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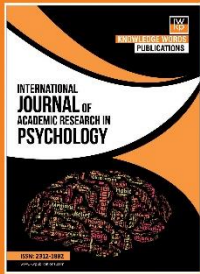
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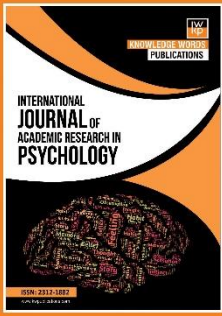


INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN PSYCHOLOGY



TABLE OF CONTENTS (Volume 5, Issue 1)

Sr.	Paper Title	Page No.
1	Effect of Gender on the Psychological Wellbeing of Nurses in Enugu Metropolis Author(s): O.J Okeke, Chiamaka P. Okeke	1-9
2	The Relationship between Resiliency with Self- Efficacy and Stress in Iranian Female High School Students Author(s): Golnar Fayazi, Fatemeh Bagherian	10-17
3	Interventions for Body Fat Reduction among Pakistani Women: A Randomized Control Trial Study Author(s): Muhammad Waseem Tufail, Rahmattullah Khan, Md. Azman Shahadan, Muhammad Saleem	18-28
4	A Study on Emotional Intelligence among Psychotherapists in Northern Uganda Author(s): Kabunga Amir, Murithi J. Jesse	29-39
5	Effect of Yogic Interventions on the Physical Fitness in Terms of Flexibility and Stamina (Cardio-Vascular Endurance) and its Resultant Effect on the Academic Achievement of High School Students Author(s): Anita Sharma, Rakesh Parihar	40-53



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Effect of Gender on the Psychological Wellbeing of Nurses in Enugu Metropolis

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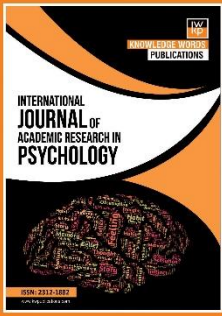
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INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN PSYCHOLOGY



Effect of Gender on the Psychological Wellbeing of Nurses in Enugu Metropolis

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Abstract

This study examined Gender as a predictor of psychological wellbeing of Nurses in Enugu Metropolis. The design of the study used is Cohort. The area of the study is Enugu Metropolis. The population of the study is Two hundred and fifty (250) Nurses. The sample and sampling technique used are two hundred and fifty purposively selected. The instruments used to collect data was Warwick Edinburgh Mental Wellbeing scales. This indicated responses from the two hundred and fifty (250) Nurses. The instruments were validated by three experts, two from measurements and evaluation and one from psychology education. ANOVA was used to analyze responses from participants. Results show that gender did not predict psychological wellbeing among Nurses. Result indicated that gender did not predict psychological wellbeing with ($\beta = -0.2$, $t = -0.31$). This clearly agrees with the hypothesis that gender will not significantly predict psychological wellbeing among Nurses. Hence the hypothesis which stated that gender has no significant impact on the psychological wellbeing of nurses in Enugu Metropolis was confirmed.

Keywords: Gender, Psychological, Wellbeing, Nurses.

Introduction

Every nation aims for higher standards in psychological well-being and health care, which thus implies ongoing changes and health reforms around the world. Psychological well-being is considered as a balance between positive effect and negative effect. Positive well-being is an appraisal of the status of one's functioning and outcome along several distinct but interrelated dimension including global, mental and physical healthfulness. According to Longman Dictionary of Contemporary English (2017) Psychological well-being is a positive state of physical, mental and social well-being. It is not merely the absence of disease or infirmity.

Sominen et al., (2000), emphasized on physical processes and advocate focusing on the connection between good physical health and high quality of life. Epstein (1992); Ingram and Wisnick (1998); Martin and Rubin (1995); Stephen, Dulberg and Joubert (1999) described psychological well-being more as a cognitive process that emphasizes life satisfaction as the

key indicator of wellbeing. Others propose that wellbeing entails spiritual processes such as purposefulness in life, which leads to optimal functioning (Adams, Bezner and Steinhardt, 1997; Ellison, 1983; Ryff and Singer, 1998). Self and social processes, such as possessing positive self-regard and self-mastery and, secondary, quality self-regard and, secondary, quality and meaningful connections to others, are also proposed (Adams et al, 1997; Costa and McCrae, 1992; Pretorius, 1998; Roid and Fitts, 1989; Ryff and Singer, 1998; Wegner, Schwarz and Jerusalem, 1981/1993). Consequently, it would seem that psychological wellbeing can be conceptualized with reference to physical, cognitive, spiritual, self and social processes.

Current studies on the existence of gender differences, including those related to psychological wellbeing reflect contradictory results and a distinct lack of consensus (Ryff and Singer, 1998; Strumpfer, 1995). Gender differences in psychological wellbeing are important because of the many efforts being made in contemporary society to empower all individuals to achieve self-actualization and utilize their full potential. In a post-feminist context this incorporates the idea of an "equal opportunities" society; yet social stereotypes still remain (Connors, 1990; Eagly, 1987; Turner and Sterk, 1994). All people are but not identical, and the possible differences between need to be considered in order to empower all individuals to achieve self-actualization and to fulfil their potential (thereby promoting optimal psychological wellbeing), whilst being offered equal opportunities.

Based on previous studies and qualitative experiences, (Croese et al., 1992) believe that gender differences do exist in almost every aspect of health and health care. In a Taiwanese study, Lu (2000) discovered gender differences while examining conjugal congruence on role experiences and psychological wellbeing, while (Stephens, Dulberg and Joubert, 1999) found gender differences in a study examining mental health in the Canadian population. Marks (1996) also found differences in her Wisconsin study, but ascribed these primarily to marital status, which interacts with gender, rather than to gender differences.

Nurses occupy a central role in the delivery of health care, though countries may have different health care systems and methods of payment options. Unfortunately, research conducted in various countries has indicated that levels of nurse dissatisfaction, burnout and intent to leave the profession are high. Younger individuals are also less interested in careers in nursing, especially the male gender. Some countries are now reporting a shortage of nurses, often compounded by the fact that richer nations are luring nurses away from poorer ones. The health care system has also undergone significant change over the past decade stemming from the greater use of new technologies, offshoring some services to developing countries, advances in medical knowledge, an aging population, more informed and critical users of the health care system, and efforts by governments to further control health care expenditures. Nursing appears to be a crisis. This if not taken care of can lead to high rates of death and pose serious health challenges to a country. This nonchalancy in pursuit of nursing profession and inadequacies among nurses has prompted this research to examine the effect of gender on the psychological wellbeing of nurses in Enugu Metropolis.

Objective of the Study

The objective of the study is to investigate whether gender will determine psychological wellbeing among nurses.

Research Question

To what extent does gender influence the psychological wellbeing among nurses in Enugu Metropolis?

Hypotheses

The hypothesis postulated and *tested* in the course of this study is thus:

H₀: Gender has no significant impact on the psychological wellbeing of nurses in Enugu Metropolis

Literature Review

Gender and psychological well-being

Gender refers to the cultural differences expected (by society / culture) of men and women according to their sex. A person's sex does not change from birth, but their gender can. In the past people tend to have very clear ideas about what was appropriate to each sex and anyone behaving differently was regarded as deviant. Today we accept a lot more diversity and see gender as a continuum (i.e. scale) rather than two categories. So men are free to show their "feminine side" and women are free to show their "masculine traits". The biological approach suggests there is no distinction between sex & gender, thus biological sex creates gendered behavior.

Brett, Doret, & Marie, (2003) conducted a study which is on research initially obtained for FORT project (a trans-university research programme on fortology; clarification and enhancement of psycho-social well-being), A snowball method of sampling was used and 378 participants were used and each completed a 13 scale that measures psychological wellbeing in affective, cognitive, spiritual, self and social -aspects. The aim of the study was to determine whether significant gender differences exist with regard to affective, physical, cognitive, spirit mil, self and social of psychological, wellbeing. The study indicates some differences in self-evaluated psychological wellbeing of men and women. Men scored significantly higher on cognitive, physical and self-aspects, and women scored significantly higher on somatic symptoms, the expression of and spiritual aspects. No gender differences were found with regards to social aspects or of coherence, affect balance and satisfaction with life, suggesting that the psychological wellbeing of the men and women in this group is comparable, in the study no significant gender differences were found regarding the experience of affect. Men and women perceived themselves as able to gauge and balance then positive and negative emotions, which in turn could their judgment of subjective wellbeing. The result is in line with gender stereotypes, and traditional socialization practices and possibly reflects the impact of longstanding social inequity between men and women.

Dowdy, Dwyer, Smith, and Wallston, (1996) examined a study "the relationship of gender and psychological well-being (PWB) in community-dwelling persons with rheumatoid arthritis", Data from the first wave of two longitudinal studies of persons with RA were examined (93 men and 276 women in panel 1; 60 men and 14? women in panel 2), Subjects completed self-report questionnaires on behavioral aspects of RA, Psychological wellbeing was assessed in both panels by the Center for Epidemiologic Studies-Depression Scale, using its 4 subcomponents, including positive and negative effect. Panel 2 had additional measures of PWB, namely the Positive and Negative Affect Schedule and the Satisfaction with Life Scale. Potential explanatory variables were then examined in an attempt to account for the observed gender differences.

Gender differences were found for negative indicators of PWB. While positive indicators of PWB showed no significant differences by gender. As with other community samples, women reported higher levels of depressive symptoms and negative mood than men. Quality of emotional support, passive pain, coping and physical functional impairment could only partially explain the observed gender differences in this study. The relationship of gender to negative indicators of PWB cannot easily be diminished or dismissed. The mechanisms by which gender differentially affect PWB need to be further explored in order to intervene appropriately to help men and women with RA achieve an optimal quality of life.

Perez (2012) conducted a cross sectional, non-experimental quantitative study aimed to determine gender differences in various aspects of psychological wellbeing among Filipino college student. A total of 588 college students from various schools in the Philippines participated in this (males= 110; females = 478), The participants completed eight scales measuring different aspects of psychological wellbeing. Gender differences were found in terms of daily spiritual experience, relationship, peer relationship, autonomy, positive relations with others, and purpose in life. No gender differences were found in the aspects of positive effect, negative effect, mother relationship, teacher relationship, environmental mastery, personal growth, and self-acceptance.

Akhter S., (2015) conducted a study of psychological well-being among male and female students. The result obtained on the psychology well -being reveals significant difference of girls at: j boy students. The results indicate that mean and standard deviation of male and female for psychological well-being is 50.5, 4.55 and 5.90, 5.00 respectively, which suggest that there is a difference among male and female on the score of psychological well-being, The .t" value of psychological well-being was 5.68, Therefore, these differences are significant for psychological well-being *among the male* and female students. According to the t-test the numerical value that we get is 5.68 which is significant at 0.01 level. Therefore the hypotheses that there is significant difference *between male and female in psychological well-being* is acceptable, it means there is significant difference in psychological well-being among *male* and female students.

Methodology

Participants

Participants in this study were 250 nurses, comprising 42 males and 208 females. Purposive sampling techniques (also known as judgment, selective or subjective sampling) is a sampling technique in which a researcher relies *on* his or her own judgment when choosing members of population to participate in the study. This technique was used to draw participants from five health institutions in Enugu Metropolis in Enugu State. The participants were nurses of Federal Neuropsychiatric hospital, New Haven, Uwani Cottage Health center Uwani, Poly Sub-District hospital Asata, Federal Orthopedic hospital, and Enugu State University Teaching Hospital, Parklane. Their age ranges from 20-60 years with a mean age of 46.33.

Hospitals	Numbers
Federal Neuropsychiatric hospital	59
Uwani cottage Health center	29
Poly Sub-District hospital, Asata	35
Federal Orthopedic Hospital	62
Enugu State University Teaching Hospital Parklane	61

Instruments

Two instruments were used in this study;

The Warwick Edinburgh Mental Well-being Scale, developed and validated by Tennant, Hiller. Fishwick, Platt, Joseph, Welch, Parkinson, Seeker, Stewart-Brown (2007), it was used to assess students with the age of 16years and above in the UK measuring aspects of mental health involving surveys in both student and general population samples, and focus groups. The scale has 4 items is scored by summing the response to each item answered on a 1 to 5 likert scale with the response as- None of the time, Rarely, Some of the time, Often and All of the time. The minimum scale score is 14 and the maximum is 70. It has now been widely validated in different

populations and languages other than English. Some items in the scale include: I've been feeling optimistic about the future; I've been feeling good about myself. The scale has full scale reliability of .83 obtained using Cronbach's alpha coefficient of .89. I gave the questionnaires to six lecturers who face validated the questionnaires and rated the cronbach alpha high. I gave the questionnaires to six lecturers who face validated the questionnaires and rated the cronbach alpha high.

