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College Students’ Physical Activity and Health-Related Quality of Life: An Achievement Goal Perspective

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ABSTRACT

Purpose: The 2 × 2 achievement goal model, including the mastery-approach, mastery-avoidance, performance-approach, and performance-avoidance goal orientations, has recently been used to explain motivational outcomes in physical activity. This study attempted to examine the relationships among 2 × 2 achievement goal orientations, physical activity, and health-related quality of life (HRQOL) in college students. Method: Participants were 325 students (130 men and 195 women; M_age = 21.4 years) enrolled in physical activity classes at a Southern university. They completed surveys validated in previous research assessing achievement goal orientations, physical activity, and HRQOL. Results: Path analyses revealed a good fit between the model and data (root mean square error of approximation = .06; Comparative Fit Index = .99; Bentler-Bonett Nonnormed Fit Index = .98; Incremental Fit Index = .99), but the model explained small variances in the current study. Mastery-approach and performance-approach goal orientations only had low or no relationships with physical activity. Mastery-approach goal orientation and physical activity also had low positive relationships with HRQOL, but mastery-avoidance and performance-avoidance goal orientations had low negative relationships with HRQOL. The hypothesized mediational role of physical activity in the relationship between mastery-approach and performance-approach goal orientations and HRQOL was not supported in this study. Conclusions: Although the data fit the proposed model well, only small variance was explained by the model. The relationship between physical activity and HRQOL of the college students and other related correlates should be further studied.

One of the major factors contributing to the obesity rate in the United States is lack of physical activity (Brannagan, 2011). According to the 2008 Physical Activity Guidelines for Americans (U.S. Department of Health and Human Services [USDHHS], 2008), adults gain substantial health benefits from 2.5 hr per week of moderate-intensity aerobic physical activity, 75 min per week of vigorous physical activity, or an equivalent combination of moderate- and vigorous-intensity aerobic activity. To obtain additional health benefits from regular physical activity, adults also need to do moderate or high muscle-strengthening activities that involve all major muscle groups on 2 or more days per week (USDHHS, 2008). However, only 47.2% of adults in the United States engage in adequate amounts of physical activity per week to gain health benefits (USDHHS, 2008). Of these adults, 18.2 million aged 18 to 24 years old are enrolled in college (Fountaine, Ligouri, Mozumdar, & Schuna, 2011) and are known as college students.

College students are at critical ages because health decisions they make can affect the rest of their lives (Centers for Disease Control and Prevention [CDC], 2009). Though regular physical activity offers a host of health benefits (LaCaille, Dauner, Krambeer, & Pederson, 2011), college students are not actively participating in physical activity (CDC, 2009; Keating, Guan, Pinero, & Bridges, 2005). Only 18% engage in physical activity 5 or more days per week, with about 23% reporting zero physical activity in a week’s span (Fountaine et al., 2011). Additionally, the most significant decline in physical activity has been observed among individuals aged 18 to 19 years old (CDC, 2009; USDHHS, 2010). Finally, women are found to be consistently less physically active than men (Fountaine et al., 2011; Keating et al., 2005). Apparently, how to promote physical activity among women should become a concern of researchers (USDHHS, 2010).

Physical activity and health-related quality of life

The amount of physical activity in which an individual is involved can have a profound effect on her/his quality of
life while in college (USDHHS, 2010). Health-related quality of life (HRQOL) is considered part of quality of life and reflects a person’s or group’s perceived sense of physical and mental well-being over time. It includes physical and psychosocial functioning (Kruger, Bowles, Jones, Ainsworth, & Kohl, 2007; Varni, Seid, & Kurtin, 2001). For example, the psychosocial functioning of HRQOL, consisting of social interactions and mental health, can have a significant impact on students’ lives, academic performance, and behavior (USDHHS, 2010).

In addition, personal and academic stressors can arouse feelings of fear, incompetence, uselessness, anger, and guilt that can lead to both psychological and physical morbidity (Swallen, Reither, Haas, & Meier, 2005; USDHHS, 2010).

