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Effectiveness of an educational program on nurses' knowledge about factors contributing to suicide

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Abstract---Background: Suicide is linked to unmet needs, hopelessness and helplessness, an ambiguous conflict between survival and excruciating stress, a shrinking of seen options, and a wish for escape, the suicidal person's distress signal. Material and Method:A convenience sample was recruited from the aforementioned hospitals. Based on an effect size of 0.25, an alpha error probability of 0.05, a power of 0.80, number of groups = 2, and 3 measurements, the total sample size would be 72 who work in the previous mentioned setting were selected randomly for this study. The final sample size would be 72; 36 for the study group and 36 for the control group.A quasi-experimental design with study and control groups was used in this study, pretest-posttest research design was used in this study. The study was carried out in Al-Rashad Psychiatric Teaching Hospital and Ibn Rushd Psychiatric Teaching Hospital in Baghdad City. Data were analyzed using the statistical package for social science (SPSS) for windows, version 26. Results: The finding of study show that the mean age for participants in the study group is 31.05 ± 6.68 ; a half age 20-29-years ($n = 18$; 50.0%), followed by those who age 30-39-years ($n = 12$; 33.3%), and those who age 40-49-years ($n = 6$; 16.7%). For the control group, the mean of age is 34.33 ± 10.24 ; more than a third age each of 20-29-years and 30-39-years ($n = 13$; 36.1%) for each of them, followed by those who age each of 40-49-years and 50-59-years ($n = 5$; 13.9%) for each of them. Conclusion: The student researcher concluded that the administered educational program positively influenced nurses' knowledge about factors contributing to suicide.

Keywords---effectiveness, educational program, nurses' knowledge factors, contributing suicide.

Introduction

Suicide is linked to unmet needs, hopelessness and helplessness, an ambiguous conflict between survival and excruciating stress, a shrinking of seen options, and a wish for escape, the suicidal person's distress signal ^(1,2,3) . Psychiatric nurses assist people in healing and recovering, as well as promoting mental health and well-being. As a result, nurses may face interpersonal issues while trying to keep someone alive who doesn't want to survive ^(4,5) . Effective nursing care provided by psychiatric nurses can be the difference between life and death for patients. Each suicide-related death emphasizes the need for nurses to improve and advance the quality of nursing care they deliver, which includes developing effective prevention technique ^(6,7) .

This strategy was publicly accepted by Health Ministers in all 194 WHO member states to emphasize the importance of mental health, a significant achievement. There are 25 nations in the WHO member states where suicide is still illegal, and another 20 countries where suicide attempters may face jail time under Sharia law ^(8,9,10) . The Action Plan outlines specific efforts targeted at improving mental health and contributing to the achievement of a set of global goals, including (a) a 20% increase in service coverage for serious mental diseases and (b) a 10% reduction in suicide rates in nations by 2020.

Stigmatization in society can contribute to behaviors such as isolation, a contributing risk factor for suicidal thoughts and behaviors. Increased substance use among the population has also been found to partially mediate the relationship between minority stress and increased likelihood of suicidal ideation ^(11,12) . A case-control study found that among individuals who died by suicide, factors related to death included rejection by family, negative feelings towards self-related to gender and identity, and dissatisfaction with appearance ^(13,14,15) .

Developing a caring and inclusive environment in the health care setting is one approach for improving cultural humility and improving care for this population ^(16,17) . Including educational content on developing a safe and inclusive environment for assessment, treatment, and management of suicide risk across diverse identities is an important dimension to address in suicide prevention training programs to meet the needs of populations at increased risk. The Veteran population comprises approximately 20% of deaths that occur by suicide in the United States ⁽¹⁸⁾ .

The field of suicide prevention, universal strategies are approaches that target the whole population. Conducting suicide risk assessments in the health care setting provides a prime opportunity for health care providers to identify and intervene with individuals at risk for suicide, even when emotional and behavioral health diagnoses are not the primary cause for seeking health care. The diverse population of individuals served in the health care setting and the private nature of health concerns discussed with provider's positions providers to assess and

intervene. Previous research demonstrating high health care utilization patterns among individuals who die by suicide in the month prior to their death ^(19,20,21) supports health care settings as an avenue for assessment and intervention. One study confirmed the feasibility of universal suicide risk screening in the emergency department, under the conditions of adequate resources.

Material and Method

Study Design

A quasi-experimental design with study and control groups was used in this study, pretest-posttest research design was used in this study.

Study Setting

The study was carried out in Al-Rashad Psychiatric Teaching Hospital and Ibn Rushd Psychiatric Teaching Hospital in Baghdad City.

