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Effect of therapeutic horseback riding on self-esteem and physical self-efficacy of college women

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Abstract

Therapeutic horseback riding, a term which takes into account the relationship formed with the horse both while riding and on the ground, has been widely accepted among the professionals in the therapeutic field.

Purpose: The present study was developed to determine how 10 weeks of horseback riding programme can have an effect on self-esteem and physical self-efficacy on college women.

Subjects: Thirty women were divided into the horseback riding exercise and control group ($n = 15$ each).

Methods: The exercise was performed for 15 minutes, 3 times per week for 10 weeks. Post-exercise evaluation was performed after 10 weeks.

Results: t test revealed significant mean difference from pre to post test score on self-esteem and physical self-efficacy on college women.

Conclusion: self-esteem and physical self-efficacy improved in college women after 10 week Therapeutic horseback riding programme.

Keywords: Therapeutic horseback riding, self-esteem, physical self-efficacy

Introduction

As far back as the ancient Greeks it was recognized that riding was more than a means of transportation, it was a way of improving the health and well-being of people with a disability (NARHA, 2000). In the time following Hippocrates, medical professionals in Germany, Austria, Italy and England used horses in the rehabilitation of people with disabilities. At the 1952 Helsinki Olympic Games, Liz Hartel brought attention to riding for people with disabilities when she won the silver medal for Dressage, despite being paralyzed in both legs from polio (Crawley & Cawley, 1994) ^[11].

Equine-facilitated learning and equine-facilitated psychotherapy are emerging as new terms to describe methods of using horses to assist people with psychological and psychiatric disorders. (American Hippotherapy Association, 2007; Canadian Therapeutic Riding Association, 2009; NARHA, 2008). As a person works with an animal he is buffered from stress and anxiety (Hart 2000) ^[15] and is provided with relief and relaxation (Chinner, 1991). In addition, the joy of working with an animal can stimulate the person's desire to participate in activities and can increase one's range of social interactions (Hart, 2000; Barker and Dawson, 1998) ^[3, 15] while creating an ever-growing base of care and acceptance. (Hart, 2000; Ruckert, 1987) ^[15].

Riding programmes have been known to build or augment self-confidence, self-esteem (De Pauw, 1986) ^[12]. Self-esteem is the experience of being capable of meeting life's challenges and being and feeling worthy of happiness. Self-esteem is the primary force that helps Individual resist involvement in maladaptive behaviors making other poor choices that can have life-long effects.

Ryckman, Robbins, Thornton, and Cantrell (1982) ^[24] recognized the need to examine individual components that influence self-efficacy which subsequently resulted in the development of the Physical Self-Efficacy Scale (PSE). Physical self-efficacy is defined as one's perceived ability to perform a physical task and confidence in one's physical self-presentation (Farias-Tomaszewski *et al.*, 2001; Ryckman *et al.*, 1982) ^[13, 24]. Farias-Tomaszewski *et al.* (2001) ^[13] demonstrated that physical self-efficacy improved in a sample of adults with disabilities following a 12-week THR programme.

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This finding supports Bandura’s Social Cognitive Theory, which posits that self-efficacy beliefs are developed through direct mastery experiences (Bandura, 1977) [2].

Self-esteem may be defined as a positive or negative attitude toward oneself (Rosenberg, 1965) and the extent to which an individual has a sense of self-worth or self-value (Blascovich & Tomaka, 1991) [6]. According to Blascovich and Tomaka (1991) [6], self-esteem is considered a component of the self-concept, which Rosenberg (1965) defines as an individual’s cognitions and behaviors in reference to oneself.

Methodology

Participants: Thirty women students between the age group of 18-21 years, undergoing physical education course at Sports Authority of India, Lakshmbai National College of Physical Education, Trivandrum were selected to participate in the study. They were randomly assigned to an Experimental group-15 and a Control Group of 15 each. Only 15 women participated in the horseback riding programme. All the participants were active.

