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"A STUDY TO EVALUATE THE EFFECT OF NURSING INTERVENTION STRATEGIES ON PHYSIOLOGICAL AND PSYCHOLOGICAL PROBLEMS AMONG PATIENTS WITH HEART FAILURE IN SELECTED HOSPITALS OF AHMEDABAD CITY."

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ABSTRACT

Background
Cardiovascular disease is the world's leading cause of death. Heart Failure effect on physiological and psychological problems that commonly includes dyspnea, edema, fatigue, anxiety, depression. Administering Nursing intervention Strategies among heart failure patients can be helpful to improve the physiological and psychological problems.

Aims
This study aims to evaluate the effect of Nursing intervention Strategies on Physiological problems as like Dyspnea, Edema, Fatigue and Psychological problems such as Anxiety and Depression among Heart Failure patients in selected hospitals of Ahmedabad city.

Objectives of the studies were
1. To assess the pre-test level of physiological and psychological problems among patients with heart failure in selected hospitals of Ahmedabad city.
2. To assess the post-test level of physiological and psychological problems among patients with heart failure in selected hospitals of Ahmedabad city.
3. To Evaluate the effect of Nursing Intervention Strategies on physiological and psychological problems among patient with Heart failure in selected hospitals of Ahmedabad city.
4. To determine the association between Pre-test level of physiological and psychological problems with selected demographic variables among patients with Heart failure in selected hospitals of Ahmedabad city.

Methods
Quantitative research approach was used with one group pre-test post-test research design (pre-experimental). Investigator used Non-Probability Purposive sampling technique for selecting 30 samples. The investigator used Tool/scale for Physiological and Psychological problems for the evaluation of pre-test and post-test effect of Nursing Intervention Strategies on physiological and psychological problems among Heart Failure patients. The reliability of the tool was determined, by using test and retest method of "Karl Pearson's formula" Reliability were: Modified mMRC Dyspnea scale- 0.83, Pitting Edema Scale- 0.73, Modified Fatigue assessment scale- 0.76, Modified Anxiety scale- 0.78, Patient Depression scale- 0.71. Tool/scales were found reliable.

Result
Present study identified that, For the comparison of pre test and post test score 't'value on Tools/Scales; Modified mMRC Dyspnea scale, Pitting Edema scale, Modified fatigue assessment scale, Modified Anxiety scale, Patient depression scale, were greater than table value, it shows that nursing intervention strategies has significant effect on level of physiological and psychological problems, so that means the null hypothesis is rejected and there is 30 observations calculated and paired t-test is applied. Hence, it was proved that **Nursing Interventions are effective in Physiological and psychological problems among heart failure patients in selected hospitals of Ahmedabad city**.

Conclusion
In Present study, physiological and psychological problems improved by the administration of Nursing intervention strategies. Significant association found between before and after administration of Nursing Intervention Strategies. The present study assessed the **effect of Nursing Intervention strategies on physiological and psychological problems** among patients with Heart failure in selected Hospitals of Ahmedabad city.

Key Words
Nursing Intervention Strategies, Effect of Nursing intervention strategies, Heart Failure , Physiological and psychological problems, and Heart failure patients.

INTRODUCTION

Cardiovascular disease is the world's leading cause of death. In 2019, 17.9 million people died from CVDs, comprising 32% of global mortality. (World Health Organization, 2021). Heart disease is the leading cause of death in the U.S. as well, causing approximately 697,000 deaths per year. (Centers for Disease Control and Prevention, 2022).Approximately 121.5 million U.S. adults have some form of cardiovascular disease. (American Heart Association, 2019).More than 75% of CVD-related deaths occur in low- and middle-income countries. (World Health Organization, 2021). 1 out of every 5 deaths in the United States is a result of cardiovascular disease. That's a death every 34 seconds. (Centers for Disease Control and Prevention, 2022). By 2035, the American Heart Association projects that more than 130 million U.S. adults will have some type of heart disease. (American Heart Association, 2018). Approximately 20.1 million U.S. adults have coronary artery disease, and 805,000 Americans have a heart attack each year. (Centers for Disease Control and Prevention, 2022). According to Indian Heart Failure Registery- Heart failure is the commonest cardiac cause for hospitalization with 1% of the general population being affected annually, which adds up to between 8–10 million patients.

Heart failure patients suffer from chronic, disabling conditions and treatment involving complicated drug regimens that require close monitoring and lifestyle changes. Nurses have identified and raised awareness about this condition and continue to influence the quality of care. The key actions for HF patient care are to provide comprehensive, cost-effective services and cardiac rehabilitation. Severe symptoms, such as dyspnoea or edema and increased exercise intolerance affect important aspects of a person's life. In addition, patients often have to adjust their lifestyle by adhering to a complex medication regimen, changing their diet and fluid intake, adopting their activities, and monitoring symptoms of worsening heart failure. To make these adjustments and to care for themselves effectively, patients need particular knowledge and skills.

Nurses can educate the patients in these aspects through structured teaching and encourage them to participate in the cardiac rehabilitation thereby prevent further complications of heart failure. Educating patients about heart failure treatment and the consequences of heart failure has improved self-management behaviour. For patients with heart failure, self-management plan includes monitoring of symptoms such as, fatigue, shortness of breath (SOB), daily weighing, knowing what to do if signs of deterioration appear and when to report the changes to the health care provider.

Objectives of the studies were

1. To assess the pre-test level of physiological and psychological problems among patients with heart failure in selected hospitals of Ahmedabad city.
2. To assess the post-test level of physiological and psychological problems among patients with heart failure in selected hospitals of Ahmedabad city.
3. To Evaluate the effect of Nursing Intervention Strategies on physiological and psychological problems among patient with Heart failure in selected hospitals of Ahmedabad city.
4. To determine the association between Pre-test level of physiological and psychological problems with selected demographic variables among patients with Heart failure in selected hospitals of Ahmedabad city.

