A Study on Effects of Selected Yogic Practices on Psychological Variables of Deaf and Dumb Children

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Abstract

In the present study random sampling procedure was followed. A group of hundred deaf and dumb children, age ranged from fourteen to twenty years, was selected randomly from Mata Prakash Kaur Hearing and speech Handicapped Welfare Center Karnal and Rotary Club School for Deaf, Ambala, Haryana. The subjects were equally divided in two groups that are experimental and control groups, In this way pre – test, programmes and post- test examination were conducted for nine weeks. In these nine weeks, trained subjects appeared for the pre-test and post test. During pre-test, physical fitness of deaf & dumb subjects were recorded and after this pre-test the 50 deaf & dumb students were given yogic practices programme for nine weeks according to the schedule. Mental Health Battery by Arun Kumar Singh was used. The results of t-test revealed that the significance of difference between post tests mean scores of experimental and controlled groups on all the psychological variables. Amongst the variables has been shown statistical significance differences (P<. 05 and P<. 01) are found on emotional stability, over all adjustment, with t = 4.43, and 1.96, respectively. Whereas no significant difference have been found on autonomy and security insecurity with t = 1.38 and 0.52 which is not significant even at 0.05 level. While the group recorded improvement in autonomy and security insecurity (M 8.70 and 8.14 in comparison to post test mean scores of controlled group 8.34 and 7.84) respectively.

Key Words: Physical fitness, deaf and dumb children & Yoga

Introduction

Yoga is not a religion but a metaphysical doctrine or a philosophy. It provides amazing improvement towards health, personal appearance and youthfulness, which often seems to be magical and sometimes miraculous. It also brings balance and harmony between the body and mind. It is considered to be a system of exercises of asnas, shatkarma and pranayams, which indirectly influences respiration, posture of the body, B.P, cardio-vascular capacity, muscular capacity and regulation of breath. Moreover yoga as scientific system of exercise has become very popular throughout the world due to its utility. Physical education has also realized its importance and tried to explore the effects on motor ability. Under modern concept, health, body deformities, psychological and some physiological problems have been being treated by yoga. Hence it is evident that we can treat a psychic as well as the physical & physiological problems through yoga.

In present study yoga is mainly associated with the physical fitness of deaf and dumb children. The need of yoga in present time is to build a healthy and mentally alert citizen, a strong nation by developing general fitness of citizens with yoga activities like yogic asana. There are so many studies available regarding effect of exercises on various components of motor abilities of normal person. However, very few studies have been conducted regarding

yogic practices related to physical, psychological and physiological variables (vital capacity, pulse rate, flexibility, B.P., cardio vascular endurance, maximum Breath holding, maximum expiratory pressure, mental health, self-confidence, flexibility, agility, speed, endurance and strength) of deaf and dumb children. So the present research is undertaken keeping in mind the problem related to deaf and dumb children.

"The orientation provided by survey of related literature is helpful in making a straight forward statement of need for investigation and of avoiding two extremes of apologetic attitudes and exaggerated claims" C. V. Goods. An important crucial aspect of a research project is the survey of related literature, which means to locate, to read and evaluate the past, as well as current literature of research concerned with the planned investigation.

It is important to acquire comparative information about what has been done in the particular area from which he or she intends to take up a problem. Review of related literature serves to avoid unnecessary worn put problems and helps to make progress towards solution of a new one. The review of literature is a time consuming but fruitful phase of investigation which provides familiarity with the literature on any problem help to the students to discover what is already known, what others have attempted to find out, what methods of attack have been promising or disappointing or solved." In other words, the related literature is worthwhile for an effective piece of research.

Larson and Yocom (1951) surveyed physiological research and tested 10 components of physical fitness like (I) Resistance to disease (ii) muscular Strength; (iii) cardio vascular respiratory endurance; (iv) muscular power;(v) Flexibility; (vi) Speed; (vii) Agility; (viii) co-ordination; (ix) Balance; (x) Accuracy.

