

*“Pampapayat, Para Lumakas,
To Be Healthy”:
Exploring Filipino Motives
For Exercise*

Jonathan Cagas

Beatriz Torre

Eric Julian Manalastas

University of the Philippines Diliman

Although exercise motivation is a well-established research area in exercise and sport psychology in the West, relatively little work on this topic is available in the Philippines. This study explored motives for exercise among Filipinos using an open-ended methodology. Five hundred ninety-two Filipinos aged 15 to 69 were asked to free-list possible motives for exercise participation. Two thousand ninety-five responses (about four per participant) were coded by two independent judges via direct content analysis and using themes derived from the Exercise Motivation Inventory subscales (EMI-2; Markland & Ingledew, 1997). The most frequently identified motives for exercise were highly extrinsic – Filipinos exercise for weight management, positive health, and strength and endurance. Challenge, social recognition, and competition were the least frequently cited motives. Results also surfaced participation motives outside those in the EMI-2, such as exercising to satisfy a requirement, to improve posture, and due to directed social influence from peers and family.

Keywords: exercise motivation, participation motives, physical activity

With the rising prevalence of lifestyle related diseases around the world (World Health Organization, 2014), there is an increased interest in studying why people participate in exercise and physical

activity outside the competitive sports setting (Biddle & Mutrie, 2008). The World Health Organization (2014) defines physical activity (PA) as any bodily movement that results in increased energy expenditure and is positively correlated with physical health. Physical activity has four general categories: work-related PA (e.g., lifting office supplies), nonwork-related PA (e.g., doing household chores), travel-related PA (e.g., walking to a bus terminal), and leisure-related PA (e.g., going for a morning jog). As a form of leisure-related PA, exercise refers to physical activity that is planned, structured, repetitive, and which maintains or improves physical fitness (Caspersen, Powell, & Christenson, 1985, as cited in Biddle & Mutrie, 2008). It can include activities such as running, swimming, gym-based fitness activities, and recreational sport.

The Philippines is currently facing major health issues with alarming increases in the prevalence of hypertension, obesity, and physical inactivity according to national data (Food and Nutrition Research Institute, Department of Science and Technology [FNRI-DOST], 2008). In a nationally representative sample of 7,700 Filipinos ages 20 and older, FNRI-DOST reported that very few Filipino adults – only 7% – had high levels of leisure-time physical activity. High leisure-time PA was operationalized in this survey as exercising either “every day” or “three to five times a week” at 30-45 minutes.

From an exercise psychology perspective, motivation to participate in leisure-related PA is a critical area of research that provides better understanding of exercise behavior and serves as basis for interventions to promote physical activity and health. Intervention messages can be developed to tap into people’s various participation motives to promote exercise participation (Ingledeew & Markland, 2008). Exercise motivation refers to reasons why people participate in leisure-time PA at the level of health and recreation (Biddle, 2007; Biddle & Mutrie, 2008). Previous research suggests that intrinsic or self-determined motives such as stress management, health and fitness, social affiliation, and challenge are better predictors of exercise participation (Ingledeew & Markland, 2008; Ingledeew, Markland, & Ferguson, 2009). Participation motives, or the specific reported reasons why people engage in exercise, is an extensively studied research area in exercise psychology in the West (Biddle & Mutrie,

2008).

A recommended starting point for studying physical activity motivation is a descriptive approach, a widely used method in early baseline studies of exercise in specific communities (Biddle & Mutrie, 2008). Descriptive approaches using systematic techniques like free listing and content analysis can be used to generate new understanding of certain health behaviors (Dongre, Deshmukh, Kalaiselvan, & Upadhyaya, 2009). According to Biddle and Mutrie (2008), although they do not offer a theoretical explanation for physical activity involvement, descriptive approaches are useful because they provide a basis for understanding the wide range of people's motivation for exercise. Population-based studies conducted in Australia (Australian Bureau of Statistics, 2007), Western Europe (Zunft et al., 1999), and Singapore (Singapore Sports Council, 2005) point to motives that appear to be shared across cultures. These are: to maintain good health, to release tension, to get fit, for leisure, and for enjoyment.

