



Published in final edited form as:

Int J Sport Exerc Psychol. 2022 ; 20(2): 630–643. doi:10.1080/1612197x.2021.1891121.

Group exercise membership is associated with forms of social support, exercise identity, and amount of physical activity

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Abstract

Exploring whether the mechanisms underlying the positive relationship between group exercise and physical activity are forms of social support – emotional, validation, informational, instrumental, and companionship and exercise identity. Participants ($n=506$; $M_{age} = 34.3$) completed a 235-item questionnaire assessing physical activity, exercise identity, social support, and other determinants of physical activity. Exploratory path analysis was used to model group exercise membership, forms of social support, exercise identity, and metabolic equivalent (MET) minutes/wk. Women and men had similar yet varying results. For women, group exercise membership was significantly associated with MET-minutes/wk ($\beta = 0.11$) and exercise identity ($\beta = 0.17$). There was a significant association between exercise identity and MET-minutes/wk ($\beta = 0.38$). Women perceived belonging to an exercise group provides emotional ($\beta = 0.36$), validation ($\beta = 0.25$), informational ($\beta = 0.35$), instrumental ($\beta = 0.19$), and companionship ($\beta = 0.46$) support. Validation ($\beta = 0.11$), informational ($\beta = 0.21$), and companionship ($\beta = 0.17$) were significantly associated with exercise identity for women. For men, group exercise membership was not significantly associated with MET-minutes/wk or exercise identity. Exercise identity was significantly associated with MET-minutes/wk ($\beta = 0.46$). Men perceived belonging to their group provides emotional ($\beta = 0.31$), validation ($\beta = 0.32$), informational ($\beta = 0.33$), and companionship ($\beta = 0.34$). Validation ($\beta = 0.22$), informational ($\beta = 0.30$), and emotional ($\beta = 0.23$) were significantly associated with exercise identity for men. Belonging to an exercise group is associated with forms of social support that strengthen exercise identity.

Keywords

adults; group exercise; exercise identity; social support; exploratory path model

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The authors declare that they have no competing interests.

The IRB from The University of Texas at Austin approved this study. Participants provided written consent prior to completing the online survey.

The datasets generated and/or analyzed during the current study are not publicly available due to privacy concerns, but are available from the corresponding author on reasonable request.

Introduction

According to the *2018 Physical Activity Guidelines for Americans*, being physically active for 150 to 300 minutes at a moderate-intensity, or 500 to 1,000 metabolic equivalent (MET) minutes per week increases the likelihood of attaining psychological and physiological benefits (2018 Physical Activity Guidelines Advisory Committee, 2018). Only 43.5% of the United States population aged 18–60 years engage in the recommended amount of physical activity (HealthyPeople 2020, 2014). One strategy for sustained physical activity for adults might be to join group-based physical activity (e.g., CrossFit; running club; etc.), rather than being physically active on their own (Carron et al., 1996; Dishman & Buckworth, 1996). Group-based physical activity has been shown to provide social support that, in turn, increases physical activity levels (Berkman & Glass, 2000; Christensen et al., 2006; Duncan et al., 1993).

Group-based physical activity programs and exercising in groups have been shown to have higher adherence compared to individual-based programs (Burke et al., 2006). In addition, while adult men show higher levels of leisure-time physical activity compared to women (Azevedo et al., 2007; Burton & Turrell, 2000; Troiano et al., 2008; Trost et al., 2002), patterns of adherence to group-based physical activity have been shown to be similar for men and women (Beauchamp et al., 2018). Exercise groups provide feelings of cohesion and social support that both contribute to greater attendance (Fraser & Spink, 2002). In addition, interventions to increase group cohesion and support among group exercise classes increased the level of perceived identity, satisfaction, and adherence compared to the group-based physical activity classes without the intervention (Carron & Spink, 1995; Crozier & Spink, 2014). However, the physical activity literature lacks a clear understanding of the forms of social support provided within exercise groups.

