

South African Generation Y students' motives for engaging in physical activity

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Abstract

The purpose of this study was to determine Generation Y students' level of physical activity and the motivation for participating in physical activity. Despite there being a great deal of published literature that provides evidence of the benefits of engaging in physical activity and its influence on reducing certain dreaded illnesses, physical activity amongst the Generation Y cohort (individuals born between 1986 and 2005) is declining worldwide. In South Africa, the Generation Y cohort constituted 38 percent of the country's population in 2013. Given the significant size of this cohort, their physical and mental wellbeing has important economic implications, not only for the country's health care system but also its current and future labour market. Given that participation in physical activity has proven health benefits, it is imperative that members of the significantly sized South Africa's Generation Y cohort be encouraged to engage in physical activity. However, designing social marketing campaigns to arouse members of this cohort's motives to engage in physical activity necessitates first understanding their motivation to participate in physical activity. The study, using a questionnaire designed to measure Generation Y students' motives for participating in physical activity, was carried out on a convenience sample of 450 students across three South African public higher education institutions' campuses located in the Gauteng province. Data analysis was conducted using one-tailed one-sample t-tests and Pearson's product-moment correlation analysis. The findings suggest that Generation Y students engage in light, moderate and vigorous levels of exercise and are highly motivated to engage in physical exercise.

Keywords: Generation Y, sport participation, physical activity, motives, motivation theories.

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Introduction

Motivation and youth participation in physical activity are key topics in sport psychology literature (Spray, Wang, Biddle & Chatzisarantis, 2006). In the past, the youth, who according to generational studies are labelled as the Generation Y cohort (individuals born between 1986 and 2005) (Markert, 2004), were viewed as being the healthiest segment of society's age cohorts. However, this appears to be changing at an alarming pace as many members of this cohort are no longer participating in moderate to vigorous physical activity. The main reasons cited

for the lack of participation include changing lifestyles and modern technology (Kaupužs, 2013). Despite there being a great deal of published literature that provides evidence of the benefits of engaging in physical activity and its influence on reducing certain dreaded illnesses, physical activity amongst the Generation Y cohort, and other cohorts for that matter, is declining (Nolan, Sandada & Surujlal, 2011; Coetzee, Coetzee & Botha, 2005; Ahmed, 2012; Sirard, Pfeiffer & Russell, 2006). People's motives for engaging in physical activity constitute a well-researched topic of study (Cagas, Torre & Manalastas, 2010). Gill and Overdoff (1994) opine that over the last few decades participation in physical activity among the youth has declined and that the incentives of good health and mental wellbeing no longer suffice to ensure regular participation. Downward, Lera-Lopez and Rasciute (2011) concur and indicate that since the turn of the century, participation in physical activities such as sport has stagnated and has even started to decline in many countries. The motivation to participate in physical activity – other than day to day light activity – may differ substantially from one person to another. The reasons for participation in physical activity may even differ according to gender, age and race groups (Sirard et al., 2006).

In South Africa, the Generation Y cohort constituted 38 percent of the country's 52 982 000 population in 2013 (Statistics South Africa, 2013). Given the significant size of this cohort, their physical and mental wellbeing has important economic implications, not only to the country's health care system but also to its current and future labour market. Those Generation Y members engaged in pursuing a tertiary qualification are of particular importance in this regard for several reasons. First, a tertiary qualification is typically associated with a higher future earning potential and a higher social status within society. The combination of these two factors suggest that Generation Y university graduates are likely to manifest as role models (Bevan-Dye, 2013), influencing the behaviour trends, including the propensity to engage in physical activity, of the wider Generation Y cohort. Second, a higher future earning potential equates to a higher future taxation contribution, which benefits the country's economy as a whole and positively influences the funds available for social security initiatives, including that of the health care system.

