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STUDY ON EXERCISE MOTIVATION AND EXAMINING ITS RELATIONSHIPS WITH FREQUENCY INTENSITY AND DURATION OF EXERCISE AMONG COLLEGE STUDENTS

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ABSTRACT

The purpose was to study the exercise motivation and examining its relationships with frequency intensity and duration of exercise among college students. To achieve the purpose of the study, 114 college students (Male = 73, Female = 41) from Colleges in Chennai region, Tamilnadu were selected as subjects and their age shall ranged from 18 to 21 years. The Leisure Time Exercise Questionnaire (LTEQ) was used to assess participants self-reported exercise intensity. The Behavioural Regulation in Exercise Questionnaire (BREQ) assesses Amotivation, external, identified, introjected, and intrinsic regulations. Descriptive analysis was used to test the status on criterion measures of the subjects used in the study. Bivariate Correlations were conducted between each of the variables of the BREQ and the three exercise behaviors (frequency, intensity, and duration). The result reveals that all the three exercise behaviors were closely correlated to exercise motivation.

KEYWORDS: Exercise Motivation, College Students.

INTRODUCTION

Sports competitions today occupy the prime of place in human life, because, it is the testing ground for the human excellence almost without the aid of scientific and technological assistance, but for the implements, exhibiting the performance of body-mind co-ordination and system synchronization of sources and efforts. The dynamics of psychological need support and need thwarting have been studied within families, classrooms, teams, organizations, clinics, and cultures using specific propositions detailed within SDT. The SDT framework thus has both broad and behavior-specific implications for understanding practices and structures that enhance versus diminish need satisfaction and the full functioning that follows from it. These many implications are best revealed by the varied papers listed on this website, which range from basic research on motivational micro-processes to applied clinical trials aiming at population outcomes (Deci & Ryan, 2000) In the 1970s, research on SDT evolved from studies comparing the intrinsic and extrinsic motives, and from growing understanding of the dominant role intrinsic motivation played in an individual's behavior but it was not until mid-1980s that SDT was formally introduced and accepted as a sound empirical theory. Research applying SDT to different areas in social psychology has increased considerably since the 2000s (Leeper, et al. 1973).

METHODOLOGY

The purpose was to study the exercise motivation and examining its relationships with frequency intensity and duration of exercise among college students. To achieve the purpose of the study, 114 college students (Male = 73, Female = 41) from Colleges in Chennai region, Tamilnadu were selected as subjects and their age shall ranged from 18 to 21 years. Participants (N = 114) were male (n = 73) and female (n = 41) volunteer (M_{age} = 23.67, SD = 8.48) regular exercisers. For the purposes of this study, 'regular exercise' was defined as consistently engaging in at least two exercise sessions (of any kind) each week for the last six months. The sample was largely composed of students with 75% of participants reporting 'student' as their primary occupation. Self-report data revealed the sample was quite active ($M_{\text{frequency}}$ = 3.54 sessions per week, SD = 1.04; M_{duration} = 61.29 minutes per session, SD = 25.12; and $M_{\text{intensity}}$ = 65.45 weekly METS, SD = 34.55). Participants listed the exercise activities in which they typically participate. The most commonly cited exercise activities were running (62.6%), weight training (41.2%), playing sports (58.7%), walking (28.5%). The Leisure Time Exercise Questionnaire (LTEQ) was used to assess participants self-reported exercise intensity. The Behavioural Regulation in Exercise Questionnaire (BREQ) assesses Amotivation, external, identified, introjected, and intrinsic regulations. Participants were approached by the researcher prior to or following their workouts in their regular setting. Once informed consent was obtained, the participants completed the BREQ-2, LTEQ and demographic information. The variables used in the present study were collected from all subjects. The collected data was subjected to various statistical applications for arriving the final results. The following statistical techniques were adopted to treat the collected data in connection with established hypothesis and objectives of this study. Descriptive analysis was used to

test the status on criterion measures of the subjects used in the study. Bivariate Correlations were conducted between each of the variables of the BREQ and the three exercise behaviors (frequency, intensity, and duration).

RESULTS

TABLE - I
DESCRIPTIVE STATISTICS FOR AGE, FREQUENCY, DURATION, INTENSITY AND BREQ SUBSCALES FOR COLLEGE STUDENTS

Sl. No	Variables	Male (n = 73)		Female (n = 41)	
		Mean	SD (±)	Mean	SD (±)
1	Age	23.45	3.38	23.89	4.21
2	Frequency (times/week)	3.50	0.76	3.58	1.07
3	Duration (mins)	60.61	10.53	61.97	8.99
4	Intensity (LTEQ-METS)	66.49	8.02	64.41	9.33
5	Amotivation	0.94	0.72	0.87	0.71
6	External Regulation	2.47	1.00	2.34	0.99
7	Introjected Regulation	2.79	1.12	2.85	1.15
8	Identified Regulation	3.31	1.21	3.20	1.31
9	Intrinsic Regulation	3.07	1.09	3.12	1.14