Procedures

The questionnaires were administered to 250 nurses from five hospitals in Enugu metropolis; the questionnaires were administered by the researcher to different hospitals on different days. Out of the 250 pieces 245 was collected representing a ratio of 98%, 10 copies were discarded due to improper filling leaving a total number of 235 that were used for analysis on this study, 195 females and 45 males. The researcher sought permission from the head of nursing services in the different health institution to administer the questionnaires. The researcher rendered lots of thanks to the participants. Design/Statistics

The study employed a cross-sectional design. The statistics used in this is one way Analysis of Variance (ANOVA)

Result

Summary of Main Finding

Table 1: Means, standard deviations, and correlations for age, and gender on psychological well being

S/N	Variable	M	SD	Age	Gender	Psy-
1	Age	38.54	8.71			
2	Gender	1.81	.39	.13*		
3	Psy-well being	45.84	1*1.07	-.03	.18**	

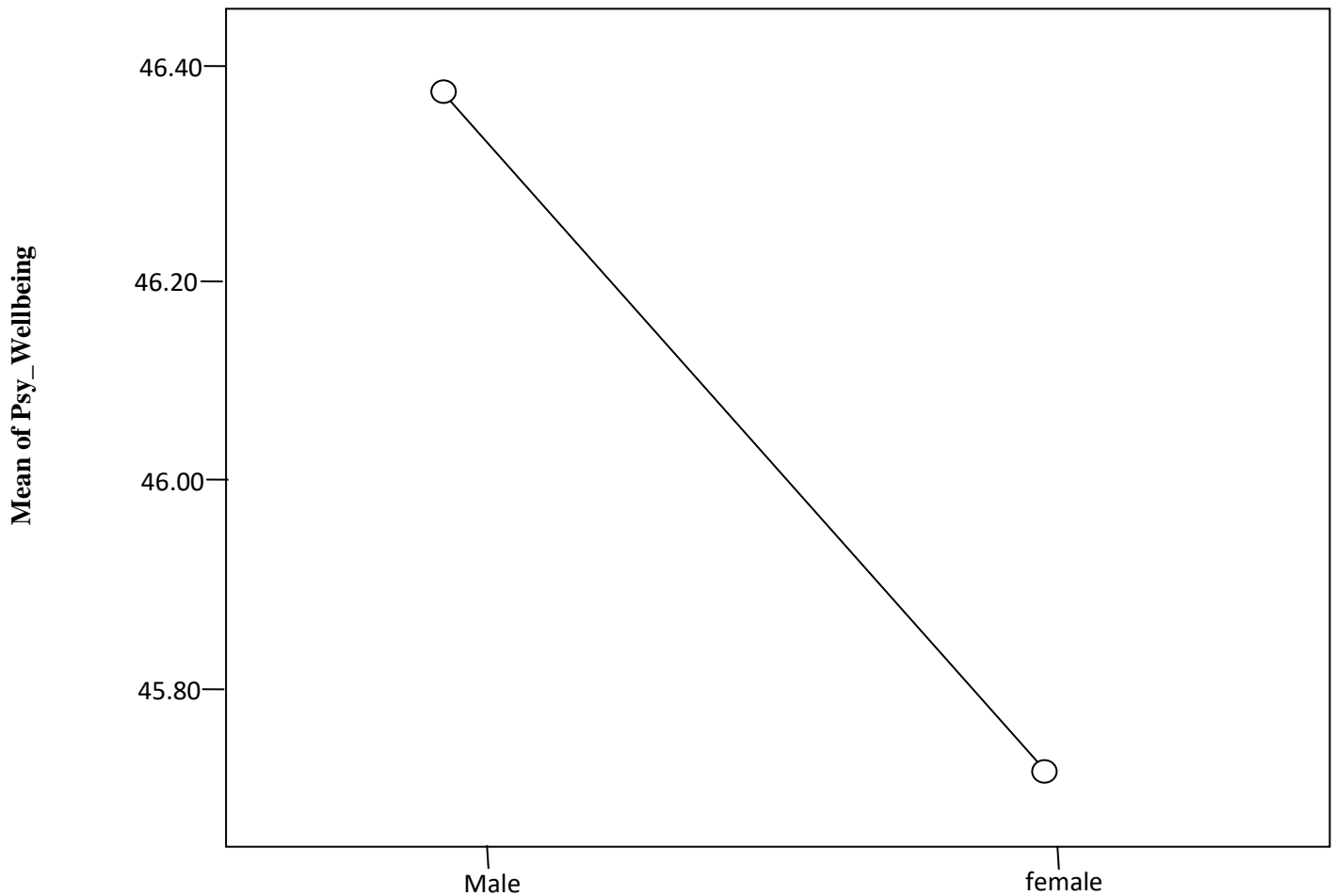
Note. $N = 451$, * $=p < .05$ (two-tailed), ** $\sim p < .01$ (two-tailed),). Gender was coded 1 » male, 2 » female; Age was coded in years,

Result of correlation table show that psychological wellbeing was positively significantly related to motivation ($r = .18$, $p < .01$); but negatively non-significantly related to age ($r = -.03$, $p > .05$) and gender ($r = -.02$, $p > .05$). Age was significantly related to gender ($r = .13$, $p < .05$); Gender was not significantly related to motivation ($r = .09$, $p > .05$).

Table 2: Showing the prediction of 'psychological well being' from control variable-age and, gender

	R	R2	R2A	B	Beta(p)	T
Model 1						
Age	.031	.001	.001	-.04	-.03	-.48
Model 2						
Gender	.037	.001	.000	-.52	-.02	-.31

Table 2 result indicated that the demographic (age) did not significantly predict psychological wellbeing of nurses ($P = .03$, $t = -.48$). Gender ($B = -.02$, $t = -.31$) entered in model two of the equation did not significantly predict psychological wellbeing of nurses. It however accounted for 31% variance in the explanation of psychological wellbeing of nurses ($R^2 = .031$, $p < .01$). To find out which gender enjoy psychological wellbeing more among nurse, data obtained from the participants was subjected to a post hoc study in which one way ANOVA was employed. Result of one-way ANOVA indicated that male nurses ($M = 46.33$) had higher mean of psychological wellbeing than female nurses ($M = 45.71$) (see appendix). The mean plot graph is shown below



Discussion

The result of the study revealed that gender will not statistically significantly predict Nurses psychological wellbeing. Gender enjoy psychological wellbeing more among nurse, using the data obtained from the participants which was subjected to a post hoc study in which one way ANOVA was employed. The Result of one-way ANOVA indicated that male nurses (M = 46.33) had higher mean of psychological wellbeing than female nurses (M = 46.33). This is congruent with that men have higher self-reported levels of ego and cognitive strengths whereas females describe themselves as stronger in social, emotional and spiritual aspects (Bond, Kwan & Li, 2000; Crose et al., 1992). Morin & Rosenfield, (1998) proposed that gender differences are encouraged by societal expectations.

Summary and Conclusion

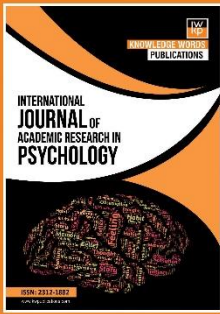
The findings of the study show that the hypothesis which states that Gender has no significant impact on the psychological wellbeing of nurses in Enugu Metropolis was confirmed. Based on the finding of the study the researcher hereby concludes that there is no significant effect of gender on psychological wellbeing of nurses in Enugu Meytropolis. This implies that the gender of the nurses has no effect on the psychological wellbeing of the nurses in Enugu Metroplolis.

Other studies should be done on gender as a predictor of psychological wellbeing among Nurses. A larger sample should be used with more than five health institutions, as this study focused on five health institutions

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The Relationship between Resiliency with Self- Efficacy and Stress in Iranian Female High School Students

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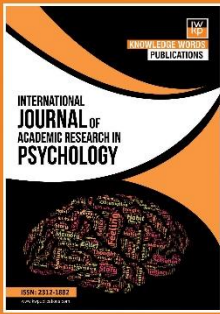
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The Relationship between Resiliency with Self-Efficacy and Stress in Iranian Female High School Students

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Abstract

Relationships between resiliency with self- efficacy and stress were investigated in Iranian female high school students in Grades 10 to 12 (N = 176). Research tools included the General self-efficacy (GSE), Depression, anxiety and stress scale– 21 and Family Resilience Assessment Scale (FRAS). The findings of this study indicated that there was a significant positive correlation between resiliency with self- efficacy and stress ($P < 0.05$). According to the findings of this study, there is a positive and significant relationship between resiliency with self- efficacy and stress in Iranian female high school. Considering the findings of this research can be effective in improving the lives of high school students and the emotional atmosphere of their families. On the other hand, the findings of this study can be used in designing and feasibility of educational protocols to reduce the problems and prevent the creation of a crisis in the life of Iranian adolescents for families.

Keywords: Resiliency, Self- Efficacy, High School Students.

Introduction

A compelling body of epidemiologic research indicates that exposure to stressful events contributes to poor health and health disparities over the life course (James, 2009; Miller, Chen & Cole, 2009). “Stress” refers to any threat or challenge to homeostasis (McEwen, 2013), and includes a broad range of exposures such as prenatal insults (Hilmert et al., 2008), early life adversity (Miller, Chen, & Parker, 2011), work (e.g., job strain), finances (e.g., poverty, food insecurity), interpersonal events (e.g., divorce, social isolation), trauma (e.g., emotional, physical, or sexual abuse), and experiences of discrimination (Abdou et al., 2016). While the neurobiological stress response (e.g., hypothalamic-pituitary-adrenal (HPA)-axis, sympathetic nervous system) is well-suited for addressing acute stressors, it is hypothesized that repeated, chronic activation of the body’s stress response (commonly operationalized as “allostatic load,” “weathering,” and related constructs) contributes to the development of cardiovascular and metabolic conditions in mid- and late-life (Geronimus, 1992; McEwen & Seeman, 1999; Miller et al., 2011). Moreover, General self-efficacy is the belief in one's

competence to cope with a broad range of stressful or challenging demands, whereas specific self-efficacy is constrained to a particular task at hand (Luszczynska, Scholz and Schwarzer, 2005). The stronger the students' belief in self-efficacy the stronger are their cognitive growth. As stated by Bandura and Locke (2003), perceived self-efficacy is apprehended as an important contributor to academic accomplishments, achievement enhancement and many aspects of well-being. The relations between general self-efficacy, stress appraisal, well-being and achievement in a broad range of stressful or challenging encounters were explored by Luszczynska, Gutierrez-Dona and Schwarzer (2005) across several countries. Social cognitive theory (Bandura and Locke, 2003) expects that self-efficacy positively influences the performance in any kind of task. Bandura (1997, Bandura and Locke, 2003) mention self-efficacy as a causal contributor to human well-being and accomplishments. Also Kebza (2005) considers self-efficacy to be one of the main components of well-being and mental health. Self-efficacy represents a way to self-control individual's emotions which can bring multiple advantages in the area of stress. Self-efficacy can explain therefore the vulnerability we show when faced with stressful situations, but it can also be a helping hand for the cognitive activation of stress theory (CATS) through conceptual resemblance regarding the anticipation mechanism for the oscillatory result of an action. Therefore if an individual perceives a task after it's cognitive evaluation and according to his/her experience as being a difficult one, the answer he/she will get to the task will trigger an alert which will increase the level of stress. We can therefore say that a positive or negative evaluation of a situation may represent an impulse or a break in overcoming obstacles thus influencing the level of stress self-perceived and biological. Also, Resilience is the ability of an individual to positively adjust to adversity, and can be applied to building personal strengths in nurses through strategies such as: building positive and nurturing professional relationships; maintaining positivity; developing emotional insight; achieving life balance and spirituality; and, becoming more reflective. While much is known about the direct effects of stress exposure on health, there has been less focus on how the intersection between stress and coping behaviors (i.e., efforts to self-regulate the body's stress response) relates to health and health disparities (Ellis & Giudice, 2014; Mezuk et al., 2013). Under the conceptualization of stress as a direct cause of poor physical health, behaviors are treated as confounders (i.e., correlates of stress and causally related to health, but not part of the pathway linking the two (Umberson, Liu & Reczek, 2008). In sum, a growing body of research indicates that the relationships among stress exposure, stress reactivity, and health behaviors are intrinsically linked in two important ways: (1) Stress exposure impacts the likelihood of engaging in health behaviors, and these behaviors, in turn, impact physiological reactivity to subsequent stressors; and (2) These behaviors engage reinforcing (e.g., dopaminergic and opioid) pathways in the brain, which are also connected to the HPA-axis and related stress-response systems. Thus, in the short-term, these health behaviors can serve as effective stress-coping strategies and preserve mental health, just as traditional approach-oriented coping strategies are known to do. However, unlike these traditional coping strategies, over the long-term behaviors such as smoking, excessive alcohol use, and poor diet contribute to disparities in physical health (Lantz et al., 1998). Regarding the effect of self-efficacy, stress and resilience in increasing life satisfaction and increasing emotional excitement, therefore the present study aimed to investigate the Relationship Between resiliency with self- efficacy and stress in *Iranian female high school students*

Material and Methods

Participants

In this correlational study, the 176 female students aged between 14 and 17 years old of high school of Tehran were selected through the use of multi-cluster sampling. Of these, 36.9% at the first grade, 40.9% in the second grade and 22.2% in the third grade high school in the experimental science (60%) and mathematical (40%) fields studied, and in terms of the level of education of parents 4.7% diploma, 42.6% *bachelor's*, 25% masters and 23.9% doctoral, as well as 96.6% employed and 3.4% unemployed.

