

A STUDY OF DECISION BALANCE IN RELATION TO PHYSICAL ACTIVITY STAGES OF CHANGE OF UNIVERSITY STUDENTS

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ABSTRACT

The purpose of this study was to study and assess the decision balance of university students for physical activity. For this purpose, Two hundred and Ninety eight students from a Maharshi Mahesh Yogi Vedic Vishwavidalaya, Jabalpur (M. P.) were invited to participate in the study. Two hundred and eight students initiated the survey, but only 153 (100 male and 53 female) students completed the questionnaires, were selected as the subjects for the study. Decisional Balance Scale prepared by Marcus, Rakowski, & Rossi (1992) and Physical Activity Stages of Change Questionnaire by Marcus & Simkin, (1993) were used for the purpose of data collection. To assess the decision balance by physical activity stages of change of university students, means, standard deviations, and Analysis of Variance were computed. The results of this investigation revealed that the statistically significant difference existed among university students on decision balance factor of self determination. The scheffe's Test of Post-hoc Comparison revealed the significant differences on stages of change of decisional balance among university students between contemplation – preparation followed by action and maintenance. The ratings of decision balance increased across the stages from preparation to the maintenance stage. But the low rating was found in Contemplation with across the stages.

Keywords: Decision, Balance, Self determination, Stages of change

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INTRODUCTION

More research is needed to investigate how required health and physical education courses can increase students' physical activity levels as compared to those students who have not taken the course. The purpose of this study was to examine motivational constructs in a college population where students are required to take a physical fitness course for graduation. The findings will guide efforts to identify and develop effective strategies that can be used to facilitate adoption of active lifestyles for the college aged population that will carry over into adulthood. Students' levels of physical activity and exercise motivation were explored using Self-determination theory (Deci & Ryan, 1985) as an organizing framework. The Trans-theoretical Model (Prochaska & Velicer, 1997) was integrated with Self Determination Theory to examine how motivation changes as individuals become physically active.

The stages of change approach has frequently been applied in the health field because it uses stages to track changes in behavior over time. This approach recognizes that behavior change requires both time and motivation because individuals vary in their readiness to make a change. The stages of change model is used as an effective tool in developing interventions that are specific to individual needs (Velicer et al., 1998).

Decisional Balance reflects an individual's struggle to weigh the pros and cons of an activity or changing of an activity. Specifically to exercise, it can be thought of as a balance between the benefits and costs of exercising. This balance changes as an individual makes his or her way through the stages of change. It has been hypothesized that decisional balance (pros minus the cons) increases from pre-contemplation to maintenance, with a shift occurring between the preparation and action stages where the pros eventually outweigh the cons (Prochaska & Velicer, 1997).

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The purpose of this study was to assess and examine the decision balance in relation to physical activity stages of change of university students.

METHODOLOGY

Selection of Subjects

Two hundred and Ninety eight students from a Maharshi Mahesh Yogi Vedic Vishwavidalaya, Jabalpur (M. P.) were invited to participate in the study. Two hundred and eight students initiated the survey, but only 153 (100 male and 53 female) students completed the questionnaires. This was a 73.50 % return rate of the total subjects studying in physical education and general education faculty. The mean age of the students was 19.47 years old.

Insrtrumentation

Decisional Balance Scale (DBS) prepared by Marcus, Rakowski, & Rossi (1992) to assesses one's attitudes (pros and cons) towards exercise. The pros represent the advantages of exercise while the cons represent the disadvantages. Participants are asked to indicate how important each question is in their decision to exercise by using a five point Likert scale (1 = not at all important, 5 = extremely important). The scale is scored by adding the responses to

the pro questions, the responses to the con questions, and then by subtracting the con total from the pro total to create a decisional balance difference score.

Physical Activity Stages of Change Questionnaire (PASCQ) by Marcus & Simkin, (1993) consists of four items representing the five stages of change in the transtheoretical model. The student was asked to answer four questions which reflected their current exercise behaviors. For example, physical activity was defined and then the student was asked to reply yes or no to “I am currently physically active” and “I intend to become more physically active in the next 6 months.” Regular physical activity was then defined and the student was asked to answer yes or no to “I currently engage in regular physical activity” and “I have been regularly physically active for the past 6 months.” The answers were assessed by a scoring algorithm. For example, a student would be in the pre-contemplation stage if they answered no to the first two questions. For a student to be in the maintenance stage, they had to answer yes to questions one, three, and four.

ADMINISTRATION OF QUESTIONNAIRES

The university, where data were collected is located in a small city in the Madhya Pradesh. It is a liberal university that has a religious affiliation also. The enrollment is typically around 10,000 students. A majority of students live outside the campus. The largest majors on campus are Computer Science, Management, Education, yoga, Vedic science and physical education. The fitness/health facility is owned and contains a 400 meters Track, two volleyball court, one handball court, badminton hall, one basketball court, weight training room, and health centre etc. Data was collected during the months of August and September, 2009 in the university campus through a personal contact with the respondents in university campus.