Social support has been primarily conceptualized as a structural (i.e., family, friends, or experts) construct within the physical activity literature (Golaszewski, 2018; Scarapicchia et al., 2017). In other health domains, social support has been recognized as a broad indicator of the different forms of perceived support that are provided in the context of social relationships (Cohen et al., 2000). Within this definition, there are five well-established forms of functional social support – instrumental, informational, emotional, validation, and companionship (Argyle, 1992; Berkman & Glass, 2000; Cohen et al., 2000; House, 1981). These forms of functional social support may help individuals cope with the challenges of achieving consistent physical activity behavior. To date, there is little known about how these forms of social support might be related to physical activity and whether they vary by gender.

Identities are roles that people adopt ranging from their job, family, political affiliations, or other life interests (P. J. Burke, 1980; Stets & Burke, 2003; Stryker & Burke, 2000). Much of our identities arise from being part of a social group or social category (Rise et al., 2010; Terry et al., 1999). Within these groups, social support helps to create and sustain identities by providing a way to make sense of an individual's self and their environment (Stryker, 1980). Exercise identity is the degree to which individuals explicitly identify as an exerciser

(Anderson & Cychosz, 1995), and may vary with participation in group-based exercise and forms of functional social support with a differential impact on levels of physical activity.

Individuals who identify as an exerciser are more likely to be motivated to regularly be physically active and engage in a variety of exercise behaviors to reaffirm this identity (Anderson & Cychosz, 1995). While many people are active without adopting an exercise identity, individuals who do adopt an exercise identity are not just more active, but are more consistent in their activity across multiple settings (Kendzierski, 1988). Moreover, those with a strong exercise identity may be more motivated to engage in behaviors that reinforce this identity (Ntoumanis et al., 2018). There are mixed findings about whether exercise identity and physical activity differ for men and women. For example, Anderson and colleagues (2001) found no difference between men and women for exercise identity and exercise behaviors, particularly with regard to the amount of physical activity per week (Anderson et al., 2001). In contrast, Lantz et al (2004) reported that women with stronger exercise identity engaged in more physical activity than men – perhaps due to their willingness to train through pain and injury compared to men (Lantz et al., 2004).

It may be that the strength of exercise identity is partly shaped by social support within an exercise group. Consider social activation, which includes social comparison, acknowledgements, and a sense of belonging. Recent evidence supports social activation as a key predictor of exercise identity (Rhodes et al., 2016). Another study found that participants in a group exercise class had higher individual exercise identity scores compared to those who received personal coaching and self-controlled gym membership (Dillman, 2007). Thus, forms of social support that include companionship, emotional, informational, instrumental, and validation support may explain the strength of an individual's exercise identity.

Taken together, these findings suggest that belonging to an exercise group will be associated with higher levels of physical activity. While this may be a direct effect, it is also likely to be based on differences in forms of functional social support and exercise identity. That is, it seems that group exercise membership provides social support, and that social support helps with the formation of exercise identities. These identities, in turn, may be associated with physical activity behaviors. The purpose of the present study was to investigate the associations between participation in group-based exercise, forms of social support (companionship, emotional, informational, instrumental, and validation), exercise identity, and amount of physical activity per week using an exploratory path model to inform theory and future interventions. Additionally, we will test whether the model differs by gender.

Methods

Participants

Adults (18–75) who regularly engaged in physical activity at least two times per week were recruited to complete a 235-item online questionnaire that assessed demographics, physical activity behaviors, and psychosocial determinants of physical activity. This paper was part of a larger study (Golaszewski & Bartholomew, 2019); however, we a priori chose to examine

group exercise membership, forms of social support, exercise identity, and physical activity levels. Additionally, we chose being physically active at least two times per week as the minimal cut-off to recruit participants with a range of physical activity levels. Participants were recruited via social media advertisements, online activity groups and forums related to physical activity, exercise clubs (running, climbing, rowing), walking programs, and gyms (i.e., Gold's, Planet Fitness, 24-hour Fitness, YMCA) to complete the questionnaire. They were also recruited from various channels including: online community bulletin boards, online events calendar on The University of Texas at Austin's campus, neighborhood Listservs, and two upper division undergraduate courses. There were 546 participants eligible for the study. Prior to the start of the online questionnaire, participants provided informed consent. Participants could enter a gift card raffle after completing the questionnaire. The Institutional Review Board at The University of Texas at Austin approved this study.