Methodology for research
Quantitative research approach was used with one group pre-test post-test research design (pre-experimental). Investigator used Non-Probability Purposive sampling technique for selecting 30 samples. The investigator used Tool/scale for Physiological and Psychological problems for the evaluation of pre-test and post-test effect of Nursing Intervention Strategies on physiological and psychological problems among Heart Failure patients. The reliability of the tool was determined, by using test and retest method of "Karl Pearson's formula" Reliability were: Modified mMRC Dyspnea scale- 0.83, Pitting Edema Scale- 0.73, Modified Fatigue assessment scale- 0.76, Modified Anxiety scale- 0.78, Patient Depression scale- 0.71. Tool/scales were found reliable.

RESULT

Present study identified that, For the comparison of pre test and post test score 't'value on Tools/Scales; Modified mMRC Dyspnea scale, Pitting Edema scale, Modified fatigue assessment scale, Modified Anxiety scale, Patient depression scale, were greater than table value, it shows that nursing intervention strategies has significant effect on level of physiological and psychological problems, so that means the null hypothesis is rejected and there is 30 observations calculated and paired t-test is applied. Hence, it was proved that Nursing Interventions are effective in Physiological and psychological problems among heart failure patients in selected hospitals of Ahmedabad city.

Table 1: ANALYSIS AND INTERPRETATION OF THE DEMOGRAPHIC VARIABLES OF THE SAMPLES.
(N=30)

Sr. No.	Demographic Variables	Frequency	Percentage (%)
1	Age in years		
	a. 31- 40	0	0
	b. 41- 50	6	20
	c. 51- 60	8	26.7
	d. above 61	16	53.3
2	Gender		
	a. Male	21	70
	b. Female	9	30
3	Religion		
	a. Hindu	15	50
	b. Christian	4	13.3
	c. Muslim	9	30
	d. Other	2	6.7
4	Marital Status		
	a. Married	29	96.7
	b. Unmarried	1	3.3
5	Type of family		
	a. Joint family	3	10
	b. Nuclear family	27	90
6	Educational qualification		
	a. Illiterate	6	20
	b. Primary	5	16.7
	c. Secondary	4	13.3
	d. Higher Secondary	7	23.3
	e. Graduate and above	8	26.7
7	Occupation		
	a. Labourer	6	20
	b. Home maker	7	23.3
	c. Private Job	7	23.3
	d. Govt. Job	5	16.7
	e. Retired	5	16.7
8	Body weight in kgs		
	a. ≤ 40	0	0
	b. 41 – 50	1	3.3
	c. 51 – 60	3	10

	d. 61 – 70 e. 71 – 80 f. ≥81	9 11 6	30 36.7 20
Sr. No.	**Demographic Variables**	**Frequency**	**Percentage (%)**
9	**Monthly family Income** a. Less than 10,000 b. 10,000 to 30,000 c. 31,000 to 60,000 d. 61,000 to 90,000 e. Above 90,000	 6 14 8 2 0	 20 46.7 26.7 6.7 0
10	**Co-morbidity** a. Hypertension b. Diabetes c. Dyslipidaemia d. Other e. None	 13 7 2 3 5	 43.3 23.3 6.7 10 16.7

Table 1 shows that the distribution of samples by age, **06 (20.0%)** samples belong to the age group of 41-50 years, **8 (26.7%)** samples belong to the age group of 51- 60 years and **16 (53.3%)** samples belong to the age group of above 60 years. Distribution of samples according to Gender, **21 (70.0%)** samples belong to Male, **09 (30.0%)** samples belong to Female. Distribution of samples by Religion **15 (50.0%)** samples belong to Hindu, **4 (13.3%)** samples belong to Christian, **9 (30.0%)** samples belong to Muslim, and **2 (06.7%)** samples belong to other religion. Distribution of samples according to marital status, **29 (96.7%)** were married, and **01 (03.3%)** were unmarried. Distribution of samples by Type of family, **3 (10.0%)** samples belong to nuclear family and **27 (90.0%)** samples belong to Joint family. As regard to educational Qualification **06 (20.0%)** samples belongs to the Illiterate, **5 (16.7%)** samples belong to the Primary, **04 (13.3%)** samples belongs to the Secondary, **07 (23.3%)** samples belongs to the Higher secondary, **08 (26.7%)** samples belongs to the Graduate and above. Distribution of samples according to Occupation, **06 (20.0%)** samples belong to Labourer, **07 (23.3%)** samples belong to Home-maker, **07 (23.3%)** samples belong to Private job, **05 (16.7%)** samples belong to Government job, **05 (16.7%)** samples belong to Retired. Distribution of samples by Body Weight in kgs, **1 (03.3%)** samples belong to the 41 – 50 kgs**, 03 (10.0%)** samples belong to 51-60 kgs, **09 (30.0%)** samples belong to 61-70 kgs, **11 (36.7%)** samples belong to 71-80 kgs, and **06 (20.0%)** samples belong to above 80 kgs. Distribution of samples according to the Monthly income, **06 (20.0%)** of the samples has less than 10,000 income, **14 (46.7%)** of the samples has 10,000 to 30,000 income, **08 (26.7%)** of the samples has 31,000 to 60,000 income, and **02 (6.7%)** of the samples has 61,000 to 90,000 income. As a regard of Co Morbidity, majority **13 (43.3%)** samples were suffering from Hypertension, **07 (23.3%)** samples were suffering from Diabetes, **02 (06.7%)** samples were suffering from Dyslipidaemia, **03 (10.0%)** samples were suffering from other disease and **05 (16.7%)** samples had no any co morbid disease.