Mookerjee et al. (1977) conducted a research study "Impact of yogic exercises on the Indian Hockey team – Winner of third World Cup, 1975." The study showed reduction of tension and stress and the players exhibited a relaxed state, which steadily improved their performance in the field. Yogic exercises contributed towards the decrease of pulse rate resting metabolism and certain lungs parameters.

Lohan, Usha (1999) made a study effect of selected yogic practices on physical and physiological variables of children and reported that yogic practices effected physical and physiological variables significantly.

Brown et. al. (1975) studied effects of stressor on a specific motor task on individual displaying selected personality. Result showed that both self-confidence and emotional stability were related to ability to withstand stress. Stressor less affected subjects was high in self-confidence or emotional stability than were the subjects low in self-confidence or emotional stability.

Deshmukh (1971) reported 82.5 percent and 77.58 percent improvement in his study on 106 and 116 patients respectively, after undergoing yogic practices. These studies showed enough justification to carry on more elaborate and planned investigation on the value of yoga in the management of psychological, psychotic and physiological disorder.

Gharote (1971) Forty-four adolescent high school boys from V.P.S. High school Lonavala served as subjects in this study. One of the group was selected as experimental group which was trained for the a period of two months in the yogic exercises. The experimental period was a season. The classes were held six days a

week, each week consisting of approximately 30 minutes. The total working days were fifty. The effects of two months yogic training was retained at least for another period of two months, even when the practices were discontinued. This leads to the assumption that a continued practice of yogic exercises may contribute in the established patron of emotional stability. Short term yogic training helps automatic balance score to shift towards increased parasympathetic functioned.

Mohinder (2000) had reported that regular practice of yoga asana improved the emotional satiability. The comparison of pre and post test conditions of experimental group has demonstrated that the practice of yoga asana has increased emotional stability.

Cattell and Scheir (1963) have stated that it is what comes closest to bring the common element in all forms of mental disorder; the lack of anxiety (Low scores on the scale) thus becomes an excellent operational definition of mental health the above statement is confirmed by the results of sub factor of anxiety. In present investigation the subjects have shown non anxiety (Low Scores) and have tried to integrate their behavior, the capacity tensions in a suitable way, (lack of depression and guilt as a result of ego pressure). All these signs indicate stability, security and mental health and subjects have shown the social emotional adjustment. The results of covert and overt anxiety shows that the subjects were more conscious about their anxiousness, and the low score on total anxiety confirms that they have trait to control their anxiety after yogic practice.

Gharote (1978) defined yoga as practices consisting of asana, paranayams, bandhas, mudras and kriyas. Asana are special pattern of postures, involving static stretching, leading to stability of body and mind: Paranayams control an autonomic process of respiration, Bandhas and mudras control the semi-voluntary muscles of the body, Kriyas are cleansing process controlling and reflex mechanisms.

It is rightly observed by certain researchers (Partap (1968), Gharote (1971) that the aim and objectives of yoga as Patanjali puts it is the means of controlling oneself against irrational conduct and ultimately provide emotional stability. In yoga the various practices are claimed to be better suited to bring about psychological, physiological equilibrium and emotional stability and it is observed that these practices are helpful in resolving conflicts and consequently contribution to the emotional stability calmness.

Methodology

In the preceding chapter, a survey of related literature is done based upon the available literature, within the reach of the researcher. In the present chapter the design of the study is being presented. An attempt had also been made to specify the subjects, sample, the procedure or methodology for the collection of data and at the end, statistical methods were employed.

In the present study random sampling procedure was followed. A group of 100 deaf and dumb children was selected randomly from the Mata Prakash Kaur Hearing & Speech Handicapped Welfare Center, Karnal and Rotary Club School for Deaf, at Ambala (Haryana).These students went through yogic exercises (for nine week) through training programme under strict supervision of the researcher and deaf and dumb teacher. However, for present study 100 students were selected from the students studying in these schools. The age group ranged from12 to 20 years. These students were equally divided in two groups, each consisting of 50 students.

Selection of Training Practices: Experimental group practiced following asana and paranayams during the training.

