

Original Article

Motivational gender differences in sport and exercise participation among university sport science students.

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Abstract

Motivation is an important psychological variable in Physical Activity(PA) as it determines both entry and continued adherence to PA.Understanding motivating factors is an antecedent to the understanding of behaviour change and programming of PA.The study was carried out to determine gender differences in participation motives to PA of sport science students of a university. Data was collected through questionnaires from 60(30 males and 20 females) sport science students. Results showed that sport science students perceive their physical health status as fair and they are involved in diverse PA with no significant gender differences. The main motives for participation in PA were Weight management; enjoyment and revitalization while the least motivators for both males and females were stress management and competition. Reported constraints to PA were lack of motivation, and lack of time and injuries. It is recommended that Sport science students need pursue their studies with visionary ideas on how to navigate motivation into PA and the constraints to PA.

Key Words. Gender, Motivation, Physical Activity.

Introduction

Motivation is a complex process that influences individuals to begin, pursue, and persist in an activity. Crandall (1980) stated that needs and motivation can be treated as forces that cause people to seek certain behaviours.Research has determined that there are motivational differences between male and female sports and exercise participants. It has been reported that male and female athletes have different strengths and weaknesses within the motivational climate. Indeed, recent studies suggest that involvement in physical activity is mediated by motivation and perceived sports competence (Ames, 1984).

Participation in physical activity among university students has often been overlooked because so much attention has centered on the negative image of university students who spend their leisure time watching television or socializing (Lumpkin, 1998).Motivation to engage in PA should be at the crux of health behavior promotion programmes. It is postulated that understanding motivation is key to health-promotion efforts by sports practitioners and exercise advisers (Dishman & Sallis, 1994). Motivation is the intrinsic determination toward goal attainment and Self-motivation is the best determinant of exercise adherence (Dishman & Sallis, 1994). Intrinsic motivation for exercise and sports are behaviours that are performed for the satisfaction gained in the activity itself. Deci and Ryan (1985) argue that intrinsic motivation indicators are commonly those of competency, interest and enjoyment. In contrast to the provision of external influences, the primary goal for health providers (promoting lifestyle modification) is the facilitation of the individual's internal motivation (Dweck,1986). On the other hand, extrinsic motivation comes from external sources, such as the lure of awards, trophies, money, fame, praise and social approval (Bandura, 1986). Interestingly, it has been found that although extrinsic motivation is a strong motivator, it can undermine intrinsic motivation (Harter, 1981).

Theoretical Framework.

There are numerous theories which have been applied in the study of motivation in sports and exercise and this study will be hankered on self-determination theory and achievement goal theory.

Self Determination Theory (SDT)

The basic premise of SDT is that humans inherently possess it. These facilitate the adoption of behaviours and activities that provide for their fulfillment. Intrinsic motivation is thought to be the primary source of energy for human behaviour and its presence facilitates behaviour maintenance and adherence. In contrast, motives that are based on extrinsic factors and rewards create a condition that may or may not facilitate adherence. In such cases, the nature and delivery of the extrinsic reward powerfully impact the decision to continue in a given activity. SDT also involves the concept of amotivation, or having no sense of purpose and lacking intent to engage in a particular behaviour. SDT posits that the different types of motivation range on a continuum from high to low self-determination; intrinsic motivation-extrinsic motivation- a motivation (Deci &

Ryan, 1985). Vallerand (1997) embraced elements of SDT and integrated them within a hierarchical theory of motivation. His model asserts that social factors, mediators (autonomy, competence, and relatedness), motivations and consequences (affect, cognition and behaviour) exist at three levels, the global level, contextual level, and situational level. A number of studies have indicated that behavioral regulations spanning the SDT continuum would lead to a corresponding pattern of consequences (Standage, et al 2003; Wilson, Rodgers, Fraser, & Murray, 2004). Autonomous regulations and intrinsic motivation are expected to correspond with more positive outcomes, whereas less self-determined forms of regulation (external and introverted regulations) correspond with more negative outcomes, such as poor focus, burnout, and dropout. Vallerand's proposals have found broad support in a range of sport and physical activity contexts (Standage et al., 2003; Ntoumanis, 2002.). However, to date no study has examined these proposals in the context of sport among sport science students in a university setting.