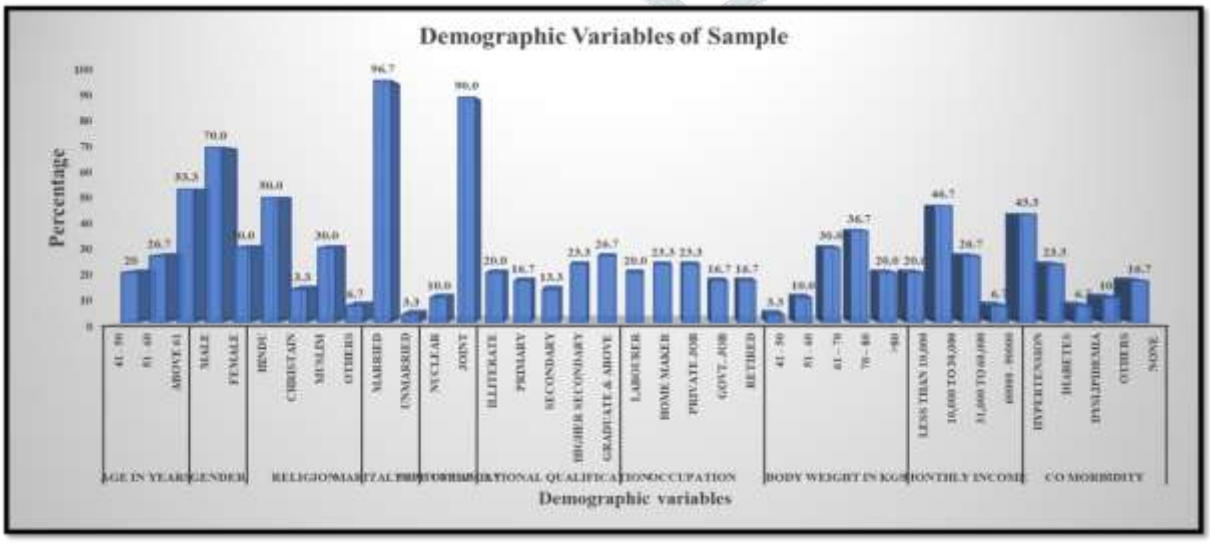

Figure 1: Bar graph showing percentage wise distribution of Demographic Variables of Sample

Frequency & Percentage, distribution of pre-test and post-test levels of score among patients with Heart failure measured by Scales.

Level of Dyspnea in Pre test and post test score by using Modified mMRC Dyspnea Scale

- It represent that before the Nursing intervention strategies, no patients had No dyspnea , Mild Dyspnea and Worst Dyspnea. **07(20%)** patients had a moderate dyspnea and **23 (76.7%)** patients had a Severe dyspnea. After the Nursing intervention strategies, no patients had No dyspnea , Mild Dyspnea and Worst Dyspnea. **14(46.7%)** patients had a moderate dyspnea and **16 (53.3%)** patients had a Severe dyspnea.

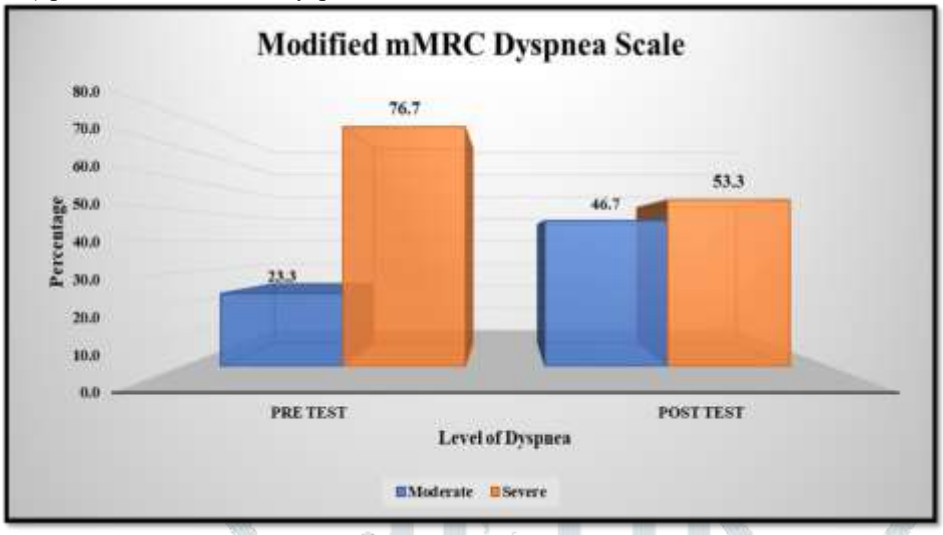

Figure 2: Bar graph Showing Pre-Test and Post Test level of Dyspnea of Sample

Level of Edema in Pre test and post test score by using Pitting Edema Scale

- It represent that before the Nursing intervention strategies, no patients had No Mild Pitting Edema. 11(36.7%) patients had a moderate Pitting Edema, 16(53.3%) patients had a moderately severe Pitting Edema and 3 (10.0%) patients had a Severe Pitting Edema. After the Nursing intervention strategies, no patients had Severe Pitting Edema. 16 (53.3%) patients had a Mild Pitting Edema 12(40.0%) patients had a moderate Edema and 02 (6.7%) patients had a Moderately Severe Edema.

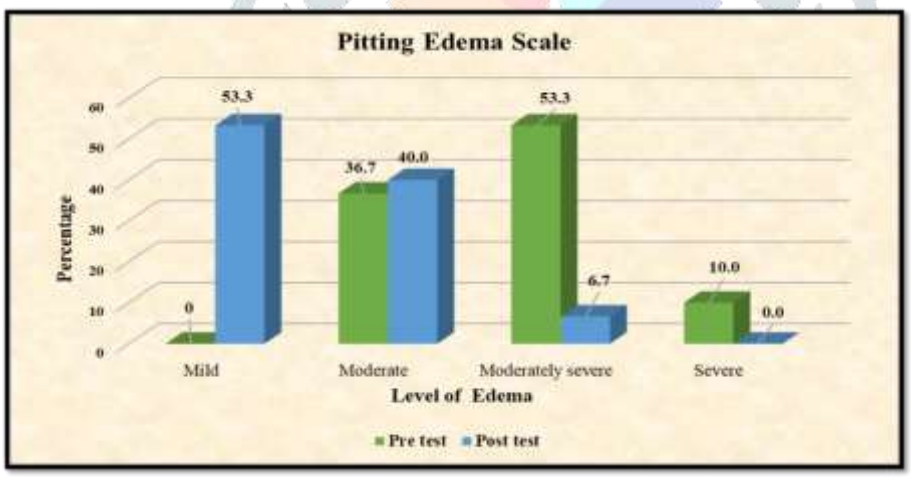

Figure 3: Bar graph Showing Pre-Test and Post Test level of Pitting Edema of Sample