Measures and Models of Exercise Motivation

Motivation to participate in exercise can be multifaceted and a number of models and standardized instruments have been designed to identify participation motives in exercise and physical activity. Markland and Ingledew (2007) have identified four motives inventories in the exercise psychology literature: the Reasons for Exercise Inventory (REI; Silberstein, Striegel-Moore, Timko, & Rodin, 1988), the Motivation for Physical Activities Measure (MPAM; Frederick & Ryan, 1993; MPAM-Revised; Ryan, Frederick, Lipes, Rubio, & Sheldon, 1997), the Personal Incentives for Exercise Questionnaire (PIEQ; Duda & Tappe, 1989), and the Exercise Motivation Inventory-2 (EMI-2; Markland & Ingledew, 1997).

Of these four, the EMI-2 provides the broadest range of reasons for exercise participation. It is also one of the most commonly used measures of exercise participation motives in the research literature (Kilpatrick, Hebert, & Bartholomew, 2005; Markland & Ingledew, 2007; Sanchez, 2008). An improved version of the original 12-subscale Exercise Motivation Inventory (EMI; Markland & Hardy, 1993, as cited in Markland & Ingledew, 1997), the EMI-2 has been factorially

validated and shown to be a reliable measure of exercise motives that can be used to evaluate participation motives of both habitual exercisers and nonexercisers (Markland & Ingledew, 1997). Its 14 subscales have also been classified into three higher order themes using factor analysis (Ingledew & Markland, 2008): (a) health and fitness motives (i.e., health pressures, ill-health avoidance, nimbleness, positive health, and stress management), (b) social engagement motives (i.e., affiliation, challenge, competition, and social recognition), and (c) appearance and weight motives (i.e., appearance, and weight management).

Filipino Participation Motives for Exercise and Physical Activity

Though exercise and sport motivation is a well-established research topic in the West, relatively little work is available in the Philippines, particularly in the area of exercise. One exception is an unpublished study by Sanchez (2008) comparing participation motives for sport versus for exercise. She asked 291 Filipino university students to answer sport and exercise versions of the EMI-2 and compared their motives for participation in these two forms of physical activity. Sanchez found that enjoyment, challenge, social recognition, affiliation, and competition motives were more likely endorsed for sport participation, whereas ill-health avoidance was reported as the most important motive for exercise participation. In the said study, the top five reasons for participating in exercise were ill-health avoidance, pursuing health, weight management, developing strength and endurance, and improving physical appearance. Additional reasons for exercise participation such as fun and valuing the benefits of regular exercise were also reported.

In another study (Polman, Pieter, Bercades, & Ntoumanis, 2004), three other factors that predict physical activity and exercise behavior among Filipino youth were identified. These are self-motivation, body weight, and body mass index (BMI). Polman et al. (2004) found that self-motivation, an individual-difference variable defined as the tendency to persist in habitual behavior regardless of situational factors, was the best predictor for male university students' exercise participation, whereas body weight and BMI best predicted

exercise for female counterparts. However, the exact psychological mechanisms through which physiological variables like body weight and BMI influence exercise behavior were not investigated.

Further reasons for participating in sport and exercise include challenge and competition (Markland & Ingledew, 1997). In a study of adult Filipino runners participating in a local marathon, Martin and Gill (1995) observed comparable levels of competitiveness, goal orientation, and win orientation between Filipinos and their Taiwanese and American counterparts. This suggests that competitiveness can also be a salient motivator for Filipinos, at least in sport settings.

These three Philippine studies all relied on imported inventories developed in Western settings with little or no cultural adaptation. Although using existing instruments can be advantageous, aspects of a phenomenon viewed as important by people of the target culture may be disregarded (Brislin, 1986). Adaptation or validation of an instrument developed for another culture to verify its meaning in the target culture is recommended if development of a new instrument is not an option (Brislin, 1986).

Cultural Differences in Exercise Participation Motives

While the idea of exercise motivation applies across cultures, specific reasons for sport and exercise participation may be diverse, with differential salience across different cultures (Jermuravong, 2006; Moreno, López de San Román, Martínez Galindo, Alonso, & González-Cutre, 2008). For example, Yan and McCullagh (2004) investigated participation motivation in physical activities among Chinese, American-born Chinese, and American children and adolescents. Results of their study suggested that American participants engage in physical activity, sports in particular, primarily for competition and skill development. In contrast, social affiliation and wellness were the main participation motives of Chinese participants, whereas opportunity to travel, equipment use, and having fun were the motives endorsed by American-born Chinese participants.

