International Journal of Psychiatry Research

Anju Mishra
Department of Mental Health Nursing, Nightingale Institute of Nursing, Chaudhary Charan Singh University, Meerut, Uttar Pradesh, India

Alka Chauhan
Department of Mental Health Nursing, Nightingale Institute of Nursing, Chaudhary Charan Singh University, Meerut, Uttar Pradesh, India

Lavanya Nandan
Department of Mental Health Nursing, Nightingale Institute of Nursing, Chaudhary Charan Singh University, Meerut, Uttar Pradesh, India

An experimental study to assess the effectiveness of cognitive behaviour therapy (CBT) on level of self-esteem of nursing students in selected nursing colleges of Delhi / UP

Anju Mishra, Alka Chauhan and Lavanya Nandan

DOI: https://doi.org/10.33545/26648962.2022.v4.i2a.43

Abstract
Introduction: Self- esteem is an evaluative component of self- concept, it is an overall assessment of the individual's worthiness, expressed in a positive or negative orientation towards them. Self-esteem plays a very important role for development during adolescent period. The formation of self -esteem and shaping of personality is of pronounced significance during adolescent period. If adolescents are given suitable instructions/intervention during this period; their self -esteem levels can be elevated which will affect their personality development. The present study is undertaken with the aim to assess and evaluate the effectiveness of cognitive behaviour therapy (CBT) on self-esteem of nursing students studying in selected nursing college of Delhi / UP.

Methods: A quasi-experimental pre-test post-test research design was adopted with convenient sampling technique was used for selecting the samples for study. The sample consists of 60 nursing students studying in selected nursing colleges of Delhi / U.P. (30 for control group and 30 for experimental group). A pre-assessment was done on the 1st day for both the groups and Cognitive behaviour Therapy (CBT) was administered to subjects in experimental group in three sessions i.e., Day 3, day 6, and day 9. The post assessment was done after one week. Tools developed and used for data collection were, structured interview schedule and Rosenberg self-esteem scale to check the self-esteem among nursing student.

Results: The researcher found that cognitive behaviour therapy is effective in improving self-esteem of nursing students. The data was analysed and interpreted as per objectives and the research hypothesis stated. Descriptive and inferential statistics were used for data analysis. Results shows that there was significant difference between mean post test scores of nursing students in experimental group (31.16) is higher than the pre-test self- esteem score (29) and Calculated Paired t test value (3.5828) is greater than the table value 2.045, which is statistically significant at 0.05 level of significance. The CHI Square test and Fisher's exact test was used to find out the association between the post-test SE score with the demographic variables. It was found that, there is no significant association between the post-test SE scores with selected demographic variables found as the p value obtained is greater than 0.05.

Conclusion: The conclusion of the study reveals that Cognitive behaviour Therapy is effective in improving the self-esteem of nursing students.

Keywords: Cognitive behaviour therapy, self- esteem, adolescents, nursing students Rosenberg self-esteem scale

Introduction
Self- esteem depends on a person's attitude, and on other areas such as purpose of life, independency, potential for success, strengths and weaknesses, social status, and his relationships. A person having healthy self- esteem (SE) enjoys physical and mental health (Brown *et al*., 1990 Rutter, 1992) [11-12], higher levels of academic achievement (Lockett and Harrell, 2003) [13] and escalated performance level (McMillan, Singh & Simonetta, 2001 [14]. It is claimed that low self- esteem leads to low life satisfaction, loneliness, anxiety, resentment, irritability, depression (Rosenberg, 1965) [2].

Background of the Study
Adolescents with damaged self-esteem are at risk of developing psychological and social problems, which hinders recovery from low self-esteem.