Data Analysis Method

In this study descriptive statistics was applied for analysis of the demographic data. For inferential statistics, data were analyzed using Statistical Package for Social Sciences (SPSS) version 22. All data collection forms were given serial numbers. Data were entered, checked for data entry errors, explored and cleaned. The researcher used alpha (α) at 0.05 and confidence interval of 95%. Instrument

General Self-efficacy (GSE)

The SGSES (Sherer et al., 1982) is a Likert format 17-item scale (example of items include: "When I make plans, I am certain I can make them work", "I give up easily", "I am a self-reliant person", "I avoid facing difficulties"). The response format is a 5-point scale (1 = strongly disagree, 5 = strongly agree). Sum of item scores reflects general self-efficacy. The higher the total score is, the more self-efficacious the respondent. Sherer et al. Higher score indicates stronger self-efficiency, and lower score indicates weaker self-efficiency.

Depression, anxiety and stress scale– 21: The DASS-21 is the shortened version of the DASS developed by Lovibond and Lovibond. to assess symptoms of depression, anxiety and stress among adults. In the DASS-21. the respondent is asked to think about their experiences in the past seven days and to judge how each statement applied to them. There are 21 items in this scale with four response options: 0 "Did not apply to me at all–Never", 1 "Applied to me to some degree, or some of the time–Sometimes", 2 "Applied to me to a considerable degree, or a good part of time–Often" to 3 "Applied to me very much, or most of the time–Almost always". Scores on three subscales naming DASS-21-Depression (DASS-21-D), DASS-21-Anxiety (DASS-21-A) and Stress (DASS-21-S) can then be calculated. There are seven items in each of the subscales; the score of which ranges from 0 to 21. The DASS-21 has been validated for use among Iranian samples.

Family Resilience Assessment Scale (FRAS): The FRAS was developed by Sixbey (2005) to measure family resilience and was based on Walsh's Family Resilience Model. The FRAS measures 66 family resilience on six factors: family communication and problem-solving, utilizing social and economic resources, maintaining a positive outlook, family connectedness, family spirituality, and ability to make meaning of adversity (Sixbey, 2005). Reliability for the FRAS is high, with a Cronbach's alpha of .96 for the total scale (Sixbey, 2005). Scores on the FRAS can range between 66 and 264; lower scores indicate little resilience within the family, while higher scores indicate high levels of resilience in the family.

Results

Table 1 indicates the correlation coefficient between the self-efficacy, family resilience and stress

Table 1: the correlation coefficient between the self-efficacy, family resilience and stress

Variable	M	SD	1	2	3	4	5	6	7	8	9
1. stress	17/56	10/8 5	-								
2. family resilience	186/89	20/48	0/44*	-							
3. Family communication and problem-solving	77/82	12/67	0/43* _*	0/92* *	-						
4. utilizing social and economical resources,	18/85	4/46	0/25* _*	0/54* *	0/33* *	-					
5. maintaining a positive outlook,	18/77	3/06	0/37* _*	0/77* *	0/74* *	0/27* *	-				
6. family connectedness,	15/53	1/97	0/08	0/01	-0/13	0/03	-0/14	-			
7. family spirituality	9/02	2/27	-0/14	0/33* *	0/18* *	0/34	0/07	0/003	-		
8. and ability to make meaning of adversity	8/94	1/47	-0/13	0/43* *	0/33* *	0/14	0/30* *	0/08	0/08	0/08	-
9. self-efficacy	63/20	10/90	0/51* _*	0/44* *	0/50* *	0/04	0/49* *	0/14	0/06	0/06	0/19* *

According to Table 1, Correlation between stress and self-efficacy (-0.51) was statistically significant. Also, the correlation between stress and resiliency was observed (-0.44), which is statistically. The observed correlation between self-efficacy and resiliency (0.44) is statistically significant ($P < 0/01$). Step-by-step regression was use to predict and explain the variance of stress and self-efficacy based on the family resilience (Table 2).

Table 3: Multiple Regression Results: Model 1 Summary

step	SS	MS	df	F	Sig
1	14575/26	14575/26	1	43/06	0/01
	58893/68	338/46	174		
2	19294/77	9647/39	1	30/80	0/01
	54174/17	313/14	174		

Table 2: the results of step-by-step regression analysis based on the Stress and self-efficacy variables through family resilience

step	variable	R	R ²	SE	B	Beta
1	Stress	0/44	0/19	0/12	-0/84	-0/44
2	self-efficacy	0/51	0/26	0/14	0/55	0/29

Table 2 indicates that stress in the first step explained 19 percent of changes in resiliency. Also In the second step, self- efficacy explained 26 percent of changes in family resiliency were significantly predicted.

Discussion and Conclusion

The purpose of this study was to investigate the relationship between resiliency with self- efficacy and stress in *Iranian female high school students*. The results showed that there is a significant relationship between self- efficacy and stress in high school students. These results agreed with the findings of the studies by (Jackson et al, 2007; Winsett et al, 2010) Which showed that patients with higher self- efficacy had higher resiliency. In addition, the results have shown that individuals with high resilience under stressful conditions maintain their mental health and are better performance It's also agreed. Pinquart (2009)'s study that resilience prevents psychological problems in young people and protects them from the psychological effects of problematic events. As well as the results of the research, Noone and Hastings (2009) found that resiliency creates a reduction in work stress and increases the mental health of staff and teachers who interact with people with mental retardation and are aligned in one direction In explaining the results, it can be stated that resonance as a protective and important factor can play a decisive role in reducing stress in students In fact, high resilience can keep students in trouble and difficult situations and increase their mental health. On the other hand, high self-efficacy in students reflects more resilience in them, resulting in a reduction in stress and increased mental health and quality of life. One limitation of the current study was the sample size is low and includes high school girls. Therefore, it is recommended that in future studies and similar students with more boys and other educational levels should be used.

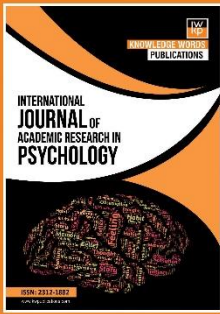
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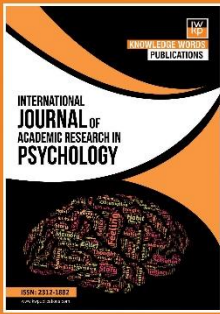
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INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN PSYCHOLOGY



Interventions for Body Fat Reduction among Pakistani Women: A Randomized Control Trial Study

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Abstract

The burden of obesity is higher in Pakistani female, to overcome this burden effective treatment is desirable. The current study intends to provide effective intervention programs to reduce percent body fat among Pakistani women. Through randomized control trial study fourteen females (N= 14, PBF= 30.28 ± 3.24) were recruited by employing penal data technique with simple randomization. The sample distributed into two equal groups from online randomization. The experimental group received 10-week sessions of modified cognitive behavior therapy (CBT) along with supervised and unsupervised exercise regimen, plus supervised diet management plan. As a contrast, the control group received 10-week sessions without offering standard treatment. The results found that the intervention group or experimental group significantly reduced percent body fat (-3.02) while control group reduced (-0.37) within 10 weeks interventions, $F=88.28$, $p<.001^{***}$, $\eta^2_p=.880$. Conclusively, the combination of CBT along with exercise regimen and diet plan is a most effective method to reduce percent body fat among obese women. The limitations and future directions are also discussed that can be a good contribution to the body of knowledge concerning obesity research.

Keywords: CBT, Exercise regimen, Diet Plan, PBF, Women, Obesity, Pakistan, Effective Interventions.

Introduction

Obesity defined as excess body fat that is valid reference to predict the obesity (National Institutes of Health, 1998; WHO, 1998), but unfortunately there is no cutoff point of body fat to classify obesity level or stage such as BMI cutoff point for different populations (Mascie-Taylor & Goto, 2007), while greater than or equal to 30 considered as overweight and 35 body fat in

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women considered as obese (Lobman, Houtkooper, & Going, 1997; Swainson et al., 2017; WHO, 1995), because BMI is not considered a good measure of obesity for Asian (Hingorjo, Syed, & Qureshi, 2009). Therefore, percent body fat is considered a reliable and accurate tool to measure obesity (Juntaping et al., 2017), particularly for Pakistani population percent body fat is a better scale to measure obesity as compared to BMI (Fatima, Rehman, & Chaudhry, 2014).

The South Asian have higher percent body fat (Misra et al., 2014) generally, while comparing with gender reference women significantly greater percent body fat as compared to male (Dias et al., 2016; Flegal et al., 2009; Ilman, Zuhairini, & Siddiq, 2016; Juntaping et al., 2017; Jackson et al., 2002), but comparing within same gender the Asian women have higher body fat as compared to white (Deurenberg, Yap, & Van Staveren, 1998; Küpper et al., 1998; Wang et al., 1994), Chinese (Ntuk et al., 2014), Norwegian (Falch, & Steihaug, 2000), and American women (Kamath et al., 1999).

In Pakistan, burden of obesity is higher in female (Fawwad et al., 2016; Tanzil, & Jamali, 2016), because of Pakistani women have significantly higher percentage of body fat as compared to male (Akhter et al., 2015; Chachar et al., 2016; Hingorjo, Syed, & Qureshi, 2009). Excessive body fat associated with mortality and morbidity (Koster et al., 2015; Mascie-Taylor & Goto, 2007). A 22-years follow up study reported that excessive body fat is strongly associated with mortality rather than BMI (Heitmann et al., 2000).

Percent of body fat in excess amount adversely effected health and well-being (WHO, 1998; 2006) as well as significantly associated with risk factors for numerous chronic diseases (Barba et al., 2004; Dehghan & Merchant, 2008), such as coronary heart disease, diabetes mellitus, dyslipidemia, hypertension (Chopra et al., 2013; Dentali, Sharma, & Douketis, 2005; Ortega et al., 2016; Sharma, & Chetty, 2005; Yusuf et al., 2004), type 2 diabetes (Bhatti et al., 2016; Gómez-Ambrosi et al., 2011), metabolic syndrome (Bosy-Westphal et al., 2006; Misra, & Khurana, 2009), cardiometabolic dysregulation (Dervaux et al., 2008; Romero-Corral et al., 2009), early inflammation (Marques-Vidal et al., 2010), cancer (Britton et al., 2013), osteopenia, osteoporosis, non-spine fractures (Hsu et al., 2006), and hepatic steatosis (Falch, & Steihaug, 2000).

Pakistani hospital study reported that higher percentage of body fat observed in female that is independent risk factors for ischemic heart disease as well as greater body fat women are suffering diabetes, hypertension (Chachar et al., 2016; Kitchlew, Chachar, & Latif, 2017), type 2 diabetes (Akhter et al., 2015), gestational diabetes mellitus (Iqbal et al., 2007).