Measures

Demographics.—Participants indicated their age (years) and gender (man = 1 or woman = 2). Race was assessed with 1 question that asked participants to indicate whether they were white, Caucasian or European American, black or African American, Asian American or Pacific Islander, American Indian or Alaskan Native, or other. Ethnicity was assessed whether participants identified as Hispanic (1) or non-Hispanic (0). Participants reported marital status single, never married (1), married or domestic partnership (2), or divorced (3). A dichotomized variable was created where married or domestic partnership (1) and single (0). Highest education level completed was assessed by high school diploma or equivalent (1), trade/technical/vocational training (2), professional degree (3), associate's degree (4), bachelor's degree (5), master's degree (6), or doctoral degree (7).

Group Exercise Membership.—Participants responded to whether they belonged to an exercise group by responding yes (1) or no (0) to “Do you belong to an exercise group?”.

Physical Activity and Social Support (Golaszewski & Bartholomew, 2019).—The Physical Activity and Social Support Scale (PASSS) is a 20-item scale based in five forms of social support – companionship, emotional, instrumental, informational, and validation for physical activity. *Emotional support* is defined as advice, positive messages, encouragement, or acceptance during times of struggle. *Companionship support* is a sense of belonging, being part of a community, having someone to rely on or having someone to do an activity with. *Instrumental support* is anything that allows for individual to carry out the behavior such as having the appropriate gear, someone to take care of household tasks in their absence, or the financial support to engage in the behavior. *Informational support* is easily accessible instructions for the behavior/behavior change or how to improve in the behavior and providing information about support. *Validation support* is where individuals seek out others for social comparison, information on normative behaviors and feelings, and relative status in a group. Participants responded to items on a 7-point Likert scale to the extent that each of the items relate to the activity that they, as individuals, closely relate to (1) never, (4) sometimes, (7) always, or (0) not applicable. For example, an item affiliated with emotional support stated “I have someone who can provide reassurance in the activity/activities.” A total mean score for each social support dimension

(companionship, emotional, instrumental, informational, and validation) was calculated. Higher scores reflected greater perceived social support. The overall Cronbach's alpha for the scale was 0.89. The alphas for the five forms were the following: companionship (0.81), emotional (0.89), instrumental (0.67), informational (0.78), and validation (0.79).

Exercise Identity Scale (Anderson & Cychosz, 1994).—On a 7-point Likert scale, participants answered 9 items assessing the level of perceived exercise identity. For example, a phrase might state “I consider myself an exerciser.” With responses from (1)-strongly disagree to (7)-strongly agree. A total exercise identity score was calculated by summing all 9 items. This scale has been validated among an adult population (Anderson et al., 2001). The alpha level for sample was 0.94.

Self-report Modifiable Activity Questionnaire (Kriska et al., 1990).—The Self-report Modifiable Activity Questionnaire (S-MAQ) is a physical activity surveillance scale that assesses whether or not an individual participates in a certain activity, duration, and frequency of those activities. There were 44 activities listed in our version of the S-MAQ. If the participant reported yes to a particular activity, they were then asked to report the number of months over the past year they participated, the number of times they participated each month, and the number of minutes they participated during a bout of this activity. From this information, MET minutes per week were calculated for each activity using the following formula $\text{MET minutes/wk} = (\text{MET value for the specific activity} * \# \text{ of months} * \# \text{ of times} * \# \text{ minutes per time}) / (60/52)$. A total MET value for each participant was calculated by summing all activities MET-minutes/wk. Similar versions of this scale have been used with adult populations (Durand et al., 2016; Gabriel et al., 2011; Knell et al., 2017; Momenan et al., 2012).