Research has shown that physical activity is associated with a better HRQOL, a lower mortality rate, and less risk for developing chronic disease (Kruger et al., 2007). The promotion of regular physical activity helps reduce the risk for health problems related to overweight and obesity. This was evident in a study where HRQOL was rated as poor among obese persons and high among nonobese persons (Kruger et al., 2007). Brown and his colleagues (2004) examined the relationship between the dose of physical activity and HRQOL among participants stratified by age group and sex. They found that in all strata, participants who reported being regularly active were likely to have fewer unhealthy days than those who were inactive. In another study, researchers evaluated data from the National Physical Activity and Weight Loss Study in which a nationwide telephone survey was conducted. Approximately 90% of the adults who met recommended levels of physical activity rated their health as good or better, suggesting that persons who were more physically active experienced better health due to a reduction in the number of physically and mentally unhealthy days compared with those who were inactive (Kruger et al., 2007).

It is evident that HRQOL may benefit from regular physical activity in both elderly populations with chronic conditions and general populations (Gu, Solmon, & Zhang, 2014; Kruger et al., 2007). However, the factors influencing college students’ physical activity and the association between physical activity and HRQOL have received little attention (USDHHS, 2010). Thus, more investigation is needed to explore the interactions among psychosocial factors, physical activity, and HRQOL in college students. Given that research work consistently indicates that psychosocial factors such as motivation are highly related to students’ participation in physical activity (Lochbaum, Litchfield, Podlog, & Lutz, 2013), it is important to examine the relationships among college students’ motivation, physical activity, and HRQOL. This examination can be done through understanding the achievement goal orientations associated with physical activity and HRQOL in college students.

Achievement goal theory

Achievement goal theory is an important theoretical framework for understanding achievement motivation in educational settings, including colleges and universities (Nicholls, 1989). According to Nicholls (1989), individuals have two different goal orientations—task and ego—which predict how they interpret their competence or define their success and resulting cognitive, affective, and behavioral responses in achievement settings. An individual pursuing a task goal defines success in terms of task mastery or improvement, while an individual adopting an ego goal defines success in terms of winning or outperforming others.

Elliot (1997) advanced the achievement goal research by proposing a 2 x 2 achievement goal model. In this new achievement goal model, competence is the core of the achievement goal construct and is differentiated in two ways. First, a valence dimension focuses on the positive versus negative possibility and can be described as “approach” or “avoidance.” Second, the goal dimension focuses on evaluating the task itself or individual performance versus others’ performance and can be described as “mastery” or “performance” (Elliot & McGregor, 2001). Four achievement goal orientations are developed from the crossing of these two dimensions that cover the types of competence-based goals that an individual adopts. Mastery (or task-involving) goal orientations reflect an individual’s intent to develop competence by acquiring new knowledge, whereas performance (or ego-involving) goal orientations reflect an individual’s desire to demonstrate competence as compared to others (Elliot & McGregor, 2001).

More specifically, mastery goal orientations include mastery-approach and mastery-avoidance goal orientations. Mastery-approach goal orientation focuses on goals such as increasing competence or striving to master a challenging task (i.e., running the hurdles with a faster time than before). Mastery-avoidance goal orientation is described as seeking to avoid a lack of mastery (i.e., avoiding hitting every hurdle in track practice). Similarly, performance goal orientations consist of performance-approach and performance-avoidance goal orientations. Performance-approach goal orientation is when a person tries to show his/her ability in relation to others (i.e., completing the hurdles event at a faster time than others). A person who subscribes to performance-avoidance goal orientation focuses on trying to avoid looking incompetent, especially when compared with other peers.
(i.e., receiving last place in the hurdle event and hitting the most hurdles).