Finally, with respect the above scenario there is dire need to launch intervention program to reduce body fat for women specifically South Asian and Pakistani women because a review study explored that obesity prevention or management still not identified in developing countries including Pakistan (Poobalan & Aucott, 2016). That is the reason to launch effective intervention plan for women by using multiple ways of treatment including modified cognitive behavior therapy along with exercise regimen and diet management while literature supported that percent body fat can be reduced through behavior modification (Harrigan et al., 2015), physical exercise (Longland et al., 2016; Pelemis et al., 2016; Sanal, Ardic, & Kirac, 2013), and diet management (Karintrakul & Angkatavanich, 2017), but combination of three methods (behavior modification, exercise, and diet management) are most effective to reduce percent body fat (Harrigan et al., 2015; Karintrakul & Angkatavanich, 2017).

Objective of the Study

1. To gauge the efficacy of psycho-physical ways (modified cognitive behavior therapy, exercise management, and diet plan) to reduce percent body fat among Pakistani females.

Hypotheses of the study: It is hypothesized that...

H1: Experimental group loses more percent body fat as compared to control group among Pakistani females.

Method

Participants and Procedure

The current randomized control trial study recruited 14 adult females through penal sampling on the basis of a percent body fat (PBF \geq 28) from South-Punjab, Pakistan. Body composition analyzer (In-Body 370) was used to measure percent body fat. All participants equally distributed into two groups through online randomization after taking informed consent. The experimental group received multiple treatments as a form of modified cognitive behavior therapy-CBT (Motivational Interviewing, Self-monitoring & problem solving) plus supervised physical activity or exercise (treadmill, aerobic exercise, & unsupervised walking using a pedometer) plus supervised diet management for 10-weeks (weekly session). While control group received no proper treatment, but engaged them in a group discussion during the session and evaluate their knowledge by asking questions in every week session until 10th-week sessions. After that percent body fat measured again at 10th week. After completing data collection, data were analyzed through SPSS (23.0), result displays into standard tabulated form and discussion made on the basis of the result.

Measurements

The percent body fat was measured by a bioelectrical impedance analyzer (in-Body 370). This is composition analyzer is a valid and reliable digital instrument to measure the accurate percentage of body fat among obese people (Coleman et al., 2015; Lee et al., 2014).

Data Analyses

Data were analyzed through SPSS (23.0) by using descriptive statistics including mean and standard deviation for computing differences between experimental group and control group in terms of age, and percent body fat at baseline. Repeated measure ANOVA was employed for computing differences and changes in percent body fat between experimental group and control group from baseline to week 10th.

Ethical Considerations

The current study considered and fulfilled almost all basic ethical concerns related to experimental in nature studies. Initially, study proposal approval taken from the ethical review committee. The current study fulfilled this step, by the recommendation of proposal evaluation penal from Institute of postgraduate study during proposal defense presentation. Penal sent study proposal to an ethical review committee that consists of five relevant national and international field experts. Study proposal amended according to filed experts' valuable suggestions. The next informed consent (written) taken from all participants. Privacy, autonomy, and confidentiality were maintained. Further, contamination was avoided among groups to arrange separate sessions in different timing and different days and to identify friends, and relatives who were included in the different groups.

Furthermore, risk and benefits considered as the completion of this study may provide benefits in the form of increased self-awareness regarding diet plan and exercise management. For some individuals, this self-awareness may produce momentary discomfort, or during an exercise session suffer fatigue. However, no appreciable adverse effects on participant's health or well-being expected. The main potential benefit to accrue from this study was decreased percent body fat as well as improved physical activity, and balanced diet.

Results

Table 1. Descriptive Statistics at base line

Measures	Experimental Group		Control Group	
	Mean	SD	Mean	SD
Age	31.0	6.27	26.43	5.19
% Body Fat	30.14	3.80	30.42	2.87

Table 1 shows descriptive statistics of age and percent body fat at baseline between experimental groups and control group. The result shows that mean age of the experimental group is 31.0 with standard deviation 6.27 while control group means age is 26.43 with standard deviation is 5.19 at baseline. The mean percent body fat of the experimental group is 30.14 with standard deviation is 3.80 while the mean percent of body fat of the control group is 30.42 with standard deviation is 2.87 that is the minor difference from the experimental group.

Table 2. Percent body fat from baseline to Post intervention

Measures	Baseline Mean (SD)	Ten Weeks Mean (SD)	Change	<i>F</i>	η^2_p	<i>p</i> -value
% Body Fat						
Experimental	30.14 (3.80)	27.12 (3.93)	-3.02	88.28	.880	<.001
Control	30.42 (2.87)	30.05 (2.82)	-0.37			

Note: Computed using alpha = .05, * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

Table 2 shows loss of percent body fat between experimental group and control group from baseline to week 10th. A 2×2 repeated measure (group by time) ANOVA result reveal that experimental group reduced percent body fat (-3.02) within 10 weeks while control group reduced only (-0.37) within the same time frame (see figure 1). There was a significant interaction between treatment condition and time ($F = 88.28$, $\eta^2_p = .880$, $p = <.001^{***}$) between experimental group and control group to lose percent body fat.

Figure 1



Discussion

The current study used psycho-physical intervention for percent body fat reduction among Pakistani obese women. Results indicated that experimental group (modified CBT + Exercise regimen + Diet plan) reduced percent body fat (-3.02) within 10th weeks and control group lose only (-0.37) within the same time duration. A recent similar study supported that through the restrictive nutritional plan, physical activity, along with counseling session intervention group of women can reduced percent body fat (-1.54) while control group increased (0.08) instead of reduced body fat within 12-weeks (Karintrakul & Angkatavanich, 2017). While, another similar study supported that through combinations of behavior therapy, supervised exercise, and diet plan women reduced percent body fat (-3.3) within 6-months interventions (Harrigan et al., 2015). Another similar study findings show that through supervised moderate intensity exercises (3-times/week) and diet counseling intervention group of women reduced percent body fat (-2.5) within 12-weeks intervention while control group increased (0.4) instead of reduced within same stipulated time (Swisher et al., 2015).

A contrast study reported that through supervised high-intensity exercise (6days/week) along with supervised diet prescription higher protein intake group reduced body fat (-4.8 kg) while low protein intake group reduced (-3.5 kg) within 4-weeks intervention (Longland et. al., 2016). Furthermore, through supervised aerobic exercise training women reduced percent body fat (-1.2) while with the combination of strength training reduced (-1.6) but control group reduced only (-0.1) within 16-weeks (Rossi et al., 2016). Another study supported that through supervised resistance (exercise) training women can reduce their body fat (-1.39) within 14 weeks while control group increased body fat (0.01) within the same time frame (Prabhakaran, Dowling, Branch, Swain, & Leutholtz, 1999).

Another study reported that after 5 months exercise training exercise group reduced percent body fat (-1.2) but control group increased (0.2) instead of reduced within same time duration (Boyden et al., 1993). A contrast study reported that there are no changes in percent body fat after 16 weeks resistance training (Hurley, 1988). A similar study supported that through moderate intensity aerobic exercise women can reduce percent body fat (-2.7) within 8-weeks (Pelemis et al., 2016). A similar study supported that through resistance and aerobic exercise training people can reduce body fat from (0 to -1.4) while control group reduced only (-0.4) within 10-weeks (Donges, Duffield, & Drinkwater, 2010). Another study supported that through supervised aerobic and resistance exercise training (3times/week) women reduced percent body fat from (-0 to -3) while control group reduced only (-0.8) within 10-weeks (Donges & Duffield, 2012). The study supported that through 12-weeks aerobic exercise people can reduced percent body fat (-1.7) while the combination of aerobic and resistance exercise reduced percent body fat -5.2 (Sanal, Ardic, & Kirac, 2013).

Conclusion

The psycho-physical intervention (combination of modified CBT, Exercise management, & Diet plan) is effective for reducing obesity related body composition and to get a significant result within a short period of time between experimental group and control group. The current intervention is also effective particularly for body fat reduction among Pakistani obese women.

Limitations and Future Directions

There are some limitations of the study. The current study was limited to conduct 10th-week sessions without follow up sessions. The future studies should be an extended interventions time frame to get better results along with follow-up sessions to offer relapse prevention. Longitudinal studies should be conducted to measure long lasting changes in body composition. The current study was focused to reduce only one obesity diagnostic factor (percent body fat) without considering other diagnostic factors and contributing factors of obesity or covariates. The future studies should examine contributing factors of obesity and intervention studies should be focused other diagnostic factors to overcome the burden of obesity.

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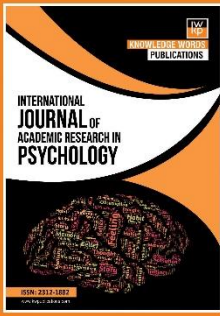
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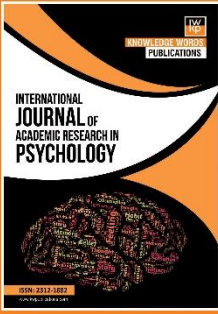
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INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN PSYCHOLOGY



A Study on Emotional Intelligence among Psychotherapists in Northern Uganda

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Abstract

A growing number of studies have suggested that emotional intelligence could have an impact on several individual domains. However, few studies have been done on emotional intelligence among psychotherapists in Africa in general and Uganda in particular. The study was to determine the levels of emotional intelligence among psychotherapists in northern Uganda. Data collection occurred with surveys incorporating the Emotional Competency Inventory 2.0. Psychotherapists from northern Uganda participated with 207 respondents returning completed surveys. Data analysis was done using descriptive statistics including percentages, median, minimum and maximum. Results indicate that 60.0% possessed high levels of self-awareness, 60.3% reported high levels of social awareness, 55.6% scored high in self-management domain and 70.1% scored highly in social skills. On the basis of these findings, suggestions and recommendations were made to include emotional intelligence as an integral component of training and incorporate emotional intelligence intervention techniques to benefit psychotherapists in managing work related stress.

Keywords: Emotional Intelligence, Northern Uganda, Psychotherapists.

Background

While the roots of emotional intelligence can arguably be traced back to the start of the 20th century, the majority of researches addressing the concept have appeared within the last two decades (Crowne, 2013). The term emotional intelligence was first used in the field of psychology by (Mayer & Salovey, 1995) in 1990. Emotional intelligence was however, brought to the forefront by Goleman in 1995. Since then the concept has become a major topic of interest in both the public and private practices (Mortana et al., 2014). However, there is lack of precise definition of the concept and consequently, different researchers have defined the notion according to their own perspective. Goleman (1997) defined emotional intelligence as recognising one's feelings and having the ability to manage those feelings to complete tasks and performing at the fullest potential, recognising the feelings of others and having efficient management skills. Mayer, Salovey and Caruso (2000) defined

emotional intelligence as the ability to perceive, appraise and express emotion accurately and to adapt to different circumstances. Bar-On (2004) referred to emotional intelligence as a set of abilities and non-cognitive skills which aid to cope with environmental stress. According to Gryn (2010) emotional intelligence involves making a distinction between one's own emotions and others and recognising and understanding these emotions. Although, the concept hasn't yet been precisely defined, most definitions demonstrate common themes. They seem to share four aspects; self-awareness, control of emotion, social-awareness and social skills.

The findings of various studies demonstrated that emotional intelligence could have an impact on several individual domains. For instance, emotional intelligence has been found to predict performance (Bar-On, 1997), career success (Ferraro, 2010; Kahn, 2013) and is correlated with better mental and emotional health (Gardner, 2005). Also emotional intelligence is one of the best predictors of adaptive coping strategies to stressful situations (Cabello et al., 2014). Besides, emotional intelligence would facilitate appropriate responses to different events that an individual would have to face daily and would decrease maladaptive emotional reactions by reducing negative moods (MacCann *et al.*, 2011). Conversely, low levels of emotional intelligence are related to self-destructive acts like drinking and drug abuse (Brown *et al.*, 2012). Therefore emotional intelligence may have influence on the wellbeing of psychotherapists.