Analyses

Mahalanobis Distance were used to identify outlying values and participants. Preliminary analyses were conducted to examine descriptive analyses, frequencies of demographics, and physical activity behaviors. Histograms, skewness and kurtosis, and Bivariate correlations between endogenous variables were also conducted. Preliminary analyses were completed with SPSS v25 (SPSS, 2017). Path analysis was used to test a saturated model with direct and indirect paths between group exercise membership, each forms of social support, exercise identity, and number of MET-minutes per week for the entire sample, and then for men and women separately. This exploratory approach is similar to other studies (Ivarsson et al., 2017; Meyer et al., 2016; Prapavessis et al., 2015; Rhodes & Dean, 2009) where saturated models were tested for theory development. Group exercise membership was considered an exogenous variable with error variance explained by other variables not included in the model (Mertler & Vannatta, 2005). Forms of social support, exercise identity, and MET-minutes per week were considered endogenous variables. The variance associated with the endogenous variables was explained by the exogenous variable (Mertler & Vannatta, 2005). The Maximum Likelihood (ML) estimation analyses were conducted in STATA (STATA, 2015). Standardized coefficients and their p-values are reported in the path models.

Results

Preliminary results

According to the Mahalanobis Distance test, 13 participants' data were less than 0.001 indicating they were outside the range of the central point of the other participants and removed from the final sample (Pituch & Stevens, 2015). Additionally, 27 participants were not included due to incomplete data. Histograms, skewness, and kurtosis of each of the measures were inspected for normality with no adjustments required, skewness values ranged from -0.03 thru -0.63 and kurtosis values ranged from -0.17 thru -0.73 . The final sample included 506 participants (M age = 34.11; SD = 13.35). Participants were 82% white, 71% women, and 75% completed a college degree or higher (see Table 1 for demographic and physical activity characteristics). About half of the sample were married. For the past 6 months, 86% of the sample reported being physically active, and 75% intended to become more physically active in the next 6 months. One hundred and eighty-two participants reported being in an exercise group. Approximately 34% of women and 40% of men reported belonging to an exercise group. Table 2 shows the bivariate correlations between forms of social support, exercise identity, and MET-minutes per week.

Path model results

Overall path model—The model tested the paths from group exercise membership to MET-minutes per week, explained by forms of social support and exercise identity (see Figure 1). This model also tested group exercise membership on the amount of physical activity per week, explained by exercise identity. There was a significant direct path from group exercise membership and MET-minutes per week ($\beta = 0.11$, $p < 0.01$). There were also significant paths from group exercise membership to exercise identity ($\beta = 0.13$, $p < 0.01$), and from exercise identity to MET-minutes per week ($\beta = 0.41$, $p < 0.001$). There were significant paths from group exercise membership to all forms of social support; emotional ($\beta = 0.34$, $p < 0.001$), validation ($\beta = 0.27$, $p < 0.001$), informational ($\beta = 0.34$, $p < 0.001$), instrumental ($\beta = 0.18$, $p < 0.001$), and companionship ($\beta = 0.43$, $p < 0.001$). There were significant indirect paths from group membership to exercise identity from emotional ($\beta = 0.10$, $p < 0.05$), validation ($\beta = 0.15$, $p < 0.01$), informational ($\beta = 0.24$, $p < 0.001$), and companionship ($\beta = 0.18$, $p < 0.01$), however, there was a non-significant path between instrumental and exercise identity ($\beta = -0.04$, $p = 0.33$). This model explained 39% of the variance in MET-minutes per week. Given the exploratory nature of this path analysis model, we estimated a saturated model with perfect model fit resulting in Chi-square (0) = 0, CFI and TFL = 1, and RMSEA and SRMR = 1 (Raykov et al., 2013).

