

Effect of the Psychiatric-Mental Health Nursing Curriculum on Students' Attitude Towards Mental Illness

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Abstract

Background: Assessment of undergraduate nursing students' attitudes toward mental illness is an important aspect as they are the future care providers. **Aim:** The aim of this study was to assess the effect of the psychiatric- mental health nursing curriculum on students' attitudes toward mental illness. **Design:** A cross-sectional descriptive design was used. **Setting:** The study was carried out at the Technical Nursing School of Nasser Institute Hospital for Research and Treatment affiliated to the Ministry of Health of Egypt at Cairo governorate. **Subject:** 92 nursing students were included. **Tools:** Part one: Socio-demographic questionnaire to assess socio-demographic characteristics of the nursing students, socio-demographic characteristics of students' parents and students' knowledge and source of knowledge about mental illness. Part two: Attitude about Mental Illness scale. **Results:** There was a highly statistically significant improvement of nursing students' attitudes percent score toward mental illness regarding all studied dimensions in post- intervention as compared to the pre- intervention phase. **Conclusion:** there was a highly statistically significant positive correlation between all dimensions reflecting nursing students' attitudes toward mental illness. **Recommendations:** The study recommend that, the psychiatric mental-health nursing curriculum of Technical Nursing School of the Ministry Of Health have to be updated. Increasing awareness of the value of the mental- health nurses and increasing the acceptance of mental illness starting from the first year of nursing schools.

Key words: Attitude, Mental health nursing curriculum, Mental illness.

Introduction:

An attitude is defined as a relatively enduring organization of emotionally linked learned beliefs around an object or a situation predisposing one to respond in some preferential manner (*Desai and Chavda, 2018*). In psychology, an attitude refers to a set of emotions, beliefs, and behaviors toward a particular object, person, thing, or event. Attitudes are often the result of experience or upbringing and they can have a powerful influence over behavior. While attitudes are enduring, they can also change (*David, 2021*).

It is widely recognized that people with mental illness are stigmatized in the general population (*Ronzani and Furtado, 2018*). Such attitudes may affect their lives in many ways, posing both functional challenges and psychological distress extending beyond that caused by their symptoms and other direct manifestations of illness. Several studies have suggested that, more stigmatizing attitudes can

reduce the access of people with mental illness to employment, education, social supports and marriage which lower self-esteem and interfere in their search for professional assistance (*Clement, 2019*).

Nurses play a key role in caring for the mentally ill in sickness and in rehabilitation after an episode of illness. In addition, the majority of patients and their families who are seeking help for their mental illness rightfully expect the hospital and nursing staff to be cognizant of their needs and treat them as unique individuals without any prejudice and discrimination (*Andrea, 2017*).

The attitudes and knowledge of the health professionals on mental illness have been argued to be a major determinant of the quality and outcome of care for mentally ill patient. Nursing students starting the nursing course bring with them stereotypes and prejudice in relation to mentally-ill people, thus show lack of knowledge as to their possibilities of recovery and social

living. Nursing students are likely to share the view that people experiencing a mental illness are dangerous, unpredictable, more prone to violence and at least partially responsible for their illness (Aguiniga, Madden and Zellmann, 2019).

The assessment of attitude of undergraduate nursing students toward mental illness is important as they are the future care providers. A positive attitude will compromise the future nurses' ability to detect and manage psychological problems regardless of knowledge of psychiatry acquired. Looking at the burden of mental illnesses, it is very important to make efforts for the acquisition of positive attitude toward mental illnesses and psychiatry at the undergraduate level (Desai and Chavda, 2018).

Factors subscales of Attitude Scale for Mental Illness:

Factors or Subscales of attitude scale for mental illness included five factors or subscales presented into:

Separatism: is treating patients with mental illnesses in an institution rather than at home within the community (Corrigan and Watson, 2019), Stereotyping: define people with mental illness in a certain behavioral pattern and mental ability (Abo El Magd and Al Zamil, 2018), Benevolence: related to kindness towards people with a mental illness (Wook, Eunkyung and Jee, 2017), Pessimistic Prediction: identified as the view that people with mental illness are unlikely to improve and how society treats them (Sreeraj, Parija, Uvais, Mohanty and Sudhir, 2017) and Stigmatization: identified as, how people perceive mental illness as stigma and it should be hidden (Mitchell, Nelson and Sapag, 2019).

Significance of the Study:

Many researchers found a relationship between nursing students' attitudes and psychiatric mental health curriculum. Students starting the nursing curriculum with negative attitude to psychiatric illness, thus showing lack of knowledge as to their possibilities of recovery and social living.

Clinical experience has been always an integral part of nursing education. It prepares student nurses to be able of "doing" as well as "knowing" the clinical principles in practice (Rahmani, Ranjbar, Ebrahimi & Hosseinzadeh, 2015). So, this study was carried out to assess the effect of the psychiatric mental health nursing curriculum on students' attitude towards mental illness and accordingly further researches will be carried out in educational field.