Asana

Uttanpadasana (double legs raising).
Sarvangasana (The shoulder stand)
Halasana (The Plough).
Matsyasana (The Fish).
Chakerasana (The Wheel).
Ustrasana (The Kneeling Wheel).
Suptvezrasana (The Kneeling Pose).
Ardhamatsyenderasana (The half Spinal Twist).
Padmasana (The Lotus).
Vazerasana (The Kneeling).

Pranayama:

Anuloma Viloma.
Surya Bhedana.
Chandra Bhedana.
Shitali
Sitkari.

Design of the study

The subjects were divided into two groups, one was controlled and other experimental. Each group had 50 deaf & dumb children. In this way pre – test, programmes and post- test examination were conducted for nine weeks. In these nine weeks, trained subjects appeared for the pre-test and post test. During pre-test, physical fitness of deaf & dumb subjects were recorded and after this pre-test the 50 deaf & dumb students were given yogic practices programme for nine weeks according to the schedule.

The subjects exercised those yogic practices during morning and evening hours. They exercised these yogic practices under proper guidance with help of deaf and dumb teacher.

Experimentation

The process of experimentation passed through following procedure. The sample of 100 students was divided in two equal groups of 50 students each. The groups were equaled on the basis of age randomly. The groups were: the groups were named experimental and control. Each of these groups were presented and post tested on the selected variables of psychological fitness. A training programme of nine weeks having 2 session of one hour each in a day was organized to give practice of asana and paranayams.

Administration of the test

To administer all the tests cooperation had been seek from many quarters. The subjects chosen for due research, were students of Mata Prakash Kaur Hearing and Speech Welfare Centre Karnal and Rotary School for Deaf Ambala. First of all permission was taken from Assistant Director of the Centre and Principal of the School to conduct experiments on the subjects. As the students had to attend classes also, dates and timings were settled in advance. Before the start of training all the 100 students were pre tested on psychological fitness.

Tools used

Keeping in view the research criteria of availability, suitability, reliability and validity the following tools were used to collect the data. To test the Psychological Fitness: Mental Health Battery by Arun Kumar Singh was used.

Statistical analysis of Data

The data obtained through random sampling was complied and tabulated variable wise and group wise. The statistical analysis was done on computer. At the initials stages, the value of means standard deviations, t- ratio of all the variables were computed to know the level of significance of the difference of pre and post test mean scores of each variables

At the second stage, analysis of variance was applied to know the significance of difference among various exercises groups against each variable where the differences were found significant at 0.05 and 0.01 level of confidence, the t-test was applied and results were tabulated to know the

level of significance of difference among various groups. A detailed computation is given in the form of tables and graphical presentation.

Results and Discussion

In the present part analysis and interpretation of the data and results obtained through the application of statistical analysis are presented. The data has no utility unless they are analyzed and interpreted by statistical techniques. Analysis of data means mathematical treatment of tabulated material in order to determine inherent values and to draw empirical inferences. It involves breaking up of complex factors into simpler parts and putting them in new arrangement for the purpose of investigation. This part is devoted to the comparative results of two groups: experimental group and controlled group on selected physical and psychological variables. The results have been discussed in three sections. Section I deal with the statistical description of pre test and post test scores of experimental and controlled groups. Comparative results of experimental and controlled groups of this study on the psychological variables have been discussed in section II. In section III various groups have been compared variable wise with the help of t-ratio.

Table No. 1: Significance of Difference between Pre Test Mean Scores of Experimental and Controlled Groups.

N=50	Pre experimental group		Pre controlled group		t-value
Variables	Mean	S.D.	Mean	S.D.	
Emotional stability	**7.40**	**1.69**	**7.32**	**1.33**	0.26
Over All Adjustment	**18.76**	**3.39**	**18.48**	**3.35**	0.62
Autonomy	**8.34**	**2.28**	**8.26**	**1.33**	0.21
Security-Insecurity	**8.04**	**1.93**	**7.88**	**1.32**	0.50

Table No 2

Significance of difference between post test mean scores of experimental and controlled groups