Level of Fatigue in Pre test and post test score by using Modified Fatigue Assessment Scale

- It represent that before the Nursing intervention strategies, no patients had No Mild fatigue. 23(36.7%) patients had moderate fatigue and 7 (23.3%) patients had Severe fatigue. After the Nursing intervention strategies, no patients had Severe fatigue. 16 (53.3%) patients had a Mild fatigue and 14(46.7%) patients had a moderate fatigue.

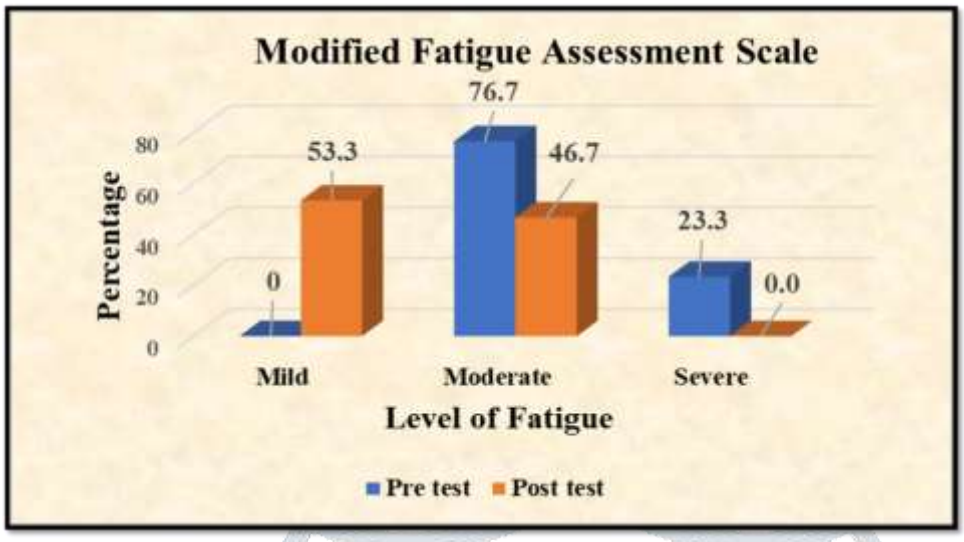

Figure 4: Bar graph Showing Pre-Test and Post Test level of Fatigue of Sample

Level of Anxiety in Pre test and post test score by using Modified Anxiety Scale

- It represent that before the Nursing intervention strategies, no patients had No anxiety. 6 (20%) patients had Mild anxiety, 19 (63.3%) patients had Moderate Anxiety and 5 (16.7%) patients had Severe Anxiety. After the Nursing intervention strategies, no patients had Severe Anxiety. 5 (16.7%) patients had a Mild Anxiety 21 (70.0%) patients had moderate Anxiety and 04 (13.3%) patients had a Moderate Anxiety.

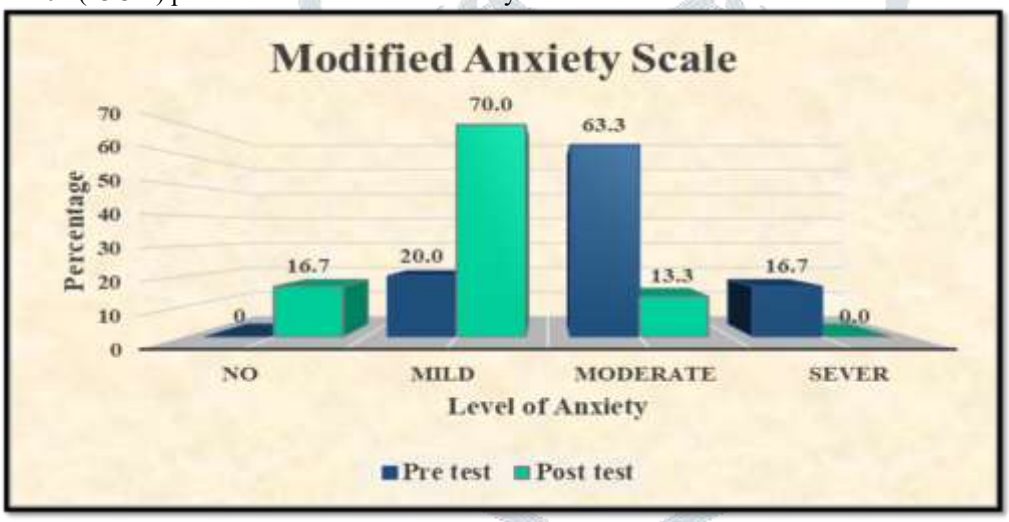

Figure 5: Bar graph Showing Pre-Test and Post Test level of Anxiety of Sample

Level of Depression in Pre test and post test score by using Patient Depression Scale

- It represent that before the Nursing intervention strategies, no patients had No Minimal Depression and Severe Depression. 6 (20%) patients had Mild depression, 15 (50.0%) patients had Moderate Depression and 9 (30.0%) patients had Moderately severe Depression. After the Nursing intervention strategies, no patients had Moderately Severe Depression and Severe Depression. 4 (13.3%) patients had a Minimal Depression, 17 (56.7%) patients had Mild Depression and 09 (30.0%) patients had a Moderate Depression.