Path model for women—The path model for women (Figure 2) differed slightly from the overall model. There was a significant direct path from group membership and MET-minutes per week ($\beta = 0.11$, $p < 0.01$). There were also significant paths from group membership to exercise identity ($\beta = 0.17$, $p < 0.01$), and from exercise identity to MET-minutes per week ($\beta = 0.38$, $p < 0.001$). There were significant paths from group membership to all forms of social support; emotional ($\beta = 0.36$, $p < 0.001$), validation ($\beta = 0.25$, $p < 0.001$), informational ($\beta = 0.35$, $p < 0.001$), instrumental ($\beta = 0.19$, $p < 0.001$), and companionship ($\beta = 0.46$, $p < 0.001$). There were significant indirect paths from group membership to

exercise identity from validation ($\beta = 0.11, p < 0.01$), informational ($\beta = 0.21, p < 0.001$), and companionship ($\beta = 0.17, p < 0.05$). However, compared to the overall model, the paths between instrumental ($\beta = -0.02, p = 0.61$), emotional ($\beta = 0.06, p = 0.30$), and exercise identity were not significant. The model for women explained 42% of the variance in MET-minutes per week.

Path model for men—The path model for men (Figure 3) differed from the overall and women's models. In contrast to the overall and women's models, the direct paths from group membership to MET-minutes per week ($\beta = 0.12, p = 0.10$) and exercise identity ($\beta = 0.03, p = 0.69$) were non-significant. There was a significant path between exercise identity ($\beta = 0.46, p < 0.001$) and MET-minutes per week. The paths from group membership to emotional ($\beta = 0.31, p < 0.001$), validation ($\beta = 0.32, p < 0.001$), informational ($\beta = 0.33, p < 0.001$), and companionship ($\beta = 0.34, p < 0.001$) were significant; however, the path to instrumental support ($\beta = 0.14, p = 0.07$) was not significant. There were significant indirect paths from group membership to exercise identity from validation ($\beta = 0.22, p < 0.05$), informational ($\beta = 0.30, p < 0.05$), and emotional ($\beta = 0.23, p < 0.05$). However, the paths between instrumental ($\beta = -0.12, p = 0.12$), companionship ($\beta = 0.15, p = 0.14$), and exercise identity were non-significant. The model for men explained 34% of the variance in MET-minutes per week.

Discussion

The findings from the overall exploratory path model indicate that the association between group exercise membership and the amount of physical activity per week is explained by various forms of social support and exercise identity. Belonging to an exercise group was associated with higher levels of social support, specifically emotional, companionship, validation, instrumental, and informational forms of support. Further, all but instrumental support was positively associated with exercise identity, which, in turn, was strongly associated with the amount of physical activity individuals engage in per week. Findings also reveal that being part of an exercise group has a positive, but small direct effect on exercise identity. The overall model is informative as it is the first to examine the associations between group exercise membership and amount of physical activity per week explained by forms of social support and exercise identity. However, the paths in the overall model differed by women and men.

For women, group exercise membership was positively associated with amount of physical activity per week and exercise identity. As for the men, group exercise membership was not directly associated with amount of physical activity per week or exercise identity. This could potentially be explained through the normative types of activities for each gender. Research suggests that men tend to participate in individual activities such as lifting weights, golf, cycling, and/or running, while women may more often engage in group-based aerobic or dance classes, yoga, and/or tennis (Keating et al., 2005; Ransdell et al., 2004; Simpson et al., 2003). A portion (40%) of men in the current study did report belonging to an exercise group; however, the non-significant findings could be due to the lack of power. It is possible that men derive their exercise identity from more individualized activities and less from group exercise, which warrants future research. Consistent with previous research, women

who participate in group exercise reported higher exercise identities and engaged in almost 1,000 more MET-mins per week compared to those who did not belong to an exercise group (Cardinal & Cardinal, 1997).

Overall, individuals who reported belonging to an exercise group reported higher levels of forms of social support. This extends previous research demonstrating that social support is an important mechanism within group exercise membership (Berkman & Glass, 2000; Christensen et al., 2006; Duncan et al., 1993; McAuley et al., 2003). Women perceived all five forms of social support from their exercise group, while men perceived that belonging to their group provided emotional, informational, companionship, and validation support, but not instrumental support. In general, it could be that belonging to a group may allow individuals to have more accessible forms of social support – especially support that is tied to the mission of the group. Many groups regularly provide support to their members (e.g., information about equipment, diet, or approaches to training). Individuals are also likely to learn from others who are pursuing the same interests and over time may be more likely to seek information, companionship, or validation from others in their group. Once provided, the impact on physical activity is not surprising.