M = Mean, SD = Standard Deviation, BREQ = Behaviour Regulation in Exercise Questionnaire; LTEQ = Leisure Time Exercise Questionnaire

Descriptive statistics for both males (n = 73) and females (n = 41) are presented in Table I. The data confirmed that the males and females were all highly active, reporting mean exercise frequency scores of 3.50 (SD = 0.76) and 3.58 (SD = 1.07) workouts per week respectively. Furthermore, mean scores for the exercise intensity and duration variable (weekly METS) males were slightly higher than female values. Mean scores for the subscales of the BREQ revealed an expected pattern in which individuals reported participating in exercise for more autonomous reasons compared to more controlling reasons. Specifically, for both genders, identified was the most strongly endorsed regulation followed by intrinsic, introjected, external and amotivation respectively.

FIGURE 1
SHOWS THE MEAN VALUES OF AGE, FREQUENCY, DURATION, INTENSITY AND BREQ SUBSCALES FOR MALE COLLEGE STUDENTS

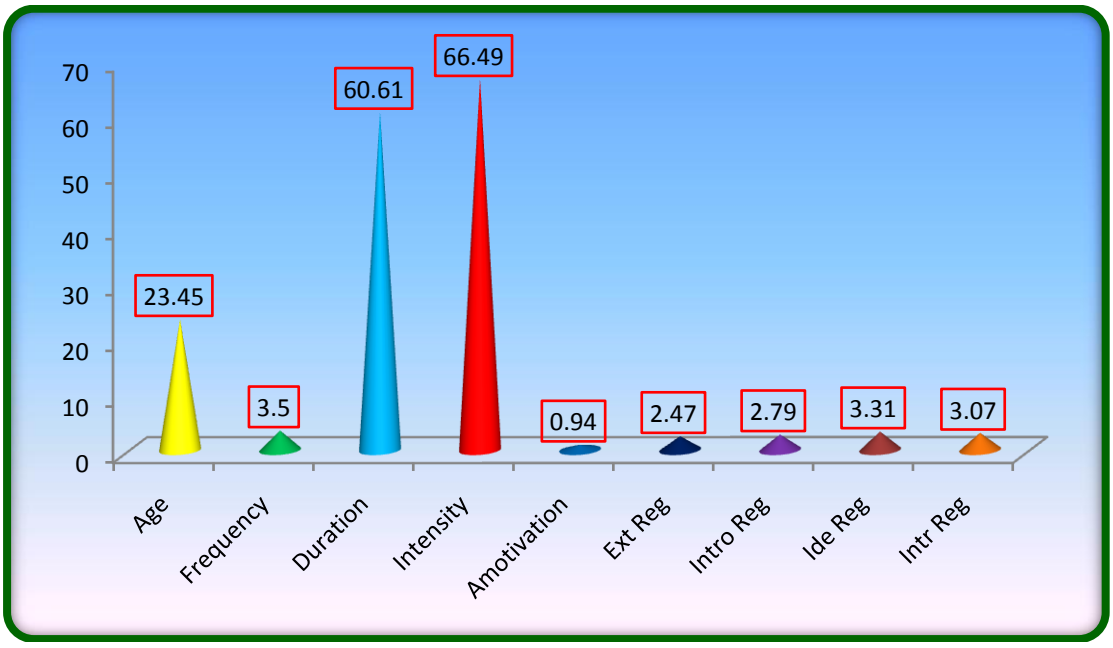

FIGURE II
SHOWS THE MEAN VALUES OF AGE, FREQUENCY, DURATION, INTENSITY AND BREQ SUBSCALES FOR FEMALE COLLEGE STUDENTS

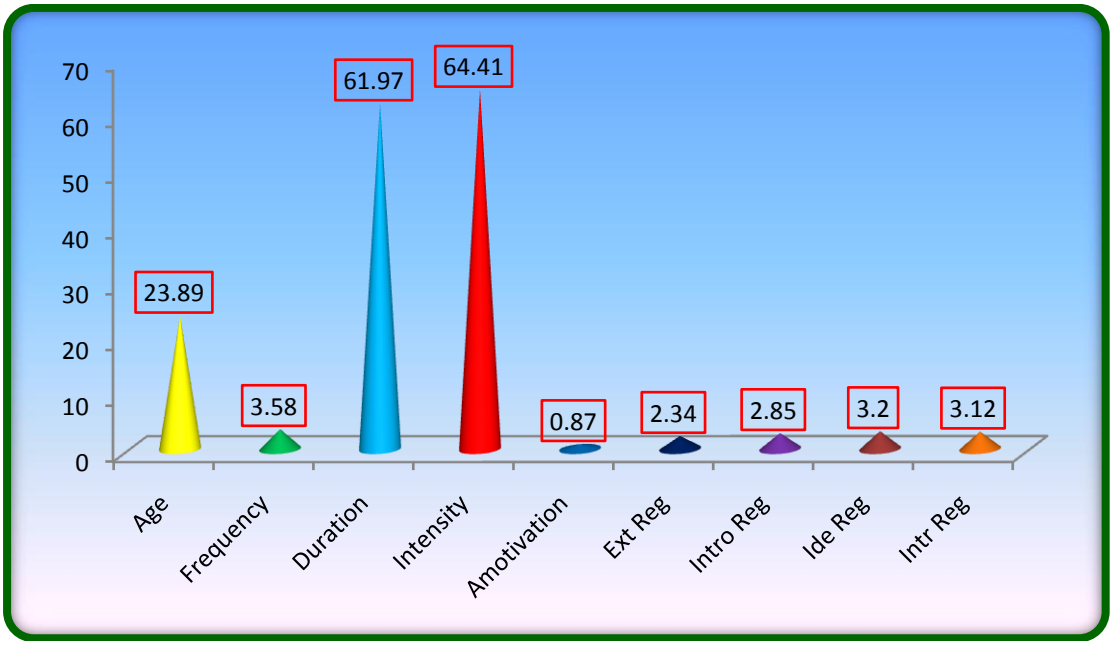

TABLE - II
BIVARIATE CORRELATIONS BETWEEN BREQ SUBSCALES, EXERCISE FREQUENCY, DURATION, INTENSITY FOR MALES

Variables	Amotivation	External Regulation	Introjected Regulation	Identified Regulation	Intrinsic Regulation	Age	Frequency	Duration	Intensity
Amotivation	------								
External Regulation	0.23**	------							
Introjected Regulation	0.34**	0.03	------						
Identified Regulation	0.28**	0.26**	0.73***	------					
Intrinsic Regulation	0.18*	0.07	0.10*	0.13*	------				
Age	0.02	0.16*	0.19*	0.16*	0.36***	------			
Frequency	0.06	0.03	0.45***	0.27**	0.18*		------		
Duration	0.10*	0.17*	0.27**	0.29**	0.19*	0.21**	0.27**	------	
Intensity	0.20**	0.05	0.36**	0.15*	0.02	0.04	0.23**	0.54***	------

** Significant at 0.05 level* *** Significant at 0.01 level* **** Significant at 0.001 level*

TABLE - III
BIVARIATE CORRELATIONS BETWEEN BREQ SUBSCALES, EXERCISE FREQUENCY, DURATION, INTENSITY FOR FEMALES

Variables	Amotivation	External Regulation	Introjected Regulation	Identified Regulation	Intrinsic Regulation	Age	Frequency	Duration	Intensity
Amotivation	------								
External Regulation	0.21**	------							
Introjected Regulation	0.20**	0.07	------						
Identified Regulation	0.18*	0.03	0.74***	------					
Intrinsic Regulation	0.11*	0.06	0.17*	0.35***	------				
