

Application of theory of planned behavior to predict recreational sports activities participation of students in Malaysia

CHUN CHENG CHUAN¹, AMINUDDIN YUSOF², CHEE CHEN SOON³, MARIA CHONG ABDULLAH⁴
^{1,2,3,4}Faculty of Educational Studies, Universiti Putra Malaysia, MALAYSIA

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Abstract:

This study aims to understand the factors that influence the participation of high school students in recreational sports activities using the “Theory of Planned Behavior” (TPB) (Ajzen, 1991). Questionnaires that were adapted from Cunningham and Kwon (2003) were used to measure the reasons for participation of recreational sports among high school students in Malaysia. The respondents consisted of 101 high school students from the age of 13 to 16. Analyses of data include descriptive statistics, Pearson Product-Moment’s correlation and standard multiple regression. The findings showed that there is a significant relationship between attitude factor and subjective norms with behavioral intention to participate in recreational sports activities. This study proposed intervention measures to increase the participation of high school students in recreational sports in Malaysia.

Key Words: Behavioral intention, attitude, subjective norms, sports participation

Introduction

There are many benefits of physical activities such as reducing the risk of diabetes, heart diseases, hypertension, osteoporosis and overweight problems as well as increasing one’s alertness (Warbuton, Katzmarzyk, Rhodes, Shephard, 2007; Tremblay, Warburton, Janssen, Paterson, Latimer, Rhodes, Kho, Audrey Hicks, LeBlanc, Zehr, Murumets & Duggan, 2011). According to the World Health Organisation (WHO, 2011) physical activities can improve health in children such as strengthening body tissues, increasing cardio-vascular stamina and balanced ideal body weight as well as contributing to better mental health and a better quality of life (Rhodes, Matheson, Blanchard, & Rachel, 2008). In view of the many benefits of physical activities, the lack of active involvement in physical activities has become a health issue in the world today (WHO, 2011). In Malaysia, one third of school students between 13 to 14 years old are at a low level in terms of physical activities and 61.5% are at the average level (Dan, Mohd Nasir, & Zalilah, 2011). Although the government has spent a large allocation of funding to encourage sports and physical activities, participation of students in physical activities in Malaysia is still low (Yusof & Shah, 2007).

To overcome the problem of physical inactivity amongst adolescents, researchers have tried to explain physical activity behavior by using different psychological models (De Bourdeaudhuij, 1998). Fishbein and Cappella (2006) suggested that application of behavioral theories could help to generate effective intervention programmes. The “Theory of Planned Behavior” (TPB) by Ajzen (1988, 1991) is one of the most used theory for studying and predicting behavior and human reaction (Ajzen, 2001). It is a model that is often used to predict physical activity behavior (Chatzisarantis et al., 2002, & Brickell, Chatzisarantis & Pretty, 2006) but there is still a lack of studies using the TPB in predicting physical activity behavior of Malaysian students in recreational sports activities. Recreational sports activities can be one of the medium to encourage students’ participation in physical activities to achieve the objective of better public health. Students’ involvement in recreational sports can provide an opportunity for them to actively continue further in the sports that they are involved in during their school days. In order to increase the participation of students in recreational sports activities, it is necessary to identify the factors that influence Malaysian high school students’ participation in recreational sports activities. Therefore, the aim of this study is to examine the factors for the involvement in recreational sports activities using the “Theory of Planned Behavior” (TPB).

TPB is an extension of “The Theory of Reasoned Action” (TRA) by Martin Fishbein and Icek Ajzen (1980). Basically, there are three antecedents of behavioral intention, which are attitude, subjective norm and perceived behavioral control (PBC). The first determinant in TPB is “the attitude of the individual towards behavior that is liked or disliked or an assessment of that behavior” (Ajzen, 1991). In general, a positive attitude will result in a change that is appropriate for that behaviour (Fazio et al., 1989). The second determinant is subjective norms. This refers to “drawing conclusions that a significant individual or someone important to them will want them to participate in the targetted behaviour” (Hagger et al., 2007). Subjective norms are

conceptualised as being perceptions and refer to social pressure experienced by an individual whether to or not to perform an action (Ajzen, 1991). The third determinant in TPB is perceived behavioral control. Perceived behavioral control shows the influence of the individual's ability and the limitations to the desire on an action (Hagger et al., 2007). The perception of an individual whether he has the capability in a particular action/activity has an important effect on whether he will finally do it (Ajzen, 1991). Intention is the measure of an individual's willingness to perform a desired behavior. The higher behavioral intention is towards a specific behavior, the more likely is that the person engaged in that behavior. Intention is regarded as the motivating factor that can influence behaviour. This will show the level of commitment of an individual in wanting to try and the level of efforts he plans to expend in fulfilling this behaviour" (Ajzen, 1991). In TPB, intention is indicated as the main determinant in behaviour.