Corresponding Author:
Anju Mishra
Department of Mental Health Nursing, Nightingale Institute of Nursing, Chaudhary Charan Singh University, Meerut, Uttar Pradesh, India

Evaluating adolescent's self-esteem can be an effective method for understanding their past and present circumstances, and useful to treat them with psychosomatic disorders. Nursing is a profession with challenges at every step, nurses with high confidence and positive self -concept are able to cope these challenges with positive attitude. Self-esteem is an important quality and a personality trait or attribute that is considered as a specific requirement for healthcare professionals during their encounters with patients that leads to better performance and positively reinforces hospital customer satisfaction. However, very few studies are targeted at adolescents nursing students, who face a very critical time especially for formation of self-concept and self-esteem. Therefore, the present investigation is undertaken to enhance the self-esteem level of nursing students.by using CBT (cognitive behaviour therapy).

María del, José Jesús Gázquez and Mahia Saracostti (2019) has conducted a pre-experimental study on Parenting Practices, Life Satisfaction, and the Role of Self-Esteem in Adolescents to assess significant associations between parenting practices, life satisfaction, and self-esteem, and the role of parenting practices in adolescent adjustment, emphasizing its influence on wellbeing. The Parenting Style Scale, the Rosenberg Self-Esteem Scale, and the Satisfaction with Life Scale were used. Self-esteem exerted a partial mediating effect on the relationship between parenting practices and satisfaction with the life of the adolescent.

Rogina J. S. Savarimuthu, (2018) [17] conducted a descriptive study in Madurai to determine the degree of self-esteem among urban Indian adolescents utilizing the Rosenberg self-esteem scale. Findings reveal that most of the adolescents had moderate degree of self-esteem and suggested that nurses using this scale can identify adolescents with low self-esteem and intervene to improve their self-esteem. Positive self-esteem protects adolescents against mental distress and enables them to cope adaptively with difficult and stressful life situations.

Safaa Diab Abd El-Wahab et al, 2015 [15], studied the Impact of counselling on self-esteem and anxiety levels among first year baccalaureate nursing students using questionnaire sheet, Rosenberg's self-esteem scale (RSES), Anxiety scale: Hamilton Anxiety Rating Scale (HAM-A) and noticed, there was improvement of the levels of self-esteem and decreasing anxiety level. So, the faculties of nursing can promote counselling programs via conferences, seminars and new training courses.

E. Chris, M. Pais (2015) conducted a Cross-Sectional Survey using Rosenberg self-esteem scale (RSES)to study the Perceived Self-Esteem amongst First-Year Nursing Students and found that overall levels of self-esteem were low in the study sample of female nursing students. Also, Institution and gender played an important role for self-derogation scores but not the age or religion.

Ajay Malhotra, Archna Sharma and Sanju Bala March 2019 [18] conducted a study to assess the relationship between academic achievement and self-esteem of senior secondary school students through a descriptive study. The result showed that there was no statistical difference observed between academic achievement and self-esteem when boys and girls were compared. But when the sample was taken as whole there is significant positive relationship between self-esteem and academic achievement scores of senior secondary school students.

Problem Statement
An experimental study to assess the effectiveness of cognitive behaviour therapy (CBT) on level of self-esteem of nursing students in selected nursing colleges of DELHI / UP.

Objectives
1.To assess the self-esteem of nursing students in selected nursing colleges of Delhi / UP by using Rosenberg Self Esteem Scale (RSES).2.To evaluate the effectiveness of cognitive behaviour therapy (CBT)on self-esteem score of nursing students studying in selected nursing college of Delhi/UP. 3. To determine the association between the post test score with selected demographic variables among nursing students in selected nursing colleges of Delhi/Noida, UP.

Hypotheses
H_1 There will be a significant positive difference between the pre- test and post-test means of self-esteem score of the experimental group.

H_2 The post-test SE means score of experimental and control group will differ to the significant level, and experimental group may show greater SE as compared to the control group.

H_3 There is significant association between the post-tests self-esteem score with different demographic variables.

Methodology
Research approach
In the present study," Quantitative research approach was used to accomplish the objectives of the study and to determine the effectiveness of Cognitive behaviour Therapy (CBT) on level of self-esteem of nursing students in selected nursing colleges of Delhi / U.P.