Study Sample

A convenience sample was recruited from the aforementioned hospitals. Based on an effect size of 0.25, an alpha error probability of 0.05, a power of 0.80, number of groups = 2, and 3 measurements, the total sample size would be 72 who work in the previous mentioned setting were selected randomly for this study. The final sample size would be 72; 36 for the study group and 36 for the control group.

Study Instrument

The study instrument consists of participants' sociodemographic sheet (age, gender, and marital status), employment profile (educational qualification, years of experience in nursing, years of experience in psychiatric units, and nurse-to-bed ratio. It also includes Nurses' Knowledge about Suicide Prevention Scale (4 items about suicide concept) and (5 items prevalence of Suicide), (15 items factors of suicide), (19 items psychiatric symptoms of suicide), (14 items psychiatric diseases caused suicide), (8 items methods of suicide), (8 items ethics of nurses to deal with suicidal person), (8 items method of suicide treatment) and (41 items the role of nurses in suicide prevention).

Study Procedure

After obtaining the agreements from the ethical scientific committee at the College of Nursing, the Ministry of Planning, and the Ministry of Health, the student researcher made a baseline assessment for the knowledge about suicide prevention for nurses in each of the study and control groups (pretest) using the aforementioned study instrument. One week later, the student researcher will administer the suicide prevention program for nurses in the study group only. Three weeks later, the researcher conducted the posttest I and posttest II three weeks after posttest I. The study was conducted in April 2021 and finished in July 2021.

Tools of the study

Pilot study

A pilot study was conducted on 10 nurses who worked at Al-Rashad Mental Health Hospital to test the readability the study instrument, and the time required for subjects to answer all items. The time required for answering all items ranges between 25-30 minutes.

Data Analyses

Data were analyzed using the statistical package for social science (SPSS) for windows, version 26. The descriptive statistical measures of frequency and percent will be used. The inferential statistical measures of Pearson correlation, Repeated-Measures ANOVA, Independent-Sample T-Test, and One-Way Analysis of Variance (ANOVA) will be used.

Results

Table 1. Participants' Sociodemographic Characteristics

	Study (N = 36)		Control (N = 36)	
	Frequency	Percent	Frequency	Percent
Age (Years)				
20-29	18	50.0	13	36.1
30-39	12	33.3	13	36.1
40-49	6	16.7	5	13.9
50-59	0	0.0	5	13.9
Mean (SD)	31.05 ± 6.68		34.33 ± 10.24	
Gender				
Male	12	33.3	16	44.4
Female	24	66.7	20	55.6
Marital Status				
Single	12	33.3	14	38.9
Married	22	61.1	21	58.3
Divorced	2	5.6	1	2.8
Level of Education				
Nursing high school	16	44.4	12	33.3
Diploma	10	27.8	12	33.3
Bachelor's degree	8	22.2	10	27.8
Master's degree	2	5.6	2	5.6

Table 2. Descriptive Statistics for the Values of the knowledge about factor contributing to suicide rate over Time

Knowledge about factor contributing to suicide	Mean	Std. Deviation	N
Study Pretest	23.63	1.97	36

Study Posttest I	25.25	1.15	36
Study Posttest II	26.33	1.35	36
Control Pretest	23.36	1.75	36
Control Posttest I	23.44	1.66	36
Control Posttest II	23.52	1.62	36

Table 3. Multivariate Tests of the Within-subjects for the knowledge about factor contributing to suicide

Multivariate Tests ^a							
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Factors (Study)	Pillai's Trace	.559	21.563 _b	2.000	34.000	.000	.559
	Wilks' Lambda	.441	21.563 _b	2.000	34.000	.000	.559
	Hotelling's Trace	1.268	21.563 _b	2.000	34.000	.000	.559
	Roy's Largest Root	1.268	21.563 _b	2.000	34.000	.000	.559
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Factors (Control)	Pillai's Trace	.133	2.615 _b	2.000	34.000	.088	.133
	Wilks' Lambda	.867	2.615 _b	2.000	34.000	.088	.133
	Hotelling's Trace	.154	2.615 _b	2.000	34.000	.088	.133
	Roy's Largest Root	.154	2.615 _b	2.000	34.000	.088	.133

a. Design: Intercept Within Subjects Design: Knowledge about factors contributing to suicide

b. Exact statistic

Table 4. Tests of Within-Subjects Effects for the knowledge about factors contributing to suicide

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Factors (Study)	Sphericity Assumed	132.352	2	66.176	31.374	.000	.473
	Greenhouse-Geisser	132.352	1.612	82.112	31.374	.000	.473
	Huynh-Feldt	132.352	1.678	78.873	31.374	.000	.473
	Lower-bound	132.352	1.000	132.352	31.374	.000	.473
Error	Sphericity	147.648	70	2.109			