Based on previous studies, researchers often used TPB to predict behavior intention in various fields such as tourism, marketing (Kalafatis et al, 1999), health, physical fitness and exercise (Hagger et al., 2003; Armitage, 2005), recreational activities (Hrubes & Daigle, 2001) and also sports marketing, where Cunningham and Kwon (2003) used this theory to understand the purchasing behavior among sports consumers participating in sports events. The findings of previous studies showed that attitude, subjective norms, past behavior and controlled perceived behavior have a relationship with the desire to participate in sports. Seok Kang, Lee and Kang-Bon (2012) studied the psychological factors that influence football fans' desire to buy sponsored sports products in the United States during the FIFA World Cup 2010 in South Africa. The findings indicated that attitude, subjective norms, past behavior and perceived behavioral control had influenced the intention among the football fans to purchase the products. Besides that, Armitage (2005) reported that all three constructs in TPB explained the increased probability of an individual involving himself in physical activities if he possesses positive effects (attitude), if there is social pressure on him to perform physical activities (subjective norms) and if he believes he will succeed in the activity (perceived social control).

Although previous studies support the proposal of the TPB for predicting behavior in context of different fields of study, there have been very few empirical studies using this theory in recreational sports activities. Thus, further studies have to be conducted to determine whether the TPB can be appropriately applied to understand and predict behavioral intention to participate in recreational sports activities among high school students. This is important for deciding on its applicability in the context of sports in schools. This study aims to answer the following research questions:

1. What is the level of attitude, subjective norms, perceived behavioral control and behavioral intention to participate in recreational sports activities among high school students in Malaysia?
2. What is the relationship between attitude and behavioral intention to participate in recreational sports activities among high school students in Malaysia?
3. What is the relationship between perceived behavioral control and behavioral intention to participate in recreational sports activities among high school students in Malaysia?
4. What is the relationship between subjective norms and behavioral intention to participate in recreational sports activities among high school students in Malaysia?
5. Which the determinant of TPB (attitude, subjective norms and perceived behavior control) is the best predictors of behavioral intention to participate in recreational sports activities among high school students in Malaysia?

Material and method

Participants

The subjects for this study were 101 students from a high school in Kuala Lumpur, Malaysia. Subjects were selected using purposive sampling method. Data were collected from subjects aged between 13 to 16 years old using questionnaires and the descriptive correlation study method. It was important to know whether the students were involved in recreational sports activities and this was verified with a question requiring a "Yes" or "No" answer regarding their participation.

Procedure/ Instruments

The questionnaire items were in Malay Language as this language is the national language in Malaysia. The questionnaires were divided into two parts, one for demographic details and second for measuring the determinants of TPB and behavioral intention to participate in recreational sports activities. Part 2 of the instrument was adopted from previous studies by Cunningham & Kwon (2003).

Data collection/Statistical analysis

Permission, consent and approval to conduct the study were obtained from the high school and the Malaysian Ministry of Education. The questionnaires were distributed with the help of the high school administrators in the school. Data were analyzed using the Statistical Package for Social Science (SPSS) Version 21. Descriptive statistics were used to analyze items on demographic information. Pearson Product-Moment Correlation Analysis were performed to determine the relationship between determinants of TPB (attitude, subjective norms and perceived behavior control) with behavioral intention to participate in recreational sports

activities. Next, standard multiple regression analysis was used to measure whether the TPB determinants could predict behavioral intention to participate in recreational sports activities.

Results

Table 1 shows the demographic profiles of the subjects in this study. In this study, the findings indicated the score for attitude towards recreational sports activities among high school students was at a high level ($M = 5.28$, $SD = 1.49$) based on a scale of one to seven. It means that individual with a positive attitude were more likely to have intention/desire to participate in recreational sports activities. In addition, the study also showed that these students also had subjective norms scores that were high ($M = 5.10$, $SD = 1.01$), it indicates that student may be involved in sports activities because their friends and parents want them to participate in recreational sports activities.

Table 1: Demographic Profiles of Subjects

| Variables | n | % |
|-------------------------------|----|------|
| Sex | | |
| Male | 46 | 45.5 |
| Female | 55 | 54.5 |
| Class | | |
| Form One | 20 | 19.8 |
| Form Two | 26 | 25.7 |
| Form Four | 55 | 54.5 |
| Status of Sport Participation | | |
| Yes | 89 | 88.1 |
| No | 12 | 11.9 |

For behavioral intention, mean scores also was high, ($M = 4.92$, $SD = 1.22$). This suggests that students are more likely and willing to participate in future recreational sports activities. The findings of the descriptive statistical analysis are shown in table 2 below.

Table 2: Descriptive statistics of attitude, perceived behavioral control, subjective norms and behavioral intention to participate in recreational sports activities

| Variable | M | SD |
|------------------------------|------|------|
| Attitude | 5.28 | 1.49 |
| Perceived Behavioral Control | 3.25 | 1.34 |
| Subjective Norms | 5.10 | 1.01 |
| Behavioral Intention | 4.92 | 1.22 |

Pearson Product-Moment correlation analysis was used to determine the relationship between attitude, perceived behavioral control, subjective norms and behavioral intention to participate in recreational sports activities among high school students in Malaysia. As shown in Table 3 the findings indicate that attitude has a significant relationship with behavioral intention of high school students to participate in recreational sports activities but this relationship is weak ($r = .27$, $p < .005$). The findings also show a significant relationship between subjective norms and behavioral intention ($r = .39$, $p < .001$). The positive relationship shows that subjective norm, that is the influence of friends and parents, can influence behavioral intention in high school students to participate in recreational sports activities. On the other hand, there is no significant relationship between perceived behavioral control and behavioral intention.

