

A Correlational Study between Cognitive Error and Anxiety and Depression among Students of Selected College of Nursing, Delhi with a View to Develop Informational Booklet for Prevention and Management of Cognitive Error, Anxiety and Depression

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Abstract: A correlational study between cognitive error and anxiety and depression among students studying in university of Delhi. In this study a quantitative research approach and correlational research design was used with purposive sampling technique, on 160 samples who were attending Rajkumari College Of Nursing. Tools was consisting of Structured questionnaire to assess demographic data, Standardized cognitive distortion questionnaire, Standardized beck depression inventory and Structured anxiety questionnaire further checking the correlation between cognitive error and anxiety and depression among nursing students. A informational booklet for giving awareness among nursing students about prevention and management of cognitive error, anxiety and depression. In nursing students majority (51.25%) have severe cognitive error. Majority of nursing students (65%) having low anxiety. Majority of nursing students (64.37%) having no depression. There was positive correlation between cognitive error and anxiety and there was also positive correlation between cognitive error and depression. There was no significant association between cognitive errors and selected background data variables.

Keywords: Cognitive error, Nursing students, Anxiety, Depression, Information booklet.

1. Introduction

Cognitive error are irrational thoughts and beliefs that unknowingly reinforce over time. Most people experience cognitive distortions from time to time. But if they are reinforced often enough, they can increase anxiety and deepen depression, cause relationship difficulties and lead to

a host of other complications. Thinking errors, also called cognitive biases or cognitive distortions, are irrational patterns of thinking that can both cause and be caused by depression.

2. Materials & Methods

Table 1: Method and Result of the Reliability of Tool.

S. No.	Parts of the Data Collection Tool	Method Used for Establishing Reliability	Reliability Score
1	Standardized Cognitive Distortion Questionnaire for assessment of cognitive error.	Cronbach's Alpha	0.80
2	Standardized Beck Depression tool for assessment of depression.	Cronbach's Alpha	0.99
3	Structured Anxiety Questionnaire for assessment of anxiety.	Cronbach's Alpha	0.85

Quantitative research approach and correlational research design was used in this study.

Population - Nursing students (17 - 25 yrs)

Sample size - 160

Sampling technique - Purposive sampling

Sample - Nursing students of Rajkumari Amrit Kaur College Of Nursing

Sampling technique - Non probability purposive sampling

3. Result

The final study was conducted in Rajkumari Amrit Kaur college of Nursing, Delhi. The data was collected by from 14th January to 17th January 2022 using standardized and structured questionnaire.

H1: There will be significant relationship between cognitive error and anxiety among nursing students at the 0.05 level of significance.

Table 2: Karl Pearson Co - Efficient of Correlation Between Cognitive Error and Anxiety Score of the BSC Nursing

Variables	Mean	Standard Deviation	"r" value
Cognitive error	16.55	11.65	0.433
Depression	18.31	9.19	

Significant at 0.05 level of significance; df (159), $r = 0.433$ at 0.05 level of significance

Table 2 shows the frequency and percentage distribution of cognitive error score among BSC Nursing students, where majority of students e. g - 82 (51.25%) showed absent /

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minimal cognitive error score, followed by 40 (25%) showed slightly cognitive error score, followed by 21 (13.12%) showed moderately cognitive error score and 17 (10.62%) showed severely cognitive error score. Hence it is concluded that majority of students have no symptoms of cognitive error.

H2: There will be significant relationship between cognitive error and depression among nursing students with structured questionnaire and standardized questionnaire at the 0.05 level of significance.

Table 3: Karl Pearson Co - efficient of Correlation Between Cognitive Error and Anxiety Score of the BSC Nursing Students

Variables	Mean	Standard Deviation	"r" value
Cognitive error	16.55	11.65	0.156
Depression	9.23	8.93	

Significant at 0.05 level of significance; df (159), r =0.156 at 0.05 level of significance

Table 2 shows the frequency and percentage distribution of depression score among BSC Nursing students, where majority of students, 103 (64.37%) showed normal score, followed by 29 (18.12%) showed mild depression score, followed by 13 (8.12%) showed moderate depression score, followed by 9 (5.62%) depicted borderline depression score, followed by 5 (3.12%) showed severe depression score, followed by 01 (0.62%) depicted extreme depression score. Hence it depicts that majority of students have no symptoms of depression.