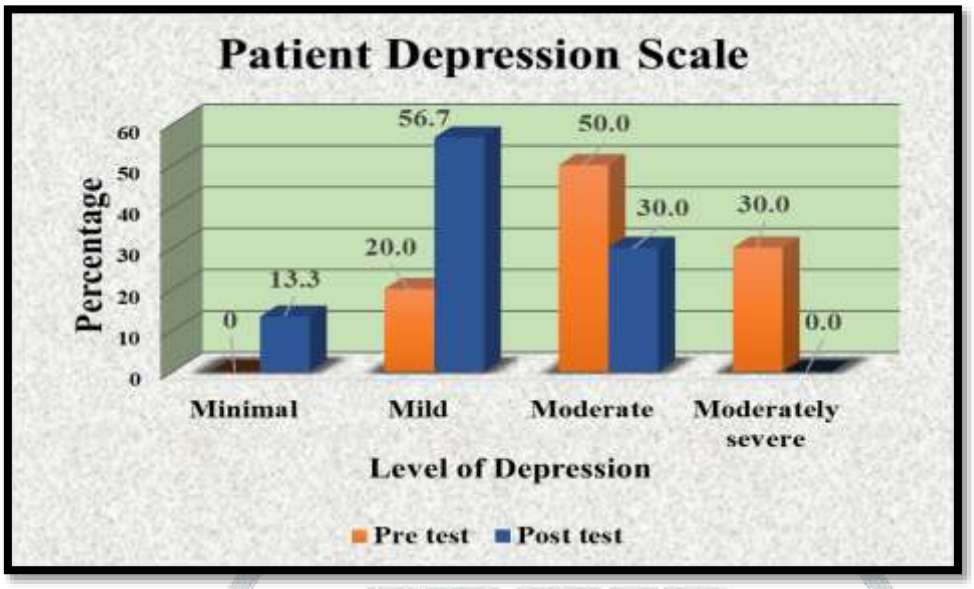

Figure 6: Bar graph Showing Pre-Test and Post Test level of Depression of Sample

The comparison of Pre-Test score and Post-Test score among 30 samples obtained by Modified mMRC Dyspnea Scale**.**

- The mean Pre-test score was **7.5** and the mean Post-test score was **6.4** with the mean difference **1.1**. The Standard deviation of Pre-test score was **1.19** and Standard deviation of Post-test score was **1.07**. The calculated 't' was **7.94** and the tabulated 't' was **2.05** with degree of freedom 29 at 0.05 level of significance.It reveals that mean post-test pain of Modified mMRC Dyspnea scale score was significantly lower than mean Pre-test of Modified mMRC Dyspnea score. This indicates that difference obtained in the Pre-test of Modified mMRC Dyspnea scale scores and mean Post-test scale score was a real difference and not by chance. Therefore, the **null hypothesis H_0 hypothesis was rejected and research hypothesis H_1 was accepted**. It reveals that Nursing intervention strategies were effective in reduction of Physiological and Psychological Problems among Heart Failure patients. Investigator concluded, that there was decreasing post-test level of Dyspnea score as compared to the pre-test level of Dyspnea score after administration of nursing interventions

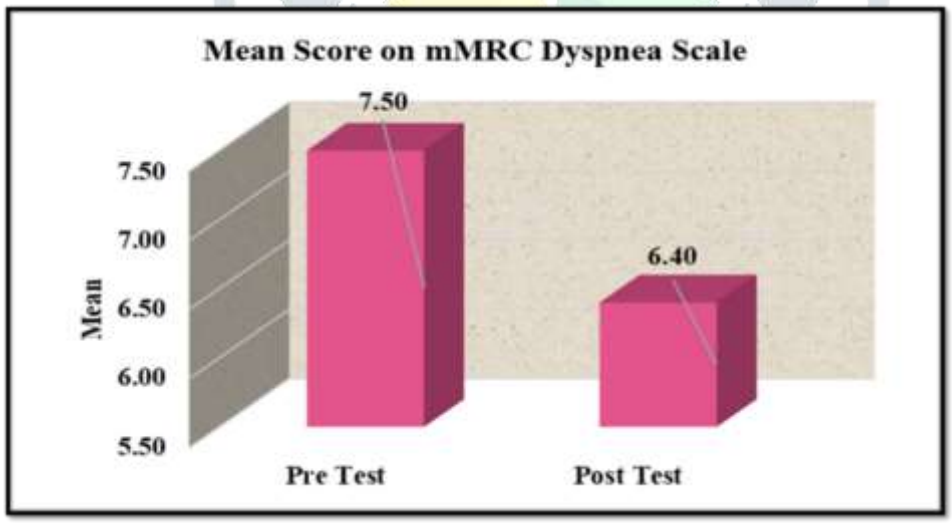

Figure 7: Bar Graph showing the comparison of Mean Pre-Test and Mean Post-test level of Dyspnea of samples

The comparison of Pre-Test score and Post-Test score among 30 samples obtained by Pitting Edema Scale**.**

- The mean Pre-test score was **2.73** and the mean Post-test score was **1.53** with the mean difference **1.2**. The Standard deviation of Pre-test score was **0.63** and Standard deviation of Post-test score was **0.63**. The calculated 't' was **13.53** and the tabulated 't' was 2.05 with degree of freedom 29 at 0.05 level of significance. It reveals that mean post-test pain of Pitting Edema Scale score was significantly lower than mean Pre-test of Pitting Edema Scale score. This indicates that difference obtained in the Pre-test of Pitting Edema Scale scores and mean Post-test scale score was a real difference and not by chance. Therefore, the **null hypothesis H_0 hypothesis was rejected and research hypothesis H_1 was accepted**.It reveals that Nursing intervention strategies were effective in reduction of Physiological and Psychological Problems among Heart Failure patients. Investigator concluded, that there was decreasing post-test level of Pitting Edema score as compared to the pre-test level of Pitting Edema score after administration of nursing interventions.