Consistent with research findings observed in academic settings (Elliot & McGregor, 2001), the four achievement goal orientations depicted in the $2 \times 2$ achievement goal model played differential roles in motivational outcomes in physical activity contexts (e.g., Biddle, Wang, Kavussanu, & Spray, 2003; Garn & Cothran, 2009; Garn & Sun, 2009; Wang, Liu, Lochbaum, & Stevenson, 2009). Puente-Diaz (2012) reported that mastery-approach goal orientation directly predicted competitive athletes’ enjoyment and indirectly impacted performance, effort, and satisfaction through enjoyment. Mastery-approach goal orientation was also found to be positively associated with intrinsic motivation (Wang et al., 2009), students’ perceived effort in fitness testing (Garn & Sun, 2009), leisure-time exercise motivation (Stevenson & Lochbaum, 2008), overall and strenuous leisure-time exercise (Lochbaum, Litchfield, et al., 2013), and within-person changes in well-being over two seasons in an elite youth sport setting (Adie, Duda, & Ntoumanis, 2010).

In their meta-analysis to examine the construct validity of mastery-avoidance goal orientation, Baranik and colleagues (Baranik, Stanley, Bynum, & Lance, 2010) found mastery-avoidance goal orientation was negatively related to help seeking, cognitive ability, and performance but was positively associated with perceived competence, interest, need for achievement, competitiveness, and negative affect. Adie and his colleagues (2010) also found mastery-avoidance goal orientation negatively predicted within-person changes in well-being over two seasons, but Lochbaum, Litchfield, and colleagues (2013) did not find any relationships between mastery-avoidance goal orientation and self-reported leisure-time exercise in their investigation.

Concerning the two performance goal orientations, research has indicated that performance-approach goal orientation positively correlates with self-reported persistence/effort, perceived competence, low state anxiety, intrinsic motivation, self-reported exercise, and stage of physical activity (Agbuga & Xiang, 2008; Lochbaum, Litchfield, et al., 2013; Lochbaum, Podlog, Litchfield, Surles, & Hilliard, 2013; Wang et al., 2009). In contrast, performance-avoidance goal orientation has been consistently related to a number of negative variables, including state anxiety, disruptive behaviors, low intrinsic motivation, and decreased performance (e.g., Agbuga & Xiang, 2008). Performance-avoidance goal orientation was also found to be negatively related to between-person mean differences in positive affect (Adie et al., 2010) and leisure-time exercise motivation (Stevenson & Lochbaum, 2008).

In addition, research has proven that physical activity has a significant relationship with HRQOL in both elderly populations with chronic conditions and general populations (Gu et al., 2014; Kruger et al., 2007). Researchers have suggested that enhancing achievement goals could yield benefits relevant to individuals improving their mental health and increasing physical activity (Lochbaum, Podlog, et al., 2013). There have been convincing cases that studying motivation, physical activity, and psychological well-being is a very important area of research (Adie et al., 2010; Lochbaum, Litchfield, et al., 2013). Few studies, however, have examined the mechanisms that predict college students’ HRQOL in a physical activity context.

The purpose of the present study, therefore, was to examine relationships among the achievement goal orientations, physical activity, and HRQOL of college students from an achievement goal perspective. Specifically, the following research questions were addressed: (a) What are the correlations among the $2 \times 2$ achievement goal orientations, physical activity, and HRQOL among college students? (b) What are the unique contributions of the achievement goal orientations to college students’ physical activity and HRQOL? The two research questions are illustrated in Figure 1.

![Figure 1. Hypothesized model of the variables (N = 325). Note. Solid lines represent significant standardized parameter estimates. Rectangles represent observed variables. MAP = mastery-approach goal orientation; MAV = mastery-avoidance goal orientation; PAP = performance-approach goal orientation; PAv = performance-avoidance goal orientation; PA = physical activity; HRQOL = health-related quality of life.](image-url)
It is important to note that physical activity would be expected to mediate the relationship between mastery-approach and performance-approach goal orientations and HRQOL among college students.

**Method**

**Participants**

Participants in this study were 325 students (130 male and 195 female; M_{age} = 21.4 years, SD = 3.3) enrolled in a public research university located in the Southern region of the United States. Eleven students had been excluded because of missing data. All students were enrolled in regularly scheduled undergraduate physical activity courses at this university, including aerobics, jogging, tennis, golf, and tai chi. These elective physical activity classes were taught by instructors or graduate teaching assistants with at least 2 years of experience with teaching or coaching. All classes met three times per week for 50 min per class. Participants were 78.2% Caucasian, followed by 11.7% African American, 4.0% Hispanic, and 6.2% Other.