Aim of the Study:

This study aimed to assess the effect of the psychiatric- mental health nursing curriculum on students' attitudes toward mental illness.

Research Question:

What is the effect of the psychiatric- mental health nursing curriculum on students' attitude towards mental illness?

Subjects and Methods

Research Design:

A cross-sectional descriptive design was used in this study.

Setting:

The study was conducted at the Technical Nursing School of Nasser Institute Hospital for Research and Treatment affiliated to the Ministry of Health of Egypt at Cairo governorate.

Sample Type and Size:

A convenient sample of all available newly enrolled third year students studying psychiatric- mental health nursing curriculum (theory and clinical), all students (92) were accepted to participate in the study.

Tools of Data Collection:

Part one: Socio-demographic questionnaire included three sections;

The First Section: student's personal characteristics, it was composed of items including; age, number of family members, the order of the student among her siblings, ambition after finishing school and residence.

The Second Section: socio-demographic characteristics of student's parent, such as father's educational level, mother's educational level, father's job, mother's job and family income.

The Third Section: student's knowledge about mental illness and sources of their knowledge, such as do you know what is mental illness? , have you ever watched or heard about mental illness?

Mental illness attitude scale: Mental Illness scale (Opinions about Mental Illness in the Chinese Community (OMICC). This scale was used to assess the student's attitude toward mental illness, which set by **Ng and Chan (2000)**, and modified by **EL-Saied (2011)**. The scale consists of 26 items and the researcher adding 5 items to assess the concept of stigma regarding mental illness among students. Total scale items is 31.

❖ **Scoring System:**

Responses were measured on a 3-point Likert scale, scored as following:

0=disagree, 1=neutral and 2=agree

Except for the negative statement "benevolence" 1, 2, 3, 4, 5, 6, and 8 they had a reversed scoring 2=disagree, 1= neutral and 0=agree.

Tool Validity and Reliability: The validity of the tools was tested for content validity by five experts in the field of Psychiatric- Mental Health Nursing from Ain Shams University, then necessary modifications and omission of some details were done.

Testing the reliability of the proposed tools was done statistically by Cronbach Alpha test that was 0.91 for the questionnaire.

1.Operational Design:

The operational design included a preparatory phase, pilot study and field work.

A) The Preparatory Phase:

The Preparatory Phase included reviewing the related literature and theoretical knowledge of various aspects of the study using books, articles, periodicals and internet magazines.

B) Pilot Study:

The pilot study was conducted in the middle of September 2019. It was conducted on 10% of total study subjects (9 nursing students). The pilot study was conducted to confirm clarity, feasibility and applicability of the tool and to estimate the time required for filling the sheet. The tool was applicable and clear for the subject during the pilot study and there was no modification done. The time needed for filling the sheet was ranged between 15 and 20 min. Those pilot subjects were included in the main study sample.

C) Field Work:

1- The Assessment phase:

The studied students were divided into six groups; 4 groups A, B, C, and D 2 groups each of them consisted of 15 students and groups E and F consisted of 16 students.

2- Working Phase:

It was executed two stages lasting from the end of September 2019 to the end of April 2020.

The first stage of the study was at the end of September 2019 before demonstrating the curriculum of psychiatric-mental health nursing, the researcher had a meeting with each group from 23th of September to 30th of September, they met in the laboratory room for one hour before the beginning of the school day from 7:00 to 8:00 am.

The second stage of the study was done after the students had completed studying the psychiatric- mental health nursing curriculum at the first week of March 2020. Due to the coronavirus pandemic, all the students have been quarantined at home so, the tool was sent via WhatsApp application to the six groups at the first week of April, with the same steps and instructions that were done in the first stage. Data collection finished at the last week of April 2020.

2-Administrative Design

To carry out the study, the necessary approvals were obtained. An official letter was issued from the Dean of the Faculty of Nursing, Ain Shams University, to obtain permission from the hospital directors about conduction the study. The researcher met both hospital directors and nursing school directors to explain the aim of the study and get their approval to collect data and seek their support.

3-Statistical design:

Data management & Statistical Analysis:

The collected data were revised, coded, tabulated and introduced to a PC using statistical package for social sciences (IBM SPSS 20.0). Data were presented and suitable analysis was done according to the type of data obtained for each parameter.

I. Descriptive Statistics:

Mean, Standard deviation (+ SD) and range for parametric numerical data, while median and interquartile range (IQR) for non-parametric data.

