



# ‘Effect of recreational program on the level of stress and psychological well-being among freshers in a selected nursing institute of the Pune city.’

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**Abstract:** The researcher endeavors to find out the way to manage freshers stresses and improve their psychological well-being through recreational intervention. **Objectives** 1) To assess the effect of recreational program on the level of stress among fresher nursing students. 2) To assess the effect of recreational programs on psychological well-being among fresher nursing students. 3) to find the correlation between the baseline level of stress and psychological well-being with selected demographic variables among freshers. **Method:** Quasi-experimental one-group pre-test post-test research method was employed among randomized 104 fresher nursing students in nursing educational setting. The method of data collection uses online Google forms with 7 items of demographic variables, DASS 21, and PWBS 18 items. Recreational program intervention was given 8 hours per day for 4 days, with outdoor and indoor activities. **Result:** Most freshers (95.2%) belong to 18-22 years of age and belong to the nuclear family (70.2%). There was a very highly significant effect of recreational program on the level of stress ( $Z = -3.710$ ,  $p$ -value  $< 0.000$ ). There was no significant effect of recreational program on overall psychological well-being ( $Z = -1.427$ ,  $p$ -value = 0.154). Significant correlations were found between financial support and freshers PWBS. **Conclusion:** The researcher recommended recreational activities in the institute as a policy to combat mental health issues among nursing students.

**Keyword:** Fresher nursing student, DASS 21, psychological well-being (PWBS), recreational program.

## I. Introduction and review of literature:

Being fresher in a professional institute has many positive as well as challenging experiences. This might be getting used to new life on novice road of adjustment with class scheduling, presentations, home assignment, journal writing or skill practices etc. Fresher has many things on their plate to digest including stressor mentioned. It is part of the growth pain as nursing student who are learning the thread of professional knowledge, attitude, and practice. To acknowledge this level of stress due to many stressors in fresher's life, and the impact of recreational program arrange for them on their stress, is the investigator research objective. In this research, the researcher would like to find out the effect of recreational program on the level of stress and psychological well-being among freshers in selected nursing institute in the Pune city.'

## II. Background review of literatures:

Reviews on research studies for recreational program were conducted, in which research conducted by Takiguchi Y et al. examine the impact of participating in different leisure activities during COVID-19 outbreak on the mental health of Japanese participants ( $N = 300$ ) who responded to two online surveys conducted before (January 2020) and after the outbreak (February 2021). The quantity of leisure activities selected at the first and second surveys substantially linked with resilience measured at the corresponding surveys (first,  $r(298) = .14$ ; second,  $r(298) = .12$ ,  $ps < .05$ ), but not with the PHQ scores (first,  $r(298) = -.06$ ; second,  $r(298) = .002$ ). The findings revealed that younger persons had lower levels of resilience than older adults and experienced more severe depressive symptoms.<sup>1</sup> Another research by T Sawangmek, examines the outcome of the program of recreational activities for boosting students' scientific learning motivation and attitude towards participating in recreational activities among 30 participants of 4th to 9th grade children, Thailand. The findings of this study show that after engaging in the recreational activity program, the participants' willingness to learn science and attitude towards participating in recreational activities increased significantly.<sup>2</sup> Abdurrahman Y et al, conduct study to assess the effect of recreational activities on the job satisfaction of health workers among 492 participants, 234 of whom are women and 258 of whom are actively working in health institutions, result determined that the internal job satisfaction factor of the Job Satisfaction Scale differs significantly in terms of medium and high monthly income and a significant difference in all factors of the Job Satisfaction scale among alcohol user.<sup>3</sup> Trajković N et al. studied the effects of physical activity and exercise interventions on general and mental health, a multidisciplinary approach to examine the relationships between different types of physical activity (type, intensity, frequency, competitive/recreational) and psychological wellbeing. Results show that physical activity and exercise have positive psychological impacts in children. Higher levels of physical activity are also associated with lower cortisol levels, lower negative mood, fewer symptoms of depression and anxiety, and fewer sleep disturbances; physical activity may be considered a protective factor for lower stress levels, stress attitudes, depression, poor eating habits, and exercise habits.<sup>4</sup>

In the field of stress studies, Amanvermez Y et al. conducted a systematic review and meta-analysis to investigate the effectiveness of stress management therapies in lowering stress, depression, and anxiety among college students. The random-effects model was used in two different meta-analyses of randomised controlled trials: one for students with high stress levels ( $n = 8$ ) and another for the unselected college student population ( $n = 46$ ). Overall, the major findings revealed moderate intervention effects for stress, sadness, and anxiety in both groups, subgroup analysis revealed significant differences in theoretical background, control condition type, and intervention duration. The findings indicate that stress management programmes could be useful in lowering distress among college students.<sup>5</sup> A meta-analysis was performed by Regehr C, Glancy D, and Pitts A. to aggregate changes in the self-reported anxiety and self-reported depression and salivary cortisol level from baseline to post-intervention. 29 controlled studies on stress treatments for university students from nursing, medical science, medicine, economics, social work, and law were included. Results reveal that approximately 50% university students report moderate levels of stress-related mental health concerns, including anxiety and depression.<sup>6</sup> Gardani M et al. conducted a meta-analysis of thirty-four studies among university students who have high prevalence of mental health problems and worsening of mental health difficulties, such as sleep disruptions and stress. The weighted pooled effect size between sleep quality and stress was 0.39 (25 studies,  $n = 10,065$ ), while insomnia and stress had a slightly stronger pooled connection of 0.41 (12 studies,  $n = 5564.5$ ) and suggested for university services on psychoeducation for stress.<sup>7</sup>