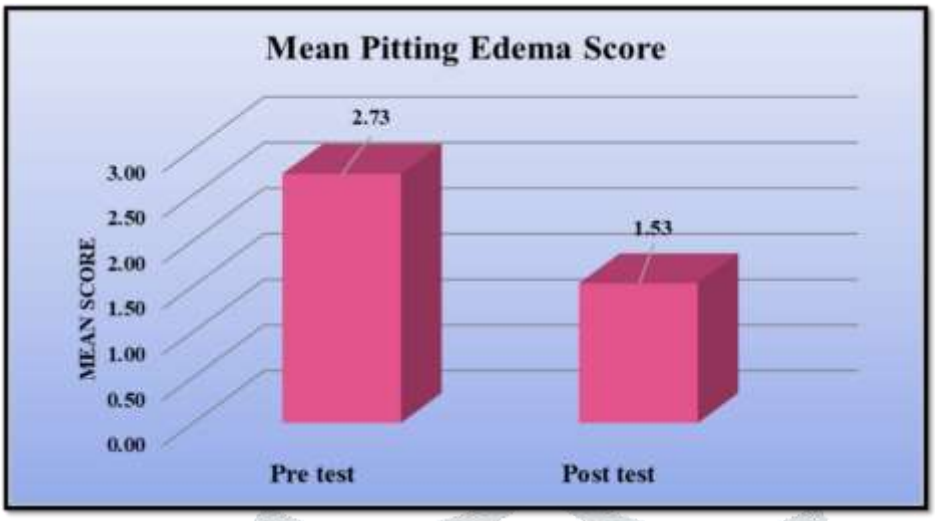

Figure 8: Bar Graph showing the comparison of Mean Pre-Test and Mean Post-test level of edema of sample

The comparison of Pre-Test score and Post-Test score among 30 samples obtained by Modified Fatigue Assessment Scale**.**

- The mean Pre-test score was **19.83** and the mean Post-test score was **11.63** with the mean difference **8.2**. The Standard deviation of Pre-test score was **1.28** and Standard deviation of Post-test score was **1.90**. The calculated 't' was **17.6** and the tabulated 't' was 2.05 with degree of freedom 29 at 0.05 level of significance. It reveals that mean post-test pain of Modified Fatigue Assessment Scale score was significantly lower than mean Pre-test of Modified Fatigue Assessment scale score. This indicates that difference obtained in the Pre-test of Modified Fatigue Assessment scale scores and mean Post-test scale score was a real difference and not by chance. Therefore, the **null hypothesis H_0 hypothesis was rejected and research hypothesis H_1 was accepted**. It reveals that Nursing intervention strategies were effective in reduction of Physiological and Psychological Problems among Heart Failure patients. Investigator concluded, that there was decreasing post-test level of Modified Fatigue Assessment scale score as compared to the pre-test level of Modified Fatigue Assessment scale score after administration of nursing interventions.

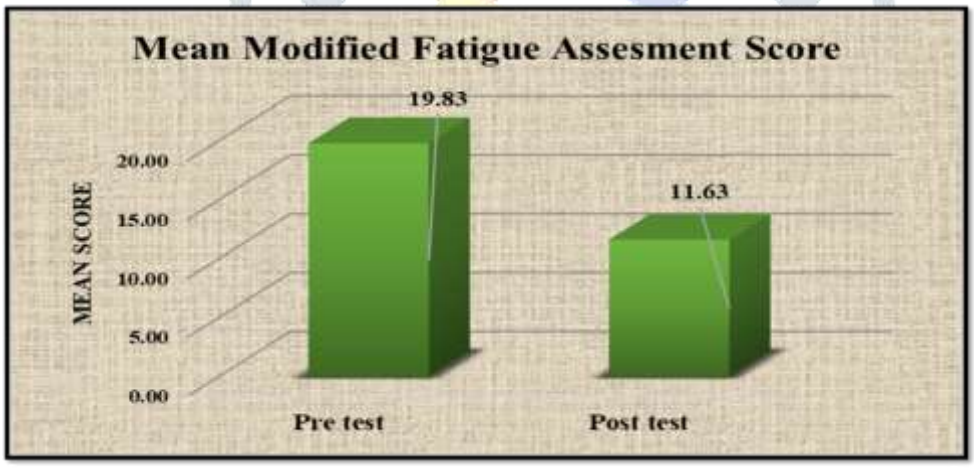

Figure 9: Bar Graph showing the comparison of Mean Pre-Test and Mean Post-test level of Fatigue of sample

The comparison of Pre-Test score and Post-Test score among 30 samples obtained by Modified Anxiety Scale**.**

- The mean Pre-test score was **45.00** and the mean Post-test score was **29.57** with the mean difference **15.43**. The Standard deviation of Pre-test score was **5.15** and Standard deviation of Post-test score was **5.21**. The calculated 't' was **15.24** and the tabulated 't' was 2.05 with degree of freedom 29 at 0.05 level of significance. It reveals that mean post-test pain of Modified Anxiety Scale score was significantly lower than mean Pre-test of Modified Anxiety scale score. This indicates that difference obtained in the Pre-test of Modified Anxiety scale scores and mean Post-test scale score was a real difference and not by chance. Therefore, the **null hypothesis H_0 hypothesis was rejected and research hypothesis H_1 was accepted**. It reveals that Nursing intervention strategies were effective in reduction of Physiological and Psychological Problems among Heart Failure patients. Investigator concluded, that there was decreasing post-test level of Modified Anxiety Scale score as compared to the pre-test level of Modified Anxiety scale score after administration of nursing interventions.