More recently, Pan and Nigg (2011) used a qualitative approach to examine motivations and barriers to physical activity participation of Hawaiian, Japanese, and Filipino university students. Major

motivation themes for Filipinos include appearance (“not for health, it’s more like oh I can’t fit into this shirt anymore”), preferential activity (“It’s convenient, simple, no need [for] a partner”), health benefits (“Stay active for health”), and recreation (“Just for fun”). Psychological benefits (e.g., “The need to refresh the mind”), which emerged from the Hawaiian and Japanese sample, were not a major theme reported by Filipino respondents. These findings demonstrate the value of empirically examining exercise participation motives in particular cultural contexts using descriptive means.

The Present Study

Research in exercise and sports psychology grounded in the Philippine context is a small but emerging field (Madrigal, Reyes, Pagaduan, & Espino, 2010). A cursory review of article titles published in the Philippine Journal of Psychology from 1971 to 2012 indicated that only a handful can be identified as studies related to exercise and sport psychology [e.g., running as an adjunct to psychotherapy (Go Singco-Holmes, 1989) and task and ego orientation in sport (Maculada, 2007)]. We sought to contribute to this literature through a first-step empirical examination using an open-ended descriptive methodology of the range of Filipino participation motives in exercise behavior.

The present study addresses the question, “What motivates Filipinos to participate in exercise?” We investigated self-reported motives for exercise behavior using an open-ended free-listing methodology. We conducted a directed-approach content analysis, a type of content analysis where prior research is used to formulate an initial coding scheme (Hsieh & Shannon, 2005), to analyze the data. Hsieh and Shannon (2005) explained that the strength of this approach is that it can support or extend prior knowledge. We then used EMI-2 subscales as themes to map out the range of exercise participation motives in a local Filipino sample. The EMI-2 was chosen over other standard exercise and physical activity motivation measures because it represents the broadest range of reasons for exercise participation (Markland & Ingledew, 1997). In contrast to the direct use of imported structured inventories, this modified bottom-up method allows for exploration of a wide range of reasons for exercise, including more

culturally salient ones.

METHOD

Participants

Five hundred ninety-two self-reported exercisers (194 males, 339 females, 59 unspecified) from Metro Manila and Metro Davao, recruited through purposive sampling, participated in this study. They reported exercising at least once a week in the last six months. Many of the participants were university students (24%), while the rest were teachers (16%), medical and other health professionals (11%), regular employees (9%), call center agents (6%), and others (35%). Age range of the respondents was 15 to 69 years. Mean age was 32.2 years ($SD = 11.4$).

Half of the respondents ($n = 298$) engaged in exercise activities two to three times a week in the last six months. One hundred thirty-seven (23%) exercised four to five times a week, 44 (7%) reported that they exercised regularly for six times or more per week, and 103 (17%) exercised at least once a week. Ten respondents did not report their exercise frequency.

In terms of exercise activities regularly participated in, 179 (31%) respondents reported running as their most common exercise activity. Others engaged in walking (18%), jogging (11%), weight lifting (8%), and yoga (5%).

Instrument and Procedures

An open-ended free listing method was used to collect data for this study. Free listing is an exploratory elicitation technique commonly used in social sciences (Brewer, 2002; Gravlee, Bernard, Maxwell, & Jacobsohn, 2013) which has been used recently in exercise psychology research (e.g., Ebben & Brudzynski, 2008). This method was chosen to explore and capture a wider variety of participation motives for Filipino exercise behavior.

Using a one-page bilingual Filipino-English form, respondents were asked to free-list all the possible reasons why they or people they

know exercise or have exercised in the past. Participants were allowed to name as many reasons as they could, in either Filipino or English. Information on personal background information, types of exercise activities participated in, and frequency of exercise participation were also collected.

The respondents were approached either individually or as a group by the researchers and were asked if they would voluntarily participate in a survey on Filipino exercise motives. Those who voluntarily agreed to participate were guaranteed confidentiality and were assured that the data would be accessible only to the researchers and will be pooled together for analysis.

Data Analysis

Responses were encoded verbatim and pooled together to create a master list of all possible reasons for exercise. As mentioned earlier, this dataset was then analyzed using directed content analysis (Hsieh & Shannon, 2005). Most of the responses were simple and clear phrases (e.g., "*para maging healthy*" [to become healthy]) and were coded immediately. Coding was performed by the first and second authors using themes corresponding to the 14 subscales of the EMI-2 (Markland & Ingledew, 1997). These codes were: (a) stress management, (b) revitalization, (c) enjoyment, (d) challenge, (e) social recognition, (f) affiliation, (g) competition, (h) health pressures, (i) ill-health avoidance, (j) positive health, (k) weight management, (l) appearance, (m) strength and endurance, and (n) nimbleness.