Gómez-LM, Viejo C, and Ortega-RR conducted a longitudinal study to evaluate four dimensions of psychological well-being: self-acceptance, positive interpersonal relationships, autonomy, and life development, and analysed data from a sample of 747 adolescents from Andalusia (Spain) aged 13 to 17 (50.5% girls, mean age wave 1 = 14.55,  $SD = 0.84$ ). The findings demonstrated medium to high levels of psychological well-being that were steady throughout the trial, as well as an increase in wave 2 in the positive interpersonal connections dimension. The Structural Equation Modelling research revealed that romantic relationships are a predictor of psychological well-being, with a positive correlation to positive interpersonal relationships and life development and a negative association to autonomy and self-acceptance.<sup>8</sup> Li ZS and Hasson F conducted a systematic review to synthesize the data relating to the relationship of resilience, stress, and well-being in undergraduate nursing students across nations from 2008 to 2018. Twelve studies were included in the review. The study's findings revealed a moderate level of resilience, significant stress levels, and a fraction of nursing students experiencing bad psychological health. The connection between resilience, stress, and well-being was significant. Resilience and low stress were found to be stronger predictors of well-being, and recommendations were made to influence educational policy and practice regarding resilience, well-being, and stress among undergraduate nursing students.<sup>9</sup> Morales-Rodríguez FM et al. studied the relationship between psychological well-being, self-reported learning styles, social skills, emotional intelligence, anxiety, empathy, and self-concept among 149 Spanish university students. The average age was 21.59 years ( $SD = 4.64$ ). The results reveal that the total variation explained by the university students' psychological well-being components are as follows: i) self-acceptance ( $R^2 = 0.586$ ,  $F(6,99) = 23.335$ ,  $p < 0.001$ ); ii) positive relationships ( $R^2 = 0.520$ ,  $F(6,99) = 17.874$ ,  $p < 0.001$ ); iii) autonomy ( $R^2 = 0.313$ ,  $F(4,101) = 11.525$ ,  $p < 0.001$ ); iv) environmental mastery ( $R^2 = 0.489$ ,  $F(4,101) = 24.139$ ,  $p < 0.001$ ); v) personal growth ( $R^2 = 0.354$ ,  $F(4,101) = 13$  and conclude that it may be used to inform new educational policies and interventions aimed at improving the psychological well-being of university students in the international context.<sup>10</sup>

The research reviews indicated the impact of stress on college students, nursing students etc. and its detrimental impact on their mental health. Reviews also indicated the importance of recreational activity. This present study focused on finding the effect of recreational program on stress and psychological well-being level among nursing students to address their mental health issues.

### III. Statement of the study:

'A pre-experimental study to assess the effect of recreational program on the level of stress and psychological wellbeing among freshers in a selected nursing institute in the Pune city.'

### IV. Objectives of the study:

Primary objectives:

1. To assess the effect of recreational program on the level of stress among freshers.
2. To assess the effect of recreational program on psychological wellbeing among freshers.

Secondary objectives:

1. To find the correlation between the baselines level of stress and psychological wellbeing with selected demographic variables among freshers.

### V. Research questions:

1. Does the recreational program reduce the level of stress among freshers?
2. Does the recreational program improve psychological wellbeing among freshers?

### VI. Hypothesis: Level of significance is set at 0.05.

Null hypothesis

1. There is no significance difference between pretest and post-test level of stress related to recreational program among freshers.
2. There is no significant difference between pretest and post-test on psychological wellbeing related to recreational program among freshers.

### VII. Operational definitions:

**Effect:** In the present study, effect refers to the effect or impact of recreational program among freshers in a selected nursing institute of Pune city.

**Recreational program:** In the present study, recreational program is structured recreational activity which include indoor and outdoor activities, where fresher nursing students participated actively as an audience by cheering, enjoying the programs and/or participants in recreational activity for a period of 4 consecutive days for duration of 7 hours each day.

**Stress:** In the present study, stress refer to a state of worry or mental tension caused by a difficult situation or challenges, having an impact on physiological and emotional state like anxiety or sadness, as experience by a fresher in a nursing institute. DASS 21 is use for assessment.<sup>11</sup>

**Psychological wellbeing:** In the present research, psychological well-being (PWB) is defined as one's level of psychological happiness or health, a positive mental state, encompassing life satisfaction, and feelings of accomplishment experience by a fresher in a nursing institute.<sup>12-14</sup>

**Freshers:** In the present research, freshers are nursing students who are admitted in a nursing institute as a first semester or first year of their courses in the nursing program of ANM, GNM, and B.Sc. Nursing.