Instruments

The Physical Self-Efficacy Scale (PSE) is a 22-item self-report questionnaire which measures perceptions of physical skill level and confidence (Farias-Tomaszewski *et al.*, 2001; Ryckman, Robbins, Thornton, & Cantrell, 1982) [13, 24]. It consists of two subscales: Perceived Physical Ability (PPA), which includes 10 items with a possible range of scores from 10 to 60, and Physical Self-Presentation Confidence (PSPC), which includes 12 items with a possible range of scores from 12 to 72. The total range for the PSE is 22-132. The PSE is rated on a 6-point Likert scale, with higher scores indicating greater physical self-efficacy (Ryckman *et al.*, 1982) [24]. In terms of reliability estimates, Ryckman *et al.* (1982) [24] reported satisfactory test-retest reliability ($r = .80$) and internal = $.82$). The PSE was found to have good convergent validity, as α (consistency estimates it was moderately correlated with the Tennessee Physical Self-Concept subscale ($r = .58, p < .001$). Self-esteem is the result of self-evaluation, either positive or negative, that is related to one’s beliefs about their worth and value (Schutte *et al.*,

2002) [25].

Rosenberg (1989) [19, 20] purports that people are motivated to have high self-esteem, and that doing so is not an indication of egotism but rather of positive self-regard. The Rosenberg Self-Esteem Scale (RSE) is a 10-item self-report measure of global self-esteem related to perceived self-worth and self-acceptance (Rosenberg, 1965). Items are rated using a 4-point scale with responses ranging from strongly agree to strongly disagree (Rosenberg, Schooler, & Schoenbach, 1989) [19, 20]. The possible range of scores is 0 to 30, with higher scores indicating greater global self-esteem (Rosenberg *et al.*, 1989) [19, 20]. Rosenberg (1965) reported a test-retest correlation of .88. In addition, the RSE has been shown to have satisfactory construct validity with measures of depression and anxiety (Rosenberg, 1965).

Therapeutic horseback riding was held at Central Institute for Mental Retardation, Trivandrum. The sessions were held thrice a week for 10 weeks. The program coordinator explained the study to potential participants, ensuring that they understood that participation is voluntary. Informed consent forms were then distributed to those who were interested. On the first day of the programme, participants were given the PSE, the RSE, and the demographic questionnaire to obtain baseline scores. The experimental group underwent the horseback riding programme, while the control group did not involve in training. Daily log was maintained, interviews were conducted to observe any changes noticed during the training period.

Activities included first phase corresponded to activities prior to mounting, preparing the equipment and the horse. The second phase corresponded to mounting and riding. The third phase corresponded to learning to round off the work with the horse, dismount, bring in the horse, gather and put away the equipment and to say goodbye to the horse.

A paired t-test was then used to analyze pre- and post-test scores of self-esteem and physical self-efficacy. Statistical significance was set at the .05 level.

Results

Mean, standard deviation and standard error mean of physical self-efficacy and self-esteem variables of experimental group are given below;

Table 1: Difference in mean scores of experimental and control group on physical self-efficacy

Group	Test	Mean	MD	SD	% Gain	t	P
Experimental	Pre	77.00	8.32	8.67	11.25	6.34	0.000**
	Post	85.67	9.14				
Control	Pre	77.33	5.60	1.20	1.55	1.87	0.080
	Post	78.53	6.31				

* Significant at $p < 0.05$, ** Significant at $p < 0.01$

The table 1 reveals the mean difference for the experimental and control group in physical self-efficacy. The mean difference of physical self-efficacy of experimental group from pre to post was statistically significant as the t value

obtained was 6.349 with $p < 0.01$. No differences were observed in the control group .The comparative bar diagram of pre to post test in physical self-efficacy of experimental and control group is shown in Figure-1 and 2.