There is a long history of research that shows social support from family and friends is strongly related with initiation and adherence to physical activity (Booth et al., 2000; De Bourdeaudhuij & Sallis, 2002; Treiber et al., 1991; Wallace et al., 2000). The current findings are novel in their ability to differentiate this effect across forms of social support. Specifically, while group membership had the largest impact on companionship, it was informational support that had the strongest link with exercise identity. This differs from previous research that found the strongest impact of social support on physical activity occurred through forms of companionship and emotional support (Scarapicchia et al., 2017; Tay et al., 2013). The earlier results may be an artifact from using a scale that centered on companionship and emotional support from either family or friends (Sallis et al., 1987; Scarapicchia et al., 2017). The use of the PASSS adds informational, instrumental, and validation support that arise from any source within an individual's network. This may allow for a more sensitive assessment of broader relationships within an exercise group. Further, belonging to a group extends past family and friends as social support is likely to flow from other members or trainers who do not rise to the level of friend status. The results are a more nuanced understanding of group exercise membership and social support, and whether these differ by gender. Understanding these nuances may be used to guide future physical activity interventions focused on including social support components.

In addition, previous research was limited to the direct impact of social support on physical activity. However, social support has an impact on identity as it helps individuals to make sense of who they are within their environment (Stryker, 1980; Stryker & Burke, 2000). This study is novel in that it examined the potential role of exercise identity for the association between social support and physical activity. The findings from this study indicate that overall companionship, informational, emotional, and validation all play a role in the formation of exercise identity. This is consistent with findings from a recent systematic review conducted by Rhodes and colleagues, which identified social activation as a predictor of physical activity identity (Rhodes et al., 2016). Social activation

includes comparison, acknowledgements, and relatedness to others, which are similar to validation, companionship, and emotional social support. Our study extends these findings, indicating that informational support also predicts exercise identity. Instrumental support was not a predictor of exercise identity. Instrumental support is anything that may help an individual carry-out an activity. As such, this may require less social interaction compared to companionship, informational, emotional, and validation forms of social support. Further, companionship, informational, emotional, and validation may be more closely linked with the exercise or activity itself compared to instrumental support. However, it is important to note that forms of social support that predicted exercise identity differed by women and men. Informational, companionship, and validation predicted exercise identity, while emotional and instrumental support did not for women. For men, emotional, informational, and validation predicted exercise identity. Future research is needed to understand the dynamic relationships between forms of social support for physical activity and exercise identity over time.

Limitations

Although the results from the exploratory path model are novel, there are a number of limitations. This was a cross-sectional study, where participants self-reported their level of social support, exercise identity, and amount of physical activity at one point in time. Although, we did use scales that have been established as valid and reliable among adults. Social support and physical activity are dynamic and may fluctuate on a daily to yearly basis. Such fluctuations were not captured in this study. Less is known about the changes in exercise identity over time; however, it could be possible that exercise identity fluctuates with social support and physical activity behaviors suggesting bi-directional relationships. Nor, can this study identify the time precedence of group membership on social support and exercise identity or the size or structure of the exercise group. Future research should explore these patterns and do so with a more objective measure of physical activity. Another limitation is that the participants were primarily highly active, white, and women. It is possible that a larger sample of men or minority populations would have revealed a different pattern of effects. With a limited sample of men, we were not sufficiently powered to test gender differences with invariance testing. However, findings from the gender specific models support varying effects that should be explored in future studies with a more diverse sample. Lastly, we were interested in exploring both the direct and indirect paths among group exercise membership, forms of social support, exercise identity, and amount of physical activity per week, which is considered a saturated model. The limitation with a saturated model is that the model will fit perfectly. Therefore, it is impossible to evaluate model fit indices. However, the purpose of this study was to test a possible theoretical model of the relationships between exercise group membership, forms of social support, exercise identity, and amount of physical activity for future research.