**Nursing institute:** In the present study, a nursing institute means recognize nursing institute imparting nursing education and training nursing students located within Pune city.

#### VIII. Methodology:

The research design employs pre-experimental one group pre-test post-test research method. This research design will be able to fulfil the objectives.

**Population under study:** the study employs freshers nursing student studying in a professional nursing institute offering various nursing programs as research setting for the study.

**Sample and sampling technique:** The research study selected 104 subject participants through simple random sampling technique from 130 sample pool by manual lottery method. Inclusion criteria were: 1) Participants who are between the age of 18 to 35 years of age. 2) Participants who are healthy and medically fit to participate in the research. 3) Participants who were present for all recreational program's days. Exclusion criteria were: 1) Participant who are unwilling to participate in the research. Withdrawal criteria: 1) Participants who are absent for a more than one day of recreational programs.

**Method of data collection:** The method of data collection uses online Google forms for pretest and post-test assessment as paperless eco-friendly approach. There were three sections for data collection i.e., demographic variables containing 7 items as section I, DASS 21 with 21 items to assess stress level as section II, and Psychosocial wellbeing (PWB) scale short version with 18 items to assess psychological well-being among freshers in nursing educational institute with translated local language i.e., Marathi included in Google form. Content validity was done by 3 subject experts from the field. Permission for use of PWBS 18 was obtained through email, credited appropriately. DASS 21 is in the public domain for use in research.<sup>11-14</sup>

The researcher tests the reliability statistics using Cronbach's Alpha for the DASS 21 with overall 21 items and found to be acceptable,  $r = 0.85$ . The researcher studied the reliability statistics using Cronbach's Alpha for the PWB 18 items and found to be acceptable,  $r = 0.67$ .

**Data collection process and intervention:** The research study was approved by the institutional ethics committee. Informed consent was obtained from eligible willing participants for the study. A Google form having the three mentioned sections were prepared with inclusion of local language as translating the statements. The Google forms link were shared to the randomly selected 104 participants who have consented for the research study and pretest were collected schedule pretest data collection period, the duration of pretest data took 15 to 20 minutes from 03/04/2023 to 06/04/23. The data were extract from google forms platforms and recorded as excel files. The intervention as recreational program for 4 consecutive days were implemented for 8 hours per day. The recreational programs included entertainment as well as competitive programs in indoor and outdoor format. Other nursing students were also present in the recreation program who were not freshers. The recreational program included many recreational activities like mehendi (hand painting), rangoli (floor decoration), singing, calligraphy, folk dance, and fashion show in the first day. On second day, outdoor activity included running race, short-put, discus throw, kho-kho, kabaddi, tug of war in morning time and in afternoon indoor activity included mine act, and beauty contest (conducted for the first three consecutive days). On third day, activity included were face and poster painting, easy & poem writing competition, group dance and drama. On the last day, activity included were debate, elocution, dance, and quiz followed by prize distribution. The recreational program ended at 5 pm on 06/04/23. After a gap of one day, posttest data were collected through Google form excluding the section I containing demographic profile. The data were collected and recorded using Excel sheets, and the data was analyzed using SPSS version 22.

**Data analysis:** As data is not normally distributed, (skewness=4.915, kurtosis =24.338), and scale use are ordinal scale, hence nonparametric approach will be employed for statistical analysis. In the present study Related sample Wilcoxon signed rank test were used for testing the significance of the study.

**IX. Result of the study:** The results of the study are presented in tabulation with interpretation to find the research objectives and answered research questions.

Following are the tables and its interpretation.

**Table 1. Frequency distribution and percentage of background variable freshers in a nursing institute.**

N=104

S.N	Variables	Frequency	Percentage of frequency
1	Age in years:		
	18-22	99	95.2
	23-27	01	01.0
	28-32	03	02.9
	Up-to 35	01	01.0
2	Type of family:		
	Nuclear family	73	70.2
	Joint family	29	27.9
	Others	02	01.9
3	Type of Nursing program:		
	B.Sc. Nursing Semester 1	41	39.4
	GNM First year	49	47.1

	ANM first year	14	13.5
4	Type of financial support:		
	Self	3	2.9
	Parent	63	60.6
	Relatives	2	1.9
	Private scholarship	8	7.7
	Government scholarship	28	26.9
5	Participated as competitor in recreational activity:		
	No	16	15.4
	Yes	88	84.6
	Participated as audience	104	100
	Total	104	100

The data in table 1 show the result that majority of the freshers (95.2%) were belong to 18-22 years of age and majority of them belong to nuclear family (70.2%), followed by joint family (27.9%). Freshers from three programs participated in the study: Basic B.Sc. Nursing (39.4%), General Nurse Midwifery (47.1%) and Auxiliary Nurse Midwifery (13.5%). For their educational, they received financial support from various sources, majority of their finance support were from parents (60.6%), while some received government scholarship (26.9%), as other have received help from private scholarship (7.7%) and some participants support themselves (2.9%) and least of them received finance support from relatives (1.9%). All 104 participants attend the recreational programs activity as audience in which 84.6% participants take part in performing the recreational activity, while 15.4% did not take part in performing the recreational activity.