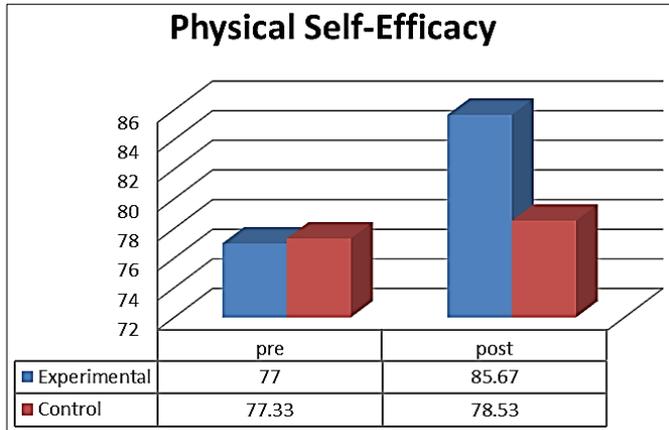


Fig 1: Difference in mean scores of experimental and control group on physical self-efficacy

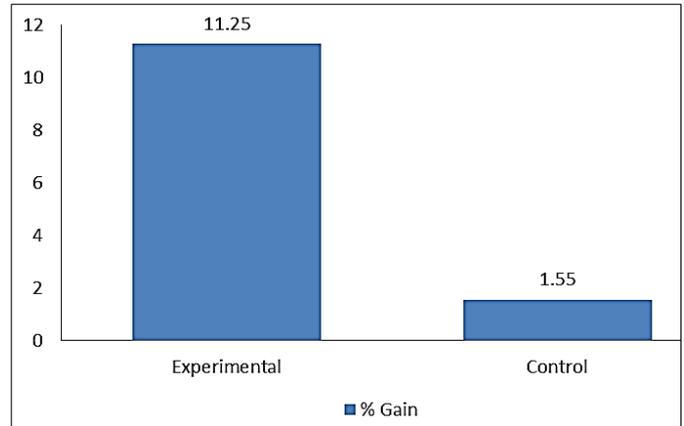


Fig 2: The percentage gain on physical self-efficacy for the experimental and control group

Table 2: Mean difference of experimental and control group on self-esteem

Group	Test	Mean	SD	MD	Gain %	t	P
Experimental	Pre	17.73	2.49	3.27	18.44	3.87	0.000**
	Post	21.00	4.46				
Control	Pre	16.93	2.60	0.47	2.77	1.00	0.330
	Post	17.40	3.76				

* Significant at $p < 0.05$, ** Significant at $p < 0.01$

Table - 2 reveals the mean difference for the experimental and control group in self-esteem. The mean difference of self-esteem of experimental group from pre to post was statistically significant as the t value was 3.874 with $p < 0.01$. For the experimental group, pretest mean of self-esteem was

17.73 with SD 2.49, and posttest mean of 21.0 with SD 4.46. No differences were observed in the control group. The comparative bar diagram of pre to post test for the experimental and control group in self-esteem is presented in Figure -3 and 4.