To determine the extent of TPB determinants can predict behavioral intention among high school students to participate in recreational sports activities, standard multiple regression analysis is performed. The standard multiple regression analysis shows that TPB determinants are significant predictors for behavioral intention of high school students to participate in recreational sports activities, $R^2 = .208$, $R^2 \text{ adj} = .181$, $F(3, 91) = 7.724$, $p < .05$.

Table 3: Relationship between attitudes, perceived behavioral control, subjective norms and behavioral intention to participate in recreational sports activities

| Independent Variable | Behavioral Intention to Participate | |
|------------------------------|-------------------------------------|-------|
| | r | p |
| Attitude | .267 | .005* |
| Perceived Behavioral Control | .011 | .458 |
| Subjective Norms | .387 | .001* |

*correlation significance at .05

To determine the extent of TPB determinants can predict behavioral intention among high school students to participate in recreational sports activities, standard multiple regression analysis is performed. The standard multiple regression analysis shows that TPB determinants are significant predictors for behavioral intention of high school students to participate in recreational sports activities, $R^2 = .208$, $R^2 \text{ adj} = .181$, $F(3, 91) = 7.724$, $p < .05$. The determinants of TPB which consist of attitude, subjective norms, and perceived behavioral control explain 20.8% of the variance in the score of behavioral intention. Based on this analysis, it is shown that attitude ($\beta = .25$, $p < .05$) and subjective norms ($\beta = .37$, $p < .05$) contribute significantly towards predicting behavioral intention. This shows with an increased one unit of standard deviation for attitude, it will increase 0.247 standard deviation of behavioral intention in participation. Similarly, a unit increase in subjective norms will result in an increased 0.368 standard deviation of behavioral intention in participation. On the other hand, perceived behavioral control does not contribute significantly in predicting behavioral intention of students.

Table 4. Result of standard multiple regression analysis

| Predictors | β | t | p |
|------------------------------|---------|------|-----|
| Attitude | .247* | 2.53 | .01 |
| Perceived Behavioral Control | .022 | 0.23 | .82 |
| Subjective Norms | .037* | 3.83 | .00 |

$R = 0.457$, $R^2 = 0.208$, $R^2 \text{ (adjusted)} = .181$

* $p < .05$

Discussion

The study shows that there is a moderately positive relationship between attitudes and behavioral intentions to participate in recreational sports activities among high school students. The findings in this study support previous studies by Beacham et al. (2011) who found out that individuals who practiced systematic exercises possess a positive attitude to exercise. Similarly, Hamilton & White (2008) suggest teenagers who are interested in physical activities, feel pressure to do physical activities, and if they feel that they are more confident of their ability in performing the physical activity, they will have a higher intention to be involved in this activity. Hence, based on the findings of this study and previous studies, it can be proposed that attitude has a link to and has the possibility to predict behavioral intention in recreational sports activities. Thus, to increase Malaysian high school students' participation in recreational sports activities, students' attitude themselves is very important. Students with positive attitudes will be more enthusiastic to be involved in recreational sports activities. Thus, programmes and intervention measures should be implemented by educational administrators in Malaysia to cultivate positive attitudes towards recreational sports activities. Hagger et al. (2002) states that intervention should be based on strengthening attitudes that increase interest in physical activities and they should be aimed at increasing physical activity performance.

Subjective norms are the main predictor and possess a moderate relationship with behavioral intention to participate in recreational sports activities. It is also the dominant factor towards behavioral intention to participate in recreational sports activities among high school students in Malaysia. This finding is consistent with a study by Hamilton & White (2008) who suggested that subjective norms such as influence of peers and friends can be influential in getting other students to participate in physical activities. Similarly, Hagger, Chatzisarantis & Biddle, (2001) and Godin & Shephard (1986) also suggested subjective norms as factors that can predict behavioral intention among teenagers who are influenced by peers or parents (people who are significant). Thus, effective strategies by school administrators to strengthen behavioral intention to participate in physical activities would be to encourage students to be involved in group activities or activities together with their friends and peers.

Conclusions

The findings of this study suggest the usefulness of the TPB model in predicting the level of participation in physical activities among high school students in Malaysia. Based on the determinants of TPB it is noted that the factors of attitudes and subjective norms are important in the prediction of behavioral intention, whereas, perceived behavioral control is not significant in predicting behavior. Consequently, intervention strategies to promote participation in recreational sports activities among high school students should always give attention to change in attitudes and emphasize on significant individuals' influence while aiming to promote students' participation. With the understanding of factors that affect school students' participation in recreational sports activities, intervention programmes to encourage active participation in recreational sports activities can be carried out effectively. Efforts to cultivate and promote students' interest to be active should start at a young age so as to make it a healthy life-style practice later.

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