Studies show that psychotherapists experience disproportionately high levels of work related stress in comparison with other occupations (Bober & Regehr, 2006; Pearlman & Maclan, 1995; Smith et al., 2000). Figley (1995a) has recognized this aspect and described it as a 'cost to caring'. Emotional intelligence in the process of psychotherapy can be regarded as a core built-quality psychotherapy services. Therefore as AbdRahman (2000) suggested psychotherapy services should go through the process of transformation involving the elements of emotional intelligence. An effort should be made to identify the level of emotional intelligence because it provides valuable information for psychotherapists in assessing self-effectiveness to increase the efficiency of psychotherapy skills and personal development. Previous research mostly in western countries has examined emotional intelligence among different professionals including; social workers, physicians, nurses, teachers, relief aid workers, trauma workers to mention a few (Potter et al., 2013; Potter *et al.*, 2010; Klappa *et al.*, 2015). Therefore there is a gap in the literature regarding emotional intelligence among psychotherapists in Uganda. The purpose of this study was to investigate the levels of emotional intelligence among physiotherapists in northern Uganda. The guiding research question in this project is:

What are the levels of emotional intelligence among psychotherapists among in northern Uganda?

Methodology

This study adopted a quantitative approach using a cross-sectional research design. The respondents in this study were two hundred and seven psychotherapists working in northern Uganda. Emotional Competency Inventory (ECI) 2.0 questionnaires were distributed to respondents using random sampling. ECI 2.0 has 72 items grouped into 18 emotional competencies. These 18 emotional competencies fall into four major dimensions; self-awareness, self-management, social-awareness and social skills.

Demographics of the Respondents

The gender ratio for the sample group was 56% male (n=116) and 44% female (n=91). The age groups in the sample are 41.5% were between 24-34 years (n = 86); 36.3% were 35-44 years (n = 75); 19.3% were 45-54 years (n= 40); and 2.9% were 55 years and above (n = 6). Qualification of the respondents are 3.4% had masters (n = 7); 54.1% had Bachelors (n= 112); 33.3% had Diploma (n = 69) and 9.2% (19) were Certificate holders. Working experience of the respondents are 20% had experience of less than 2 years (n = 42); 27.5% were in 2-4 years (n = 57); 40.1% were in 5-9 years (n = 583); and 12.1% were in more than 10 years (n = 25).

Results and discussion

The major objective of the study was to determine the levels of emotional intelligence among psychotherapists in northern Uganda. To achieve this objective, the respondents were asked to indicate their competencies on a five point likert scale. Once all the items were scored, emotional intelligence levels of psychotherapists were rated as low, average or high based on the ECI 2.0 technical manual guidelines (Hay Group, 2005). The researchers scored and categorized the levels of emotional intelligence within the four domains.

Self-Awareness Domain

Self-awareness domain has three competencies namely; emotional awareness, accurate self-assessment and self-confidence. The self-awareness domain had a total of 12 items. The respondents were asked to rate themselves on this domain using the ECI 2.0 questionnaire. Each of the items in this domain had the lowest score of one and highest score of five. Responses to each of three competencies were rated. Data was summarized as median, minimum and maximum. The measures were used to specifically describe the psychotherapists' responses on competencies as indicated in Table 1.

Table 1

Findings on Psychotherapist Self-Awareness Competencies

Domain	Competency	Sample size	Median (IQR)	Min.	Max.
Self-Awareness	Emotional Awareness	206	16.0 (14.0, 18.0)	6.0	20.0
	Accurate self-Assessment	206	15.0 (13.0, 17.0)	8.0	19.0
	Self- Confidence	207	16.0 (13.0, 17.0)	8.0	20.0
	Total	205	47.0 (39.0, 50.0)	30.0	58.0

Considering the individual scores of the three competencies, Table 1 indicates that the median score for psychotherapists' self-awareness was 47.0 (IQR: 39.0, 50.0) with a minimum and a maximum of 30.0 and 58.0 respectively. The scores for this domain appear far to the right of the minimum value of 12 that was anticipated in case a respondent scored strongly disagreed with the respective research items. None of the competencies has a minimum score of 4 indicating that no respondent strongly disagreed with the item contributing to the scores for each competency. The high median scores demonstrate better emotional intelligence based on this domain. This was later collapsed into three categories in order to determine the levels of self-awareness among the sampled respondents. The results are illustrated in Table 2.

Table 2*Rating of Psychotherapists' Self-Awareness*

Self-Awareness Scores	Levels	n	Percentage
0-29	Low	0	0.0
30-45	Average	82	40.0
46-60	High	123	60.0
Total		205	100

The analysis in Table 2 indicates that majority of the respondents (60.0%) possessed high levels of self-awareness, 40% of the respondents had average levels of self-awareness and none of the respondents had low levels of self-awareness. The results indicated that the level of self-awareness among psychotherapists was high and significant number had average self-awareness. High scores on self-awareness mean that the majority psychotherapists know their strength and limitations. It can also be deduced from this result that psychotherapists know what environments are optimal for their work style. This concurs with Holahan and Sears (1995) who stated that individuals who are able to recognize their own feelings are more competent in determining their work environment. In addition psychotherapists are able to recognise feelings and put a name on them. This concurs with Goleman's (1995) assertion that one of the basic emotional intelligence skills involves ability to recognise feelings and put a name on them.

This result is consistent with Goleman's (1996) study in which primary school counsellors reported moderate and high levels of self-awareness. Similarly, the result matches the findings of Rorlinda et al.'s (2015) study on emotional intelligence competencies among Malaysian school counsellors. The study showed that schools counsellors had high levels of self-awareness. However, the results contrast a study by Nasir, Mustafa and Ahmad (2011) which showed that counselling teachers in Kulaijaya, Johor in Malaysia possessed moderate level of self-awareness emotional intelligence. This discrepancy may be attributed to a small sample in the study.

Social Awareness Domain

Social awareness domain had three competencies namely empathy, organizational awareness and service orientation. Each competency had four items. This domain had a total of 12 items. The psychotherapists were asked to rate themselves on this domain. Each of the items in this domain had the lowest score of one and highest score of five. To determine the psychotherapist responses, measures of central tendency including the median, minimum and maximum were used to specifically describe psychotherapists' social awareness competencies as summarised in Table 3.

Table 2*Findings on Psychotherapist Social Awareness Competencies*

Domain	Competency	Sample size	Median (IQR)	Min.	Max.
Social Awareness	Empathy	207	16.0 (13.3, 18.0)	6.0	20.0
	Organizational Awareness	206	16.0 (14.0, 17.0)	7.0	19.0
	Service orientation	207	16.0 (13.0, 17.0)	6.0	20.0
	Total	206	49.0 (41.0, 52.0)	25.0	58.0

Table 3 indicates that the median score for social awareness was 49.0 (IQR: 41.0, 52.0) with a minimum of 25.0 and a maximum of 58.0. The total for each competency score in this domain appears

far to the right of the minimum value of 12. This was the minimum value of the 5 Likert scale anticipated in case a respondent strongly disagreed with the related research items. Again the high median scores demonstrate better emotional intelligence based on social awareness domain. This was later collapsed into three categories in order to establish the levels of social awareness among psychotherapists in northern Uganda. The results are illustrated in Table 4.

Table 4*Rating of Psychotherapists' Social Awareness Competencies*

Social Awareness Scores	Levels	n	Percentage
0-29	Low	6	2.9
30-45	Average	76	36.8
46-60	High	124	60.3
Total		206	100

The results in Table 4 demonstrated that majority (60.3%) of the respondents had high levels of social awareness. A significant number (36.8%) had average social awareness while a small number (2.9%) of the respondents had low levels of social awareness. The high social awareness suggests that the majority of the psychotherapists in northern Uganda relate well with people of diverse background and consider the opinion of both the clients and colleagues. This concurs with a study by Berr, Church and Wachawski (2000) which found that individuals who consider others' feelings and emotions in the work process are rated by colleagues as being more highly sociable than their counterparts who are not.

The result compares favourably with the reports from previous empirical research (Cook, 2006; Rorlinda *et al.*, 2015). For example in a study on emotional intelligence competencies among Malaysian school counsellors, Rorlinda *et al.* (2015) report that school counsellors had high scores in the social awareness domain. Cook (2006) reports that principals scored high in social awareness domain. Basing on the sample findings above, less than $\frac{2}{5}$ of the psychotherapists in the districts have average competencies in social awareness domain while less than $\frac{1}{10}$ are poor in similar competencies. This corresponds to a study by Goleman's (1996), which shows that primary school counsellors of research scored moderately and high in this same domain of emotional intelligence. However results of the present study contradict the findings of a study by Nasir, Mustaffa and Ahmad (2011) which revealed that counselling teachers in Kulaijaya, Johor in Malaysia possessed modest level of social awareness. This inconsistency in results may be attributed a small sample used in Nasir, Mustaffa and Ahmad's (2011) study. In addition, the level of experience for the respondents may also account for this discrepancy.

Self-Management Domain

Self-management domain comprised of six competencies namely; emotional self-control, transparency, adaptability, achievement orientation, initiative and optimism. Each of the competencies had four items and therefore there were 24 items in total in this domain. The lowest score was 24 and the highest score in this domain was 120. The psychotherapists were asked to indicate their self-evaluation in this domain. To investigate the psychotherapist responses to the research variable, descriptive statistics (median, minimum and maximum) were used. The results are reported in Table 5.

Table 5*Summary of Findings on Psychotherapists' Self-Management Competencies*

Domain	Competency	Sample size	Median (IQR)	Min.	Max.
Self- Management	Emotional Self- Control	207	14.0 (11.0, 16.0)	7.0	20.0
	Transparency	207	14.0 (11.0, 17.0)	6.0	20.0
	Adaptability	207	14.0 (11.0, 17.0)	6.0	20.0
	Achievement Orientation	207	13.0 (11.0, 17.0)	5.0	20.0
	Initiative	207	12.0 (11.0, 14.0)	6.0	19.0
	Optimism	207	13.0 (11.0, 16.0)	6.0	20.0
	Total	207	83.0 (67.0, 95.0)	52.0	112.0

Results in Table 5 show that the median score of self-management of psychotherapists was 83.0 (IQR: 67.0, 95.0) with a minimum of 52.0 and a maximum of 112.0. Apparently, the minimum scores for self-management competencies altogether are twice higher than the expected score of 24 had the respondents strongly disagreed with items assessing each competency. This means that psychotherapists in northern Uganda have high emotional intelligence based on this element. This was later collapsed into three categories in order to make a distinction between the levels of self-management among the sampled respondents. The results are illustrated in Table 6.

Table 3*Rating of Psychotherapists' Self-Management Competencies*

Self- Management Scores	Levels	Frequency (n)	Percentage
0-53	Low	12	5.7
54-71	Average	80	38.7
72-120	High	115	55.6
Total		207	100

Majority respondents (55.6%) scored high in self-management domain as shown in Table 6. A significant proportion (38.7%) of respondents demonstrated average levels of self-management. An insignificant number (5.7 %) had low levels self-management. In view of the current study results, it means that the psychotherapists tend to control and regulate to their emotions. This view is supported by Miyagamwala (2015) who asserts that if individuals are competent in self-management, they can ably regulate their own emotional state. In affirmation, Goleman (1998) adds that high self-management is necessary for a psychotherapist to control self in the event of scary client experience. The results above imply that more than $\frac{1}{2}$ of the psychotherapists are highly competent in self-management and less than $\frac{2}{5}$ others are averagely competent. Despite the contextual differences, this result corresponds with the Rorlinda *et al.*'s (2015) study in which it was reported that school counsellors among Malaysian schools have both average and high scores on the self-management domain. Similarly, the current study is consistent with Goleman (1996) findings, in which primary school counsellors scored moderately and high in self-regulation domain. Similar to the findings of the study, Baird and Kracen (2006) found that social workers at a non-governmental organisation had an above average ability to manage their own emotions. The study however contrasts Marshall's (2010) study which found out that principals scored low on self-management. Also the current study contradicts Goleman's (1996) study which showed secondary school counsellor obtained average

scores in self-regulation domain. The findings also contradict a study by Nasir, Mustaffa and Ahmad (2011) which showed that counselling teachers in Kulajaya, Johor had average level of self-management. The inconsistency in results may be attributed to the difference in tools used to collect data and sample size. In addition, the current study findings contradict previous research partly because of location, contextual, and institutional differences. The study was carried out in northern Uganda, which presents different contexts different from areas of the related research above.

Social Skills Scores

Social skills domain had six competencies namely; developing others, inspirational leadership, change catalyst, influence, conflict management and teamwork and collaboration. Each of the competencies had four items and therefore there are 24 items in this domain. The lowest score was 24 and the highest score was 120 in this domain. The psychotherapists were asked to rate themselves on this domain. Each of the items in the domain had the lowest score of one and highest score of five. Measures of central tendency were used as part of the descriptive statistics for analysis of ECI 2.0 responses. The median, minimum, and maximum were used to specifically describe psychotherapists' competencies in social skills as shown in Table 7.