H3: There will be significant association between cognitive error, anxiety and depression with their selected demographic variables at 0.05 level of significance

Table 4: Findings Related to Association between Cognitive Error and Demographic Variables, N=160

S. No.	Selected Variables	Frequency	Chi square	df	Table Value	Significant/ Not Significant at 0.05 level of significance
1.	Age					
	17 - 19 years	13	9.36	6	12.59	Not Significant
	20 - 22 years	123				
	23 - 25 years	24				
2.	Religion					
	Hindu	137	4.49	9	16.91	Not Significant
	Muslim	2				
	Christian	17				
Others	4					
3.	Year of Study					
	BSC Nursing 1 st year	0	8.20	6	12.59	Not Significant
	BSC Nursing 2 nd year	54				
	BSC Nursing 3 rd year	54				
BSC Nursing 4 th year	52					
4.	Living Arrangement					
	Hosteller	153	4.58	3	7.81	Not Significant
	Day Scholar	7				
5.	Family Income Per Month					
	Below Rs.20, 000	35	4.77	9	16.91	Not Significant
	Rs.20, 000 - Rs.40, 000	58				
	Rs.41000 - Rs.60, 000	35				
Above Rs.60, 000	32					
6.	Type of Family					
	Nuclear Family	135	7.61	6	12.59	Not Significant
	Joint Family	22				
Single Parent	3					

Not Significant at p (<0.05)

Table 4 shows that Chi square values given in table 4.17 showed no significant association between anxiety and selected demographic variables – age (Chi square value= 15.63, tabulated value= 18.30), religion (Chi square value= 13.10, tabulated value=24.99), year of study (Chi square value= 9.77, tabulated value=18.30), living arrangement (Chi square value= 4.08, tabulated value=11.07), family income per month (Chi square value= 15.54, tabulated value=24.99) and type of family (Chi square value= 11.04, tabulated value=18.30). So, the calculated Chi square value is less than the tabulated value at the 0.05 level of significance. Hence, we accept that there is no statistical significant association among depression and selected demographic variables at the 0.05 level of significance. This indicates that the depression is independent on its own and

not influenced by the selected demographic variables. Therefore, the null hypothesis is failed to reject.

4. Discussion

In the present study aimed to assess association between cognitive error, anxiety and depression among BSC Nursing students in selected College of Nursing, Delhi. In this section, the major findings of the study are being discussed with reference to the results obtained by other investigator in the same aspect.

Presence of Cognitive Error and Anxiety among Nursing Students

In the present study, it was found that majority 51.25% of the students were had absent or minimal cognitive error and 65% had experienced low anxiety. Which indicates that nursing students must learn the prevention and management of cognitive error and anxiety.

The result comes in agreement with the study conducted, to assess the level of cognitive error and anxiety among adults between the age group 18 years to 26 years. It reveals that 51 (51%) having severe cognitive errors and 45 (45%) having moderate to severe anxiety. [22]

Another cross sectional study was conducted by **Biranchi Narayan, Anu Mohandas, Saba Syed** on 149 BSC Nursing students in Hyderabad, 2021 revealed that the 67.7% were having depression, 85.3% of students had anxiety and 46.9% suffer from stress. [25]

The findings were also supported by findings of a study conducted by **Stevens Rachel, Nussbaum Rachel, Blake Tyler (2019)** to investigate the prevalence of state anxiety levels among sophomores, junior and senior nursing students at United States and study reported that 39.64% suffer from mild anxiety, 17.75% had moderate anxiety and the students with severe anxiety was 18.34%. [26]

Presence Of Cognitive Error and Depression Among Nursing Students

The finding of present study shows that adults had cognitive error and depression. These findings are confirmatory with the study findings of **Shizuko Sarah, Kannellopoulos Dora, Alexopoulos George (2014)**. The article reviews the cognitive error and depression present among adult. The result of the study revealed that $r = 0.67$ which shows strong correlation between cognitive error and depression.

The findings were also confirmatory with the findings of **RnicKaterina, Dozois David, MartinRod (2016)** conducted a study on undergraduate students and noting 208 participants reported cognitive distortions were positively and significantly associated with depressive symptomatology.

Association Between Cognitive Error, Anxiety and Depression with Selected Demographic Variables.

The findings were also confirmatory with the findings of **Tavakolizadeh Jahanshir, AtarodiAlireza** conducted a study on medical and noting 700 participants reported that there was no significant relation was found between depression and demographic factors.

The findings of the present study show that there is no significant association of cognitive error and anxiety with the selected demographic variables. These findings are confirmatory with the study findings of **IbanrillinRancee, MohiniYadav**, International journal of science and research, 2018. The article review that cognitive error and anxiety was not significantly associated with the sociodemographic variables.

5. Conclusion

On the basis of the finding of the study, the following conclusions can be drawn: -

- The maximum number of the BSC Nursing students 123 (77%) were found in the age group of 20 - 22 years.
- The majority of the participants belong to Hindu religion.
- Most of the students had 82 (51.25%) absent/ minimal cognitive error.
- A majority of the students had 104 (65%) low anxiety and 103 (64.37%) no depression.
- There was significant relationship between cognitive error score and anxiety score of nursing students.
- There was significant relationship between cognitive error score and depression score of nursing students.
- There was no significant association between age, religion, year of study, living arrangement, family income per month, type of family and cognitive error of nursing students.
- There was no significant association between age, religion, year of study, living arrangement, family income per month, type of family and anxiety of nursing students.
- There was no significant association between age, religion, year of study, living arrangement, family income per month, type of family and depression of nursing students.

Declaration by Authors

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