**Table 2.1 Effect of recreational program on three factors of level of stress among freshers in DASS 21**

N=104

DASS 21		Pretest data				Post-test data				Z (p-value)
		f	%	Mdn	SD	f	%	Mdn	SD	
Level of depression	Normal	69	66.3	1	0.940	74	71.2	1	0.924	-0.562 (0.574)
	Mild	13	12.5			12	11.5			
	Moderate	18	17.3			13	12.5			
	Severe	3	2.9			4	3.8			
	Very severe	1	1.0			1	1.0			
Level of anxiety	Normal	50	48.1	2	1.267	65	62.5	1	1.252	-2.074 (0.038**)
	Mild	12	11.5			8	7.7			
	Moderate	27	26.0			20	19.2			
	Severe	9	8.7			4	3.8			
	Very severe	6	5.8			7	6.7			
Level of stress	Normal	67	64.4	1	0.846	90	86.5	1	0.693	-2.951 (0.003***)
	Mild	19	18.3			5	4.8			
	Moderate	15	14.4			6	5.8			
	Severe	3	2.9			3	2.9			
	Very severe	0	0			0	0.0			

f = frequency, Mdn = median, SD = standard deviation, Z = Related sample Wilcoxon Signed rank test

Significance level is 0.05, 0.05 = significant \*, 0.03 = highly significant \*\*, 0.01 = very highly significant \*\*\*

The data in the table 2.1, show the effect of recreation program as intervention in level of stress, using DASS 21 as assessment tool with its three factors i.e., depression, anxiety, and stress. For the factors assessing depression in DASS 21, the pretest data shows, majority of freshers were within normal limit (66.3%), moderate level of depression (17.3%), mild (12.5%), severe (2.9%), and very severe (1%) in pretest data (Mdn=1, SD=0.940), post-test data comparison indicate more freshers were within normal range (71.2%) followed by reduce percentage of moderate level of depression (11.5%), mild (11.5%), as a result of effect of recreational program while severe level slightly increase and level of very severe remain static in post-test data (Mdn=1, SD=0.924). There was no significance difference for level of depression as per related sample Wilcoxon signed rank test (Z = -0.562, p-value=0.574). For factor assessing anxiety as part of stress level, the pretest data indicated, majority of freshers were within normal range (48.1%), moderate level of anxiety (26%), mild (11.5%), severe (8.7%), and very severe (5.8%) level of anxiety in pretest data (Mdn=2, SD=1.267). When pretest anxiety factor was compared to post-test anxiety data, the result shows increase percentage of freshers were within normal range (62.5%) followed by reduce percentage of moderate level of anxiety (19.2%), mild (7.7%), severe (3.8%) as a result of effect of recreational program while there was a slight increase in very severe percentage (6.7%) in post-test data (Mdn=1, SD=1.252). There was highly significant difference as an effect of recreational program on the level of anxiety using related sample Wilcoxon signed rank test (Z = -2.074, p-value=0.038). For factor assessing stress level, the pretest data indicated, majority of freshers were within normal range (64.4%) followed by mild level of stress (18.3%), moderate (14.4%), severe (2.9%) in pretest data (Mdn=1, SD=0.846). When pretest stress factor was compared to post-test stress data, the result shows increase in majority percentage of freshers within normal range (86.5%) followed by reduce percentage of moderate level of stress (5.8%), mild (4.8%) because of effect of recreational program, while level of severity percentage (2.9%) remain same in post-test data (Mdn=1, SD= 0.693). There was very highly significant difference as an effect of

recreational program on the level of stress using related sample Wilcoxon signed rank test ( $Z = -2.951$ ,  $p\text{-value} = 0.003$ ). Hence, it can be concluded that there is a significant effect of recreational programs on anxiety and stress factors.

**Table 2.2 Effect of recreational program on the level of stress among freshers in DASS 21**

N=104

Level of stress			Related Sample Wilcoxon Signed rank test for null hypothesis						
	M	SD	SE	St. test statistic	Test statistic	Positive difference (N)	Negative difference (N)	Z (P-value)	Null hypothesis
Pretest level	13.60	8.74	264.85	-3.710	1250.00	28	66	<b>-3.710 (0.000)</b>	Rejected
Post-test level	11.14	9.48							

M=mean, SD- standard deviation, SE- Standard error. Significance level is 0.05, 0.05=significant \*, 0.03=highly significant \*\*, 0.01= very highly significant \*\*\*

The pretest post-test comparison analysis in table 2.2 shows that there was a very highly significant effect of recreational program on the level of stress ( $Z = -3.710$ ,  $p\text{-value} < 0.000$ ). This data result indicate that recreational program very significantly reduces level of stress among freshers. Hence the null hypothesis is rejected with  $p\text{-value} < 0.000$ . The primary objective to assess the effect of recreational program on the level of stress among freshers was met.