Achievement Goal Theory

Theorists differ on terminology but they all agree that goals influence individuals' responses to achievement settings and suggest that individuals' goal orientations influence motivated behaviour (Williams & Gill, 1995). Achievement goal orientation and perceived physical competence are two dimensions of motivation that interact to affect exercise behaviour. According to Nicholl (1989), individuals can demonstrate competence via two goal orientations. Under a task goal orientation, ability is conceived in terms of learning, improvement and effort, and these qualities lead to greater mastery and achievement. Thus, ability and success is self-referenced. In contrast, an ego goal orientation denotes a conception that the demonstration of competence is dependent upon performing favorably in comparison to others. A considerable body of research has dealt on how task orientation facilitates intrinsic motivation and is positively correlated with enjoyment and interest on sport participation as well as with self reported effort while ego orientation is negatively related to enjoyment (Duda, Chi, Newton, Walling, & Catley, 1995).

Literature review

Newton and Fry (1998) observed that there was a positive association between task orientation and intrinsic motivation. Ego orientation is associated with the belief that success in sport is achieved by those who are gifted with natural ability, a factor that does not help ordinary people and children who are in a developmental stages to realize their abilities. Goal orientations were also examined in combination with other perceptions. Vlachopoulos, Biddle and Fox (1996), opined that motivational advantage of adopting a task orientation in physical achievement situations and demonstrated the role of task orientation as a determinant and affect exercise testing in children. Williams and Gill (1995) revealed that task orientation was a good predictor of effort. However, the interaction of ego orientation and perceived competence failed to adequately predict effort. They concluded that task goal orientation but not ego orientation directly influenced perceived competence, intrinsic interest and effort. The identification of the type of goal orientation that leads to participation in physical activity may give an insight to methods of influencing students to be more physically active.

Duda et al (1995) observed that “differential structures such as the standards, methods and criteria underlying evaluation, the nature of recognition and the manner in which it is expressed, the source of authority, the way tasks are structured, and the manner in which individuals are grouped are held to constitute the overriding climate operating in achievement settings. Research suggests that the perceptions of ego-involving or task-involving motivational climates affect motivation in a different manner. In general, results showed that perceptions of task-involving motivational climates in sport settings are linked to more enjoyment and levels of involvement in sport activities (Duda, et al, 1995).

Gender is an aspect of our society which has an effect on all of us in our day-to-day lives. Our gender has an influence on the type of job we are likely to take, our career paths, and even our interests. Some studies indicate that women are more motivated to participate in sport by intrinsic motives rather than extrinsic motives (Colly, Berman & Van Milligen, 2005). Ryan, Frederick, Lepes, Rubio, and Sheldon (1997) have found several other factors which play a role in the kinds of sports an individual participates in including intrinsic motives (participating in sport for satisfaction) and extrinsic motives (participating in sport for rewards). Research integrates the findings of Ryan et al. (1997) on intrinsic and extrinsic motivation, with the difference in motivation based on gender. Wilson et al, (2004), found that men leaned more closely to intrinsic motivation than women. It also noted that the four most important motivations for both male and female were affiliation, fitness, skill development, and friendship, as opposed to the three least influential motivators which were reward/status, situational, and competition (Gitonga & Nteere, 2011)

Williams and Gill (1995) showed that although there is a positive relationship between task orientation and effort, relationship between ego goal orientation and effort depends upon the individual's level of perceived competence. If this level is high then, the effort is also high. Contrary, if the level of perceived competence is

low, the effort is also low because individuals believe that they cannot outperform others. Other factors such as level of interest, self-esteem may influence the relationship of individuals with effort. Deci and Ryan's (1985) theory that the relationship between perceived competence and effort is mediated by intrinsic motivation or by one's propensity to engage in challenging tasks has been partially supported in the physical domain.