Some responses were compound (i.e., indicating two or more participation motives in one response), thus were decomposed by the three authors into phrases to represent only one motive each. For example, the response "*iwas sa sakit para maging malakas ang katawan, higit sa lahat malakas ang energy*" [avoiding illness in order to have a strong body and most of all for lots of energy] was split into three motives: (a) *iwas sa sakit* [avoiding illness], (b) *para maging malakas ang katawan* [in order to have a strong body], and (c) *malakas ang energy* [for lots of energy]. After data cleaning, the first and second authors continued coding independently. Responses were also coded later on using the three higher-order factors of the

EMI-2 to provide a broader picture of participation motives in the dataset.

A number of responses did not fit any of the themes above and were coded as “others.” In accordance with the procedure of directed content analysis (Hsieh & Shannon, 2005), responses which could not be coded using the predetermined categories were analyzed further by the research team using an inductive approach and categorized into new themes.

To ensure reliability and consistency of the analysis, coding was conducted in stages. In the initial stage, responses from a small subset ($n = 50$) were categorized. At this stage, analytical procedure was refined. Coding disagreements were resolved by the third author. Initial intercoder agreement (ICA) was 74%. Succeeding analyses included larger subsets and ICA values were as follow: 71%, 76%, 74%, and 75%. After coding, frequency analysis was conducted to identify the most and least cited motives. Overall intercoder agreement was 76%, a level considered substantially acceptable for exploratory studies (Dongre et al., 2009).

RESULTS

As expected, respondents listed a wide variety of motives for exercise participation. Filipino exercisers cited as few as one to as many as 12 participation motives. After decomposing complex responses, we identified a total of 2,095 motives. One thousand seven hundred nine (82%) of these motives were subsequently coded under the EMI-2 themes.

Weight management (e.g., “*para pumayat*” [to lose weight]) was the most frequently cited motive for exercise participation (15%). Positive health (e.g., “*para maging healthy*” [to become healthy]), strength and endurance (e.g., “to develop strength”), and appearance (e.g., “to have a sexy body”) were the next most frequently mentioned motives for exercising. On the other hand, exercising for social recognition (e.g., “*para magpakitang-gilas*” [to show off ability]) and competition (e.g., “I have a competitive nature”) were the least mentioned reasons for exercising. Table 1 summarizes the frequency of responses under each EMI-2 theme, including sample responses.

Table 1. Motives for Exercise Coded Using EMI-2 Subscales

Theme	Frequency	Percentage	Examples
EMI-2 Themes			
Weight Management	323	15.4%	“to lose weight”
Strength & Endurance	290	13.8%	“ <i>para lumakas</i> [to increase strength]”
Positive Health	305	14.6%	“ <i>para maging healthy</i> [to become healthy]”
Appearance	182	8.7%	“to have a sexy body”
Health Pressures	126	6.0%	“ <i>dahil sinabi ng doktor</i> [because of doctor’s advice]”
Affiliation	70	3.3%	“ <i>barkada</i> activity [peer group activity]”
Enjoyment	58	2.8%	“because it’s fun”
Stress Management	109	5.2%	“ <i>pampatanggal</i> stress [to reduce stress]”
Revitalisation	76	3.6%	“to feel good”
Ill-Health Avoidance	105	5.0%	“ <i>para maiwasan ang pagkakaroon ng high blood pressure o iba pang sakit sa katawan</i> [to avoid high blood pressure or other physical ailments]”
Nimbleness	36	1.7%	“ <i>para tumaas ang talon</i> [to increase vertical jump]”
Challenge	14	0.7%	“to improve skill”
Social Recognition	11	0.5%	“ <i>para magpakitang gilás</i> [to show off]”
Competition	4	0.2%	“competitive nature”
Motives Falling Under General Fitness and Others			
General Fitness	145	6.9%	“ <i>para maging physically fit</i> [to become physically fit]”
Others	241	11.5%	(see Table 2)
TOTAL	2095	100%	

The EMI-2 themes include two fitness motives: nimbleness, and strength and endurance. However, a number of responses (7%) referred to nonspecific overall fitness as a reason for exercising (e.g., “*para maging* physically fit” [to become physically fit]), thus were coded separately. Combined, these three (nimbleness, strength and endurance, and overall fitness) accounted for 471 responses (22%). Thus, although weight management appeared to be the single most central motive for participation among Filipino exercisers in the sample, fitness motives were also a highly salient cluster of reasons reported for exercise behavior.