Given that participation in physical activity has proven health benefits, it is imperative that members of the significantly sized South Africa's Generation Y cohort be encouraged to engage in physical activity. However, designing social marketing campaigns to motivate members of this cohort to engage in physical activity necessitates first understanding their motivation to participate in physical activity. In terms of tailoring social marketing efforts to encourage physical activity participation, the role model influence of Generation Y students on the wider Generation Y cohort in South Africa may have a salient impact on the success of such efforts aimed at targeting this segment.

As such, the purpose of this study was to determine Generation Y students' motivation for participating in physical activity.

Physical activity refers to the movement of the body and muscles that results in energy expenditure, which occurs regardless of whether or not there was any conscious intention to achieve a certain level of fitness (Caspersen, Powell & Christenson, 1985; Thompson et al., 2003; Nolan et al., 2011). Caspersen et al. (1985) make a clear distinction between physical activity, exercise and physical fitness. The definition for physical activity, as described by them, has already been discussed. They define exercise as a planned, repetitive and structured activity with a purpose or goal, and physical fitness as a set of attributes that a person has or wants to achieve. Physical fitness can further be defined as the ability to perform physical activity with vigour and without fatigue. Henderson and Ainsworth (2003) classify physical activity into three categories, namely exercise, leisure and lifestyle. Exercise can be explained as intended, planned or routine exercise such as training or participating in sport for the main purpose of obtaining a certain level of fitness. This may also be referred to as vigorous physical activity. The second level of physical activity is leisure-time activity and this refers to activities performed during spare or leisure time. Typical activities under this category would be dancing, swimming for relaxation and playing with children or pets. This type of activity may also be referred to as moderate physical activity. The last level of physical activity is lifestyle activity and includes day to day activities such as walking, climbing stairs, housework or gardening. This may also be referred to as light exercise. For the purpose of this study the definition as set out by Henderson and Ainsworth (2003) is used.

Participation in physical activity is considered an important attribute to healthy living; however, living healthy is only one of the reasons people participate in sport or physical exercise (Dhurup & Garnett, 2011). Pratt et al. (1999) point out that there are several psychological benefits of physical activity, including stress reduction and improvement of self-esteem. Markland and Hardy (1993) identify several reasons why people participate in physical activity. These include stress management, revitalisation, enjoyment, challenge, social recognition, affiliation, competition, health pressure, ill-health avoidance, positive health, weight management, appearance, strength and endurance and nimbleness. Cooper and Theriault (2008) divide the reasons for physical activity participation into three groups, namely social, to be with friend or other people (enjoyment, social recognition, affiliation), physical, to remain healthy (stress management, revitalisation, health pressure, ill-health avoidance, positive health) and intrapersonal, to feel better about oneself (challenge, competition, weight management, appearance, strength and endurance, nimbleness). Kaupužs (2013) divides the reasons why people participate in physical activity into five subscales of motivation, namely amotivation (people do not see a reason to participate in physical activity), external regulation (people exercise because other people tell

them to do so), introjected regulation (when people feel guilty if they do not partake in physical activity), identified regulation (when people value the benefits of physical activity) and intrinsic regulation (people partake in physical activity because it is fun).

A recent study by Kwak et al. (2009) even showed that there was a positive association between school-based physical activity and academic outcomes. It should be noted that this study showed that only vigorous physical activity resulted in a significant improvement in the students' academic achievement. The improvement in the students' academic achievement may also be a result of improved psychological levels associated with physical activity, as pointed out by Pratt et al. (1999).

Theories on motivation to participate in sport

Sage (1977) defines motivation as the intensity and direction of one's effort. Researchers have identified several theories of motivation to participate in physical activity, or any other activity, over the decades. Some researchers have focussed on theories of sport behaviour (Cunningham & Kwon, 2003), whilst others focused more on the motivation to participate in sport (Pelletier et al., 1995). These refer to motivational theories and range from a mechanistic nature (people being passive and driven by psychological drivers) to cognitive in nature (people who are actively interpreting and processing and their achievement). Motivation theories aim to determine why a particular behaviour is implemented and may, in turn, be applied to explain why individuals are motivated to partake in physical activity (Koivula, 1999). Some of these include achievement goal theory, self-determination theory, theory of planned behaviour and sport for development theory.