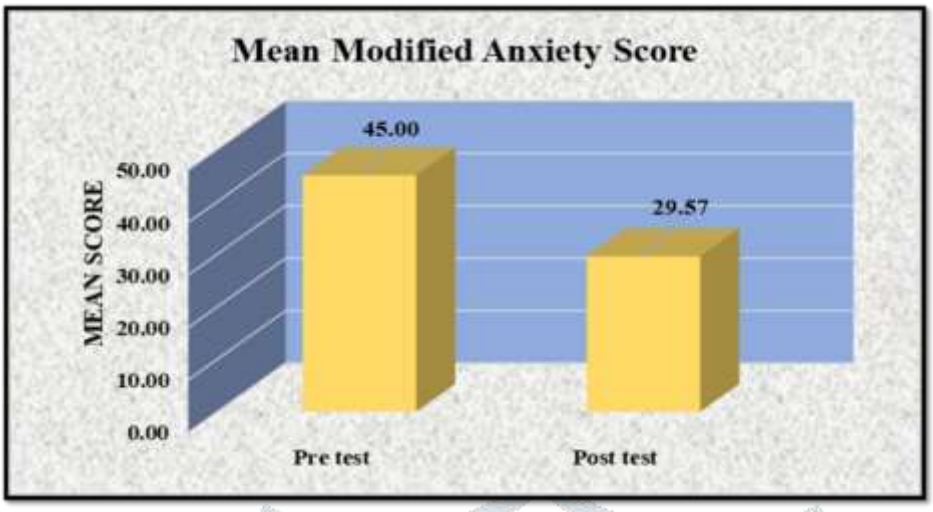

Figure 10: Bar Graph showing the comparison of Mean Pre-Test and Mean Post-test level of Anxiety of sample

The comparison of Pre-Test score and Post-Test score among 30 samples obtained by Patient Depression Scale**.**

- The mean Pre-test score was **12.83** and the mean Post-test score was **8.3** with the mean difference **4.53**. The Standard deviation of Pre-test score was **3.05** and Standard deviation of Post-test score was **2.48**. The calculated 't' was **13.27** and the tabulated 't' was 2.05 with degree of freedom 29 at 0.05 level of significance. It reveals that mean post-test pain of Patient Depression Scale score was significantly lower than mean Pre-test of Patient Depression scale score. This indicates that difference obtained in the Pre-test of Patient Depression scale scores and mean Post-test scale score was a real difference and not by chance. Therefore, the **null hypothesis H_0 hypothesis was rejected and research hypothesis H_1 was accepted**. It reveals that Nursing intervention strategies were effective in reduction of Physiological and Psychological Problems among Heart Failure patients. Investigator concluded, that there was decreasing post-test level of Patient Depression Scale score as compared to the pre-test level of Patient Depression scale score after administration of nursing interventions.

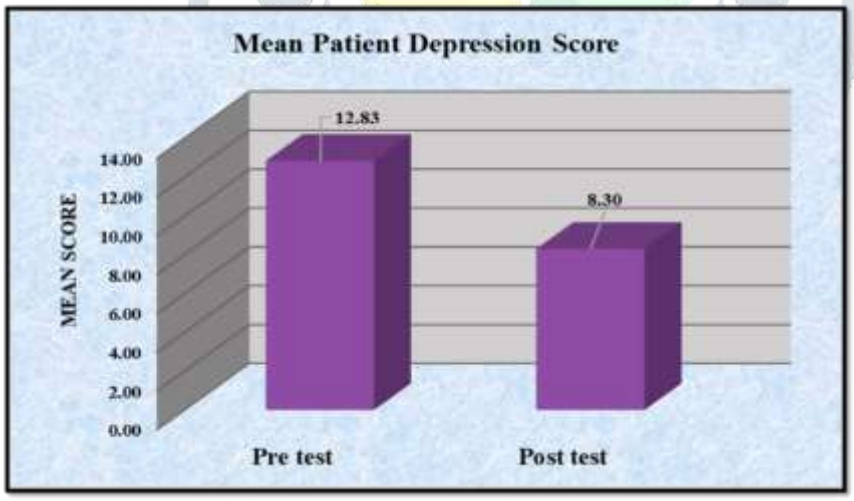

Figure 11: Bar Graph showing the comparison of Mean Pre-Test and Mean Post-test level of Depression of sample

TABLE 2 SHOWS ASSOCIATION BETWEEN DEMOGRAPHIC VARIABLES WITH THE PRE-TEST SCORE OF PHYSIOLOGICAL AND PSYCHOLOGICAL PROBLEMS OF HEART FAILURE PATIENTS

[N=30]

Demographic Variables	Sr. No.	Pre- Test level of Physiological and Psycological Problems	Chi Square	DF	Table Value	Sig./Non Sig.
Age in years	PART-A PHYSIOLOGICAL PROBLEMS					
	A.1	Dyspnea	5.194	2	5.99	NS
	A.2	Edema	10.232	4	9.59	S
	A.3	Fatigue	0.186	2	5.99	NS
	PART-B PSYCHOLOGICAL PROBLEMS					
	B.1	Anxiety	1.238	4	9.48	NS
	B.2	Depression	0.826	4	9.48	NS
Gender	PART-A PHYSIOLOGICAL PROBLEMS					
	A.1	Dyspnea	0.719	1	3.84	NS
	A.2	Edema	1.176	2	5.99	NS
	A.3	Fatigue	1.074	1	3.84	NS
	PART-B PSYCHOLOGICAL PROBLEMS					
	B.1	Anxiety	2.105	2	5.99	NS
	B.2	Depression	1.481	2	5.99	NS
Religion	PART-A PHYSIOLOGICAL PROBLEMS					
	A.1	Dyspnea	10.497	3	7.82	S
	A.2	Edema	4.147	6	12.59	NS
	A.3	Fatigue	5.217	3	7.82	NS
	PART-B PSYCHOLOGICAL PROBLEMS					
	B.1	Anxiety	12.787	6	12.59	S
	B.2	Depression	3.126	6	12.59	NS
Marital Status	PART-A PHYSIOLOGICAL PROBLEMS					
	A.1	Dyspnea	0.315	1	3.84	NS
	A.2	Edema	0.905	2	5.99	NS
	A.3	Fatigue	0.315	1	3.84	NS
	PART-B PSYCHOLOGICAL PROBLEMS					
	B.1	Anxiety	0.599	2	5.99	NS
	B.2	Depression	1.034	2	5.99	NS
Demographic Variables	Sr. No.	Pre- Test level of Physiological and Psycological Problems	Chi Square	DF	Table Value	Sig./Non Sig.