**Table 3.1 Effect of recreational program on subdomain of level of psychological well-beings among freshers using PWBS**

N=104

Subscale domain	Pretest			Post-test			Z (p-value)
	M	Mdn	SD	M	Mdn	SD	
Autonomy	13.56	15.0	3.159	14.02	15	2.422	-0.932 (0.351)
Environment mastery	13.80	14.0	2.785	14.43	15	2.875	-1.749 (0.080)
Personal growth	16.57	18.0	4.570	16.77	17	4.134	-0.258 (0.797)
Positive relation with other	12.66	12.0	3.474	13.17	13	4.503	-0.763(0.445)
Purpose of life	12.65	13.0	3.538	12.44	12	3.951	-0.371 (0.710)
Self-acceptance	14.72	15.0	3.383	16.08	15	3.387	<b>-2.651 (0.008***)</b>

M-Mean, Mdn-median, SD-standard deviation, Z- related sample Wilcoxon signed rank test score. Significance level is 0.05, 0.05=significant \*, 0.03= highly significant \*\*, 0.01= very highly significant \*\*\*

The data in the table 3.1 show the result analysis of subdomain of psychological well-being. As the score indicate highest score having the better psychological wellbeing, each subdomain was analysis for the effect of recreational programs on psychological well-being. The subdomain autonomy pretest data (M=13.56, Mdn=15, SD=3.159) and post test data (M=14.02, Mdn=15, SD=2.422) were analyze using related sample Wilcoxon signed rank test that show no significance difference between pretest and post-test ( $Z = -0.932$ ,  $p\text{-value} = 0.351$ ). The subdomain environment mastery pretest data (M=13.80, Mdn=14, SD=2.785) and post test data (M=14.43, Mdn=15, SD=2.875) were analyze using related sample Wilcoxon signed rank test that show no significance difference between pretest and post-test ( $Z = -1.749$ ,  $p\text{-value} = 0.080$ ). The subdomain personal growth pretest data (M=16.57, Mdn=18, SD=4.570) and post test data (M=16.77, Mdn=17, SD=4.134) were analyze using related sample Wilcoxon signed rank test that show no significance difference between the pretest and post-test ( $Z = -0.258$ ,  $p\text{-value} = 0.797$ ). The subdomain positive relation with other pretest data (M=12.66, Mdn=12, SD=3.474) and post test data (M=13.17, Mdn=13, SD=4.503) were analyze using related sample Wilcoxon signed rank test that show no significance difference between the pretest and post-test ( $Z = -0.763$ ,  $p\text{-value} = 0.445$ ). The subdomain purpose of life pretest data (M=12.65, Mdn=13, SD=3.538) and post test data (M=12.44, Mdn=12, SD=3.951) were analyze using related sample Wilcoxon signed rank test that show no significance difference between pretest and post-test ( $Z = -0.371$ ,  $p\text{-value} = 0.710$ ).The last subdomain self-acceptance pretest data (M=14.72, Mdn=15, SD=3.383) and post test data (M=16.08, Mdn=15, SD=3.387) were analyze using related sample Wilcoxon signed rank test that show very high significance difference between pretest and post-test ( $Z = -2.651$ ,  $p\text{-value} = 0.008$ ). Among all the six subdomain of psychological well-being (PWBS), recreational programs have high significant effect on self-acceptance domain.

**Table 3.2 Effect of recreational program on overall level of psychological well-beings among freshers using PWBS-18**

N=104

Level of psychological well-being	Pretest					Post-test					Z (p-value)
	f	%	M	Mdn	SD	f	%	M	Mdn	SD	
Low (0-18)	0	0	2.54	3	0.501	0	0	2.56	3	0.553	<b>-0.378 (0.705)</b>
Average (19-84)	48	46.2				48	46.2				

Above average (85-110)	56	53.8				53	51.00			
High (111 & above)	0	0				3	2.90			
Total	104	100				104	100			

f = frequency, M=mean, Mdn= median, SD- standard deviation, Z- related sample Wilcoxon signed rank test score. Significance level is 0.05, 0.05=significant \*, 0.03= highly significant \*\*, 0.01= very highly significant \*\*\*

To present the data more clearly, the PWBS were divided into low, average, above average and high. The pretest data in the table 3.2 shows that, 46.2% of participants have score ranging from 19 to 84 score at average level of psychological well-being in the present research. Among total 104 participants, 53.8% have above average level of psychological well-being between 5 and 110 in pretest data (M=2.54, Mdn=3, S.D.=0.501). In the post test data, result analysis reveal, though there is slight improvement but no statistically significant difference as compare to pretest data for average level (46.2%), but there was a slight difference in above average level (51%) and high level (2.90%) in post-test data (M=2.56, Mdn=3, SD=0.553) using related sample Wilcoxon signed rank test, the analyze reveal that there is no statistically significant effect of recreational program on psychological well-being (Z=-0.378, p-value=0.705). The primary research objective to assess the effect of recreational program on psychological well-being was met which show that there was no significant effect of recreational program on overall psychological well-being.