A considerable body of research reiterates that task orientation facilitates intrinsic motivation and is positively correlated with enjoyment and interest on sport participation as well as with self reported effort while ego orientation is negatively related to enjoyment (Duda, Chi, Newton, Walling & Catley 1995; Nicholl, 1989; Nicholl, 1984). Participation in sports is strongly related with enjoyment. It is very important to focus on student's enjoyment through participation in sports because it is linked to long term health (Powel, Thompson, Caspersen & Kendrick, 1987). In a society in which adult sedentary behavior contributes substantially to the epidemic of cardiovascular and other chronic diseases, there is a rationale for shifting the orientation of physical activity to health focus (Sallis & McKenzie, 1991).

A student's initial motivation, whether intrinsic (participating in sport for enjoyment) or extrinsic (participating in sport to gain rewards) usually predicts the individual's attendance and adherence to that particular sport (Ryan et al 1997). It is interesting to note that intrinsic and extrinsic motivation have different effects on an individual, including whether or not they continue or adhere to their sport. Lintunen, Valkonen, Leskinen and Biddle (1999) examined the physical activity intentions using a goal perspective approach and found that the nature of sport ability positively influence enjoyment in physical activity. An intention to participate in physical activity is mediated by task-oriented achievement goal independent of variations in perception of competence. They also found that intention to participate is mediated by an ego-oriented achievement goal and by perceived competence.

Siegel (1999) assessed patterns of participation, motivation of sport level and types of physical activity in urban Mexican school youth. He found that females preferred individual lifetime activities whereas males seem to prefer sport activities. The primary reason for sport participation of the youth was fun and physical fitness. Males were more ego-oriented than females and there were no difference in task orientation. Most males were in the active category while most females were in the inactive category. Biddle, Soos and Chatzisarantis (1999) attempted to predict physical activity intentions using a goal perspectives approach in 12 to 16 years old Hungarian adolescents. They found that a big percentage of the intentions were explained by their task orientation. The motivational importance of a task orientation was confirmed with its direct prediction of intentions.

Ryan et al. (1997) investigated whether initial motivation predicted adherence to that particular sport. The purpose of their study was to explore how sports motives for initiating activity in a particular sport related to continuation and participation in that sport. An important distinction was made between intrinsic and extrinsic motivation. Intrinsically motivated behaviors are performed for the satisfaction one gains from engaging in the activity itself. Individuals who were mainly motivated by competence (engaging in exercise to expand skills) and enjoyment (the desire to have fun) are said to be primarily motivated intrinsically. In contrast, extrinsically motivated behaviors are those behaviors performed in order to obtain rewards or outcomes that are separate from the behavior itself.

The authors considered students who have body-related motives (a want to improve appearance) to be primarily motivated extrinsically.

Statement of the Problem

Research has established a firm link between regular physical activity and overall health. Despite the recognized benefits of an active lifestyle, an alarming proportion of the university student population is not participating in regular physical activity. Lack of physical activity has led to an increase in the percentage of adults who are unhealthy, which in turn increases the incidence of health related diseases. Evidence shows that the level of physical activity declines from high school to university (Jackson, 1993) and activity patterns in the university population is generally insufficient to improve health and fitness.

There is need to study sports and exercise motivation of university students so as to develop better programs and interventions to improve their physical activity patterns. The purpose of this study was to analyze the gender differences that impact students' motivation in participation in sports and exercise.

This information will be vital for identifying participants' needs and wants. This will enable the university to develop better programs and interventions to improve the sports and exercise patterns of sport science students.

Materials and Methods.