RESULTS AND DISCUSSION

Means and standard deviations, Analysis of Variance (ANOVA) for decisional balance with the independent variable being stages of change were computed with the help of SPSS 16 Version.. Wherever, the F-ratio was found significant, Scheffe's Test of post-hoc analysis was applied to find out significance of difference between ordered paired means. and data pertaining to this have presented in Table 1 to3.

TABLE 1
MEANS AND STANDARD DEVIATIONS OF DECISION BALANCE IN
RELATION TO STAGE OF CHANGE OF UNIVERSITY STUDENTS

S.NO.	Physical Activity Stages	Decision Balance	
		M	SD
1.	Contemplation(N=28)	4.39	6.37
2.	Preparation (N=19)	11.42	3.77
3.	Action (N=22)	10.45	4.29
4.	Maintenance (N=84)	11.92	4.30

The mean scores of decisional balance and self-efficacy by stages of change of university students have been depicted in figures 1

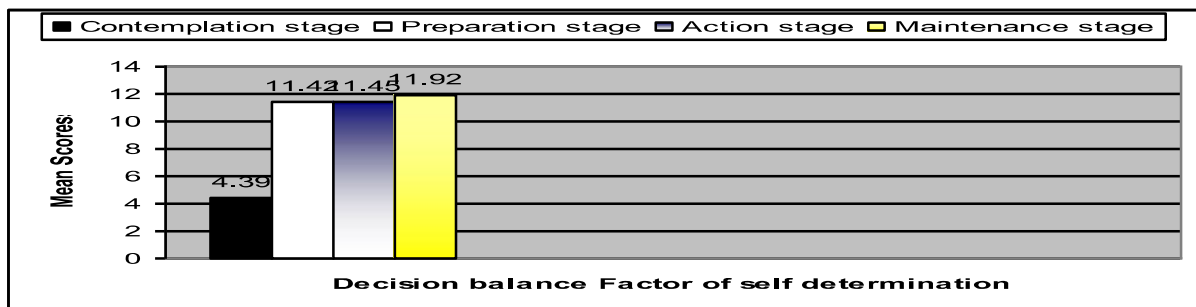


Figure 1: Mean Scores of Decision Balance factor of Self Determination by Physical Activity Stages of Change of University Students.

TABELE 2
ANALYSIS OF VARIANCE OF DECISINAL BALANCE BY STAGES OF CHANGE OF UNIVERSITY STUDENTS

Self-determination Factors	Source of Variance	df	Sum of Square	Mean Squares	F-ratio
Decision Balance	Between Groups	3	1220.83	406.94	18.49*
	Within Groups	149	3279.18	22.01	

Significant at .01 level, $F_{01}(3,149)=3.91$

From Table 2, It is evident that the statistically significant difference existed among university students on decisional balance, as the obtained F-values of 18.49, and 13.13 were higher than the required $F_{01}(3, 149) = 3.91$.

As the F-ratio was found to be significant, Scheffe's Test of Post-hoc comparison was applied to study the significance of differences among university students on decisional balance, the data pertaining to this have been presented in Table 3.

TABLE 3
SINGNIFICANCE OF DIFFERENCES AMONG UNIVERSITY STUDENTS BETWEEN ORDERED PAIRED MEANS ON STAGES OF CHANGE BY DECISIONAL BALANCE

Mean Scores					
Contemplation	Preparation	Action	Maintenance	Paired mean difference	(C.I.)
4.39	11.42	-	-	7.03*	1.76
4.39	-	10.45	-	6.06*	
4.39	-	-	11.92	7.53*	
-	11.42	10.45	-	0.97	
-	11.42	-	11.92	0.50	
-	-	10.45	11.92	1.47	

*Significant at .01 level,

It is quite obvious from the table 3, that there were significant differences on stages of change of decisional balance among university students between contemplation – preparation followed by action and maintenance; as the paired mean differences of 7.03, 6.06, and 7.53 respectively were higher than the confidence interval (C.I.) of 1.76 But the mean differences of .97, .50, and 1.47 were not significant at 0.01 level.

DISCUSSION

Decisional balance was hypothesized to vary as a function of stages of change, and those hypothesis was supported. Statistically significant difference exhibited by university students on decisional balance. The university students in the maintenance, action, and preparation stages had higher scores on decisional balance than those in pre-contemplation/contemplation. The ratings of decision balance increased across the stages from preparation to the maintenance stage. But the low rating was found in Contemplation with across the stages.

CONCLUSIONS

From the present study, the following conclusions are drawn:

1. Significant differences were on stages of change of physical activity among university students between contemplation – preparation followed by action and maintenance; preparation – maintenance; and action- maintenance.
2. Statistically significant difference existed among university students on decision balance factor of self-determination by stages of change.

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