**Table 3.3 Effect of recreational program on overall psychological well-beings among freshers using PWBS. N=104**

Level of stress			Related Sample Wilcoxon Signed rank test for null hypothesis						
	M	SD	SE	St. test statistic	Test statistic	Positive difference (N)	Negative difference (N)	Z (P-value)	Null hypothesis
Pretest level	83.96	13.23	295.120	1.427	2996.5	57	44	<b>-1.427 (0.154)</b>	Retain
Post-test level	86.91	14.61							

M=mean, SD- standard deviation, SE- Standard error. Significance level is 0.05, 0.05=significant \*, 0.03=highly significant \*\*, 0.01= very highly significant \*\*\*

The pretest post-test comparison analysis in table 3.3 shows no significant effect of recreational program on overall psychological well-being (Z= -1.427, p-value = 0.154), indicate that recreational program does not have significantly improve level of psychological well-being among freshers. Hence the null hypothesis is retained and accepted with p-value =0.154. The primary objective was met which reveal that, there was no impact of recreational programs on overall psychological well-being among freshers.

**Table 4. Descriptive statistics, Correlations matrix between level of stress and selected demographic variables among freshers using Spearman's rho N=104**

Variable		Age	ToP.	ToF	ToFS	DS	AS	SS	LD	LA	LS
Age		1.00									
	p-value										
ToP		<b>0.22*</b>	1.00								
	p-value	<b>0.03</b>									
ToF		-0.05	<b>0.23*</b>	1.00							
	p-value	0.62	<b>0.02</b>								
ToFS		-0.15	<b>-0.45**</b>	<b>-0.33**</b>	1.00						
	p-value	0.13	<b>0.00</b>	<b>0.00</b>							
DS		0.05	0.14	0.12	-0.03	1.00					
	p-value	0.58	0.16	0.22	0.79						
AS		0.00	0.03	0.14	0.07	<b>0.53**</b>	1.00				
	p-value	0.97	0.77	0.15	0.46	<b>0.00</b>					
SS		-0.03	-0.05	0.02	<b>0.21*</b>	<b>0.62**</b>	<b>0.63**</b>	1.00			
	p-value	0.80	0.61	0.81	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>				
LD		0.10	<b>0.26**</b>	0.16	-0.11	<b>0.85**</b>	<b>0.45**</b>	<b>0.50**</b>	1.00		
	p-value	0.34	<b>0.01</b>	0.10	0.26	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>			
LA		0.03	0.09	0.13	0.05	<b>0.47**</b>	<b>0.94**</b>	<b>0.57**</b>	<b>0.39**</b>	1.00	
	p-value	0.79	0.34	0.18	0.61	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		
LS		0.02	-0.06	-0.02	<b>0.22*</b>	<b>0.44**</b>	<b>0.45**</b>	<b>0.85**</b>	<b>0.36**</b>	<b>0.46**</b>	1.00
	p-value	0.82	0.52	0.80	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	

Footnote: Age in years, ToP-type of program, ToF-Type of family, ToFS-type of financial support, DS-total depression score, AS-total anxiety score, SS-total stress score, LD-level of depression, LA-level of anxiety, LS-level of stress.

\*. Correlation is significant at the 0.05 level (2-tailed). \*\*. Correlation is significant at the 0.01 level (2-tailed)

The data in table 4 show the correlational matrix level of stress in each three factors or subdomain, i.e., depression, anxiety, and stress with selected demographic variables. The correlation matrix shows that there is no significant correlation between subdomain/factors i.e., total depression score and total anxiety score with selected demographic variables like age, type of program, family, or financial support among freshers. Whereas total stress score is having high significant positive correlation with type of financial support (Spearman's rho 0.21, p-value = 0.03) available to the fresher students. There is very high significant positive correlation between level of depression and type of program (Spearman's rho 0.26, p-value = 0.01) that the freshers participants enrolled for.

There is also high significant positive correlation between level of stress and type of financial support (Spearman's rho 0.22, p-value = 0.03) among freshers. It also can be noted that total depression, stress and anxiety score positively correlate with each other (p-value<0.00), more the depression score, stress, or anxiety, higher will be anxiety score or vice versa. Similarly, there is highly significant positive correlation between selected variables i.e. type of family and type of program (Spearman's rho 0.23, p-value = 0.02).

There is a very highly significant negative correlation between type of financial support with type of program (Spearman's rho -0.45, p-value < 0.00) and type of family (Spearman's rho -0.33, p-value <0.00). Thus, the secondary objective to find correlation between the baseline level of stress among freshers with selected demographic variables were met indicated the data statement of table 4.

The data in table 5 show the correlational matrix of overall PWBS, its six subdomains of PWBS, i.e., autonomy, environment mastery, personal growth, positive relation, with other, purpose of life, and self-acceptance with selected demographic variables. The correlation matrix shows that there is no significant correlation between subdomains i.e., autonomy, environment mastery, personal growth, and purpose of life with selected demographic variables like age, type of program, family or financial support or participation among freshers.