A descriptive survey research design was utilized to unearth the motivational orientations of the sport science students.

Sample. The study targeted sport science students in a university with 180 students. However through stratified random sampling with the representation of every year of study only 60 students took part in the study. The Sport Science students pursue a degree programme which has both practical and theoretical courses. They are expected to maximally participate in the practical sessions and the course examinations have both theory and practical areas. Some of the students participate in sport and physical activities inside the scheduled class time and the University has the necessary sports infrastructure to enable Sport science students continue with participation after classes.

Instruments for data collection.

Self-administered questionnaires were used for data collection. The questionnaire was divided into four sections where section A focused on demographic details (age, gender, year of study), Section B consisted of items on perceived physical status and competencies, and Section C was concerned with motivation and amotivation factors while Section D unearthed the constraints to sports participation.

Items in section C and section D were weighted on a 4-point like scale format ranging from Very important to very Unimportant. Values of items from scaled such that the more important the motive was the higher the score. The questionnaire had been used in a previous study with a reliability of 0.82 (Gitonga, Njororai & Wahome, 2003).

Data was analyzed for frequencies and presented in percentages, and tables.

Results

The subjects' involvement in physical activities and sports is shown in the Table 1 below:

Table 1: Participation involvement in sports and exercise activities

Activity	Males		Females		Total	
	n	%	n	%	n	%
Aerobics	2	6.7	14	70	16	32
Ball games	10	33.3	1	5	11	22
Weight training	10	33.3	0	0	10	20
Walking /jogging	3	10	2	10	5	10
Swimming	2	6.7	2	10	4	16
Cycling	2	6.7	1	5	3	6
Martial Arts	1	3.3	0	0	1	2
Total	39	100	20	100	50	2

Table 1 shows that the subjects were involved in diverse exercise activities with 16(32%) involved in aerobics, 4(8%) in swimming, ball games had 11(22%), weight training 10(20%), cycling 3(6%), walking/jogging 5(10%) and martial arts 1(2%). It is apparent that male subjects preferred ball games and weight training while female students preferred aerobics, walking and swimming. The subjects perceived physical health status is presented in table 2.

Table 2: Perceived physical health status of the sport science students

Perceived opinion	Males		Females		Total	
	n	%	n	%	N	%
Very good	3	10	1	5	4	8
Good	10	33.3	4	20	14	28
Fair	12		10	50	22	44
Poor	5	16.67	5	25	10	20
Total	30	100	20	100	50	100

Table 2 shows that 44% of the respondents perceived their physical health status to be fair while 28% perceived their health status to be good, with 20% perceiving their status to be poor while 8% perceived their status as very good. There were no differences in the perception of physical health status by male and female students. The subjects' perception rating of motivation is shown in table 3.

Table 3: Perceived clusters of motivators of sport involvement by gender of the sport science students

Opinion	Males		Females		Total	
	n	%	n	%	n	%
Motivational climate	4	13.33	10	50	14	28
Personal ability	2	6.67	1	5	3	06
Goal achievement	10	33.33	4	20	14	28
Positive attitude	14	46.67	5	25	19	38
Total	30	100	20	100	50	100

The perceived reasons which spurred participation in physical activities were positive attitude 38% followed by both motivational and goal achievement and perceived personal ability was the least (6%). For the male students, perceptual reasons declined from positive attitude, goal achievement, motivational climate and perceived physical ability. The female's perception declined from motivational, climate, positive attitude, goal achievement and perceived personal ability. The motivating factors for both male and female subjects are shown in table 4:

Table 4: Motivating factors into physical activities of sport science students

Factor	Female		Male	
	\bar{x}	Rank	\bar{x}	Rank
Stress management	3.3	10.5	3.2	9
Revitalization	3.8	4.5	3.6	8
Enjoyment	3.8	4.5	4.8	1
Challenge	3.3	10.5	4.3	6
Social recognition	3.7	6	3.4	10
Skill development	3.6	8	4.7	3.5
Competition	3.2	12	3	12.5
Health pressures	3.6	8	4.5	5
Ill-health avoidance	3.6	8	4.06	7
Fitness	4.9	1	4.7	3.5
Weight management	4.55	2	3.0	12.5
Appearance	4.3	3	3.2	11
Strength and endurance	2.85	13	4.8	1