**Measures**

The initial section of the survey used in this study consisted of demographic information to characterize the participants. Self-reported personal information on age, gender, and race was obtained. The remainder of the questionnaire consisted of three scales with a total of 42 items. Cronbach’s alpha coefficients were calculated for each scale to provide evidence for reliability.

**Achievement goals**

To assess students’ achievement goal orientations, the 12-item Achievement Goal Questionnaire for Sport (AGQ–S) was used in this study (Conroy, Elliot, & Hofer, 2003). The AGQ–S assesses four achievement goal orientations: mastery-approach, mastery-avoidance, performance-approach, and performance-avoidance. Each item describes the different ways that participants can strive for competence or avoid competence. Participants were asked to rate each item by responding to the stem, “Using the scale below, please check each question that best describes your thoughts about the present activity . . . .” Examples of an item in each goal were illustrated as follows: (a) mastery-approach, “It is important to me to perform as well as I possibly can”; (b) mastery-avoidance, “I worry that I may not perform as well as I possibly can”; (c) performance-approach, “It is important to me to do well compared with others”; and (d) performance-avoidance, “I just want to avoid performing worse than others.” Participants responded on a 7-point Likert-type scale ranging from 1 (not at all like me) to 7 (completely like me). This questionnaire has been validated in previous studies (Conroy et al., 2003). Acceptable internal consistency for the present study is reported in Table 1.

**Physical activity**

To assess students’ physical activity, the seven-item International Physical Activity Questionnaire (IPAQ) short form was used (Craig et al., 2003). The IPAQ aims to identify the frequency and duration of walking, moderate physical activity, and vigorous physical activity as well as inactivity for the previous 7 days. The questions cover four activity types: periods of vigorous activity for at least 10 min, periods of moderate activity for at least 10 min, walking periods for at least 10 min, and times spent sitting on weekdays.

Data collected with the IPAQ short form were reported as median metabolic equivalent (MET)-minutes (Craig et al., 2003). One MET is the metabolic equivalent to an individual sitting at rest. The MET score was the mean of the range for each intensity level of physical activity (i.e., MET walking = 3.3, MET moderate = 4.0, MET vigorous = 8.0). Median MET-minutes can be computed for walking, moderate-intensity activities, and vigorous-intensity activities by multiplying the MET score of an activity by the minutes performed. Given the non-normal distribution of energy expenditure (MET score), a logarithmic transformation was used to improve the normality of the distribution for energy expenditure of college students’ physical activity. The IPAQ is a reliable and valid questionnaire (Craig et al., 2003).

**Health-related quality of life**

To assess participants’ perceived quality of life, a 23-item Quality of Life Inventory was used (Varni et al., 2001).

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mastery-approach</td>
<td>.86</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Mastery-avoidance</td>
<td>.29</td>
<td>.92</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Performance-approach</td>
<td>.37</td>
<td>.46</td>
<td>.94</td>
<td></td>
<td></td>
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<tr>
<td>4. Performance-avoidance</td>
<td>.16</td>
<td>.38</td>
<td>.52</td>
<td>.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Physical activity</td>
<td>.18</td>
<td>.09</td>
<td>.16</td>
<td>.07</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>6. HRQOL</td>
<td>.18</td>
<td>.33</td>
<td>.01</td>
<td>.20</td>
<td>.12</td>
<td>.89</td>
</tr>
</tbody>
</table>

Note. Cronbach’s alpha coefficients are provided along the diagonal in bold. M = mean; SD = standard deviation; HRQOL = health-related quality of life. Bivariate correlations among the study variables indicate how the variables covary: r = 0 indicates no correlation; ±.1 < r ≤ ±.3 indicates low correlation; ±.3 < r ≤ ±.7 indicates moderate correlation; r > ±.7 indicates high correlation.

