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## **MOTIVATION OF FEMALE SECONDARY STUDENTS TOWARDS PARTICIPATION IN PHYSICAL ACTIVITIES IN HONG KONG**

### **INTRODUCTION**

In recent years, Hong Kong has been making significant progress in sport achievements. It undertook the responsibility of hosting the equestrian events of the 2008 Beijing Olympics; and hosted the East Asian Games in 2009. In the year 2010, Asian Games, Hong Kong also secured five gold medals, seven silver medals and five bronze medals which placed it at the 11<sup>th</sup> position among 45 participating countries. However, behind this prosperous scene, school educators alerted that there has been a dramatic drop in fitness among school children which was a result of decrease in their activity level. Previous studies in Hong Kong found that local secondary school children were quite sedentary; and watching television, playing computer games and shopping were their major recreational activities (Ng, 1996). There was also a tendency among school children to avoid physical education lessons in schools, and this phenomenon was especially prominent among female secondary students (Cruz, 1998; Li, Chow and Yeung, 1995). According to Dishman (1990), participation was related to attitude, hence this study aimed to explore the attitude of female secondary school children towards physical activities.

In this study, the self-determination approach (Deci and Ryan, 1985) was used to understand the motivation of the participants. Self-determination theory suggests that behaviour can be broadly categorized as intrinsically motivated, extrinsically motivated, or amotivated. Intrinsically motivated behaviours are undertaken out of interest in the activity itself. In contrast, extrinsically motivated behaviours are controlled by external sources such as awards, trophies, money or praise. Amotivation refers to the situation where there is an absence of motivation and individuals are reluctant to get involved. Deci and Ryan (1985) further described four types of extrinsic motivation. External regulation refers to behaviour that is controlled by external sources, such as material reward or constraints imposed by others. Introjected regulation occurs when the external source of motivation has been internalized and such behaviours are reinforced through internal pressures such as guilt or anxiety. With identified regulation, the outcomes of behaviour are highly valued and are performed with less pressure. Finally, integrated regulation is in operation when the individual

comes to value and judge the behaviour as important and, therefore, performs it out of choice. From the perspective of self-determination, integrated regulation can hardly be distinguished from intrinsic motivation. The different types of motivated behaviours can be ordered along a self-determination continuum. Starting from higher to lower levels of self-determination there are: intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, and amotivation. The theory predicts that high levels of intrinsic motivation and internalized extrinsic motivation, that is, self-determined forms of motivation, should lead to positive effects and should be associated with greater effort in participation. On the other hand, external regulation and introjected regulation which are controlling forms of motivation, would lead to boredom and eventually dropout.

## **METHOD**

A total of 160 female school students from the same school participated in this study. Half of them (n=80) were junior secondary (Secondary 1) students with a mean age of 12.45 (SD=0.82); while the other half (n=80) were senior secondary (Secondary 5) students with a mean age of 16.67 (SD=0.77). They completed a questionnaire measuring the different motivational types developed by Goudas, Biddle, and Fox (1994). Students were asked to respond according to a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5) which followed the stem „I take part in the PE class ...”.

After data collection, the questionnaire items were reduced to five subscales: intrinsic motivation, identified regulation, introjected regulation, external regulation and amotivation. Descriptive data analysis were used to examine the motivational status of the participants, independent sample t-test was used to find out the differences in attitude between the junior and senior female school students towards participation in physical activities.

## **RESULTS AND DISCUSSION**

### **Attitude of the female students towards participation in physical activities**

Mean scores, obtained using descriptive analysis, revealed that intrinsic motivation (m=3.75, SD=.73) and identified regulation (m=3.76, SD=.65) were significantly higher than other scales of introjected regulation (m=2.83, SD=.93) and external regulation (m=3.30, SD=.58); while the lowest score (m=2.19, SD=.76) was obtained for amotivation.

**Table 1.** *General Attitude of the Whole Sample (n=160) towards Participation in Physical Activities*

Items	Mean	SD
Intrinsic motivation	3.75	.73
Identified regulation	3.76	.65
Introjected regulation	2.83	.93
External regulation	3.30	.58
Amotivation	2.19	.76

These findings shed a positive light on the participation motives of this group of female secondary school students in physical activities. They participated in physical activities out of intrinsic motivation and identified regulation which were at the higher level of the self-determination continuum. According to previous studies (Deci and Ryan, 1985; Vallerand and Losier, 1999), this self-determined form of motivation would lead to greater effort in participation and in turn would elicit positive effect among this group of students. Based on the findings, it can be predicted that the intention of this group of students towards physical activities would be physically active.