The main motives which spur participation in exercise for males are fitness followed by weight management, appearance, enjoyment and revitalization. For the female students their participation in physical activities is incited by enjoyment, strength and endurance, skill development and fitness, and health pressures. The least motives for both males and females are stress management and competition. The sport science constraints to participation in physical activities are shown in table 5.

Table 5: Constraints to participation in physical activities of sport science students

Constraints	Males		Female		Total	
	n	%	n	%	N	%
Lack of time	10	33.33	5	25	15	30
Facility/inaccessibility	1	3.33	0	-	1	2
Lack of motivation	12	40	11	55	23	46
Injuries/illness	6	20	2	10	8	16
Others	1	3.3	2	10	3	6
	30		20			

Factors that hinder participation in PA include lack of motivation (46%) followed by lack of time (30%), injuries/illness 16% and facility inaccessibility (2%). For the male students, constraints to participation to PA declined from lack of motivation, followed by lack of time, injuries and facility inaccessibility while the same scenario was replicated among the female students.

Discussion

Results indicate that the subjects were involved in diverse exercise activities with preference in aerobics, swimming ballgames, weight training, cycling, walking/jogging and marital arts. Findings also indicate that some students may be involved in more than one exercise /sports activities. Although there were no

significant gender differences in the choice of activities, it was apparent that males mostly took part in ball games and weight training while the female students preferred aerobics, walking/jogging and swimming. These findings are supported by Siegel (1999) where females preferred individual life time activities whereas males seemed to prefer team sport activities. The influence of gender in the choice of activities is in congruence to females' involvement in activities which are culturally accepted and feminine centered activities such as swimming and aerobics. Males' preference for ball games such as soccer, rugby, hockey, basketball etc is imbedded in the popularity of these activities in educational institutions and especially in universities in Kenya (Gitonga, et al 2003).

Scully and Clarke (1997) found that males prefer team sports and masculine sports while females prefer individual and aesthetic sports and physical activity. Most feminine sports are those with strong aesthetic component such as swimming and gymnastics which do not compromise the stereotypes of feminine behaviour and appearance (Colley, et al, 2005). These different approaches relate directly to traditional gender-role differences in the form of females communal, person focused orientation and males instrumental competitive orientation (Eagly, 1987).

The students perceived physical health status showed that 44% was fair and 28% was good with 20% indicating that their health status was poor. This is surprising as these are sport science students whose health status should be perceived to be good. Otherwise these students are pursuing a unique degree course which is supposed to ensure that health status is good. However, it can be postulated that the sports science students may not be physically active or maybe involved in other activities like alcohol consumption and other social ills which may compromise their physical health status. As much as there were no gender differences the males perceived their physical health status as fair, good, poor and very good. On the other hand the female student rating was fair, poor, good and very good. It is interesting to note that females perceived their health status lowly than males. Amorose (2001) supports the positive impact of physical self-concept and conception of competence in motivation towards exercise in the physical education context.

Student ability beliefs relate to and predict their performance in different achievement domains such as physical activity and sport (Gitonga, et al 2003). Indeed, individuals who perceive they are competent may be motivated to engage in physical activity and adversely withdraw from activities when they perceive themselves to lack competence. The findings of the study indicate that positive attitude was the main impetus followed by both motivational, climate and goal achievement. Ntoumanis (2002) identified three profile was characterized by high scores in self-determined motivational (intrinsic motivation, identified regulation), affective consequences (effort, satisfaction) and task- involving motivational climate (learning in collaboration). On the other hand, boredom and evaluation based on comparison with others had low scores.