Research design
The experimental design opted for the study is pretest – post-test with one experimental and one control group.

Setting: Nursing Colleges of Delhi/U.P.

Population: Undergraduate final year nursing students

Sample: sample comprised of Undergraduate nursing students (final year) studying in various nursing colleges of Delhi / U.P.

Sample Size: Sample size for present study is 60, samples were divided into Experimental group and Control group 30 samples each

Sampling Technique: Sample selection was done using convenient sampling method.

Data collection tools and techniques

Section A: Socio-demographic characteristics of students which has seven variables: Age, Sex, Area/Residence, Educational Qualification, Family income, Academic performance, Physical illness.

Section B: Rosenberg self-esteem scale (Standardised tool) to assess the pre-test and post-test self-esteem score of nursing students divided in experimental and control group.

Table 1: Rosenberg self-esteem scale

S. No.	Tool	Method	Technique
1.	Rosenberg self- esteem scale	Self-administered attitude scale	Four-point Likert scale (rating scale)

Scoring Interpretation

Table 2: Scoring Interpretation

Level of Self esteem	Self-esteem score
Moderate	20-30
High	30-40

Content Validity: Content validity of tools was established by ten experts from the field of mental health nursing, by using criteria rating scale which consist of items with four responses for rating against each criterion like "strongly agree", "agree" and "disagree" and "strongly disagree" with the remark column for each criterion. Thus the final tool was prepared based on the experts suggestions.

Reliability: The tool Rosenberg self-esteem scale used is a standardised tool with established reliability of Internal consistency 0.77 and Coefficient of reproducibility 0.90. thus, the tool was found to be reliable.

Intervention: Cognitive Behavior Therapy

Procedure of Data Collection: Formal administrative approval was obtained from Principal Ahilya Bai College of Nursing, New Delhi, and data was collected. Data was collected in following steps:

Table 3: Data Collection

Group	Day 1	Day (3,6,9)	Day 15
Experimental	Pre assessment of self-esteem of subjects done using Rosenberg self-esteem scale	Intervention CBT SESSIONS conducted	Post assessment of self-esteem of subjects done using Rosenberg self-esteem scale
Control	Pre assessment of self-esteem of subjects done using Rosenberg self-esteem scale	No intervention	Post assessment of self-esteem of subjects done using Rosenberg self-esteem scale

Ethical Consideration: Formal permission was taken from the Principal and ethics committee of Nightingale Institute of Nursing. nformed written consent was taken from all subjects before administrating the CBT. Anonymity and confidentiality of the participants has been maintained

Results
The findings of the study are discussed in the terms of objectives and hypothesis of the study. Descriptive and inferential statistics were used for analysis of the data. The level of significance set for testing hypothesis was 0.05.

Section 1: Description of Demographic Data In age distribution all 60 samples fall between 20-22 year of age group. In gender distribution 100% samples were female. Whereas in educational status all samples were final year of B.Sc. (nursing) students. As per area of residence all the subjects belongs to urban background. In terms of past academic performance majority of students had scored between 60-75%. Majority of subjects belongs to the families whose annual income is 200000 and above.in terms of chronic illness no subject was suffering with any type of chronic illness.

Section 2: Findings related to assessment of pre-test and post- test level of self-esteem among nursing students in experimental and control group.

Table 4: Frequency and percentage distribution of pre-test and post-test level of self-esteem among the nursing students in the Experimental group

Level of self esteem	Score (20-30)	Score (30-40)
	No. %	No. %
Pre test	20-67	10-33
Post test	18-60	12-40

The above table reveals improvement in post test score of subjects in experimental group after providing intervention.