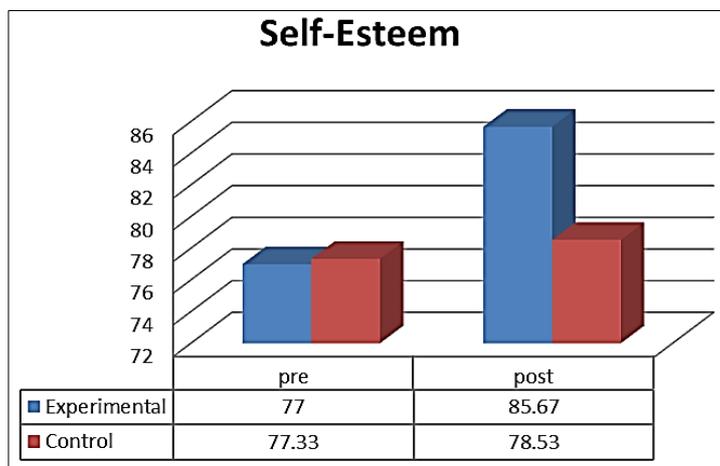


Fig 3: Mean difference of experimental and control group on self-esteem

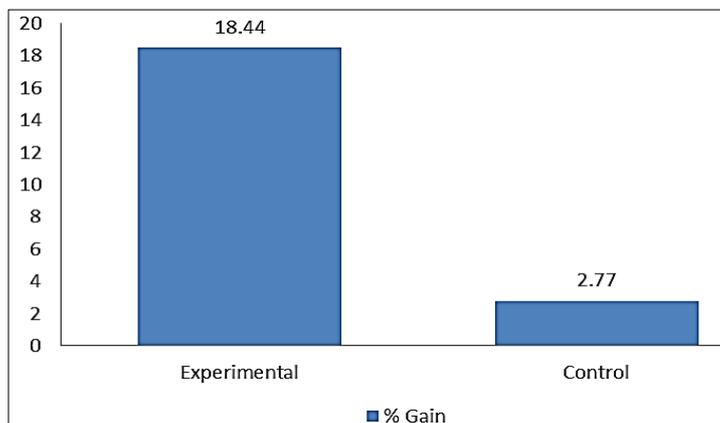


Fig 4: The percentage gain on physical self-efficacy for the experimental and control group

Discussion

In this study, a sample of fifteen college women took part in an 10-week therapeutic horseback riding (THR) programme. Participants in this programme reported higher physical self-efficacy on the Physical Self-Efficacy Scale (Ryckman *et al.*, 1982)^[24] and higher self-esteem on the Rosenberg Self-Esteem Scale (Rosenberg, 1965) from pre-test to post-test after 10-weeks of THR. This finding indicates that THR increased the physical self-efficacy and self-esteem of college women and, therefore, supports the hypotheses of the present study.

Self-efficacy is developed through a variety of pathways including vicarious experiences, cognitive stimulation, verbal instruction, and enactive mastery experiences. Of these, enactive mastery (real life) experiences produce stronger and more generalized efficacy beliefs because they provide the most authentic evidence of whether one can master whatever it takes to succeed (Bandura, 1997). Due to the hands-on nature of therapeutic horseback riding (THR), it may be more effective than traditional talk therapy in increasing perceived self-efficacy. Unlike therapies that rely on verbal persuasion to build self-efficacy, THR allows individuals to build feelings of self-efficacy through enactive mastery experiences. THR participants had the opportunity to build a relationship with, care for, and control a large and often intimidating animal. This requires learning to read and predict a horse's reactions, to maintain safe physical boundaries, to use a variety of unfamiliar equipment, and to solve common problems that occur when working with horses. Success at these tasks builds an individual's perceived self-efficacy and has the potential to generalize to other areas of his or her life. The finding that THR increases physical self-efficacy corresponds with the findings of Farias Tomaszewski *et al.*, 2001^[13].

Limitations- Although findings from this study make an important contribution to the rather limited body of empirical research on therapeutic horseback riding, in India there are several limitations to this study. The design of the study was limited to persons who voluntarily participated in THR and, as a result, they may have had some proclivity toward wanting to enhance physical self-efficacy and self-esteem aspects. For example, all participants viewed themselves as being extremely active. This outcome suggests that THR may improve physical self-efficacy and self-esteem in people who were active, but it may not generalize to people who are inactive or slightly active.

Implications and Future Research: The findings of this study offer several clinical implications for therapists and physical educators. THR programmes for college women could be introduced which may improve the physical self-efficacy and self-esteem of participants. These THR programs provide participants with the opportunity to experience success through controlled challenges (Farias-Tomaszewski *et al.*, 2001)^[13], supporting Bandura's (1977)^[2] theory that self-efficacy beliefs are improved through mastering tasks perceived as challenging. Lastly, according to Lessick *et al.* (2004)^[16] there are many physical, psychosocial, and educational gains from participating in THR that have not been examined in this study. Therefore, exploring the benefits of other constructs is warranted.

Conclusion

Self-efficacy and Self Esteem improved in college women following 10 weeks of Therapeutic horseback riding.

The major theme highlighting the positive and supportive interactions with horses and people is the unconditional acceptance of the individual. It is this sense of personal worth and acceptance that can lead to an increase on self-esteem and self-efficacy (Rutter, 1987)^[23].

The horse was identified as both a humanistic mirror and as a metaphor for real world experiences. The horse's ability to mirror, reflect and respond to a person's emotions is a powerful vehicle for personal growth. (Greenwald, 2000)^[14]. This relationship with the horse proved an important factor in a participant's success.

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