### **Age differences in attitude of female secondary students towards participation in physical activities**

Age differences were inferred from the comparison of junior (Secondary 1, mean age=12.45) and senior (Secondary 5, mean age=16.67) secondary school students. Results from Independent sample t-test revealed that significant differences were observed in intrinsic motivation ( $t_{(158)}=6.34$ ,  $p<.001$ ) with junior students' results ( $m=4.13$ ,  $SD=.56$ ) being significantly higher than those of senior students ( $m=3.37$ ,  $SD=.67$ ); in identified regulation ( $t_{(158)}=3.38$ ,  $p<.01$ ) with junior students' results ( $m=4.01$ ,  $SD=.64$ ) significantly higher than senior students' results ( $m=3.35$ ,  $SD=.58$ ); also in introjected regulation ( $t_{(158)}=3.44$ ,  $p<.01$ ) with junior students' results ( $m=3.14$ ,  $SD=.94$ ) also significantly higher than those of senior students ( $m=2.52$ ,  $SD=.82$ ). For the other two motivated behaviours, the differences were not significant.

**Table 2.** Comparison of Attitude between Junior (n=80) and Senior (n=80) Female Students towards Participation in Physical Activities

Items	Junior (n=80)		Senior (n=80)		T-value	p-value
	Mean	SD	Mean	SD		
Intrinsic motivation	4.13	.56	3.37	.67	6.34	.000
Identified regulation	4.01	.64	3.51	.58	3.38	.001
Introjected regulation	3.14	.94	2.52	.82	3.44	.001
External regulation	3.38	.60	3.22	.54	1.39	.172
Amotivation	2.14	.81	2.20	.72	.38	.709

These findings revealed that, although both groups of students participated out of self-determined motivation, there was a significant decrease in the more self-determined factors of intrinsic motivation, identified regulation and introjected motivation in the senior students' group. This implied that when the female students grew older, their interest in participation in physical activities would fade. They did not feel participation as satisfying and intentional. According to the self-determination theory, their intention to participate would decrease, their participation would be associated with increasing boredom and they would exert less effort.

## RECOMMENDATIONS

In light of the self-determination theory (Deci and Ryan, 1985) and based on the results from this study, several recommendations for school PE curriculum can be highlighted. Several studies have tried to identify the factors associated with students' avoidance of school physical education classes. Boredom, repetition, and lack of meaningful work within the lessons were suggested as the causes in some studies (Fox and Biddle, 1988; Rice, 1988); teachers' behaviour was also mentioned (Figley, 1985); and competitive class environment was also one of the factors (Robinson, 1990). At present, the school PE curriculum is dominated by competitive sports activities such as athletics and major ball games which place special emphasis on formal competitions. Devereux (1976) has indicated that children may be robbed of valuable learning experiences because formal competition undermines informal games and the ability to organize and run games themselves. School physical educators can strive to help school children recognize their personal improvement in these formal competitive activities, and it is also recommended that informal non-competitive physical activities such as Tai Chi, challenge courses, gymnastics and jazz be included in the curriculum. When considering the trend of PE lessons in Hong Kong, there also exist favourable conditions for encouraging females to participate

in sport and physical activities. There have been a growing amount of activities that are being incorporated in the school PE curriculum, that cater for the interest of female students such as rhythmic activities, aerobic classes, netball and outdoor adventurous activities. Recently, the trend of relating body image and developing health-related fitness within the school PE curriculum in Hong Kong (Curriculum Development Council, 2000) is a practical and constructive move in re-structuring the curriculum, especially when considering that children move into adolescence in their senior secondary years, and they are more aware of their body image. Students believed that regular physical activities promote health and allow them to have a better body shape, and they can gain satisfaction and enjoyment through participation in physical activities. Thus, this should be the future direction for the promotion of sport and physical activities.

According to a study on sport development among Asian countries (Waters and Smith, 2002), using the National Sport Development Index (NSDI) which was comprised of three domains representing the nation's sport delivery system, among 14 nations Hong Kong ranked 1st in elite sport, but 6th in mass sport and 7th in educational sport. This reflected the skewing of the national psyche towards elite sport in Hong Kong. Thus, in order to help our next generation, the allocation of resources needs to be re-considered, for example, there should be more investment in educational and mass sport as suggested in a recent study (Fu, 2002).

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## **ABSTRACT**

The study was based on the Self-determination Theory (Deci and Ryan, 1985) to examine the motivation of female secondary students in Hong Kong towards physical activities. 160 students from secondary one and secondary five participated in the study by completing the questionnaire developed by Goudas, Biddle and Fox (1994) to examine the underlying motivational orientations. Results were positive and they revealed that intrinsic motivation and identified regulation were the main factors underlying the participation in physical activities. However, in examining the age differences, there was also a significant decrease in motivation towards participating in physical activities with higher forms ( $p < .001$ ). It was suggested that schools, in promoting physical activities to female students, should shift the traditional school PE curriculum from focusing on competitive sports to aesthetic activities that could help students achieve physical fitness and an attractive physical appearance.

**Key words:** *Self-determination Theory, motivational orientations, physical activities*