Table 5: Frequency and percentage distribution of pre-test and post-test level of self-esteem among the nursing students in the control group (N=30)

Level of self esteem	Score (20-30)	Score (31-40)
	No. %	No. %
Pre test	18-60	12-40
Post test	19-63	11-37

The above table reveal that no significant change is evident in the post test score of subjects in control group

Section 3: findings related to comparison of pre and post-test level of self-esteem score of nursing students for experimental group

Table 6: Comparison of pre and post-test level of self-esteem score of nursing students for experimental group N=30)

Condition	N	M	Mean difference	SD	t Value
Pre-test	30	29	-2.17	3.48	3.5828
Post-test	30	31.17		3.68	

Table value =2. 045, Degree of freedom = 29, at significance level of at $p<0.05$

Above table reveals that mean post-test self-esteem score is higher than the pre-test self-esteem score and Calculated t value is greater than the table value, which is statistically significant.
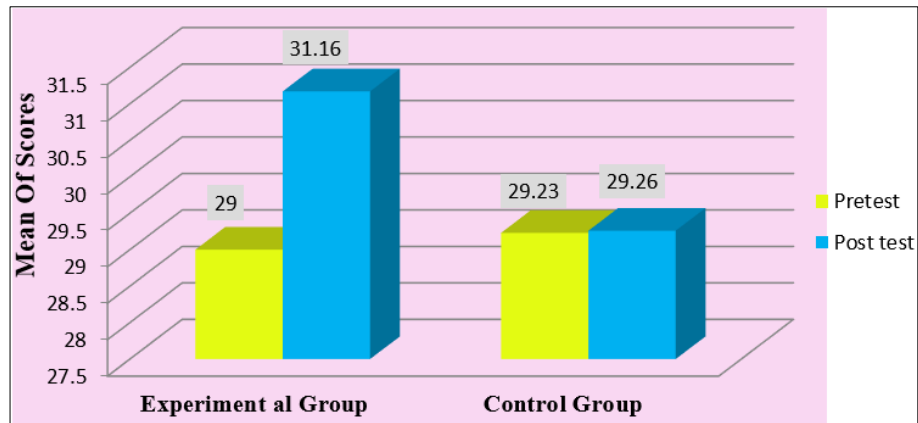
Table 7: Comparison of pre and post-test level of self-esteem score of nursing students for control group N=30

Condition	N	M	Mean difference	SD	t value
Pretest	30	29.23	0.03	3.94	0.0396
Post test	30	29.26		3.85	

Table value = 2. 045, Degree of freedom =29, at significance level of at *p*< 0.05

Table 3and 4shows that the self-esteem of the samples in experimental and control group are similar before the intervention, hence the self -esteem of the groups can be assessed and compared after the intervention.

Fig 1: Bar graph showing comparision between mean pretest self-esteem scores and mean posttest self-esteem scores of experimental and control group
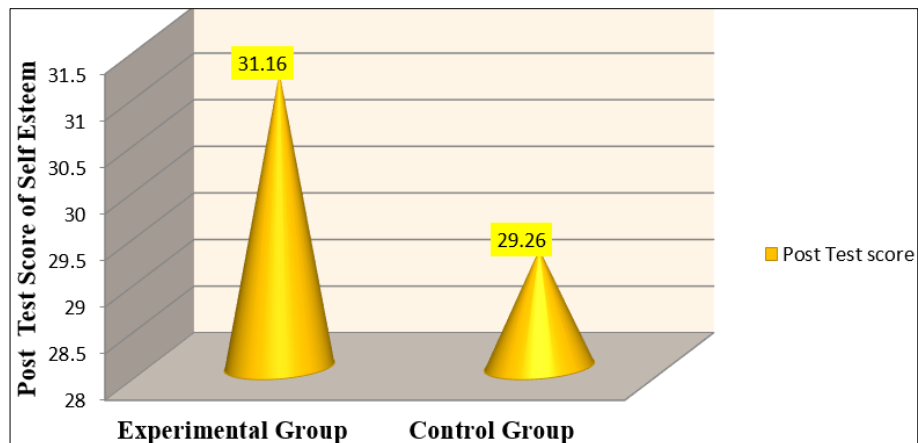
Table 8: Comparison of post-test level of self-esteem score of nursing students between the control group and experimental group N = 30