Age	0.20**	0.08	0.28**	0.06	0.32**	------			
Frequency	0.16*	0.16*	0.36***	0.29**	0.12*	0.24**	------		
Duration	0.32***	0.17*	0.57***	0.45***	0.28**	0.18*	0.17*	------	
Intensity	0.06	0.14*	0.35***	0.42**	0.21**	0.15*	0.22**	0.29**	------

** Significant at 0.05 level* *** Significant at 0.01 level* **** Significant at 0.001 level*

Correlations were conducted between each of the variables of the BREQ and the three exercise behaviors (frequency, intensity and duration; Table III & IV). The analyses revealed a theoretically consistent pattern of relationships in which adjacent subscales from the BREQ were more strongly and positively correlated with subscales theorized to be more proximal along the motivation continuum. This finding supports the concept of a motivational continuum as proposed by Self Determination Theory.

Strong correlations were found between the identified and introjected subscales for both males (r = 0.73, p = 0.001) and females (r = 0.78, p = 0.001). Some researchers have indicated that bivariate correlations >.70 between variables may suggest collinearity. An examination of the collinearity diagnostics revealed that when the condition index was high (>10), no two variables had variance proportions exceeding the recommended threshold (.50) and therefore it was determined that the subscales were not collinear.

In line with self-determination theory, all three exercise behaviors were more strongly correlated with intrinsic motivation and the more autonomous forms of extrinsic motivation for males and females. For males, exercise frequency and intensity were most strongly related to identified regulation, while duration of exercise was most strongly related to intrinsic regulation. For females, identified regulation had the strongest relationship with exercise intensity and introjected regulation was most strongly related to frequency and duration. For females, however, identified regulation was also most strongly related to duration of exercise.

CONCLUSION

1. Mean scores for the subscales of the BREQ revealed an expected pattern in which individuals reported participating in exercise for more autonomous reasons compared to more controlling reasons. Specifically, for both genders, identified was the most strongly endorsed regulation followed by intrinsic, introjected, external and amotivation respectively.
2. The result reveals that all the three exercise behaviors were closely correlated to exercise motivation.

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