The subject motivating factors which spur their participation in sport and exercise were differentiated along gender lenses. For the male students, the five factors with highest means were strength and endurance, enjoyment, fitness, skill development and health pressures while the factors with lowest means were competition, weight management, appearance and stress management. For the females the first motivating factors were fitness, weight management appearance and revitalization. Conversely, the lowest means were returned under strength and endurance, competition, challenge, stress management and skill development.

These findings are in congruence with other studies which indicate that women are more motivated to participate in sport and physical activities in general by intrinsic motives (Fredrick & Ryan 1997). Other studies have shown that the four most important motivations for both males and females were affiliation, fitness, skill development and friendship as opposed to the three least influential motivators which were rewards/status, situations and competitions. However these findings do not find support in Gitonga and Nteere (2011) observations that there are significant differences in motivational orientations of males and female athletes at collegiate level. Indeed Gitonga et al, (2003) found that for male athletes the participatory motives range from enjoyment and skill development to aesthetic qualities while for females participating motives range from health to success or winning. The differentiated ranking of the participatory motives between male and female athletes gives credence to gender stereotyped version of socialization into sport (Martin, Hagger & Chatzisarantis, 2007).

Several constraints hinder people from continued participation in sport and related exercise activity. The constraints to sport participation in this study waned from lack of motivation followed by lack of time, injuries/illness and inaccessibility to sports facilities for both males and females' lack of motivation was a crucial factor in constraining participation in physical activities.

These constraints to participation in sport or physical activities have been reported elsewhere. Jackson, (1993) reported that physical and personal constraints to participation increase with advancing age and lack of dire as a constraint has been observed to be significant among younger groups but decrease with age (Alexandris & Caroll, 1997). The same authors reported that females experienced more constraints than males especially in intrapersonal constraints (Jackson & Henderson, 1995).

Implications

Although the motive for weight management is more strongly linked to exercise than sport participation, this difference is particularly true for females. The result suggests that University females have greater concerns regarding their body weight than do the males. Females' greater concern for weight status seems appropriate on the surface given that younger females on average are more likely to be over weight than their male peers. As hypothesized more of the health related motives are linked to exercise opposed to sports participation thus supporting that sports participation is more closely related to intrinsic motives. It is clear from the results that motivation for sport participation is linked more closely to intrinsic reasons whereas motivation for exercise is tied to extrinsic reasons as males tend to participate in sports and females more in exercise. Regardless of these findings interpreted through self-determination theory, it suggests that the motives associated with sport participation may more likely lead to long-term adherence than the motives for exercise and that some of the difficulties in long-term maintenance of exercise programs are as a result of the extrinsic goal motivations underlying exercise.

One of the underlying foundations of this study is that behavior maintenance and adherence is most likely to occur when motivations are intrinsic rather than extrinsic in nature. The results have suggested that sport participation is linked to more desirable motivation strategies for a physically active lifestyle than exercise. Individuals appear to be more specifically inclined to participate in sports for their own sake, rather than for some desired outcome thus supporting the hypothesis that intrinsic motives lead to continuation in sport and exercise participation.

Conclusion

This study concludes that students who participate in sport and physical activities for intrinsic motives generally stick with the activities while individuals who participate to gain something (extrinsic motive) are less likely to continue participation after they fulfill their extrinsic needs. In other words competence and enjoyment predicts participation and adherence while body related motives do not predict adherence to a particular sport. Consequently exercise participants (females) were more focused than sports participants (males) on body-related motives, while males rated enjoyment and competence related motives more highly, thus illustrating that certain sports attract different types of motivation and that the type of physical activity that a student engages in determines their level of motivation. It is clear that both motivation influences involvement in physical activity (exercise or sport) among sport, science students and involvement in physical activity influences motivation as is the reason for intrinsic motivation that leads to physical activity adherence.

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