Whereas a total score of positive relation (PR) is having a significant negative correlation with type of financial support (Spearman's rho -0.197, p-value = 0.045) available to the fresher students. There is very highly significant negative correlation between total score of self-acceptance domain of PWBS with type of financial support (Spearman's rho -0.233, p-value = 0.017) and participation (Spearman's rho -0.247, p-value = 0.011) in the recreational activity program as intervention.

There is also significant negative correlation between overall PWBS score and type of financial support (Spearman's rho -0.193, p-value = 0.050) among freshers.

It also can be noted that total environment mastery positively correlates with autonomy (Spearman's rho 0.347, p-value 0.000). Personal growth subdomain of PWBS have highly significant positive correlation with its all six subdomain autonomy (Spearman's rho 0.337, p-value < 0.000), environment mastery (Spearman's rho 0.266, p-value = 0.006), positive relation (Spearman's rho 0.454, p-value < 0.000), purpose of life (Spearman's rho 0.311, p-value = 0.001 and self-acceptance (Spearman's rho 0.416, p-value < 0.000) and vice versa. There is no significant correlation between different level of PWBS with selected demographic variables as well. Thus, the secondary objective was met.

**Table 5. Descriptive statistics, Correlations matrix between level of psychological well-being and selected demographic variables among freshers using Spearman's rho**

N=104

Variables		Age	ToP	ToF	ToFS	P	A	EM	PG	PR	PL	SA	PWBS	PWBS level
Age		1.000												
ToP		<b>0.216*</b>	1.000											
	p value	<b>0.028</b>												
ToF		-0.050	<b>0.230*</b>	1.000										
	p value	0.615	<b>0.019</b>											
ToFS		-0.151	<b>0.452**</b>	<b>0.330**</b>	1.000									
	p value	0.125	<b>0.000</b>	<b>0.001</b>										
P		-0.029	-0.123	-0.179	0.027	1.000								
	p value	0.772	0.215	0.070	0.789									
A		-0.023	0.162	-0.071	0.032	-0.072	1.000							
	p value	0.820	0.100	0.476	0.746	0.468								
EM		-0.011	0.160	0.052	-0.124	-0.132	<b>0.347**</b>	1.000						
	p value	0.915	0.105	0.602	0.211	0.180	<b>0.000</b>							
PG		0.052	0.085	0.162	-0.053	-0.190	<b>0.337**</b>	<b>0.266**</b>	1.000					
	p value	0.600	0.390	0.100	0.594	0.053	<b>0.000</b>	<b>0.006</b>						
PR		0.105	0.044	0.136	<b>-0.197*</b>	0.012	0.047	0.055	<b>0.454**</b>	1.000				
	p value	0.288	0.655	0.167	<b>0.045</b>	0.903	0.635	0.582	<b>0.000</b>					
PL		-0.061	-0.125	0.003	-0.032	-0.051	-0.046	-0.054	<b>0.311**</b>	0.190	1.000			
	p value	0.541	0.207	0.980	0.750	0.608	0.644	0.586	<b>0.001</b>	0.053				

SA		-0.029	0.076	-0.004	-0.233*	-0.247*	0.296**	0.372**	0.416**	0.255**	0.088	1.000		
	p value	0.772	0.443	0.966	0.017	0.011	0.002	0.000	0.000	0.009	0.375			
PWBS		0.017	0.115	0.069	-0.193*	-0.176	0.470**	0.512**	0.787**	0.565**	0.415**	0.677**	1.000	
	p value	0.866	0.247	0.488	0.050	0.074	0.000	0.000	0.000	0.000	0.000	0.000		
PWBS level		0.028	0.044	0.082	-0.063	-0.127	0.421**	0.460**	0.693**	0.492**	0.312**	0.523**	0.864**	1.000
	p value	0.780	0.655	0.410	0.522	0.197	0.000	0.000	0.000	0.000	0.001	0.000	0.000	

Footnote: Age in years, ToP-type of program, ToF-Type of family, ToFS-type of financial support, P-participants, A- total autonomy score, EM-total environment mastery, PG- Total personal growth score, PR- Total score of positive relation with other, PI- Total purpose of life score, SA- Total self-acceptance score, PWBS- Overall total PWBS score, PWBS level- Level of psychosocial wellbeing

**X. Discussion and Conclusion:** The present study primary research objectives were to assess the effect of recreational program as intervention for 4 whole days inclusive of outdoor and indoor activity on the level of stress and psychological well-being among freshers. The research data analysis was done by using nonparametric approach as the population were not normally distributed and tools used were ordinal scale. A total of 104 participants were selected as sample through simple random sampling. Data were collected through online Google forms and its excel form were extracted for analysis using SPSS version 22. Related sample Wilcoxon signed rank test were used for significance test of null hypothesis. Demographic profile show that majority of freshers (95.2%) were 18-22 years of age and belong to nuclear family (70.2%). Freshers were from Basic B.Sc. Nursing (39.4%), General Nurse Midwifery (47.1%) and Auxiliary Nurse Midwifery (13.5%). They received financial support from parents (60.6%), government scholarship (26.9%), private scholarship (7.7%) while some support themselves (2.9%) and least of them received finance support from their relatives (1.9%).