1. Mastery-approach
2. Mastery-avoidance
3. Performance-approach
4. Performance-avoidance
5. Physical activity
6. HRQOL
Each item starts with the stem, “In the past 7 days, how much of a problem has this been for you?” Participants answered each question on a 5-point scale ranging from 0 (never) to 4 (always). Example items included: physical functioning (e.g., “It is hard for me to do sports activity or exercise”); emotional functioning (e.g., “I feel sad or blue”); social functioning (e.g., “Other students do not want to be my friend”); and school functioning (e.g., “I have trouble keeping up with my work”). The items were reverse-scored and transformed to a linear scale (0–100), with 100 indicating the highest and 0 indicating the lowest possible HRQOL. Scale scores were then created by dividing the sum of the responses by the number of items answered. The higher HRQOL scores, the better the quality of life. The Quality of Life Inventory has demonstrated adequate reliability and validity in previous studies (Varni et al., 2001).

**Procedures**

The university Institutional Review Board granted permission to conduct this study, and students signed informed consent forms prior to the study. All questionnaires were distributed and collected during regularly scheduled physical activity classes. Specific instructions were provided before students filled out the questionnaires, and research assistants were available to answer questions throughout the data collection. To minimize students’ tendency to give socially desirable responses, the students were encouraged to answer the questions truthfully and independently. They were also assured that their responses were confidential and would not affect their grades and that their instructors would not have access to their responses. Students spent approximately 25 min completing the questionnaires.

**Data analyses**

The Statistical Package of the Social Sciences (Version 20.0, SPSS Inc.) was used to analyze the data. First, a confirmatory factor analysis was conducted to examine the factorial validity of the four achievement goal orientations measured by the AGQ−S using AMOS 20.0. Second, descriptive statistics were calculated on all variables. Third, Pearson product–moment correlations were used to examine the relationships between the study variables. Finally, those relationships were further examined by path analyses with maximum likelihood estimation using AMOS 20.0 (see Figure 1). In all path analyses, 2 × 2 achievement goal orientations, physical activity, and HRQOL were treated as observed rather than latent variables due to the variable conceptualization (e.g., average score for each variable) and research purpose of the current study. As such, it is possible to determine whether achievement goal orientations can predict college students’ physical activity and HRQOL. An alpha level of .05 was used for all statistical analyses.

Path analysis is a powerful statistical method used for specifying and estimating models of linear relationships among variables (Hu & Bentler, 1999). It allows all independent and dependent variables to be examined simultaneously. In line with the recommendation of Hu and Bentler (1999), various fit indexes were examined to evaluate the adequate fit of the model to the data. Specifically, the chi-square statistic ($\chi^2$) tests whether there is a statistically significant difference between the model and sample data and degrees of freedom (df) for each model estimated. The $\chi^2$/df ratio may be reported given that $\chi^2$ can be heavily influenced by sample size. $\chi^2$/df ratios from 2 to 5 have often been employed (Buhi, Goodson, & NeiIands, 2007). Other indexes included the Comparative Fit Index (CFI), Bentler-Bonett Non-normed Fit Index (NFI), Incremental Fit Index (IFI), and the root mean square error of approximation (RMSEA). Possible values for the CFI, NFI, and IFI range from 0 to 1. CFI, NFI, and IFI values greater than .90 indicate a good fit of the model to the data, and values greater than .95 are typically considered an excellent fit (Hu & Bentler, 1999). Further, values less than .10 obtained from the RMSEA suggest a well-fit model, whereas values exceeding .10 are typically undesirable (Buhi et al., 2007; Hu & Bentler, 1999).

**Results**

**Psychometric properties and descriptive statistics**

To examine the factorial validity of the four achievement goal orientations measured by the AGQ−S, a confirmatory factor analysis was performed prior to conducting the main analyses. It yielded acceptable fit indexes ($\chi^2$/df = 4.02 < 5; RMSEA = .09; CFI = .96; NFI = .94; IFI = .96; Hu & Bentler, 1999).