II. Analytical Statistics:

- 1- Independent sample t-test.
- 2- The paired sample t-test
- 3- One-way ANOVA
- 4- Pearson Correlation Coefficient (r)
- 5- McNemar test
- 6- Cochran-Mantel-Haenszel test (CMH)

P-value: Level of significance:

- $P > 0.05$: Non-significant (NS)
- $P < 0.05$: Significant (S)
- $P < 0.01$: Highly significant (HS)

Ethical considerations

The study proposal was approved by the Ethical Committee of the Faculty of Nursing, Ain Shams University. The official permission to conduct the study was secured. All participants gave their informed consent to participate in the study. They informed about the study aim and about their rights to refuse or withdraw from the study and anytime. The

confidentiality of the information obtained was ascertained. The study maneuvers do not entail any harmful effects on participant

Results:

Table (1): The table shows that, more than three fourth of the studied nursing students (79.3%) were aged 17 years to less than 18 years while 20.7% were aged 16 years; their mean age was 16.79 ± 0.41 . Regarding the number of family members, 44.6% live in family that consist of five members with a mean of 5.41 ± 1.21 . Concerning their order among siblings, 40.2% were the 3rd or more in order and the mean of birth order was 2.29 ± 1.29 . The majority of the participating students (81.5%) had ambition about enrollment in university education and the remaining 18.5% had an ambition about working in hospitals as a nurse; all of the participating students were living in Cairo city 100%.

Table (2): The table shows that, the majority of fathers' and mothers' educational levels 33.7% & 64.1% were of a secondary school respectively. Concerning fathers' jobs; less than two third to three (64.1%) were employees; while more than half of the mothers were not working/retired (56.5%); majority of the participating students (90.2%) stated that, their family income was sufficient.

Table (3): The table shows that, the majority of the studied students had TV, TV dish and internet 87.0%, 76.1% and 71.7% respectively, the majority (83.7%) of the studied students had adequate knowledge about mental illness. 91.3% of the students had ever watched or heard about mental illness, More than two thirds of the students (67.4%) had their knowledge from internet about mental illness, followed by Radio and TV (40.2%), while 4.3% of the studied students had their information about mental illness from the private readings. More than one third of them (37.0%) had someone they know treated from psychiatric disorder, while 17.4% & 8.7% had a friend or someone they know casually was treated before from a psychiatric disorder respectively. 60% & 40% of the people who had

treated were of the students' third or second degree relatives respectively.

Table (4): The table shows that, there is a highly statistically significant improvement of the nursing students' attitudes toward mental illness regarding Separatism dimension in post-intervention as compared to the pre- intervention phase ($P<0.01$).

Table (5): The table shows that, there is a highly statistically significant improvement of the nursing students' attitudes toward mental illness regarding Stereotyping dimension in post-intervention as compared to the pre-intervention phase ($P<0.01$).

Table (6): The table shows that, there is a highly statistically significant improvement of the nursing students' attitudes toward mental illness regarding Benevolence dimension in post-intervention as compared to the pre-intervention phase ($P<0.01$).

Table (7): The table shows that, there is a highly statistically significant improvement of the

nursing students' attitudes toward mental illness regarding pessimistic prediction dimension in post-intervention as compared to the pre- intervention phase ($P<0.01$).

Table (8): The table shows that, there is a highly statistically significant improvement of the nursing students' attitudes toward mental illness regarding Stigmatization dimension in post- intervention as compared to the pre-intervention phase ($P<0.01$).

Figure (1): The figure shows that, there is a highly statistically significant improvement of the nursing students' attitudes toward mental illness regarding all studied dimensions in post-intervention as compared to the pre-intervention phase ($P<0.01$).

Table (9): The table shows that, there is a statistically insignificant difference in the nursing students' total attitudes percent score regarding father's education level, mother's education level, father's job, mother's job and family income ($P>0.05$).

Table (1): personal characteristics of the studied nursing students (n=92).

Variables		No.	%	
Age	16 years-< 17years	19	20.7%	
	17 years-< 18years	73	79.3%	
	Mean \pm SD	Minimum	Maximum	
	16.79	0.41	16.00	17.00
No. of family members	Four members	20	21.7%	
	Five Members	41	44.6%	
	Six Members or More	31	33.7%	
	Mean \pm SD	Minimum	Maximum	
	5.41	1.21	4.00	8.00
Order of student among her siblings	1 st	32	34.8%	
	2 nd	23	25.0%	
	3rd or more	37	40.2%	
	Mean \pm SD	Minimum	Maximum	
	2.29	1.29	1.00	6.00
Ambition after finishing school	Enrollment in university education	75	81.5%	
	Working in hospitals as a nurse	17	18.5%	
	Changing into another profession	0	0.0%	
	Staying at home	0	0.0%	
Residence	The countryside	0	0.0%	
	The city	92	100.0%	

Table (2): Socio-demographic characteristics of the nursing students' parents (n=92).