Condition	N	Post-test mean score	Mean difference	SD	T Value
control	30	29.26	1.90	3.85	1.9546
experimental	30	31.16		3.68	

Table value = 1.671 Degree of freedom df = 58 at significance level of *p*< 0.05

Above table reveals that the calculated t value 1.9546 is more than the table value which is statistically significant at significance level of *p*< 0.05.Hence research hypothesis (H 2) is accepted and null hypothesis is rejected.

Fig 2: Cone Graph Showing comparsion of Self Esteem Post Test Score of Experimental and Control Group

Section 4: Association of post-tests self-esteem score with different demographic variables: It was found that the demographic variables age in years, sex, area of residence, educational status, family Income per annum, academic performance (12th class), physical illness, shows no significant association with the post-test self-esteem scores

Table 9: Association of post-tests self-esteem score with different demographic variables. Mean score =3 0.21 (N=60)

S. No.	Variable	Category	Below mean	Above mean	Chi square / Fisher exact	Significant/non-significant at *p*<0.05
1	Age	20-22yrs	37	23	1 (fisher exact value)	Not Significant.
		Above 22yrs	0	0		
2	Sex	Male	0	0	1 (fisher exact value	Not Significant
		Female	37	23		

3.	Area of residence	Rural Urban	0 37	0 23	1 (fisher exact value	Not Significant
4.	Educational qualification	B.Sc. (n)4th year 3rd year	370	230	1 (fisher exact value	Not Significant
5	Family Income per annum	Rs.1lakh -2lakh	9	3	1.128 P value 0.288	Not Significant
		Above Rs.2lakh	28	20		
6	Academic performance 12th.class	60--75%	24	13	0.0975 P value0.970	. Not significant
		Above 75%	14	9		
7	Physical illness	Present	0	0	1(fisher exact value)	Not significant
		Absent	37	23		

Discussion

The present study was focused on the effectiveness of cognitive behavior therapy (CBT) on self-esteem of nursing students studying in selected nursing colleges of Delhi/U.P.A number of studies have been included in the chapter dealing with review of literature. Mrs. Xavier Belsiyal. C (2015) [16] has conducted study on level of Self-Esteem among B.Sc. (N) Students in a Selected College of Nursing at Bangalore, Karnataka through descriptive research design and assessed self-esteem using the Rosenberg's self-esteem scale, and association between self-esteem and selected socio demographic variables were established. There was significant association found between subjects' self-esteem and father's and mother's education also there was also significant association noted between subjects' self-esteem and parents' occupation with the results of the study can be useful to nursing educators whose efforts are focused on promoting professional excellence. R. Acharya Pandey, H. N. Chalise, (2015) [19], Kathmandu University established correlation between Self-Esteem and Academic Stress among Nursing Students by conducting cross sectional study. Academic stress is psychological condition often experienced by college students. Significant variable for high academic stress and low self-esteem were lower the age, lower the education and low perceived family support. Lower financial support has also had high academic stress. Nursing students have low self-esteem and high academic stress. Intervention which lower the academic stress and increase the self-esteem should be carried out so of students will be efficient that the learning.

Conclusion

The present study assessed the effectiveness of Cognitive Behaviour Therapy on enhancing self-esteem level of nursing students studying in selected nursing colleges of Delhi / U.P. The researcher found that the self-esteem score of subjects in experimental group has improved significantly after administering intervention i.e., Cognitive behavior therapy (CBT) sessions. There was no significant association between the post-test self-esteem score with the various demographic variables: Age in years, gender, residence, educational status, academic performance, annual family income and chronic physical illness as the P value obtained was greater than the calculated chi-square value, hence, the null hypothesis was accepted and Research hypothesis was rejected.