Means and standard deviations for the perceptions of the four achievement goal orientations, physical activity, and HRQOL are reported in Table 1. In general, participants reported relatively high levels of the achievement goal orientations, physical activity, and HRQOL. As shown in Table 1, reliability coefficients exceeded .70 and represented acceptable internal consistency values (Nunnally, 1978).

**Correlation analyses**

As shown in Table 1, mastery-approach, mastery-avoidance, performance-approach, and performance-avoidance...
goal orientations were all positively related to one another with no to moderate correlation coefficients. Physical activity had low positive correlations with the mastery-approach and performance-approach goal orientations but no correlations with the mastery-avoidance and performance-avoidance goal orientations. HRQOL had low negative correlations with the mastery-avoidance and performance-avoidance goal orientations but had a low positive relation with the mastery-approach goal orientation and physical activity (Morrow, Jackson, Disch, & Mood, 2011; Zhu, 2012).

**Path analyses**

As shown in Figure 2, we revised our hypothesized model of the variables by deleting the link between performance-approach goal orientation and HRQOL because they were not statistically significantly related to each other in the current study. This deletion was based on the suggestion of James, Mulaik, and Brett (2006). The results of the path analyses are reported in Figure 2. Based on the goodness-of-fit statistics, the sample covariance matrix exhibited an acceptable fit to the revised structural model (e.g., $\chi^2/df = 2.31 < 5$; RMSEA = .06; CFI = .99; NFI = .98; IFI = .99; Hu & Bentler, 1999). It should be acknowledged that the variance explained in the dependent variables by the model was relatively small as follows: $\eta^2$ for physical activity = .04 and $\eta^2$ for HRQOL = .21 (Morrow et al., 2011). Figure 2 represents the standardized parameter estimates of the model. Specifically, mastery-approach and performance-approach goal orientations had no or low positive relationships with physical activity ($\beta = .14$, $p = .015$, $\eta^2 = .02$, and $\beta = .11$, $p = .049$, $\eta^2 = .01$, respectively). Mastery-approach goal orientation had a low positive relationship with HRQOL, but physical activity had no positive relationship or low positive relationships with HRQOL ($\beta = .28$, $p = .001$, $\eta^2 = .07$, and $\beta = .11$, $p = .031$, $\eta^2 = .01$, respectively). Mastery-avoidance goal orientation had a moderate negative relationship with HRQOL, but performance-avoidance goal orientation had no negative relationship or a low negative relationship with HRQOL ($\beta = -.38$, $p = .001$, $\eta^2 = .15$, and $\beta = -.11$, $p = .046$, $\eta^2 = .01$, respectively). The indirect effects of the mastery-approach and performance-approach goal orientations on HRQOL ($\beta = .13$, $p = .015$, $\eta^2 = .02$, and $\beta = .12$, $p = .012$, $\eta^2 = .01$, respectively) were small. Although the goodness-of-fit indexes indicated a good fit between the model and data, it should be noted that the hypothesized mediating role of physical activity in the relationship between the mastery-approach goal orientation and HRQOL and between the performance-approach goal orientation and HRQOL was not supported.

**Discussion**

The major purpose of this study was to examine the relationships among $2 \times 2$ achievement goal orientations, physical activity, and HRQOL in college students from an achievement goal perspective. Path analyses revealed a good fit between the model and data ($\chi^2/df = 2.31 < 5$; RMSEA = .06; CFI = .99; NFI = .98; IFI = .99), but the model explained small variances of the dependent variables in the current study. Mastery-approach and performance-approach goal orientations had low positive relationships with physical activity. HRQOL had low negative correlations with the mastery-avoidance and performance-avoidance goal orientations but had low positive relationships with the mastery-approach goal orientation and physical activity. Finally, the hypothesized mediating role of physical activity in the relationship between the mastery-approach and

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**Figure 2.** Final model of the variables ($N = 325$). Note. Solid lines represent significant standardized parameter estimates. Rectangles represent observed variables. MAP = mastery-approach goal orientation; MAv = mastery-avoidance goal orientation; PAP = performance-approach goal orientation; PAv = performance-avoidance goal orientation; PA = physical activity; HRQOL = health-related quality of life.
performance-approach goal orientations and HRQOL was not supported in this study.