Variables	No.	%	
Father's education level	Illiterate	0	0.0%
	Can read & write	0	0.0%
	Primary	11	12.0%
	Preparatory	24	26.1%
	Secondary	31	33.7%
	University	26	28.3%
Mother's education level	Illiterate	0	0.0%
	Can read & write	0	0.0%
	Primary	9	9.8%
	Preparatory	7	7.6%
	Secondary	59	64.1%
	University	17	18.5%
Father's job	Skilled worker	13	14.1%
	Employee	59	64.1%
	Worker	20	21.7%
	Not working/Retired	0	0.0%
	Skilled worker	6	6.5%
	Mother's job	Employee	28
Worker		6	6.5%
Not working/Retired		52	56.5%
Family income	Sufficient and increasing	3	3.3%
	Sufficient	83	90.2%
	Not sufficient	6	6.5%

Table (3): The students' knowledge and source of knowledge about mental illness (n=92).

Variable	No.	%
Home Media		
TV	80	87.0
Computer	32	34.8
Internet	66	71.7
TV Dish	70	76.1
Knowledge about mental illness		
Yes	77	83.7%
Watched or heard about mental illness		
Yes	84	91.3%
Source of information about mental illness		
Radio and TV	37	40.2%
Press	0	0.0%
Private readings	4	4.3%
Seminars/Lectures	5	5.4%
Internet	62	67.4%
Other media	0	0.0%
Relatives	9	9.8%
Have you, or someone you know, ever been treated from psychiatric disorder		
Yes	34	37.0%
The person you know treated from psychiatric disorder		
Yourself	0	0.0%
A friend	16	17.4%
Someone you know casually		
A relative	10	10.9%
Relationship degree		
1st degree	0	0.0%
2nd degree	4	40.0%
3rd degree	6	60.0%

Table (4): Nursing students' attitude toward mental illness regarding "Separatism" dimension in pre and post- intervention phase.

Items		Intervention				MH statistic	P-value
		Pre-intervention		Post-intervention			
		No.	%	No.	%		
1- Mental patient's behavior is unexpected (#)	Disagree	3	3.3%	70	76.1%	126.00	0.000**
	Not certain	15	16.3%	5	5.4%		
	Agree	74	80.4%	17	18.5%		
2- It's easy to get mental illness again after recovery (#)	Disagree	3	3.3%	73	79.3%	131.00	0.000**
	Not certain	10	10.9%	1	1.1%		
	Agree	79	85.9%	18	19.6%		
3- If a mental health center is established in my street or community, I will leave the place (#)	Disagree	4	4.3%	80	87.0%	144.00	0.000**
	Not certain	16	17.4%	2	2.2%		
	Agree	72	78.3%	10	10.9%		
4- The mental patient must be separated from the physical patient in hospital (#)	Disagree	31	33.7%	77	83.7%	98.00	0.000**
	Not certain	2	2.2%	4	4.3%		
	Agree	59	64.1%	11	12.0%		
5- I get worried when dealing with mental patients (#)	Disagree	10	10.9%	77	83.7%	135.00	0.000**
	Not certain	1	1.1%	1	1.1%		
	Agree	81	88.0%	14	15.2%		
6- It's hard to live with a mental patient (#)	Disagree	7	7.6%	78	84.8%	143.00	0.000**
	Not certain	1	1.1%	1	1.1%		
	Agree	84	91.3%	13	14.1%		

(#) Reverse worded items, (**) Highly statistically significant at $p < 0.01$

Table (5): Nursing students' attitude toward mental illness regarding "Stereotyping" dimension in pre and post- intervention phase.

Items		Intervention				MH statistic	P-value
		Pre-intervention		Post-intervention			
		No.	%	No.	%		
1. I can recognize mental patients easily (#)	Disagree	6	6.5%	84	91.3%	155.00	0.000**
	Not certain	5	5.4%	2	2.2%		
	Agree	81	88.0%	6	6.5%		
2. The behavior of mental patients is strange and anomalous (#)	Disagree	4	4.3%	83	90.2%	143.00	0.000**
	Not certain	19	20.7%	4	4.3%		
	Agree	69	75.0%	5	5.4%		

(#) Reverse worded items, (**) Highly statistically significant at $p < 0.01$

Table (6): Nursing students' attitude toward mental illness regarding" Benevolence" dimension in pre and post- intervention phase.