Table 7

Summary of Findings on Psychotherapists' Social Skills

Domain	Competency	Sample size	Median (IQR)	Min.	Max.
Social skills	Developing others	207	15.0 (12.0, 17.0)	6.0	20.0
	Inspirational Leadership	207	14.0 (11.0, 16.5)	6.0	20.0
	Change catalyst	207	15.0 (12.0, 16.0)	7.0	20.0
	Influence	207	15.0 (12.0, 16.0)	7.0	20.0
	Conflict management	207	15.0 (11.0, 17.0)	6.0	20.0
	Teamwork	207	15.0 (11.0, 17.0)	6.0	20.0
	Total	207	92.0 (68.0, 98.0)	48.0	112.0

The results in Table 7, show that median score was 92.0 (IQR: 68.0, 98.0) with a minimum of 48.0 and a maximum of 112.0. The minimum score for this social skills domain appears far to the right of the minimum value of 24 that was anticipated in case a respondent scored strongly disagreed. Specifically, the median scores are high as regards psychotherapists' social skills in developing others, inspirational leadership, change catalyst, influence, conflict management and teamwork. The high scores for the social skills domain also demonstrate higher emotional intelligence among the respondents. This was later categorised into three in order to separate between the levels of social skills among the sampled respondents. The results were as shown in Table 8.

Table 4*Rating of Psychotherapists' Social Skills*

Social- Skills Scores	Levels	Frequency (n)	Percentage
0-53	Low	14	6.7
54-71	Average	48	23.2
72-120	High	145	70.1
Total		207	100

Table 8 indicates that 70.1% of respondents scored high on social skills domain and 23.2%, had average levels of social skills domains and 6.7% had low levels of social skills. The high scores in social skills domain imply that psychotherapists can collaborate with colleagues, have inspirational leadership skills, are open to change and are visionary. Application of the competencies of social skills domain by psychotherapists was evident from their rating. This implies that psychotherapists in the region are able to interact comfortably with others, persuade, negotiate and settle disputes amicably. This observation matches a view by Salovey and Mayer (1993) who argue that an individual with good social skills will be able to interact comfortably with co-workers, negotiate and settle disputes peacefully.

The findings of this study are consistent with Goleman's (1996) study in which primary school psychotherapists scored moderately and high in social skills domain. The findings also concur with the Rorlinda *et al.*'s (2015) study on emotional intelligence competencies among Malaysian school counsellors. The overall findings show that school counsellors had high scores on the social skills domain. This result also corroborates the Michele's (2011) report which indicated that principals of high achieving middle schools exhibited high levels of emotional intelligence. The finding on psychotherapists' self-rating in this domain support the ones by Cook (2006) who reported that principals studied had high levels of social skills domain. In addition, a study by Nasir, Mustaffa and Ahmad (2011) showed that counselling teachers in Kulajaya, Johor had high level of social skills as a domain of emotional intelligence.

The result of the current study however contrasts with several previous studies (Goleman, 1996; Marshall, 2010; Sharif, Zaidatul & Rashid, 2012). Sharif, Zaidatul and Rashid (2012) in their study on the relationship between the levels of emotional intelligence and personal development of secondary school counsellors in Johor, discovered that majority of the respondents had moderate level of social skills. Marshall (2010) found out in his study that social skills scores of the school principals were low, while Goleman (1996) also found out secondary school counsellor obtained average scores in social skills domain. The current study findings vary from such previous research partly because of location, contextual, and institutional differences.

Conclusion and Recommendation

The study showed that psychotherapists in northern Uganda have high emotional intelligence and a reasonable number had low levels of emotional intelligence. Therefore the study concluded that psychotherapists performed better in various aspects of life. They responded appropriately to different events that they would have to face on a daily basis. However, the rating of psychotherapists as average in emotional intelligence may be attributed to the training of psychotherapists which does not include such competencies. The study therefore recommends that there is need to promote emotional intelligence because it comprises of pathways that may help a psychotherapists to adapt

to change and manage adverse life experiences. In addition, on the basis of these findings, suggestions and recommendations were made to include emotional intelligence as an integral component of training and incorporate emotional intelligence intervention techniques to benefit psychotherapists in managing work related stress. There is need for a study to determine the relationship between levels of emotional intelligence and work related strains including compassion fatigue among psychotherapists.

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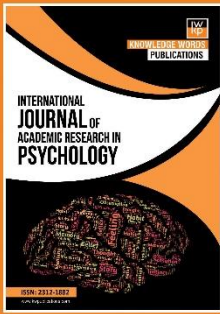
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Effect of Yogic Interventions on the Physical Fitness in Terms of Flexibility and Stamina (Cardio-Vascular Endurance) and its Resultant Effect on the Academic Achievement of High School Students

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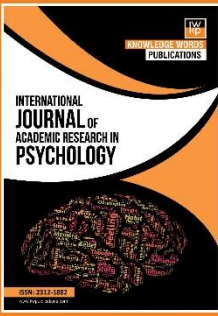
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Effect of Yogic Interventions on the Physical Fitness in Terms of Flexibility and Stamina (Cardio-Vascular Endurance) and its Resultant Effect on the Academic Achievement of High School Students

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Abstract

The gamut of the present experimental research was to examine the effects of yogic exercises on the physical fitness in terms of flexibility and endurance and their resultant effects on the academic achievement of high school students. A representative sample of 200 students (100 males and 100 females) of high school level was drawn randomly from two high schools and were further divided into two groups i.e., experimental and control group each consisting of equal number of males and females. Yogic exercises were given to the experimental group for a period of three months. The control group was not exposed to the yogic training. A factorial design of 2x2x (2) with repeated measure on the last factor was employed to see the significance of difference between different means of experimental and control group in both the genders. Results indicated that flexibility and endurance was improved significantly and thereby improved the academic performance of the students significantly for the experimental group irrespective of gender. The study has important implications for school students for employing yogic exercises in their school curriculum.

Keywords: Yogic Interventions, Fitness, Flexibility.

Introduction

Yoga is one of the six orthodox Indian philosophies. Its philosophical and metaphysical aspects may be accepted, or denied but there is no doubt about its rewards in the form of better health, vitality and psycho-physical poise. Yoga has now been recognized not only as a routine practice for

general well-being, but also a therapeutic agent for certain diseases. Yoga is traditionally recognized as a spiritual system in which the interdependence of mind and body is emphasized.

The problem school students facing today are lack of concentration in their studies, poor eye hand co-ordination, poor information processing skills and poor physical health, which results ultimately to poor scholastic achievement. Yoga culture is the dire necessity for bringing psycho-physiological equilibrium aiming to achieve positive physical and mental health. Yogic philosophy has always believed in the integration of body and mind.

The present study was conducted to observe the effect of yogic exercises on the physical fitness and academic achievement of high school students. First of all, to achieve these objectives, students of standard's -8th, 9th and 10th from two high schools of district Solan in Himachal Pradesh were selected. A representative sample of 200 students, comprising of 100 male and 100 females were randomly selected. They were further divided into an experimental and a control group respectively. Yogic exercises were given to experimental group.

Three variables were taken into account for the present Study (1) flexibility, (2) Stamina in terms of cardio-vascular endurance and (3) academic achievement. Then the selected sample was assessed on selected variables. Their academic achievement score was taken from school records. A pre and post study was done to see the effect on selected variables.

Many modern scientists have recognized the fruitfulness of research efforts in the field of yoga especially for the school students. Asanas and pranayama key practices in yoga emphasize relaxation of body and mind and bring the psycho-physiological equilibrium. Asanas work on tone and equilibrium at physical level and one experiences stability, comfort, ease and promotion of health and fitness. Asanas are claimed to give rise to develop stability, steadiness and lightness of the body.

Pranayama have beneficiary effect on cardio-pulmonary efficiency as oxygen consumption, carbon dioxide output ventilation and oxygen content have been affected for better functioning. The practice of asana and pranayama prepare background for psycho-physiological fitness. The word "Yoga" comes from the Sanskrit root 'yuj' which means "to yoke" or "to unite", common meanings include "joining" or "uniting", and related ideas such as 'union' and "conjunction" (Apte, 1965). In the spiritual sense, yoga means union of the mind with the divine intelligence of the universe. Yoga aims through its practice to liberate a human being from the conflicts of duality (body-mind), which exists in every living thing (Iyengar, 2004). One of the yoga practices, Hatha Yoga, is based on the knowledge, development and balance of psycho-physical energies in the body and can, therefore, be referred to as the "psycho-physical yoga" (James, 2002).

In Indian philosophy, Yoga is the name of one of six orthodox philosophical schools (Radhakrishnan, 1967). The sage Patanjali is regarded as the founder of the formal Yoga philosophy. Many Hindu texts discuss the aspects of Yoga and praising it to enhance the good health and prosperity including, the Vedas, the Upanishads, the Bhagavad Gita, the Yoga Sutras of Patanjali, the Hatha Yoga Pradipika, the Shiva Samhita and the Gherand Samhita (Chatterjee et al., 1984). Major branches of yoga include: Hatha Yoga, Karma Yoga, Jnana Yoga, Bhakti Yoga and the Raja Yoga (Swami Ram, 2008). Through desireless action in the world, one can attain moksha, the supreme goal of life. Yoga is the state of equilibrium of body, mind and intellect.

Yoga in Vedas

When all the five senses with mind are dissolved in soul then that state is called yoga. The sage Patanjali is regarded as the founder of the Yoga Sutra. Patanjali's yoga is known as Raj yoga, Patanjali defines the word "Yoga" in his second sutra, which is the definitional sutra for his entire work.

Declined health and fitness status among school children is a significant clinical and social problem. The problems that school students are facing today are lack of concentration in their studies, poor information processing skills and poor physical health, which results ultimately to lower scholastic achievement. Many recent investigations indicate increased trend of severity of health problems more so in terms of fitness among school children that affect their overall working capacity. Thus, it becomes necessary to enhance the cognitive functioning, information processing skills and health related physical fitness of high school students. This enhancement would then lead to an improvement in academic achievement.

Yoga culture is the dire necessity for bringing psycho-physiological equilibrium aiming to achieve positive physical and mental health. Considering the above facts, the investigators intended to find out whether training in yoga would help to improve the specified physiological functions like flexibility and stamina in terms of cardio-respiratory endurance, which are prerequisites for a healthy mind.

In this era, students generally complain of lack of concentration in studies resulting in under-achievement. The reason behind this is the distorted and scattered attention leading to poor concentration and poor academic achievement. So, the present endeavour has been designed to observe the effect of yogic practices such as asanas, pranayama, meditation, Om chanting and tratka in the enhancement of flexibility, stamina and academic achievement of students.

Keeping these facts in mind the present study has following aims and hypotheses:

Aims

- To assess the effect of yogic exercises on the flexibility of high school students.
- To assess the effect of yogic exercises on the stamina (cardio-vascular endurance) of high school students.
- To assess the effect of yogic exercises on the academic achievement of high school students.

Hypotheses

- Yogic exercises will enhance the flexibility of high school students.
- Yogic exercises will enhance the cardio-respiratory endurance of high school students.
- Yogic exercises will enhance the academic achievement of high school students.

Methodology

A factorial design 2x2x (2) with repeated measure on the last factor was employed for the present study. A representative sample of 200 students was divided into two groups i.e., experimental and control each consisting of equal number of males and females. Yogic exercises were given to the experimental group for a period of three months. The control group was not exposed to yogic training.

Variables Selected

Independent Variable: Yogic Exercises

Dependent Variables: flexibility, stamina (cardio-respiratory endurance) and Academic Achievement.

Tools Used

➤ **AAHPERD technical manual for physical fitness variables.**

For assessing the physical fitness variables in terms of stamina (cardio-vascular endurance) and flexibility the AAHPERD, 1984 (American Alliance for Health and physical education, recreation and dance) technical manual for health related physical fitness test was used.

➤ **Academic Achievement**

The total marks obtained by the students in their previous annual examination were used as the measure of academic achievement.

➤ **Statistical Analysis of Data**

At the initial stage, the values of mean of all the variables were computed to see the difference of pre scores and post scores on each variable. At the second stage ANOVA was applied to know the significance of difference among group, gender, and between to test conditions i.e. pre-testing and post-testing.

➤ **Yogic Intervention**

Following yogic exercises were given to the experimental group for a period of three months.

Asanas: Surya Namaskar with mantras.