The present study result analysis reveals that there is very high significant effect of recreational programs on the level of stress among freshers nursing students as participants. ( $Z = -3.710$ ,  $p\text{-value} < 0.000$ ). This data result indicate that recreational program has significantly reduce the level of stress among freshers. Hence the null hypothesis is rejected with  $p\text{-value} < 0.000$ . The primary objective to assess the effect of recreational program on the level of stress among freshers was met. The answer to research question on effect of recreational program on level of stress were indicated by pretest post-test analysis using Wilcoxon signed rank test, pointed out that recreational program does play a significant role in reducing the level of stress among fresher nursing students. Among the three factors of DASS 21 as assessment tool to assess stress level, two factors i.e anxiety and stress level were highly significant impact ( $Z = -2.074$ ,  $p\text{-value} = 0.038$ ) and ( $Z = -2.951$ ,  $p\text{-value} = 0.003$ ) respectively which means that recreational programs have its effect by reducing anxiety and stress level among fresher nursing student. Hence the institution should have policy and program plan for providing recreational activity for management of their life as well academic stresses in student hectic life. Such recreational activity may act as medium to release stress and connect with others. The researcher recommended to have annual or biannual recreational activity in the institute as policy to combat mental health issue among nursing students. Such recreational program can act as preventive approach for student future mental health regardless of their educational background.

The research analysis also shows that among all six subdomain of PWBS, the last subdomain self-acceptance pretest data ( $M = 14.72$ ,  $Mdn = 15$ ,  $SD = 3.383$ ) and post test data ( $M = 16.08$ ,  $Mdn = 15$ ,  $SD = 3.387$ ) comparison were analyze using related sample Wilcoxon signed rank test, that show a very high significance difference between pretest and post-test ( $Z = -2.651$ ,  $p\text{-value} = 0.008$ ). This result indicated that recreational programs have only high significant effect on self-acceptance domain of PWBS only as compared to other remaining five subdomain i.e., autonomy, environment mastery, personal growth, positive relation with other, and purpose of life. Using related sample Wilcoxon signed rank test, the analyze reveal that there was no statistically significant effect of recreational program on psychological well-being ( $Z = -0.378$ ,  $p\text{-value} = 0.705$ ). The answer to the research question was that there was no significant improvement in psychological well-being among freshers. Such finding may be due to small sample size.

The Spearman's rho correlation matrix present in table 4 and 5 reveal the positive and negative correlation between level of stress, psychological well-being with its subdomains and selected fresher's demographic variables. The total stress (Spearman's rho 0.21,  $p\text{-value} = 0.03$ ) subdomain score and level of stress (Spearman's rho 0.22,  $p\text{-value} = 0.03$ ) have a high significant positive correlation with type of financial support available to the fresher students indicating that financial sources of support as alleviating/cause for stress and vice versa. There is very high significant positive correlation between level of depression and type of program (Spearman's rho 0.26,  $p\text{-value} = 0.01$ ) that the freshers participants enrolled for, reveal a link between type of program they are studying and its impact in their overall stress.

As mentioned in table 5 show a significant negative correlation between positive relation (PR) score and type of financial support (Spearman's rho -0.197,  $p\text{-value} = 0.045$ ) indicating fresher relation inversely link to type of financial support they got for study. Similarly, fresher's self-acceptance domain of PWBS have highly significant negative correlation with their type of financial support (Spearman's rho -0.233,  $p\text{-value} = 0.017$ ) and participation (Spearman's rho -0.247,  $p\text{-value} = 0.011$ ) in the recreational activity program as intervention.

This finding was interesting to note as the inverse relation of self-acceptance with financial support show role of finance issue play in their vulnerability toward their psychological wellbeing. And role of type of financial support among freshers' psychological well-being was further noted by significant negative correlation between overall PWBS score and type of financial support (Spearman's rho -0.193,  $p\text{-value} = 0.050$ ) among freshers. Hence it can be stated with caution that financial support availability or lack of can have significant role to play in freshers psychological wellbeing. Provision for student's scholarship in the educational institution may have major role to play in improving psychological well-being.

**XI. Conclusion and recommendation:** The present study finding indicated that recreational program is a mentally healthy practice as part of co-curricular activity for nursing student and such program significantly reduce stress among nursing students.



The researcher recommended recreational activities in the institute as a policy to combat mental health issues among nursing students. The researcher recommended to conduct such recreation program annually in educational institution for all students regardless of educational fields and the similar study can be conducted by using large sample size with PWBS 42 instead of PWBS 18 to get more robust data for analysis in future.

**XII. Ethical consideration:** Ethical consideration and inform consent were taken from all participants as per declaration of Helsinki.

**XIII. Conflict of Interest:**

The authors report that there is no competing conflict of interests to declare.

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