Items		Intervention		MH statistic	P-value		
		Pre-intervention	Post-intervention				
		No.	%	No.	%		
1. Care and support from family and friends help rehabilitate the mental patients	Disagree	70	76.1%	1	1.1%	70.00	0.000**
	Not certain	1	1.1%	1	1.1%		
	Agree	21	22.8%	90	97.8%		
2. Companies and society "including the government" must provide employment opportunities for the mental patients	Disagree	71	77.2%	3	3.3%	72.00	0.000**
	Not certain	3	3.3%	1	1.1%		
	Agree	18	19.6%	88	95.7%		
3. The mental patient can return to his previous job again after treatment	Disagree	70	76.1%	2	2.2%	70.50	0.000**
	Not certain	5	5.4%	8	8.7%		
	Agree	17	18.5%	82	89.1%		
4. We should take care of mental patients after their treatment and rehabilitation	Disagree	70	76.1%	1	1.1%	55.50	0.000**
	Not certain	0	0.0%	1	1.1%		
	Agree	22	23.9%	90	97.8%		
5. It is easy for anyone to get mental illness	Disagree	77	83.7%	21	22.8%	64.00	0.000**
	Not certain	2	2.2%	7	7.6%		
	Agree	13	14.1%	64	69.6%		
6- The mental patient should not be mocked, even if his behavior is strange	Disagree	70	76.1%	0	0.0%	119.00	0.000**
	Not certain	0	0.0%	0	0.0%		
	Agree	22	23.9%	92	100.0%		
7- I feel bad if I am in the same place with a mental patient (#)	Disagree	29	31.5%	81	88.0%	75.50	0.000**
	Not certain	5	5.4%	0	0.0%		
	Agree	58	63.0%	11	12.0%		
8- I take care of my words and actions when dealing with a mental patient	Disagree	76	82.6%	10	10.9%	88.50	0.000**
	Not certain	2	2.2%	3	3.3%		
	Agree	14	15.2%	79	85.9%		

(#) Reverse worded items, (**) Highly statistically significant at $p < 0.01$

Table (7): Nursing students' attitude toward mental illness regarding "pessimistic prediction" dimension in pre and post -intervention phase.

Items		Intervention		MH statistic	P-value
		Pre-intervention	Post-intervention		
		No.	%	No.	%
1. It is difficult for people with mental illnesses to get the same wages for the same job, even with healthy people (#)	Disagree	3	3.3%	88	95.7%
	Not certain	2	2.2%	0	0.0%
	Agree	87	94.6%	4	4.3%
2. It is difficult for a mental patient to return to society even after treatment (#)	Disagree	2	2.2%	88	95.7%
	Not certain	1	1.1%	1	1.1%
	Agree	89	96.7%	3	3.3%
3. The mental patient is being persecuted by society (#)	Disagree	3	3.3%	85	92.4%
	Not certain	0	0.0%	0	0.0%
	Agree	89	96.7%	7	7.6%
4. The mental patient is not able to enjoy a normal life (#)	Disagree	3	3.3%	85	92.4%
	Not certain	0	0.0%	4	4.3%
	Agree	89	96.7%	3	3.3%
5. The mental patient always feels anxious and upset (#)	Disagree	2	2.2%	89	96.7%
	Not certain	0	0.0%	0	0.0%
	Agree	90	97.8%	3	3.3%
6. The mental patient may be punished for his unacceptable behavior (#)	Disagree	7	7.6%	92	100.0%
	Not certain	0	0.0%	0	0.0%
	Agree	85	92.4%	0	0.0%
7. It is difficult for a mental patient to have a future that he dreams about and plans for (#)	Disagree	8	8.7%	91	98.9%
	Not certain	1	1.1%	1	1.1%
	Agree	83	90.2%	0	0.0%

(#) Reverse worded items, (**) Highly statistically significant at $p < 0.01$

Table (8): Nursing students' attitudes toward mental illness regarding "Stigmatization" dimension in pre and post- intervention phase.

Items		Intervention				MH statistic	P-value
		Pre-intervention		Post-intervention			
		No.	%	No.	%		
1. I would be ashamed if I became mentally ill or a relative of mine (#)	Disagree	7	7.6%	87	94.6%	1.66	0.000**
	Not certain	0	0.0%	3	3.3%		
	Agree	85	92.4%	2	2.2%		
2. I cannot tell anyone if I became mentally ill, me or one of my relatives(#)	Disagree	3	3.3%	85	92.4%	169.00	0.000**
	Not certain	1	1.1%	3	3.3%		
	Agree	88	95.7%	4	4.3%		
3. I feel ashamed to work in the field of psychiatric nursing (#)	Disagree	5	5.4%	89	96.7%	84.00	0.000**
	Not certain	0	0.0%	0	0.0%		
	Agree	87	94.6%	3	3.3%		
4. I can't tell anyone that I work in the field of psychiatric nursing (#)	Disagree	5	5.4%	87	94.6%	82.00	0.000**
	Not certain	0	0.0%	0	0.0%		
	Agree	87	94.6%	5	5.4%		
5. I refuse to be in a relationship or marry someone that was affected by mental illness, he or one of his relatives (#)	Disagree	6	6.5%	90	97.8%	84.00	0.000**
	Not certain	0	0.0%	0	0.0%		
	Agree	86	93.5%	2	2.2%		
6. I can't tell anyone that I am related or married to someone who was affected by mental illness (#)	Disagree	8	8.7%	87	94.6%	162.00	0.000**
	Not certain	0	0.0%	2	2.2%		
	Agree	84	91.3%	3	3.3%		
7. I refuse to have a friendship with someone who had mental illness (#)	Disagree	7	7.6%	88	95.7%	166.00	0.000**
	Not certain	0	0.0%	2	2.2%		
	Agree	85	92.4%	2	2.2%		
8. I can't tell anyone that I have a friend who had mental illness (#)	Disagree	5	5.4%	86	93.5%	168.00	0.000**
	Not certain	0	0.0%	3	3.3%		
	Agree	87	94.6%	3	3.3%		