Conclusions

Overall, belonging to an exercise group appears to be associated with forms of social support that strengthen exercise identity for both women and men. However, group exercise membership was positively associated with amount of physical activity per week and

exercise identity for women only. The novel findings from the exploratory path model inform further theoretical developments on social support and exercise identity formation. These findings can inform how we think about group exercise and how programs might be tailored to increase levels of physical activity for women and men.

Acknowledgments

Research reported in this publication was supported by the National Institute on Aging of the National Institutes of Health under Award Number T32AG058529. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

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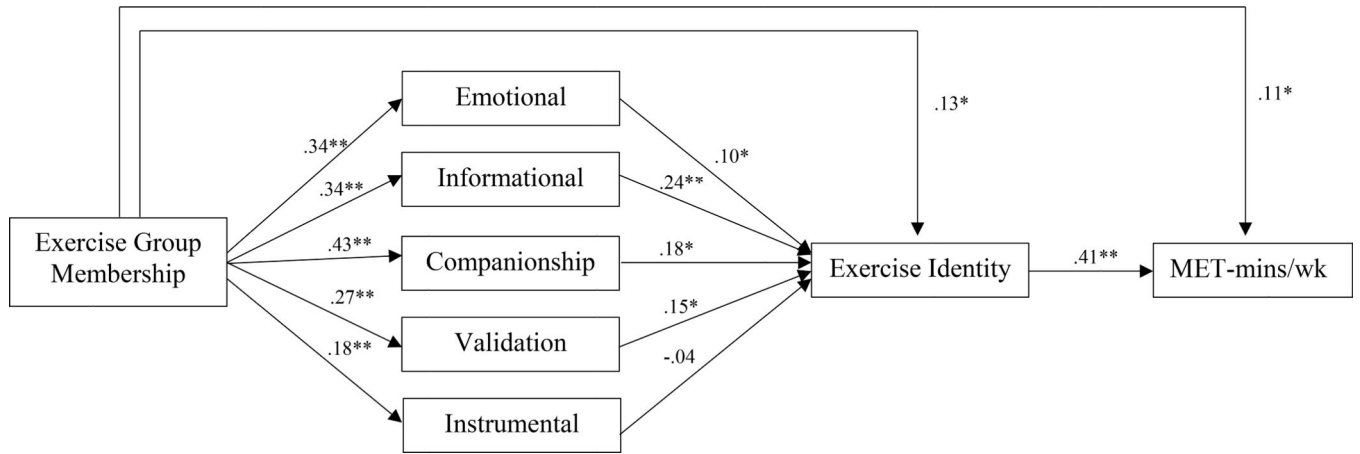


Figure 1.
 Group Exercise Membership Path Model (n=506)
 **p<.001; *p<.05

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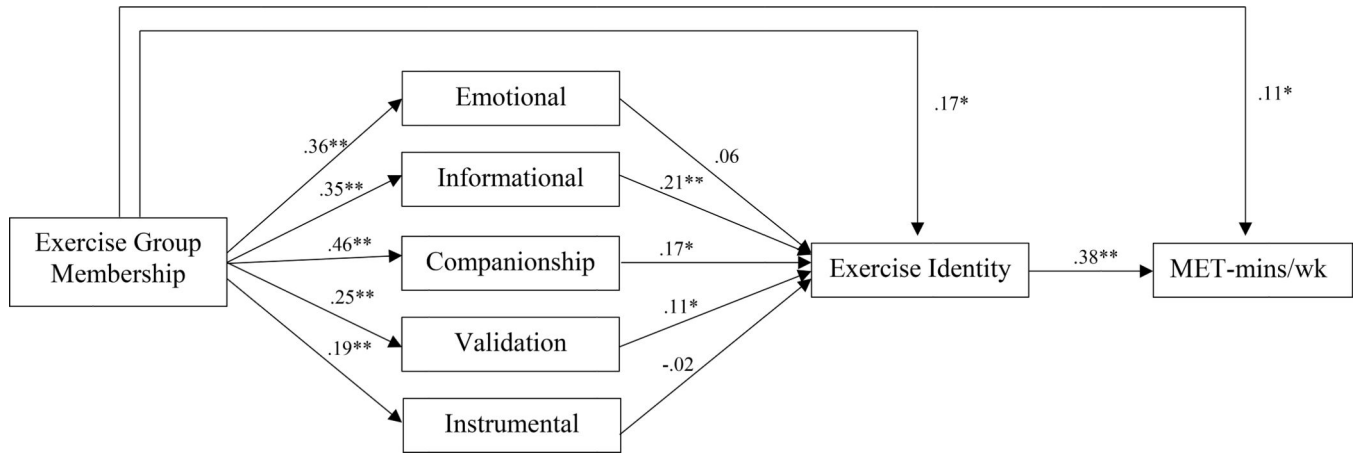