Nursing Implications

The nurses are the part of case team in hospital and community setting for assessment planning and evaluating the outcome of any kind of treatment to patients. These study findings will help the nursing tutors, nursing students and other health personnel to understand the effectiveness of cognitive behaviour therapy (CBT) on self-esteem of students and nursing staff. The implication drawn from the present study is of vital concern to the health team including the professional nurse practitioners, nurse administrators, nurse educators and research. It has implications in clinical Nursing Practice, Nursing Education, Nursing Administration and Nursing Research.

Recommendations

A similar study can be done on school and college students. An experimental study can be conducted to assess the effectiveness of CBT on larger population with audio and video assisted teaching.

References

1. Minev M, Petrova B, Mineva K, Petkova M, Strebkova R. Self-esteem in adolescents. Trakia Journal of Sciences. 2018 Jun 1;16(2):114-8.
2. Rosenberg M. Society and the adolescent self-image. Princeton. NJ: Princeton University Press; c1965. p. 2-34.
3. Coopersmith S. The Antecedents of Self-Esteem. San Francisco, CA: WH Freeman; c1967.
4. Covarrubias R, Fryberg SA. The impact of self-relevant representations on school belonging for Native American students. Cultural Diversity and Ethnic Minority Psychology. 2015;21:10-1.
5. Adolescent Self-Esteem. ACT for youth upstate center of excellence research, facts and findings. Retrieved; c2003. from http://www.actforyouth.net/ resources/rf/rf_slfestm_0603.pdf
6. Arthur D. Measuring the professional self-concept of nurses: a critical review. Journal of Advanced Nursing. 1992;17(6):712-719.
7. Randle J. Changes in self-esteem during a 3-year pre-registration diploma in higher education (nursing) programme. Learning in Health and Social Care. 2003b; 2(1):51-60.
8. Terry DJ, Hogg MA, White KM. The theory of planned behaviour: self-identity and group norms. British Journal of Social Psychology. 1999;38(3):225-244.
9. Papanis E. Self Esteem and its measurement. Athens: Atrapos Pub. (in Greek); c2004.
10. Emery EM, McDermott RJ, Holcomb DR, Marty PJ. The relationship between youth substance use and area-specific self-esteem. J Sch Health. 1993;63(5):224-228.
11. Brown GW, Bifulco A, Veiel HO, Andrews B. Self-esteem and depression. Social psychiatry and psychiatric epidemiology. 1990 Sep;25(5):225-34.
12. Rutter M, Schopler E. Classification of pervasive developmental disorders: some concepts and practical considerations. Journal of autism and developmental disorders. 1992 Dec;22(4):459-82.
13. Lockett CT, Harrell JP. Racial identity, self-esteem, and academic achievement: Too much interpretation, too little supporting data. Journal of Black Psychology. 2003 Aug;29(3):325-36.

14. McMillan JH, Singh J, Simonetta LG. The tyranny of self-oriented self-esteem. Educational Horizons. 2001 Jan 1;79(2):92-5.

15. Abd El-Wahab SD, Eita LH. The effectiveness of live bee sting acupuncture on depression. IOSR J Nurs Health Sci. 2015;4:19-27.

16. Belsiyal CX. Level of self-esteem among B.Sc. (N) students in a selected college of nursing at Bangalore, Karnataka. Asian Journal of nursing education and research. 2015 Apr 1;5(2):254.

17. Milardović S, Ivanišević I, Rogina A, Kassal P. Synthesis and electrochemical characterization of AgNP ink suitable for inkjet printing. Int. J Electrochem. Sci. 2018 Nov 1;13(11):11136-49.

18. Malhotra A, Sharma A, Ajanta A, Bala S. Study the relationship between academic achievement and self-esteem of senior secondary school students. J Evid. Based Med. Healthc. 2019;6(11):899-903.

19. Pandey RA, Chalise HN. Self-esteem and academic stress among nursing students. Kathmandu University medical journal. 2015;13(4):298-302.