Standing Postures: (a) VRIKSHASANA
(b) TRIKONASANA
(c) TADASANA

Sitting Postures: (a) SUKHASANA
(b) PADMASANA
(c) SIDDHASANA
(d) MANDUKASANA
(e) PASCHIMOTTANASANA

Lying Down Postures: (a) BHUJANGASANA
(b) DHANURASANA
(c) SHALABHASANA
(d) SARVANGASANA
(e) SHAVASANA
(f) MAKARASANA
(g) DRADASANA

Pranayama: (a) ANULOMA VILOMA

(b) NADISHODHANA

(c) BHASTRIKA

(d) BHRAMARI

(e) KAPALABHATI

Relaxation: Shavasana or Yog Nidra, Om recitation and Meditation.

Results

A repeated measure ANOVA 2x2x (2) was computed for concentration and academic achievement for the groups viz. experimental group and control group and two sexes. The results of F-test are as follows:

Flexibility

Group and Flexibility

The F-ratio for the main effects of group viz. Experimental and Control group is 47.42** $p < .01$ under error A. This indicates the significant mean difference with mean ($M = 65.29$) for experimental group and mean ($M = 60.00$) for control group. The results show the superiority of Experimental group over the Control group.

Gender and Flexibility

The F-ratio for the main effects of gender is 10.28** $p < .01$ under error A indicating the significant differences in the flexibility of boys and girls with mean value ($M = 63.71$ for females) and mean ($M = 61.57$ for males). The results show the better flexibility in females as compared to the males.

Yoga and Flexibility

The F-ratio for the effect of yoga on flexibility is 14.67** $p < .01$ under error B indicating the positive and significant effect of yoga on the flexibility of students (males and females) in Experimental group at the post test ($M = 65.59$) as compared to the Control (non-treatment) group at the post test ($M = 59.60$).

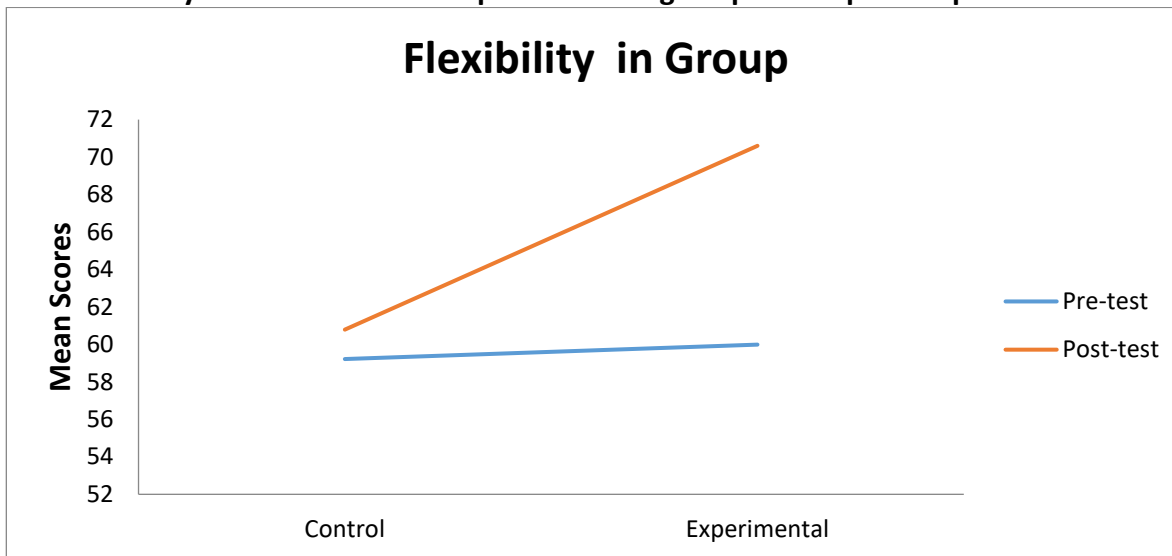
Interaction Effect of Group X Yoga on Flexibility

It is significant at .05 level with F-ratio being 5.76* under error B which depicts that in the post-test group, the effect of yoga is highly pronounced in the Experimental group showing the significant difference between the Control and the Experimental group, whereas, the two groups are almost similar at the pre-test level i.e. the level of flexibility remains almost the same (see figure 1 and Table 1).

TABLE-1: Mean Contingency Table

Test Conditions	Control	Experimental
Pre-test	59.22	59.99
Post-test	60.79	70.60

Fig.1: Flexibility in control and experimental group from pre to post test

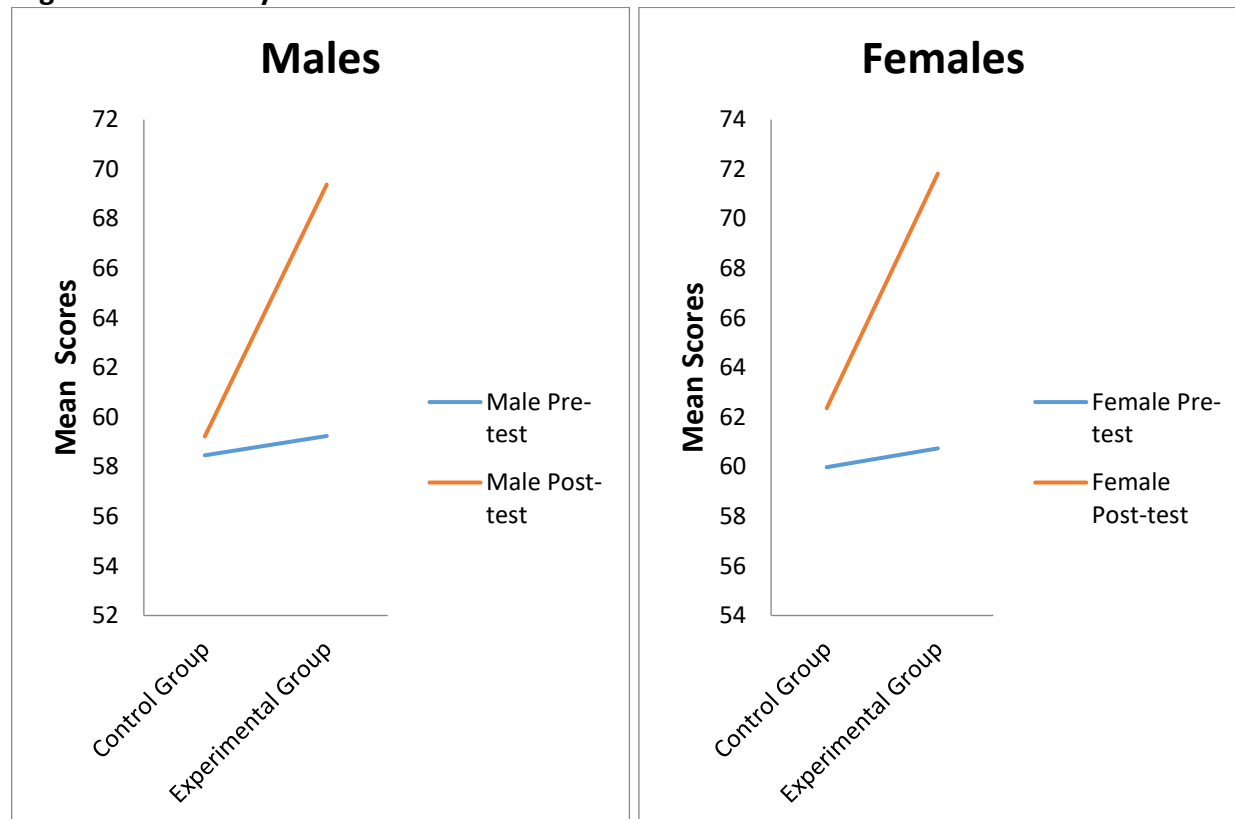


Interaction Effect of Gender X Yoga on flexibility

Almost identical effect of Yoga could be seen in both the genders in terms of flexibility but the effect is more pronounced in the girls with F-ratio being 6.62** p<.01 under error B. (See figure 2 along with Table-2).

TABLE- 2: Means Contingency Table

Gender	Test Conditions	Control Group	Experimental Group
Males	Pre-test	58.46	59.24
	Post-test	59.22	69.38
Females	Pre-test	59.98	60.74
	Post-test	62.36	71.82

Fig. 2: Flexibility in Males and Females from Pre to Post-test.

Stamina (Cardio-vascular Endurance)

Group and Stamina

The F-ratio for the main effect of group under error A is 16.00**, $p < .01$. This indicates a significant mean difference with mean value ($M = 2.44$) for the experimental group and ($M = 2.47$) for the control group.

Gender and Stamina

The main effect of gender is 148.00 $p < .01$ under error A. This indicates a significant gender differences

Interaction effect of group x gender on Stamina

The F ratio for the two factor interaction of group x gender is 2.01 which is not significant.

Intervention effect under error B.

The F-ratio for the main effect of intervention i.e. yogic exercises is 9.84 $p < .01$ under error B. This indicates a positive and significant effect of intervention on stamina of student at the post-test ($M = 2.32$) as compared to the pre-test ($M = 2.59$).

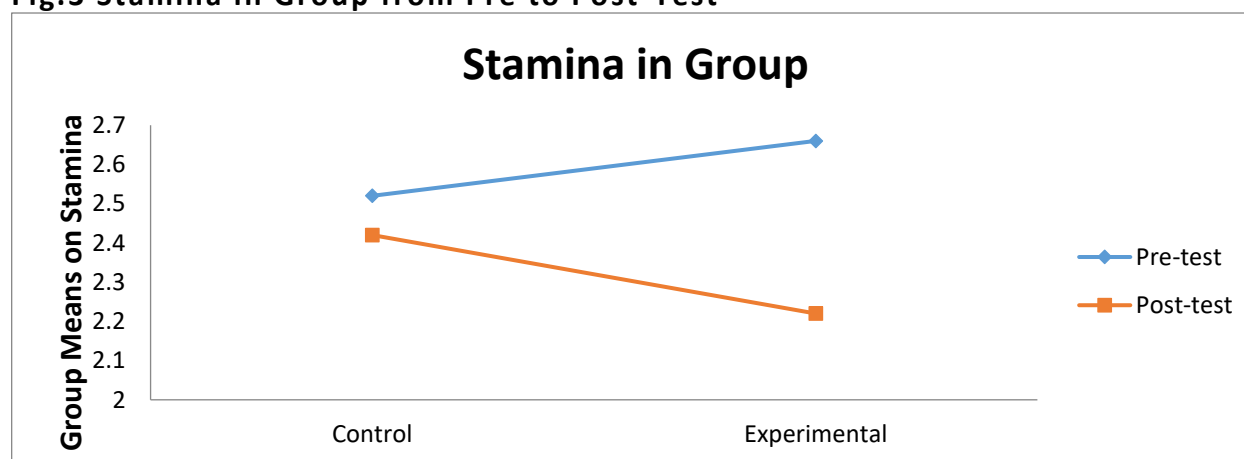
Inteaction Effect of Group × Intervention under Error B.

The F- ratio for the interaction effect of group x intervention is 9.56 <.01 under error B. This indicate a significant mean difference with mean value (M=2.44) for the experimental group and (M=2.47) for the control group.