The results indicated mastery-approach goal orientation had low positive relationships with college students’ physical activity and HRQOL, which partially support the theorization of the 2 X 2 achievement goal model that mastery-approach goal orientation is positively related to a variety of outcomes (Adie et al., 2010; Garn & Cotran, 2009; Garn & Sun, 2009; Stevenson & Lochbaum, 2008; Wang et al., 2009). These results are also consistent with recent findings from a study examining social physique anxiety and achievement goals on physical activity among British undergraduate and postgraduate students where mastery-approach goal orientation was a positive predictor of physical activity (Hagger, Hein, & Chatzisarantis, 2011). Further, results of the path analyses also revealed that performance-approach goal orientation had a low positive relationship with physical activity but had no relationship with HRQOL in the present study. Considered together, these findings suggest the mastery-approach and performance-approach goal orientations may be important psychosocial correlates to students’ physical activity in colleges (Lochbaum, Podlog, et al., 2013).

Mastery-avoidance goal orientation had a negative relationship with HRQOL in the current study. This result suggests that students who focus on mastering the art of not failing in their physical activity classes may report low scores on HRQOL. Although mastery-avoidance goal orientation has not been fully examined in the physical activity field and yielded equivocal results, our findings add to emerging evidence that mastery-avoidance goal orientation has a detrimental impact on physical and psychological health (Adie et al., 2010; Baranik et al., 2010; Garn & Sun, 2009). The present research also supports that examining the mastery-avoidance goal orientation is important to understand students’ health-related well-being such as HRQOL.

Like mastery-avoidance goal orientation, performance-avoidance goal orientation was found to be negatively related to HRQOL. Students who are performance-avoidance-oriented seek to avoid failure as compared with other students’ performance. The negative relationship observed in the current study suggests that college students who value their physical activity performance based on how they are measured up to the performance of others may develop a damaging psychological effect on their quality of life in social settings. This finding is consistent with other findings reporting that psychological distress is commonly correlated with the psychosocial functioning of HRQOL and that psychosocial factors can have an influence on college students’ HRQOL (Adie et al., 2010; Stevenson & Lochbaum, 2008).

Similar to previous studies (Agbuga & Xiang, 2008; Lochbaum, Litchfield, et al., 2013), mastery-avoidance and performance-avoidance goal orientations were found to be unrelated to physical activity in the current study. This finding is expected. Students with mastery-avoidance and performance-avoidance goal orientations either seek to avoid a lack of mastery or try to avoid looking incompetent relative to others. As a result, they are not expected to demonstrate high levels of physical activity because high levels of physical activity are generally driven by one’s perceived competence and intrinsic motivation (Lochbaum, Litchfield, et al., 2013).

Assessing and promoting physical activity and HRQOL have become important in public health and also serve as a major goal of Healthy People 2020 (USDHHS, 2010). Knowledge of the association between physical activity and HRQOL could help target interventions and direct resources to individuals and communities. Although cross-sectional data have consistently shown a positive association between physical activity and HRQOL among the general adult population (e.g., Bize, Johnson, & Plotnikoff, 2007), the current study revealed that such an association among college students in physical activity classes was weak. This weak association, however, does not necessarily mean that physical activity has nothing to do with the HRQOL among college students. Researchers have proposed that in addition to physical activity, there are many factors associated with individuals’ HRQOL such as significant others’ quality of life, school performance, and psychological aspects (Bize et al., 2007; Brown et al., 2004). Additionally, Brown and colleagues (2004) found that doing too much physical activity may attenuate benefits related to HRQOL. Therefore, it may be informative to investigate the HRQOL by considering amounts of physical activity (e.g., active and inactive groups). Finally, the weak association observed in this study suggests that physical activity may play differential roles in predicting different dimensions of HRQOL including physical and psychosocial functioning (Bize et al., 2007).