N=50	Post experimental group		Post controlled group		t-value	Improvement %
Variables	Mean	S.D.	Mean	S.D.		
Emotional stability	8.38	1.27	**7.36**	**1.09**	4.43**	13.85
Over All Adjustment	19.68	3.01	**18.56**	**2.65**	1.96*	6.03
Autonomy	8.70	1.40	**8.34**	**1.25**	1.38	4.31
Security-Insecurity	8.14	1.32	**7.84**	**1.02**	0.52	2.35

* $P<0.05$ ** $P<0.01$

A perusal of table No. 1 reveals that the significance of difference between pre tests mean scores of experimental and controlled groups on all the psychological variables. Among the variables there is no statistically significant difference (P< .05) on self confidence, emotional stability over all adjustment autonomy, intelligence and mental health with t = 0.26, 0.62, 0.21 and 0.50.

In table No.2, significance of difference between post tests mean scores of experimental and controlled groups on all the psychological variables. Amongst the variables has been shown statistical significance differences (P<. 05 and P<. 01) are found on emotional stability, over all adjustment, with t = 4.43, and 1.96, respectively. Whereas no significant difference have been found on autonomy and security insecurity with t = 1.38 and 0.52 which is not significant even at 0.05 level. While the group recorded improvement in autonomy and security insecurity (M 8.70 and 8.14 in comparison to post test mean scores of controlled group 8.34 and 7.84) respectively.

As per the results depicted in table No. 2 experimental group shows statistical significance of difference between post tests mean scores of experimental and controlled groups on the psychological variables among emotional stability and over all adjustment. Whereas no significant difference have been found among autonomy and security insecurity. The experimental group has been recorded 4.31 % and 2.35 % improvement in autonomy and security insecurity respectively. Mall, Chaudhery (1978), Romanowski (1971) and Mohinder (2000) conducted studies and revealed a positive change in psychological fitness.

Discussion:

On the basis of the analyses of the results of table No. 2, following observation has been made On the basis of the analyses of data as given in table No. 6 it is found that the subjects of experimental group significantly improve the emotional stability after yogic practice. Comparison in mean scores between controlled and experimental the groups clearly shows that post test mean scores of experimental group has the higher means value i.e. 8.38 has recorded significant improvement in emotional stability of deaf and dumb children. Brown et. al (1975), Gharote (1971), Deshmukh (1971, 1972) and Hittlemen (1962-63) have confirmed the results. It is found that the subjects of experimental group significantly improve the overall adjustment after yogic practice. Comparison in mean scores between the groups clearly shows that post test mean scores of experimental group has the higher means value (i.e. 19.68) has recorded significant improvement in overall adjustment of deaf and dumb children. Whereas no significant difference have been found on autonomy and security insecurity with t = 1.38 and 0.52. Which is not significant even at 0.05 level. Comparison in mean scores between the groups clearly shows that post test mean scores of experimental group has the higher mean value i.e. 8.70 and 8.14 have recorded improvement after nine weeks yogic practices, further long term studies are required to examine i.e. six months or more.

Hence the findings of the present study have accepted the hypotheses Controlled and experimental groups are likely to differ on psychological fitness variables of deaf and dumb children Viz, Emotional stability, Over All Adjustment, Autonomy and Security-Insecurity

Experimental group of deaf and dumb children has been found to be significance difference on physiological fitness except autonomy and security insecurity. But improvement have been seen on these variables while compared pre test mean

scores of experimental group and post mean scores of experimental group. Experimental group has been found significant different on other variables i.e. emotional stability and over all adjustment.

Conclusions

With the analysis of data of the present study the following conclusions are drawn: Post test mean score of experimental group significant differ from post test mean scores of controlled group on psychological fitness variables i.e. emotional stability and overall adjustment. However yogic practices improve the emotional stability and overall adjustment significantly. Post test mean score of experimental group does not differ significant from post test mean scores of controlled group on psychological fitness variables i.e. autonomy and security insecurity. However yogic practices do not effect autonomy and security insecurity significantly. But 4.31 percent and 2.35 percent improvement has been observed on experimental group. These findings are consistence with the results of prior researches done by Brown et. Al (1975), Deshmukh (1971, 1972) and Hittlemen (1962-63) have been confirmed the results of present study.

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