(#) Reverse worded items, (**) Highly statistically significant at p<0.01

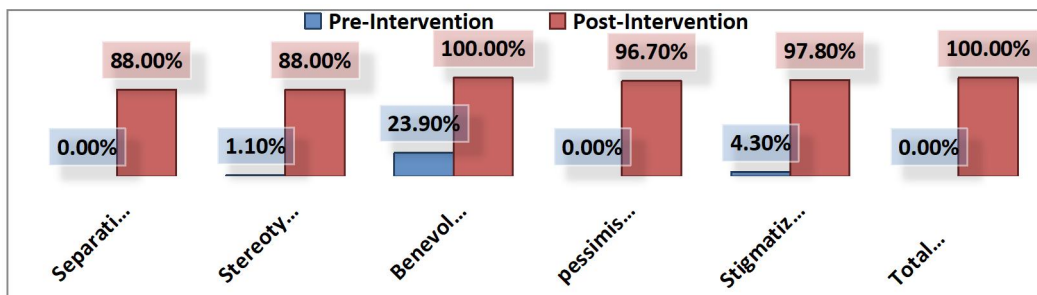


Figure (1): Comparison between nursing students' attitudes level as regard all studied dimensions in pre and post-intervention phase.

Table (9): Comparison between nursing students' total attitudes percent score and their parents' characteristics in pre-intervention phase.

Socio-demographic Characteristics	Total Percent score		Test of Significance	P-value	
	Mean	± SD			
Father's education level (##)	Illiterate	.	.	1.494	0.111
	Can read & write	.	.		
	Primary	11.14	9.33		
	Preparatory	12.57	9.87		
	Secondary	12.64	11.10		
Mother's education level (##)	University	11.29	9.82	0.912	0.574
	Illiterate	.	.		
	Can read & write	.	.		
	Primary	8.60	8.76		
	Preparatory	12.21	10.89		
Father's job (##)	Secondary	12.66	10.26	1.198	0.282
	University	11.76	10.29		
	Skilled worker	9.18	7.22		
	Employee	12.55	10.53		
	Worker	12.50	10.46		
Mother's job (##)	Not working/Retired	.	.	1.239	0.250
	Skilled worker	9.41	7.52		
	Employee	15.44	11.50		
	Worker	7.53	8.64		
	Not working/Retired	11.07	9.39		
Family income (##)	Sufficient and increasing	18.82	12.21	1.525	0.100
	Sufficient	11.95	10.19		
	Not sufficient	10.22	7.54		

(#) Independent sample t-test was used to compare between two independent group means, (##) One Way ANOVA test was used two compare between groups of more than two independent means

Discussion:

Regarding nursing students' knowledge about mental illness, this study revealed that, most of the studied nursing students had knowledge about mental illness before providing psychiatric-mental health nursing curriculum. This result may be due to interest of students to know the psychology of people and how to provide care for them. These findings were agreed with a study conducted in India by **Thimmaiah, Vijayalakshmi, Pashupu and Badamath (2019)** who found in their study of undergraduate nursing students' attitudes towards mental illness that most of the undergraduate nursing students participants had adequate knowledge related to mental illness as they agreed that mental illness is not a sign of people's weakness and it's not their fault. In Nepal **Shrestha (2020)** also illustrated in his study of "Knowledge and attitude about mental illness among nursing students" that, there was overall adequate knowledge about mental illness among undergraduate nursing students.

Concerning nursing students' sources of information about mental illness, the current study revealed that, more than two thirds of nursing students had their information about mental illness from the internet. This finding may be due to excessive use of technology as a source of information that everyone has a personal mobile or computer. This finding is in the same line with a study conducted at European nursing collage by **Montagni, Donisi and Federico (2018)** who mentioned in their study of internet use for mental health information and support among European university students that most of the students reported that, they gain their knowledge about mental illness through online browsing.