Using the EMI-2’s three higher-order factors as superordinate codes, the salient Filipino participation motives lay in two of the three themes: health and fitness (33%) and weight management and appearance (24%). Very few motives were coded under social engagement (5%), indicating that these motives do not seem to be particularly important for many Filipino exercisers.

Two hundred forty-one (12%) of the reported motives did not fall under any of the EMI-2 themes or under general fitness. These motives were analyzed inductively together by the three authors and clustered under different subthemes based on similarity in meaning. Some of the motives derived from this analysis were: participating in exercise due to an academic or job-related requirement, for pure leisure, to achieve athletic goals (i.e., training for a specific sport), as part of an overall lifestyle of physical activity, and due to directed social influence (e.g., being urged by friends, romantic partners, or family to exercise). Table 2 shows the top five additional motives for participation in our sample of Filipino exercisers.

DISCUSSION

The purpose of this study was to explore exercise participation motives of Filipinos using a free-listing methodology. Overall fitness and weight management were the top two motives for exercising reported by Filipino exercisers. This is in contrast to earlier findings using the EMI-2 (Sanchez, 2008) which identified ill-health avoidance as the primary reason for exercise participation in a Filipino university student sample.

Table 2. Top Additional Motives for Exercise

Theme	Frequency	Percentage	Examples
Lifestyle	25	10%	“ <i>bahagi ng</i> lifestyle [part of lifestyle]”
Requirement	22	9%	“As requirement in our job”
Social influence	22	9%	“ <i>kasi</i> forced by parents [because forced by parents]”
Posture	20	8%	“to improve my posture”
Athletic goals	19	8%	“ <i>para gumaling sa</i> sport [to improve in sport]”
Leisure	19	8%	“ <i>pampalipas oras</i> [to pass the time]”
Self-esteem	19	8%	“to feel good about myself”

While most of the reasons cited could be accounted for by themes derived from the EMI-2 subscales, certain motives in the original scale (i.e., challenge, social recognition and competition) were not particularly salient, similar to previous local work using the EMI-2 (Sanchez, 2008). That is, very few Filipino exercisers reported doing so for reasons of challenge and competition.

Results also point to reasons for exercising beyond those identified in the EMI-2. Exercising in fulfillment of a requirement, such as in physical education courses and fitness-related jobs, was cited. In addition, although social factors such as affiliation and social recognition were in the EMI-2 themes, Filipino respondents also identified reasons involving normative social influence such as “*inaya ng kaibigan* [invited by friend]” and “*kasi* forced by parents [because forced by parents].” This suggests that motives not directly measured by standard inventories such as the EMI-2, including those that involve more directed interpersonal influence (e.g., urged by family), are also meaningfully involved in Filipinos’ participation in exercise.

Despite these differences in specific exercise motives, the overall predominance of extrinsic reasons for exercise is noteworthy. Extrinsic reasons (i.e., exercising for overall fitness and weight management but not for enjoyment or fun) appear to be the top motivation for exercise

participation according to Filipino exercisers. And as the global research literature in exercise psychology indicates, individuals do participate in exercise activities primarily for instrumental purposes (Kilpatrick et al., 2005). Exercising primarily for fitness is consistent with findings from Ebben and Brudzynski's (2008) open-ended survey which showed that the top three exercise motives for USA-based university students were general health, fitness, and stress reduction. Similarly, health and fitness motives remain the main reason for physical activity participation in other countries such as Australia (Australian Bureau of Statistics, 2007).

Implications for Health Promotion

An important implication of the present study is in designing effective intervention messages to increase exercise participation among Filipinos. As Ingledew and Markland (2008) argued, PA interventions can be more effective if messages are consistent with motives endorsed by a particular target group. A variety of messages that are appealing to individuals with different participation motives can be included to improve intervention effectiveness (Ingledew & Markland, 2008).