Although we cannot conclude whether this weak association between physical activity and HRQOL can be explained via a causal pathway (i.e., higher physical activity leading to a higher level of HRQOL, or vice versa, or mutual influence), the results may still offer insights for practitioners. We concur with the notion (Bize et al., 2007) that individuals who are physically inactive or sedentary may perceive themselves in a negative manner relative to physical and psychosocial functions that are assessed in HRQOL. In addition, HRQOL can be used as an assessment tool to identify individual college students who are at risk mentally, psychologically, socially, and
physically. From an applied perspective, physical activity intervention programs emphasizing the mastery learning environment are highly recommended.

The findings partially reveal a need to promote mastery-approach and performance-approach goal orientations among college students and support the notion that improving competence in self-referenced standards and demonstrating competence in relation to others may promote physical activity and HRQOL, as compared with fixating on avoiding self-referential incompetence and performing worse than others (Biddle et al., 2003; Elliot & McGregor, 2001; Garn & Cothran, 2009). However, there are some limitations in this study. First, self-reported physical activity was obtained from the students. A more objective physical activity measurement, such as pedometers and accelerometers, is needed to give more accurate physical activity results. Second, a cross-sectional research design was used in this study. Future studies should use a longitudinal design or experimental design to investigate the temporal relations among 2 × 2 achievement goal orientations, HRQOL, and physical activity behaviors. Third, this study examined college students’ 2 × 2 achievement goal orientations, physical activity, and HRQOL at one single university. Future studies should collect data from multiple universities to achieve greater generalizability. Fourth, participants were recruited from elective college physical activity classes. Therefore, these students may have already had the understanding of the importance of physical activity or were in the process of learning about it. Future studies should recruit students from regular lectures classes. Fifth, given the varying intensity and nature of the physical activity classes in the current study, the amount of physical activity within the classes themselves or the physical activity instructors need to be controlled for in future studies. Sixth, given that the achievement goal orientations assessed in the current study were referenced to the context of a specific class activity (e.g., jogging and tennis) in which participants were engaged, it is important to consider the level of specificity between the achievement goal orientation measure and the measures of physical activity and HRQOL in future studies so that the same level of specificity across these measures can be ensured. Finally, it should be acknowledged that the data fit the proposed model well, but only small variance was explained by the model. As such, the relationship between physical activity and HRQOL of the college students and other related correlates should be further studied.

In conclusion, having physical activity classes on college campuses is important for facilitating physical activity participation among college students, which in turn may somehow influence their perceptions toward quality of life. Understanding the effect of goal orientations on college students’ physical activity participation and performance can help researchers and practitioners carefully structure the physical activity environment to maintain better quality of life. Given the finding that mastery-approach and mastery-avoidance goal orientations may influence certain degrees of students’ HRQOL (positively and negatively), we recommend that health promoters emphasize the value of the activity, encourage students to view competence in self-referenced standards, and foster beliefs that effort leads to success. These instructional practices may help promote mastery-approach goal orientations. Understanding college students’ health perceptions (physical and psychosocial functioning) and motivational mechanisms will be recommended for future investigations.

What does this article add?

This study adds to our knowledge base on college students’ physical activity and HRQOL by providing empirical evidence that dispositional motivation measured by approach-avoidance goal orientations plays an important role in understanding those health-related outcomes based on the 2 × 2 achievement goal model. The findings partially support that improving college students’ competence in self-referenced standards will be related to positive health outcomes as compared with fixating on avoiding failure of a mastered task and performing worse than others. The key implication of this finding is that physical activity instructors must create learning environments that focus on processes and steps of learning and avoid self-referential incompetence if they wish to motivate students to engage in physical activity and enhance their HRQOL. Suggested instructional behaviors include providing a variety of physical activities in which students have a chance to succeed, facilitating students to develop positive interpersonal relations, and emphasizing skill mastery and self-improvement rather than end results and peer comparison in physical activity classes.

References


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