A study by **Kauer, Mangan and Sancu (2019)** emphasized in their study of the perception of medical students online mental health services improve help-seeking that most of the Australian medical students reported that, they looked for online information for mental health and the most searched topics were stress, depression and anxiety. In contrast , a study by **Abo El magd and Al Zamil (2018)** at Umm Al Qura University who demonstrated in their

study of medical and non-medical female students' attitudes toward mental illness and psychiatric patients that, more than one third of medical and non-medical students gain their information about mental illness from mass media.

Regarding nursing students' attitudes toward separatism domain, this study showed that, all nursing students had a negative attitude toward separatism before providing psychiatric-mental health nursing curriculum. This finding may be due to a personal experience as interacting with someone living with mental illness that left a strong impression. In agreement with the study **Aker, Aker, Boke, Dundar, Sahin and Peksen (2017)** who mentioned in their study of the attitude of medical students to psychiatric patients and their disorders and the Influence of psychiatric study placements in bringing about changes in attitude that, attitudes about mental illness affected by personal knowledge about mental illness and interacting with mentally ill persons.

The findings of the study showed that, there was a highly statistically significant improvement of nursing students' attitudes about separatism domain after providing psychiatric-mental health nursing curriculum than before. This finding may be related to the actual scientific knowledge of the students received theoretical part and direct contact with people with mental illness during their clinical training under supervision of professional teachers, That affect their attitudes

The findings were supported by a study conducted at the Faculty of Nursing El-Minia and Assiut Universities by **Omar, Abo El-Magd, Mohamad and Darweesh (2020)** who reported in their study of nursing students' attitudes toward psychiatric nursing and psychiatric patients that, there was a significant positive attitude toward separatism among nursing students after psychiatric -mental health nursing term. While, the findings were inconsistent with **Bennett and Stennett (2020)** who mentioned in their study about attitudes toward mental illness of nursing students in a baccalaureate programme

in Jamaica that, nursing students had negative attitudes in separatism after their psychiatric-mental health nursing course.

Concerning nursing students' attitudes toward stereotyping domain, the current study findings proved that most nursing students had negative attitudes toward stereotyping before providing psychiatric-mental health nursing curriculum. This could be due to the social roles related to how people are expected to behave in a particular role or social norms, which involve society's roles that set what behavior is considered appropriate or not. This finding goes with the study of **Ross and Goldner (2020)** who concluded in their study of stigma, negative attitudes and discrimination toward mental illness within the nursing profession that, the mass media and cinema have facilitated this portrayal of the mentally ill by depicting them in various distasteful ways.

The results of the present study clarified that, there was a highly statistically significant improvement of nursing students' attitudes about stereotyping domain after providing psychiatric-mental health nursing curriculum than before. This may be explained by the students' direct contact with mentally ill patients during the clinical experience. Similarly, a study by **Vijayalakshmi Reddy, Math and Thimmaiah (2021)** who reported in their study of attitudes of undergraduates towards mental illness: A comparison between nursing and business management students in India that, Indian nursing students generally hold more positive attitudes toward all aspects of mental illness since they are knowledgeable about mental health, and have a greater awareness of mental health issues in their study.

Regarding nursing students' attitudes toward benevolence domain, the current study findings clarified that the nursing student had the highest positive attitude before providing psychiatric - mental health-nursing curriculum. As nursing students may consider mental illness as a kind of disability like other physical disabilities that need kindness in dealing with those people. This finding is parallel to the study

conducted in India by **Thimmaiah, Vijayalakshmi and Math (2017)** who explained in their study on medical and nursing students' attitudes toward mental illness that, nursing students hold more benevolent attitudes toward persons with mental illness.

Also in the study of attitudes of undergraduates toward mental illness: A comparison between nursing and business management students in India which was carried out by **Vijayalakshmi Reddy, Math and Thimmaiah (2021)** who reported that, nursing students had more benevolent attitudes than business management students in India. In the same line **Lingeswaran (2018)** illustrated in the study of Psychiatric curriculum and its impact on the attitude of Indian undergraduate medical students and interns.

Concerning nursing students' attitudes toward pessimistic prediction domain, this study finding proved that, all nursing students had a negative attitude toward pessimistic prediction before providing psychiatric mental- health nursing curriculum. This finding could be due to nursing students' previous knowledge and prejudice toward mentally-ill people possibilities of recovery and social norms which they bring with them from their social and cultural background.

The negative attitude toward pessimistic prediction result has been highlighted by **Ravi, Dinesh, Neeraj, Pankaj, Santosh (2018)** who mentioned in their study of undergraduate nursing students' attitude toward mental illness in India that, the students had negative attitude in pessimistic predictions. The results of the present study are supported by **Samari, Seow and Chua (2019)** who reported in their study of attitudes toward psychiatry amongst medical and nursing students in Singapore that, nursing students had had pessimistic attitudes regarding recovery, rehabilitation of mentally ill patients.