Achievement goal theory

The achievement goal theory states that people participate in physical activity to prove their achievement or competence in a task or activity. This theory can be divided into two sub-categories, namely task and ego orientation. Being task orientated entails employing a perception of ability, which is self-referenced. In contrast, being ego orientated entails measuring one's own ability against that of someone else (Sit & Lindner, 2005; Spray et al., 2006).

Self-determination theory (SDT)

The self-determination theory (STD) includes the psychological needs for competence, relatedness and autonomy as an extension to the traditional notions of extrinsic and intrinsic motivation. The SDT has been used to assess individuals' motivation in physical activity. Self-determination increases as a

person moves from external regulation (being forced to take part) to intrinsic regulation (taking part because it is fun). An example of this would be a child was forced to partake in an activity as punishment by a parent and then after a while the child ends up actually liking or enjoying the activity (Spray et al., 2006).

Theory of planned behaviour (TPB)

This theory of planned behaviour (TPB) states that only specific attitudes towards certain behaviour, in this case, physical activity, can be expected to predict that specific behaviour. This theory has been found useful in predicting different kinds of behaviour such as dieting and exercising. The main attribute of the theory is the *intention* to engage in or perform an activity (Gucciardi & Jackson, 2013).

Sport for development theory

Lyras and Peachey (2011) define the sport-for-development (SFD) theory as using sport as a method to influence the socialisation of children, youths and adults, public health, social integration of disadvantaged people and economic development and conflict management in a positive manner. Coalter (2013) adds that physical activity can teach individuals 'lessons of life' and contribute to character building. This, in turn, may lead to the development of self-discipline and positive moral reasoning.

Methodology

Target population and sample

The target population for the study comprised individuals aged between 18 and 24 years registered at South Africa's 23 registered public higher education institutions (HEI's) that existed in 2013. Using judgemental sampling, the sampling frame was narrowed down to include the campuses of three HEIs situated in the Gauteng province – one from a comprehensive university, and the others from a traditional university and a university of technology respectively. The Gauteng province was selected over the other provinces because it contained the highest percentage (26%) of South Africa's public HEIs in 2013 (HESA, 2011).

From this sampling frame, a non-probability convenience sample of 450 students across the three campuses was taken for the main study. Lecturers at each of the three campuses were contacted and asked if they would allow the questionnaire to be distributed to their students in class. Once permission was obtained, fieldworkers distributed the questionnaires to students at the three campuses.

Participation was voluntary and confidentiality was assured concerning the information provided by the participants, including the name of the HEI at which they were registered.

Instrument and procedure

A self-administered questionnaire was used to gather the data for the study. Markland and Ingledew's (1997) Exercise Motivation Inventory (EMI-2) was used to measure the Generation Y students' motives for engaging in physical activity. The scale comprises the 14 constructs of stress management (four items), revitalisation (four items), enjoyment (four items), challenge (five items), social recognition (four items), affiliation (four items), competition (four items), health pressure (three items), ill-health avoidance (four items), positive health (four items), weight management (four items), appearance (four items), strength and endurance (four items) and nimbleness (four items). These responses were measured on a six-point Likert scale ranging from strongly disagree (1) to strongly agree (6). The Likert scale was selected as it is the most popular interval scale for the measurement of attitudes and offers the benefits of being both easy to construct and easy to administer (Malhotra, 2010).

The questionnaire included various demographic questions pertaining to participants' native language, province of origin, age, race and gender. These questions were included to assess how representative the sample was of the target population.

Respondents were also asked how regularly in the past seven days they had participated in vigorous exercise (for example, jogging, squash, aerobics, fast cycling, football), moderate exercise (for example, fast walking, dancing, golf) and light exercise (for example, walking at an average pace, light housework, table tennis). The scaled responses to this question were again measured on a Likert scale that ranged from often (4) to not at all (1).