Type of family	**PART-A PHYSIOLOGICAL PROBLEMS**					
	A.1	**Dyspnea**	1.014	1	3.84	NS
	A.2	**Edema**	0.455	2	5.99	NS
	A.3	**Fatigue**	0.186	1	3.84	NS
	PART-B PSYCHOLOGICAL PROBLEMS					
	B.1	**Anxiety**	0.858	2	5.99	NS
	B.2	**Depression**	0.864	2	5.99	NS
Educational qualification	**PART-A PHYSIOLOGICAL PROBLEMS**					
	A.1	**Dyspnea**	10.388	4	9.48	S
	A.2	**Edema**	6.847	8	15.5	NS
	A.3	**Fatigue**	2.203	4	9.48	NS
	PART-B PSYCHOLOGICAL PROBLEMS					
	B.1	**Anxiety**	3.928	8	15.5	NS
	B.2	**Depression**	21.554	8	15.5	S
Occupation	**PART-A PHYSIOLOGICAL PROBLEMS**					
	A.1	**Dyspnea**	4.685	4	9.48	NS
	A.2	**Edema**	3.982	8	15.5	NS
	A.3	**Fatigue**	12.032	4	9.48	S
	PART-B PSYCHOLOGICAL PROBLEMS					
	B.1	**Anxiety**	6.154	8	15.5	NS
	B.2	**Depression**	9.429	8	15.5	NS
Body weight in kgs	**PART-A PHYSIOLOGICAL PROBLEMS**					
	A.1	**Dyspnea**	5.353	4	9.48	NS
	A.2	**Edema**	13.427	8	15.5	NS
	A.3	**Fatigue**	0.723	4	9.48	NS
	PART-B PSYCHOLOGICAL PROBLEMS					
	B.1	**Anxiety**	5.974	8	15.5	NS
	B.2	**Depression**	7.608	8	15.5	NS
Monthly family Income	**PART-A PHYSIOLOGICAL PROBLEMS**					
	A.1	**Dyspnea**	3.547	3	7.82	NS
	A.2	**Edema**	1.361	6	12.59	NS
	A.3	**Fatigue**	4.079	3	7.82	NS
	PART-B PSYCHOLOGICAL PROBLEMS					
	B.1	**Anxiety**	5.753	6	12.59	NS
	B.2	**Depression**	3.865	6	12.59	NS
Demographic Variables	**Sr. No.**	**Pre- Test level of Physiological and Psycological Problems**	**Chi Square**	**DF**	**Table Value**	**Sig./Non Sig.**
Co-morbidity	**PART-A PHYSIOLOGICAL PROBLEMS**					
	A.1	**Dyspnea**	2.758	4	9.48	NS
	A.2	**Edema**	11.897	8	15.5	NS

A.3	**Fatigue**	2.805	4	9.48	NS
PART-B PSYCHOLOGICAL PROBLEMS					
B.1	**Anxiety**	9.008	8	15.5	NS
B.2	**Depression**	5.043	8	15.5	NS

Findings related to Pre-test levels of Physiological and Psychological problems of Heart Failure Patients with Demographic Variables.

- Association between the pre-test of Numerical Dyspnea scales score of with selected demographic variables of samples. Religion and Education qualification had significant association with Numerical Dyspnea scales scores of the samples. This indicates that the selected demographic variables had significant association with Numerical Dyspnea scales score among Heart failure patients.
- Association between the pre-test of Pitting Edema scales score of with selected demographic variables of samples. Age in year had significant association with Pitting Edema scales scores of the samples. This indicates that the selected demographic variables had significant association with Pitting Edema scales score among Heart failure patients.
- Association between the pre-test of Modified Fatigue assessment scales score of with selected demographic variables of samples. Occupation had significant association with Modified Fatigue assessment scales scores of the samples. This indicates that the selected demographic variables had significant association with Modified Fatigue assessment scales score among Heart failure patients.
- Association between the pre-test of Modified Anxiety scale score of with selected demographic variables of samples. Religion had significant association with Modified Anxiety scales scores of the samples. This indicates that the selected demographic variables had significant association with Modified Anxiety scales score among Heart failure patients.
- Association between the pre-test of Patient Depression scales score of with selected demographic variables of samples. Education qualification had significant association with Patient Depression scales scores of the samples. This indicates that the selected demographic variables had significant association with Patient Depression scales score among Heart failure patients.

DISCUSSION

The present study conducted with quantitative research approach, thirty (30) Heart failure patients of selected Hospitals of Ahmedabad city. Non-probability, Purposive sampling technique adopted for the samples selection as per criteria. Investigator used standardized tool and all the matter with step by step procedure in order to make tool more reliable and valid. Investigator make a plan to use tool under the guidance of guide and referred many previous thesis and also the articles related to the study and also validated by experts of medical-surgical nursing. Training of therapies under the guidance of therapist was done and after developing tool than investigator conducted pilot study and after checking the feasibility of the study and according to the permission granted from the Hospitals, the main study was conducted. The final data collection was done, the investigator approached individually, discussed the objectives and purpose of the study. The data collected from the selected hospitals was compiled and analysed using descriptive and inferential statistics. The result of the study was majority of the samples with Physiological and Psychological Problems among Heart Failure patients were reduced by Nursing intervention strategies.

CONCLUSIONS

The following conclusions could be drawn from the present study findings In Present study, physiological and psychological problems improved by the administration of Nursing intervention strategies. Significant association found between before and after administration of Nursing Intervention Strategies. The present study assessed the effect of Nursing Intervention strategies on physiological and psychological problems among patients with Heart failure in selected Hospitals of Ahmedabad city. It is evident that the Nursing Intervention Strategies are effective in improving the physiological problems such as Dyspnea, Edema, Fatigue and psychological problems such as anxiety, depression. This study also suggested that specific information and Nursing Interventions has to be taught to the patients with heart failure in improving the physiological and psychological problems.

Conflict of interest: The authors declare that they have no competing interests.

Consent for publication

Written consent for publication was obtained from each participant.

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