The findings were supported by the study of change in attitude among undergraduate nursing health setting in India **Grover, Jameel and Dhiman (2019)** reported

that the undergraduate nursing students had negative attitude in pessimistic predictions at pre-assessment. In contrast **Happell (2019)** mentioned in his study of influencing undergraduate nursing students' attitudes toward mental health nursing: acknowledging the role of theory in Victoria, Australia that, undergraduate nursing students had a positive attitude in pessimistic predictions.

There was a highly statistically significant improvement in nursing students' attitudes about pessimistic prediction domain after providing psychiatric-mental health nursing curriculum as compared to before. This finding may have argued that the clinical training hours spread a positive attitude among nursing students concerning mentally ill patients. It may also be due to the psychiatric-mental health nursing curriculum develop students' knowledge, skills, and attitudes to mentally ill patients and assess and encourage more understanding and tolerance of mental illness among nursing students.

Regarding nursing students' improvement of pessimistic prediction domain. It goes with **Snowden and Martin (2019)** who reported in their study about effects of the psychiatric nursing course on students' attitudes toward mental illnesses, perceptions of psychiatric nursing in Turkey that, attitude improved significantly on pessimistic prediction dimension at the post-assessment phase. A similar study in Australia by **Chadwick and Porter (2020)** about an evaluation of the effect of a mental health clinical placement on the mental health attitudes of student nurses had shown that, more positive outcome in nursing students' attitudes on pessimistic prediction dimension following four weeks clinical placement with mentally ill patients.

Regarding nursing students' attitudes toward stigmatization domain, the current study finding displayed that most nursing students had negative attitude toward stigmatization domain before providing psychiatric-mental health nursing curriculum. This finding may be due to the nursing students' cultural and social background, which considered mental disorder as a stigma.

The finding of the study goes with the study of change in attitude among nursing undergraduate students following one-month exposure in a Mental Healthcare Setting in Indian by **Grover Jameel and Dhiman (2019)** who illustrated that, at the pre-assessment the undergraduate nursing students held a negative attitude toward stigmatization domain. In agreement with the study finding, **Hasan (2020)** who reported in his study of nursing students' attitudes and stigma toward mental health nursing in Saudi Arabia that, students had poor attitudes stigmatizing beliefs toward mental illness.

The study results showed that there was a highly statistically significant improvement of nursing students' attitudes about stigmatization domain after providing psychiatric-mental health nursing curriculum as than before. This result may be due to increasing levels of training that has the effect of developing a positive attitude among nursing students concerning mentally ill patients.

The results of the study was in agreement with by **Bingham and O'Brien (2018)** in their study of educational intervention to decrease stigmatizing attitudes of undergraduate nurses toward people with mental illness and supported with **Tambag (2020)** in his study of effects of a psychiatric nursing course on beliefs and attitudes about mental illness who concluded that, there was an improvement in students' attitudes concerning the stigmatization domain after attending psychiatric theoretical course.

Concerning the comparison between nursing students' total attitude toward mental illness percent score and their parents' characteristics, the present study findings demonstrated that, there was a statistically insignificant difference in nursing students' total attitude percent score and their parents' characteristics. The findings of the study may be due to that the exposure to psychiatric teaching and training can module nursing students' negative attitude towards the mentally ill people. Parallel to the study findings, **Dawood (2020)** in his study of impact of clinical placement on student nurses' attitude towards psychiatry in the United State of America found that, there was no

statistically significant difference in nursing students' total attitude and their parents' characteristics.

Conclusion:

Based on the study finding the researcher concluded that:

- There was a highly statistically significant improvement of nursing students' attitude percent score towards mental illness regarding all studied dimensions in post- intervention as compared to the pre- intervention phase.
- There was a statistically insignificant difference in nursing students' total attitudes percent score regarding father's education level, mother's education level, father's job, mother's job and family income.
- There was a highly statistically Positive significant correlation between all dimensions (Separatism, Stereotyping, Benevolence, pessimistic prediction, and Stigmatization) reflecting nursing students' attitudes toward mental illness.

Recommendations:

Based on the main study findings, the following recommendations are deducted:

1. Psychiatric- mental health nursing curriculum (theory and clinical) should be updated in nursing schools to meet the recent knowledge and practice regarding the role of mental health nursing with mentally ill patients.
2. Increasing awareness of the value of the mental- health nurses and increasing the acceptance of mental illness starting from the first year of nursing schools.
3. Nurse teachers should be qualified and specialized in psychiatric mental-health nursing (have mastered or PhD degree).
4. Conduct seminars and workshops by psychiatric- mental health nursing specialists to increase awareness of mental health and reduce stigma among patients with mental illness.

5. The practical hours should be increased in the clinical area of the psychiatric- mental health hospitals.
6. Further researches should be carried out in large number schools as well as includes male and female nursing students.

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