The questionnaire was piloted on 30 students, who were excluded from the final study. The pilot study was conducted in order to evaluate the reliability of the instrument. The Cronbach alpha values computed for the individual constructs ranged between 0.825 and 0.963 in the pilot study, thereby indicating acceptable reliability (Pallant, 2010).

Reliability

The reliability coefficients for the scales in the main survey were all above the recommended 0.700 level (Pallant, 2010) and ranged from 0.726 to 0.907. This confirmed the reliability of the measurement instrument.

Data analysis

The Statistical Package for Social Sciences (SPSS), Version 22.0 for Windows was used to analyse the gathered data. The statistical analysis included frequencies, descriptive statistics, one-tailed one-sample t-tests and Pearson's product-moment correlation analysis. Malhotra (2010) indicates that a one-tailed t-test for a single mean is appropriate when there is some preferred direction for the conclusion for which sample evidence is sought and that Pearson's product-moment correlation analysis is suitable when the objective is to measure the strength of association between two metric variables.

Ethical considerations

In terms of the ethical standards of academic research, participation in this study was voluntary and lecturers at the respective campuses served as gatekeepers. In order to honour the promise of confidentiality provided in the cover letter of the questionnaire, the findings are reported on in aggregate and the names of both the participants and the HEI at which they were registered at the time of the study are not mentioned.

Results

Of the 450 questionnaires distributed, 324 completed questionnaires were returned, which yielded a 72 percent response rate. In terms of gender, there was an equal split between male and female participants. The sample included participants in all seven of the age categories, with most of them (47%) indicating being 19 and 20 years of age. The sample included participants from eight of South Africa's nine provinces. Most of the participants indicated their province of origin as Gauteng (53.6%), followed by Limpopo (15.4%). There were no participants from the Western Cape. The sample comprised predominantly African/black students (84%) and white students (13.6%). A description of the sample is outlined in Table 1.

The highest means were recorded for the positive health motive (mean=5.23), the ill-health avoidance motive (mean=4.86) and the strength and endurance motive (mean=4.85). The lowest mean was recorded on the health pressure motive (mean=3.34), which, given the age of the target population, was not surprising. A one-tailed one-sample t-test, where the expected mean was set at $X > 3$ (that is, in the agreement area of the six-point Likert scale) and the significance level at the conventional $\alpha=0.05$, was performed to determine whether the computed means were significant. The means for each of the physical exercise motives were significant ($p=0.000$). This suggests that Generation Y students are highly motivated to engage in physical exercise.

Table 1: Sample description

Age	(%)	Gender	(%)	Language	(%)	Home Province	(%)	Race	(%)
18	12.3	Female	50.0	Afrikaans	9.6	Eastern Cape	3.8	Coloured	1.5
19	21.6	Male	50.0	English	8.7	Free State	11.0	Indian/Asian	0.9
20	25.0			IsiNdebele	.3	Gauteng	53.6	White	13.6
21	17.6			IsiXhosa	7.1	KwaZulu-Natal	5.3	African/Black	84.0
22	11.4			IsiZulu	19.6	Limpopo	15.4		
23	8.3			Sesotho sa Leboa	7.8	Mpumalanga	5.0		
24	3.7			Sesotho	23.6	North West	4.4		
				Setswana	10.6	Northern Cape	1.6		
				SiSwati	4.3				
				Tshivenda	3.4				
				Xitsonga	5.0				

In terms of the degree to which Generation Y students engage in physical exercise, the highest mean was recorded for light exercise (mean=3.00), followed by moderate exercise (mean=2.80) and the lowest mean for vigorous exercise (mean=2.70). Once again, a one-tailed one-sample t-test was performed to determine whether the computed means were significant. Given that these items were measured on a four-point scale, the expected mean was set at $X > 2$ (that is, in the very to fairly often area of the four-point Likert scale) and the significance level at the conventional $\alpha = 0.05$. The means for each of the levels of physical exercise were significant ($p = 0.000$). This suggests that Generation Y students engage in light, moderate and vigorous exercise.

