	28	181
Anxiety	11.30	3.68	7	26	181
Social function	13.24	3.17	7	25	181
Depression	9.27	3.26	7	24	181

Table 2 shows a significant difference between students living with their families and students living in dormitories in mental health ( $p = 0.02$ ); students living in dormitories have lower mental health compared to the students living with their families. Results show a significant difference between mother's education and academic achievement test ( $p=0.02$ ). Tukey test showed a significant difference between high school and university ( $p=0.01$ ), and the academic achievement of students whose mothers have university education is more than those whose mothers have high school education. No significant difference was found between the other educational levels in this test.

**Table 2.** Distribution of average grades of academic achievement and mental health with demographic characteristics of the subjects under study

Demographic features		Academic achievement		Mental health	
		Mean	SD	Mean	SD
Field of Study	Nursing	15.66	1.45	44.86	10.79
	Midwifery	15.34	1.33	11.77	10.43
	Sig.	P=0.32		P=0.1	
Gender	Girl	15.71	1.32	45.20	10.25
	Boy	15.11	1.67	47.26	13.69
	Sig.	P=0.06		P=0.32	
Marital status	Single	15.51	1.38	45.54	11.16
	Married	15.95	1.53	42.7	8.16
	Sig.	P=0.08		P=0.1	
Type of residence	With family	15.73	1.41	42.68	8.73
	In the dorm	15.48	1.48	46.33	11.45
	Sig.	P=0.2		P=0.02	
	Illiterate	15.49	1.17	49.37	17.10
	Elementary	15.29	1.54	44.15	9.41
	Guidance school	15.79	1.58	43.9	8.89
	High school	15.45	1.44	45.81	10.45

Father's education	University education	15.9	1.53	43.73	10.82
	Sig.	P=0.6		P=0.4	
Mother's education	Illiterate	15.49	1.16	47.76	14.13
	Elementary	15.66	1.49	43.66	9.81
	Guidance school	16.09	1.27	45.5	14.03
	High school	15.21	1.63	46	9.32
	University education	16.42	1.04	44.5	11.62
	Sig.	P=0.02		P=0.6	
Employment status	Employed	15.8	1.46	44.09	10.99
	Unemployed	15.5	1.46	45.42	10.63
	Sig.	P=0.2		P=0.4	
History of referral to a psychiatrist	Has	15.6	1.5	43.64	11.45
	Does not have	15.59	1.45	45.65	10.46
	Sig.	P=0.9		P=0.2	
History of physical illness	Has	15.63	1.45	45.31	12.29
	Does not have	15.55	1.48	44.93	10.12
	Sig.	P=0.7		P=0.8	
Interest in the field of study	Has	15.59	1.4	44.41	11.14
	Does not have	15.55	1.68	46.83	9.6
	Sig.	P=0.8		P=0.2	
The number of time attending the entrance exam	Once	15.69	1.36	45.25	11.41
	Twice	15.61	1.51	44.72	10.17
	Three times and more	15.05	1.65	47.11	10.86
	Sig.	P=0.2		P=0.7	
Family income	300-500 thousand tomans	15.51	1.45	44.22	9.25
	510-700 thousand tomans	15.9	1.55	48.26	13.09
	710 thousand to 1000000 tomans	15.28	1.51	45.43	14.48
	More than 1000000	15.62	1.47	45.37	9.87
	Sig.	P=0.5		P=0.7	

In addition, findings of Table 3 showed that mental health and its subscales are not predictive of academic achievement.

**Table 3.** Prognosis of academic achievement based on mental health and its subscales

Criterion variable	Predicting variable	F	P	R	R <sup>2</sup>	B	t	P
Physical symptoms	Academic achievement	0.81	0.3	0.06	0.004	-0.02	0.9	0.3
Anxiety	Academic achievement	0.230/	0.6	0.3	0.001	0.01	0.48	0.6
Social function	Academic achievement	0.27	0.6	0.3	0.001	0.01	0.52	0.6
Depression	Academic achievement	0.59	0.4	0.05	0.003	-0.02	-0.77	0.4
mental health	Academic achievement	0.04	0.8	0.01	0.000	-0.002	-0.2	0.8

### Discussion and Conclusion

Studying students' specific issues, successful education, and their physical and mental health are among the most important goals of government educational planners and depression is one of the most common mental illnesses especially in the youth age group. Since the effects of this disease on various aspects of life, including work and activities and academic achievement are important, the purpose of this study was to determine the degree of depression and mental health in nursing and midwifery students.

The results of this study also showed no significant relationship between psychological tests and marital status. This finding are in line with the results of the study of Tavakoli Zadeh [15] and Namdar Areshtanab [11]. It should be noted, however, that the ratio of single to married people in samples is not comparable, and this indicates the importance of conducting research in which the number of married people is close to single individuals.

The study showed that students living in a dormitory have a lower mental health level than students who live with their families. It is clear that students who study with their families do not experience the stresses and problems of dormitory students. One of these problems is the limited environment, low recreation facilities, the existence of different cultures and the emergence of problems in the field of cultural conflict. Namdar Areshtanab [11] found no significant differences between the student's residences. Therefore, it is necessary to examine the role of effective factors that eliminate the difference between mental status and place of residence. Since fathers, according to their occupation, spend more time outdoors and have less relationship than the mothers with their offspring, the present result, which states no difference between father's education and psychological tests (mental health and depression), is no unexpected.

The present study showed that children of mothers with higher education show better educational achievement. Educated women place more emphasis on education and, given the role they play in their families, shift the notion of important education to their children and, as a result, their children are more likely to study and have better academic achievement. Contrary to the present study, which does not show a difference between male and female, and psychological tests, in his study, Hadavi [16] stated that male students' depression is more than female students' depression. Another study by Yousofi [17] found that women had lower mental health than men did. These different results nullify the need for further research in this field.

In his research, Namdar Areshtanab stated that the students who have chosen their field of study base on interest have a better mental health status than the others, which is not consistent with the current study [11]. The present study states no relationship between the interest in the field of study and academic achievement and mental health. This contradiction can be due to the effect of other confounding variables that reminds of the need for further research.

Contrary to research that found no relation between mental health and academic achievement, in their studies, Parviz Rad [20] and Namdar Areshtanab [13] stated that those with higher incomes have a higher mental health than those with lower incomes. The mentioned studies, as well as the present study aimed to study the financial reciprocation of the monthly income, as well as the fact that a fixed amount may be considered appropriate and desirable from the point of view of one person and not good from the other ones' point of view that should be studied. Therefore, it is recommended that in other researches, in order to examine the financial compliance, attention be paid to the satisfaction of individuals from the monthly income, not merely the amount received. In his study, Yusofi [17] stated no meaningful relationship between mental health and academic achievement, which is consistent with the present study. In other words, mental health and its subscales cannot predict academic progress.

Finally, due to conducting this research in a college, the results of this study cannot be generalized to all the students, which is of the limitations of the study. Therefore, it is necessary to study with a larger sample size at different universities. Since academic achievement and mental health are affected by many underlying factors, many of which are unknown in this study, it is suggested that a study be conducted to identify these factors.

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### **Conflict of Interest:**

There is no conflict of interest to be declared.

### **Authors' contributions:**

All of authors contributed to this project and article equally. All authors read and approved the final manuscript.

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