TABLE- 3: Group Means of Stamina

Test conditions	Control	Experimental
Pre-test	2.52	2.66
Post-test	2.42	2.22

Fig.3 Stamina in Group from Pre to Post-Test



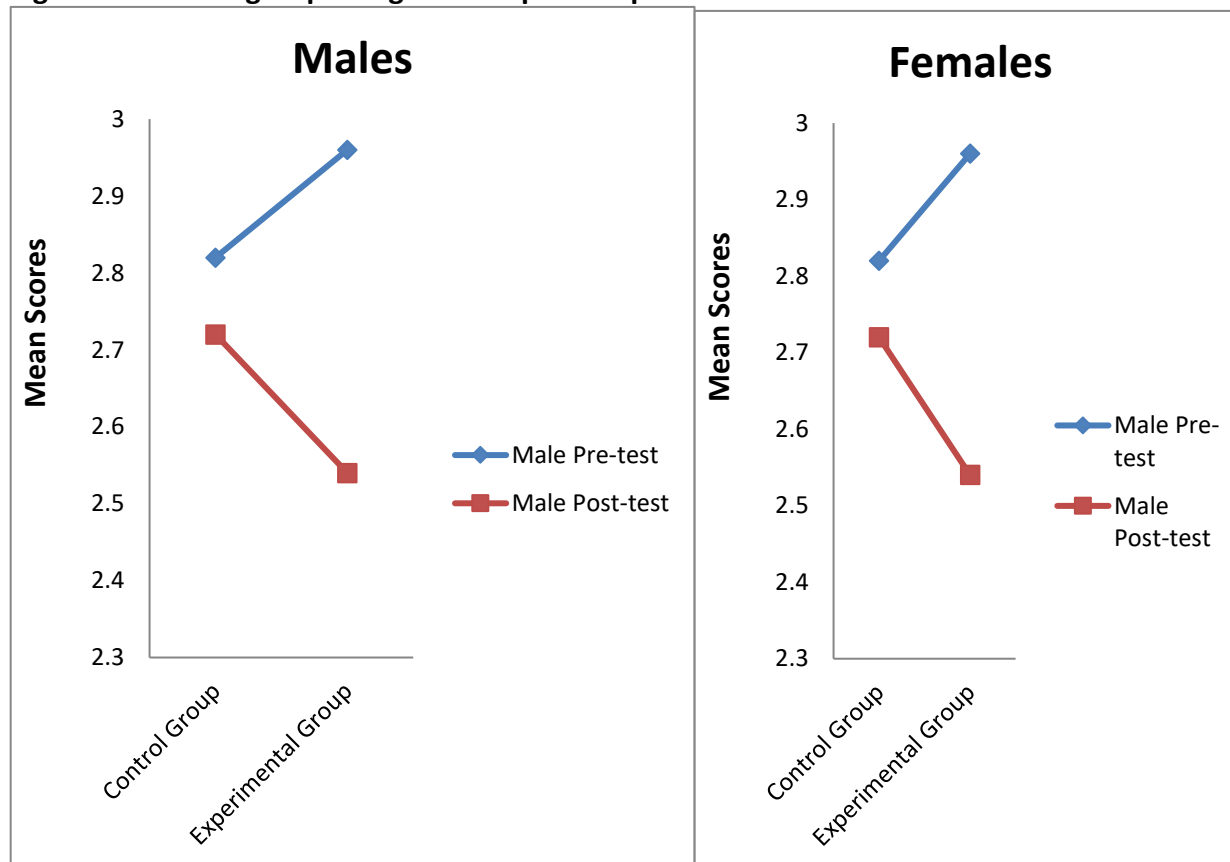
Interaction Effect of group x gender x intervention on Stamina.

The F ratio for the interaction effect of group x gender x intervention on Stamina is 8.50 P< .01. This depicts that both boys and girls of the experimental group have gained significantly from the intervention programme but the boys have gained slightly more as compared to girls.

TABLE: 4
Means of group and gender in pre-and post-testing

Gender		Control Group	Experimental Group
Males	Pre-test	2.23	2.37
	Post-test	2.13	1.91
Females	Pre-test	2.82	2.96
	Post-test	2.72	2.54

Fig 4: Stamina of group and gender in pre and post-test conditions



Academic Achievement

1. Group & Academic Achievement

On this variable, ANOVA has yielded a significant F-ratio of 129.64** under error A, the main effect of group indicating the significant mean differences with Experimental group showing the superiority of mean (M =55.31) over the Control group (M= 50.66) on academic achievement.

Gender and Academic Achievement

On this variable, ANOVA has again yielded a significant F-ratio of 9.32* p<.05 under error A for gender, indicating the significant mean differences between the

sexes with females outperforming (M =54.31) the males (M =51.66) in their academic achievement.

Yoga and Academic Achievement

The F-ratio for the treatment i.e. yoga is 4.86** p< .01 under error B indicate that yoga has significant and positive effect on the academic achievement of the students in yogic i.e. intervention group (experimental group) at the post test with M= 55.93 as compared to the non-treatment group control group with M = 50.04).

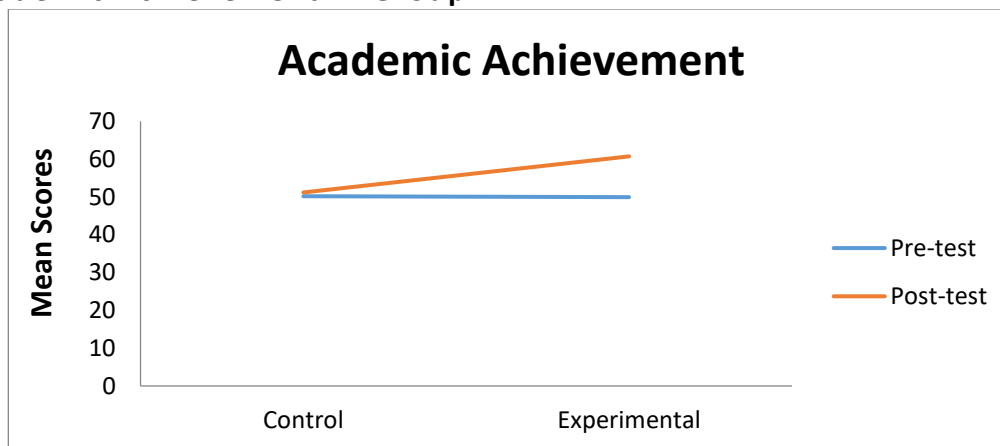
Interaction Effect of Group X Yoga on Academic Achievement

Significant differences in academic achievement between Control and Experimental group at the post-test appear obviously due to the yogic intervention with F-ratio being 6.87** p<.01 under error B as compared to the pre-test where the level of academic achievement remains almost the same for both the groups. Thus, the curves clearly reveal that the effect of yoga is highly pronounced in the Experimental group as compared to the control group at the post-test (see figure 3 along with table 3).

TABLE- 5: Means Contingency Table

Test conditions	Control	Experimental
Pre-test	50.17	49.92
Post-test	51.16	60.70

Fig. 5 Academic Achievement in Group

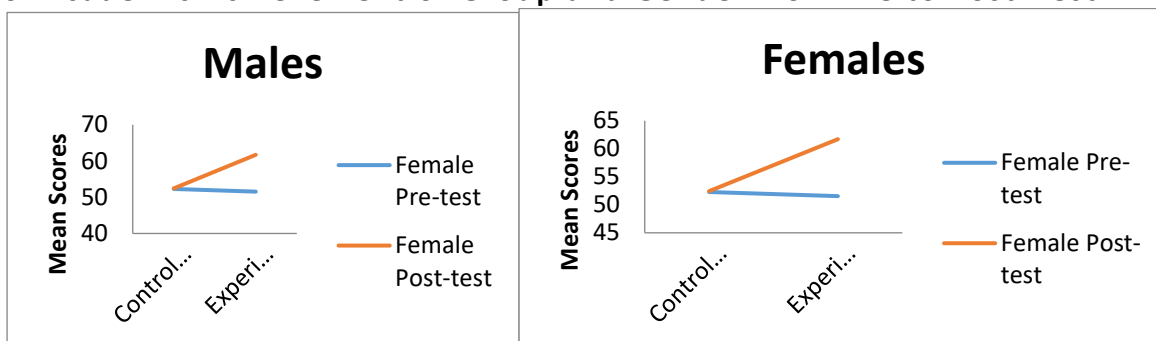


Interaction Effect of Gender X Yoga in Academic Achievement

The interaction reveals that both the genders are almost similar at the pre-test but at the post-test level the yogic effect is more favorably pronounced in girls.

TABLE- 6: Means of Group and Gender in Pre-and Post-testing Conditions

Gender	Test Conditions	Control Group	Experimental Group
Males	Pre-test	49.76	48.30
	Post-test	49.90	59.70
Females	Pre-test	52.28	51.54
	Post-test	52.43	61.70

Fig 6: Academic Achievement of Group and Gender from Pre to Post-Test

Discussion of Results

The present results concerning the variables of flexibility, stamina in terms of cardio-vascular endurance and academic achievement have been rationalized in terms of the hypotheses that experimental group will outperform the control group due to yogic interventions/exercises. These results could best be depicted through the two-way interaction effects of groups x yoga and gender x yoga on flexibility, stamina in terms of cardio-vascular endurance and academic achievement respectively.

On the variables of flexibility, stamina in terms of cardio-vascular endurance and academic achievement, the two way interactions between group x yoga have been found to be significant at .01 level under error B. See results section for F-ratios and can be confirmed through the curves (figure 1,3,5 & 6 tables 1,3,5 & 6). Both the interactions reveal that the Experimental group (treatment group) has been benefited more in terms of flexibility and stamina (by 20.18%) and academic achievement (by 16.48%) obviously due to the yogic treatment. Hence, the hypotheses stand confirmed the reason being that the effect is profound and tremendous. The rationale for the yogic treatment could be offered in the following manner. Yogic exercises attain steadiness of body and mind, a feeling of lightness, suppleness and psychophysical poise (Rama etal, 1976 and Harvey, 1988).

Advanced Asanas and Yoga postures evoke feelings of sublimity, inner tranquility, psychic strength and purity of consciousness. Selvamurthy (1986) observed that the regular practice of postures and breath control improved cognitive ability of the brain including concentration, memory and psychomotor performance. The scientific breathing (Pranayama) is extremely beneficial to lungs and the proper functioning of the blood as it brings oxygen and energy to every cell, cleans the organism and expels the toxins. Pranayama followed by selected Asanas further tones the muscles,

helps in removing the disease, increases the elasticity of the body and lung tissues, purifier external and internal organs and maintains the highest standards of physical and mental efficiency by increasing the individual's mental power, happiness vigour and vitality. Just as the goldsmith removes the impurities of gold by heating it in the furnace and the blowpipe vigorously, so the impurities of body and mind can be removed by the practice of Pranayama e.g. Kapalabhati and Bhastrika remove the phlegm, cleans the nerve channels, purify the bloodstream, regenerates the liver, spleen and pancreas, warms the body and tones up the entire nervous system and Asanas stimulate and tone up the endocrine glands. The Asanas viz. Siddhasana, Swastikasana, Padmasana etc. increase the psychophysical energies by giving the body inner harmony, stimulating the nervous system, strengthening the muscles of the chest, spine and legs, improving the digestive system and also developing the stamina.

Dradasana and shavasana have been found to be the best exercises for relaxation and rest. They ward off fatigue, increase mental repose, improve immediate memory, tone up nervous system and are highly beneficial for those who suffer from headache of sleeplessness (Kulkarni, 2002). Bagga and Gandhi (1983) found that the practice of Shavasana increases galvanic skin resistance (GSR) significantly which is indicative of the deactivation of the SNS and a dominant PNS. Hence, yogic exercises bring about purity and balance in the functioning of sympathetic and parasympathetic activity.

Similarly, the 2 way interaction effect of gender x yoga have also turned out to be significant at .01 level under error B on the variables of concentration and academic achievement. (For details see results section and the interaction curves in figures 2 & 4 and tables 2 and 4) revealing the significant and positive effect of yoga in both the genders. The interaction curves further reveals that the effect of yoga is more favorably pronounced in the girls at the post-test with 14.2% and 10.42% of enhancement to that of boys who have shown 7.60% and 5.16% of enhancement in the level of flexibility, stamina and academic achievement.

Thus, the results have shown that both the sexes have shown improvement due to yogic exercises but the boys have been benefited more may be due to their bodily disposition and early socialization practices due to which they take any kind of task seriously and do not get easily distracted, rather remain focused (Sharma & Malhotra, 2000) and hence make the best use of the yoga classes which get reflected in their enhanced concentration and academic achievement. Overall, there is a powerful effect of yoga irrespective of age, gender, caste or creed (Sharma & Singh, 2014).

In a nutshell, it can be said that yoga alone offers a relaxed outlook in life. A rested mind and a rested body are the best kind of health insurance. It is from the rested mind that the entire beneficial cycle starts. In psychoanalytical language yoga helps us to conquer the neurotic personality of our times and makes the mind peaceful and happy. Chanting of OM stimulates the brain cells resulting in their reactivation and ultimately leading to better flexibility and stamina (Ghosh, S.K. 2003). It is rightly said that if you wish to change the society, first change yourself and through yoga man can find his zest for life. Yoga bestows on man healthier and happier life. Yogasanas give suppleness to the spine tree of our life by calming the tired nerves, relaxing the muscles, revitalizing the organs and nervous system thereby increasing the power of flexibility and cardiovascular endurance ultimately leading to achievement in any sphere. These exercises stimulates the brain cells resulting in their activation and ultimately leading to better concentration

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