Limitation of the Study

Because of the broad, descriptive approach of this initial study, correlates for exercise participation motives were not investigated; however future research in Philippine settings can look into three factors that have been found to have an impact on motives for exercise: age, gender, and class. Some reviews have suggested different motives for exercise among children, youth, and adults (e.g., Biddle, 2007), while a number of empirical studies point to differences in both participation levels and motives for physical activity across gender (Ingledew, Markland, & Medley, 1998; Kilpatrick et al., 2005) and based on socioeconomic status (Troost, Owen, Bauman, Sallis, & Brown, 2002).

There was also no opportunity to supplement the free-listing method with interview or probe. As mentioned by Brewer (2002),

supplementary interview increases the number of responses from the participants. Future works are encouraged to use more rigorous qualitative methods.

Conclusion

In conclusion, this study is the first to empirically describe the broad range of Filipino exercise participation motives using a free-listing methodology. In spite of its descriptive approach, the findings provide useful first-step information in understanding – and later on, promoting – Filipino exercise behavior. With few Filipinos engaging regularly in health-enhancing physical exercise, identifying which exercise participation motives are particularly salient to Filipinos can contribute valuable knowledge for physical activity promotion.

AUTHORS NOTES

The authors would like to thank Nikka Munion and Pia Villanueva for helping in the data collection and data encoding.

REFERENCES

- Australian Bureau of Statistics (2007). *Participation in sports and physical recreation 2005-2006*. Retrieved from [http://www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/0/A36EC2C4EAD3937BCA257281001ADA51/\\$File/41770_2005-06.pdf](http://www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/0/A36EC2C4EAD3937BCA257281001ADA51/$File/41770_2005-06.pdf)
- Biddle, S. J. H. (2007). Exercise motivation across the life span. In D. Smith & M. Bar-Eli (Eds.), *Essential readings in sport and exercise psychology* (pp. 378-389). Champaign, IL: Human Kinetics.
- Biddle, S. J. H., & Mutrie, N. (2008). *Psychology of physical activity: Determinants, well-being and interventions* (2nd ed.). London: Routledge.
- Brewer, D. D. (2002). Supplementary interviewing techniques to maximize output in free listing tasks. *Field Methods*, 14(1), 108-

- 118.
- Brislin, R. W. (1986). The wording and translation of research instruments. In J. Lonner & J. W. Berry (Eds.), *Field methods in cross-cultural research* (pp. 137-164). Beverly Hills, CA: SAGE Publications.
- Dongre, A. R., Deshmukh, P. R., Kalaiselvan, G., & Upadhyaya, S. (2009). Application of qualitative methods in health research: An overview. *Online Journal of Health and Allied Sciences*, 8(4). Retrieved from <http://www.ojhas.org/issue32/2009-4-3.htm>
- Duda, J. L., & Tappe, M. K. (1989). The personal incentives for exercise questionnaire: Preliminary development. *Perceptual and Motor Skills*, 68(3c), 1122.
- Ebben, W., & Brudzynski, L. (2008). Motivations and barriers to exercise among college students. *Journal of Exercise Physiology Online*, 11, 1-11. Retrieved from <http://faculty.css.edu/tboone2/asep/EbbenJEPonlineOctober2008.pdf>
- Food and Nutrition Research Institute, Department of Science and Technology. (2008). *7th National Nutrition Survey*. Retrieved from http://www.fnri.dost.gov.ph/images/stories/7thNNS/clinical/clinical_health_partii.pdf
- Frederick, C. M., & Ryan, R. M. (1993). Differences in motivation for sport and exercise and their relationships with participation and mental health. *Journal of Sport Behavior*, 16, 125-145.
- Gravlee, C. C., Bernard, H. R., Maxwell, C. R., & Jacobsohn, A. (2013). Mode effects in free-list elicitation: Comparing oral, written, and web-based data collection. *Social Science Computer Review*, 31(1), 119-132. doi:10.1177/0894439312455312
- Go-Singco Holmes, M. (1989). Running and group dynamics as treatments for psychopathology. *Philippine Journal of Psychology*, 22, 26-36.
- Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15, 1277-1288. doi:10.1177/1049732305276687
- Ingledeu, D. K., & Markland, D. (2008). The role of motives in exercise participation. *Psychology and Health*, 23, 807-828. doi: 10.1080/08870440701405704
- Ingledeu, D. K., Markland, D., & Ferguson, E. (2009). Three levels