Table 2 reports on the calculated means, standard deviations, standard errors, t-values and p-values. In light of the findings presented in Table 2, Pearson’s product-moment correlation analysis was performed to determine the relationships between the various physical exercise motives and levels of physical exercise amongst Generation Y students. These correlation coefficients are reported on in Table 3.

As is evident in Table 3, there was a significant positive relationship between the motives of revitalisation ($r = 0.348, p = 0.000$), enjoyment ($r = 0.410, p = 0.000$), challenge ($r = 0.309, p = 0.000$), social recognition ($r = 0.187, p = 0.001$), affiliation ($r = 0.189, p = 0.001$), competition ($r = 0.438, p = 0.000$), positive health ($r = 0.137, p = 0.014$), strength and endurance ($r = 0.328, p = 0.000$), nimbleness ($r = 0.321, p = 0.000$) and engaging in a vigorous level of exercise. Furthermore, there was a significant positive relationship between the motives of stress management ($r = 0.146, p = 0.009$), revitalisation ($r = 0.182, p = 0.001$), ill-health avoidance ($r = 0.164, p = 0.004$), positive health ($r = 0.177, p = 0.002$) and engaging in a moderate level of exercise.

Table 2: Motives for engaging in physical exercise and level of physical exercise

	Mean N= 324	Standard deviation	Standard error	t-value	p-value
Motives					
Stress management	4.68	1.04	0.06	29.08	0.000*
Revitalisation	4.75	0.95	0.05	33.15	0.000*
Enjoyment	4.78	1.05	0.06	30.63	0.000*
Challenge	4.61	0.96	0.05	30.33	0.000*
Social recognition	3.58	1.44	0.08	7.22	0.000*
Affiliation	4.21	1.17	0.07	18.62	0.000*
Competition	4.21	1.39	0.08	15.65	0.000*
Health pressure	3.34	1.56	0.09	3.88	0.000*
Ill-health avoidance	4.86	1.20	0.07	27.79	0.000*
Positive health	5.23	0.94	0.05	42.70	0.000*
Weight management	4.08	1.41	0.08	13.73	0.000*
Appearance	4.41	1.19	0.07	21.30	0.000*
Strength and endurance	4.85	1.04	0.06	31.90	0.000*
Nimbleness	4.70	1.02	0.06	29.81	0.000*
Level of physical exercise					
Vigorous	2.70	1.08	0.60	11.62	0.000*
Moderate	2.80	0.95	0.54	14.86	0.000*
Light	3.00	0.99	0.56	17.70	0.000*

*Significant at the 0.05 level.

Table 3: Relationship between physical exercise motives and level of physical exercise

Motives	Level of physical exercise		
	Vigorous	Moderate	Light
Stress management	0.62	0.146*	0.034
Revitalisation	0.348*	0.182*	0.140*
Enjoyment	0.410*	0.106	0.037
Challenge	0.309*	0.060	0.037
Social recognition	0.187*	-0.024	-0.079
Affiliation	0.189*	0.102	0.021
Competition	0.438*	0.083	-0.059
Health pressure	-0.035	-0.014	0.087
Ill-health avoidance	0.085	0.164*	0.078
Positive health	0.137*	0.177*	0.056
Weight management	0.042	0.036	0.029
Appearance	0.050	0.037	-0.019
Strength and endurance	0.328*	0.045	0.018
Nimbleness	0.321*	0.090	0.090

* Significant at the 0.05 level (2-tailed).

Engaging in light exercise typically would not require much motivation amongst this age cohort and, indeed, this level of exercise had a significant positive relationship with only one motive, namely revitalisation ($r=0.140$, $p=0.013$). There was no significant relationship between any of the three levels of physical exercise and the motives of health pressure, weight management or appearance.