(Factors Study)	Assumed						
	Greenhouse-Geisser	147.648	56.414	2.617			
	Huynh-Feldt	147.648	58.731	2.514			
	Lower-bound	147.648	35.000	4.219			
Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Factors (Control)	Sphericity Assumed	.500	2	.250	3.621	.032	.094
	Greenhouse-Geisser	.500	1.590	.315	3.621	.043	.094
	Huynh-Feldt	.500	1.653	.302	3.621	.041	.094
	Lower-bound	.500	1.000	.500	3.621	.065	.094
Error (Factors Control)	Sphericity Assumed	4.833	70	.069			
	Greenhouse-Geisser	4.833	55.643	.087			
	Huynh-Feldt	4.833	57.861	.084			
	Lower-bound	4.833	35.000	.138			

Discussion

Table(1) show that the mean age for participants in the study group is 31.05 ± 6.68 ; a half age 20-29-years ($n = 18$; 50.0%), followed by those who age 30-39-years ($n = 12$; 33.3%), and those who age 40-49-years ($n = 6$; 16.7%). For the control group, the mean of age is 34.33 ± 10.24 ; more than a third age each of 20-29-years and 30-39-years ($n = 13$; 36.1%) for each of them, followed by those who age each of 40-49-years and 50-59-years ($n = 5$; 13.9%) for each of them. Concerning gender, most in the study group are females ($n = 24$; 66.7%) compared to males ($n = 12$; 31.4%). For the control group, most are females ($n = 20$; 55.6%) compared to males ($n = 16$; 44.4%). Regarding the marital status, most in the study group are married ($n = 22$; 61.1%), followed by those who are singles ($n = 12$; 33.3%), and those who are divorced ($n = 2$; 5.6%). For the control group, most are married ($n = 21$; 58.3%), followed by those who are singles ($n = 14$; 44.4%), and one who is divorced ($n = 1$; 2.8%). With respect to the level of education, more than two-fifth in the study group are nursing high school graduates ($n = 16$; 44.4%), followed by those who hold a diploma degree ($n = 10$; 27.8%), those who hold a bachelor's degree ($n = 8$; 22.2%), and those who hold a master's degree ($n = 2$; 5.6%). For the control group, a third are both nursing high school graduates and hold a diploma degree ($n = 12$; 33.3%) for each of them, followed by those who hold a bachelor's degree ($n = 10$; 27.8%), and those who hold a master's degree ($n = 2$; 5.6%). Table(2) This table demonstrated that the values of the nurses' knowledge about factor contributing to suicide for the study group noticeably increase by time compared to the control group (Pretest = 23.63

vs. 23.36, Posttest II = 25.25 vs. 23.44, Posttest II = 26.33 vs. 23.52) respectively. Higher score means better knowledge. Table(3) There are significant differences in the values of knowledge about factors contributing to suicide over time for participants in the study group ($F = 21.563$, $df = 2$, $p < .05$). Finally Table (4) There was a (a priori $p = 0.01$) significant difference ($F (1.612, 56.414) = 31.374$, $p = 0.01$) in the knowledge about factors contributing to suicide over time for participants in the study group. The omnibus effect (measure of association) for this analysis is .473, which indicates that approximately 47% of the total variance in the value of knowledge about suicide rate is accounted for by the variance in the administered intervention. For the control group, there was a (a priori $p = 0.05$) significant difference ($F (1.590, 55.643) = 3.621$, $p = 0.05$) in the knowledge about factors contributing to suicide over time for participants in the study group. The omnibus effect (measure of association) for this analysis is .094, which indicates that approximately 0.9% of the total variance in the value of knowledge about factors contributing to suicide is accounted for by the chance. In the study group in the pretest time statistically differ from such knowledge in the posttest I and posttest II. Such a knowledge in the posttest I statistically differs from that in the pretest time and posttest II. Such knowledge in the posttest II statistically differs from that in the pretest time and that in the posttest I and posttest I. These findings reflect the positive effect of the administered educational program in enhancing nurses' knowledge about the nurses' overall knowledge and the consistency of the administered educational program in enhancing such a knowledge. These findings are supported by ⁽²²⁾ who concluded that there are significant increases in the values of subjects' knowledge about suicide from pretest to posttest. These findings almost go in line with these of ^(23,24) who concluded that there was a significant improvement in intervention participants in terms of perceived knowledge of/willingness to help suicidal patients immediately after training and when compared with the control participants 3 months later ^(25,26,27).

Conclusion

The student researcher concluded that the administered educational program positively influenced nurses' knowledge about factors contributing to suicide.

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