- of exercise motivation. *Applied Psychology: Health and Well-Being*, 1(3), 336-355. doi:10.1111/j.1758-0854.2009.01015.x
- Ingledeu, D. K., Markland, D., & Medley, A. R. (1998). Exercise motives and stages of change. *Journal of Health Psychology*, 3, 477-489. doi:10.1177/135910539800300403
- Jermuravong, W. (2006). Motivational factors on exercise behavior in youth. *Silpakorn University International Journal*, 6, 1-2. Retrieved from <http://www.journal.su.ac.th/index.php/suij/article/download/7/5>
- Kilpatrick, M., Hebart, E., & Bartholomew, J. (2005). College students' motivation: Differentiating men's and women's motives for sport participation and exercise. *Journal of American College Health*, 54, 87-94. doi:10.3200/JACH.54.2.87-94
- Maculada, S. (2007). Gender differences in task and ego goal orientations and motivation in sport participation. *Philippine Journal of Psychology*, 40, 123-135.
- Madrigal, N., Reyes, J. J., Pagaduan, J., & Espino, R. V. (2010). Exercise science academic programs and research in the Philippines. *International Journal of Exercise Science*, 3(4), 157-174. Retrieved from <http://digitalcommons.wku.edu/cgi/viewcontent.cgi?article=1291&context=ijes>
- Markland, D., & Ingledeu, D. K. (2007). Exercise participation motives. In M. Hagger & N. Chatzisarantis (Eds.), *Intrinsic motivation and self-determination in exercise and sport* (pp. 23-34). Champaign, IL: Human Kinetics.
- Markland, D., & Ingledeu, D. K. (1997). The measurement of exercise motives: Factorial validity and invariance across gender of a revised Exercise Motivations Inventory. *British Journal of Health Psychology*, 2, 361-376.
- Martin, J. J., & Gill, D. L. (1995). Competitive orientation, self-efficacy and global importance in Filipino marathoners. *International Journal of Sports Psychology*, 26, 348-358.
- Moreno, J. A., López de San Román, M., Martínez Galindo, C., Alonso, N., & González-Cutre, D. (2008). Peers' influence on exercise enjoyment: A self-determination theory approach. *Journal of Sports Science and Medicine*, 7, 23-31.
- Pan, J., & Nigg, G. (2011). Motivation for physical activity among

- Hawaiian, Japanese, and Filipino university students in Hawaii. *Journal of Applied Sport Psychology*, 23, 1-15.
- Polman, R., Pieter, W., Bercades, L., & Ntoumanis, N. (2004). Relationship between psychological and biological factors and physical activity and exercise behavior in Filipino students. *International Journal of Sports and Exercise Psychology*, 2, 81-97.
- Ryan, R. M., Frederick, C. M., Lipes, D., Rubio, N., & Sheldon, K. M. (1997). Intrinsic motivation and exercise adherence. *International Journal of Sport Psychology*, 28, 335-354.
- Sanchez, C. (2008). *Participation motivation for sport and for exercise among St. Paul University Manila service physical education students* (Unpublished Master's thesis). University of the Philippines Diliman, Philippines.
- Silberstein, L. R., Striegel-Moore, R. H., Timko, C., & Rodin, J. (1988). Behavioral and psychological implications of body dissatisfaction: Do men and women differ? *Sex Roles*, 19, 219-232.
- Singapore Sports Council (2005). *National sports participation survey*. Retrieved from <http://app1.mcys.gov.sg/ResearchRoom/ResearchStatistics/ReasonsforSportsParticipation19972005.aspx>
- Trost, S. G., Owen, N., Bauman, A. E., Sallis, J. F., & Brown, W. (2002). Correlates of adults' participation in physical activity: Review and update. *Medicine and Science in Sports and Exercise*, 34, 1996-2001.
- World Health Organization. (2014). *Physical inactivity: A global public health problem*. Retrieved from http://www.who.int/dietphysicalactivity/factsheet_inactivity/en/
- Yan, J. H., & McCullagh, P. (2004). Cultural influences on youth's motivation of participation in physical activity. *Journal of Sport Behavior*, 27, 378-390
- Zunft, H. J. F., Friebe, D., Seppelt, B., Widhalm, K., de Winter, A. M. R., de Almeida, M. D. V., . . . Gibney, M. (1999). Perceived benefits and barriers to physical activity in a nationally representative sample in the European Union. *Public Health Nutrition*, 2(1a), 153-160.