Discussion

The aim of this study was to determine Generation Y students' level of physical activity and motivation for participating in physical activity. In terms of the level of physical activity, the findings indicate that Generation Y students engage in light, moderate and vigorous exercise. The findings suggest that while the majority of students participate in light exercise, fewer engage in moderate and vigorous exercise. These results can be expected in today's lifestyle where digital technology distractions and time constraints limit the time and motivation available to students to participate in vigorous and moderate exercise activities. This was also indicated in the literature by Kaupužs (2013).

The students appear to understand that participation in physical activity offers important health benefits given that the highest reported means were for the motives of positive health and ill-health avoidance. In contrast, the lowest reported mean was for the health pressure motive meaning that few actually participate in physical activity as a result of an existing ailment or treatment. Taking into consideration their age, this finding makes sense. In a study done by Lee and Yuen Loke (2005) they found that students had incomplete knowledge and a poor sense of health responsibility and that relatively few engaged in physical activity. This is contradictory to the findings of this study as students were mostly motivated by positive health and ill-health avoidance. In another study, Cagas *et al.* (2010) indicate that students mostly exercised to be fit and manage their weight, whereas in this study weight management was the third lowest ranked motive for students to participate in physical activity.

The findings of this study indicate a significant positive relationship between vigorous exercise and the motives of revitalisation, enjoyment, challenge, social recognition, affiliation, competition, positive health, strength and endurance and nimbleness. This suggests that marketing campaigns that stress these motives may encourage Generation Y individuals to participate in vigorous exercise. There was a significant positive relationship between moderate exercise and the motives of stress management, revitalisations, ill-health avoidance and positive health, and emphasising these benefits may encourage members of South Africa's Generation Y cohort to engage in moderate physical activity. The evidence from this sample also infers that Generation Y students are relatively happy with their appearance and have a high self-esteem, given that the motives of social recognition, weight management and appearance scored the lowest means and, weight management and appearance had no significant positive correlation with any of the exercise levels.

The importance and benefits of exercise remains a significant issue and, in light of the findings of this study, it is clear that individuals in the Generation Y cohort need to be constantly reminded that moderate to vigorous exercise is

beneficial not only to their health status but also to foster social and intrapersonal relationships. It is recommended that a variety of sporting exercise activities be presented to students on campus and that they be informed of the extramural activities taking place outside their campuses. It is also recommended that students receive incentives and discounts for participating in moderate to vigorous sporting events. Physical activity such as sport participation is seen as culture or way of life and cannot easily be fostered at a late stage in a person's life; therefore, it is of the utmost importance to nurture this culture in a child's life as early as possible. Most of the students that participate in vigorous sport at university level will most probably have done so for most of their lives. Therefore, the importance of sport and exercise should already be emphasised in pre- and primary-school phases.

Limitation and implications for further research

The results of this study should be interpreted in the light of certain limitations. The most important limitation is that a non-probability convenience sample was used. This type of sample does not necessarily allow for an objective assessment of the sample findings (Malhotra, 2010) and care should be taken in generalising the results to a larger target population. Although this study included respondents from eight of the nine provinces in South Africa, the study focussed exclusively on the HEI campuses in Gauteng province. Another limitation is that the research design followed a single cross-sectional approach and it is only a snapshot in time. Therefore, results from studies conducted in another region or time period may differ. In order to overcome this limitation, a longitudinal study is recommended as this would provide more in-depth information and results. Furthermore, the study utilised a self-administered questionnaire, which instead of actually observing their behaviour, relied on the respondents to recall their abilities and actions.

This study has implications for further study. First, as indicated within the limitation section a longitudinal study using probability sampling across all South Africa's nine provinces that includes the observation data collection technique could be conducted. This could provide more meaningful and generalisable results. Secondly, this study also opens a scope for investigating the difference in gender motives for engaging in physical activity.

Conclusion

Members of the Generation Y cohort represent the future of South Africa, and their current and future health has important implications for the country's future. Given the known benefits of exercise to both physical and mental health, it is imperative that this segment of the population be targeted with initiatives

that will encourage them to adopt a moderate to vigorous physical active lifestyle.

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