Figure 2.
 Group Exercise Membership Path Model for Women Only (n=357)
 **p<.001; *p<.05

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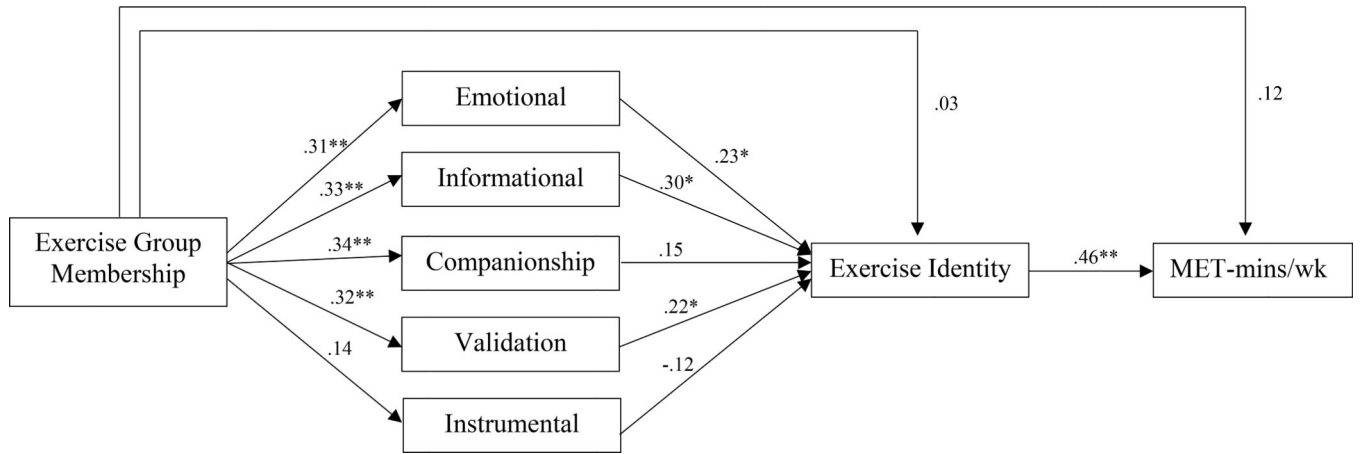


Figure 3.
 Group Exercise Membership Path Model for Men Only (n=149)
 **p<.001; *p<.05

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Table 1

Demographic and Physical Activity Characteristics

	Overall (n=506)	Non-Group Exercise (n=324)	Group Exercise (n=182)
Women	71%	73%	68%
Hispanic	13%	14%	11%
White	82%	77%	90%
College or higher	75%	74%	76%
Married	46%	46%	47%
Mean (SD)			
Age	34.11 (13.35)	32.87 (13.21)	36.31 (13.38)
MET-minutes/wk	2108.43 (1911.85)	1743.07 (1485.72)	2758.87 (2365.30)
Exercise Identity	5.05 (1.55)	4.66 (1.51)	5.74 (1.37)
Physical Activity and Social Support	3.93 (1.15)	3.56 (1.11)	4.59 (.91)
Emotional	4.94 (1.59)	4.53 (1.64)	5.67 (1.20)
Companionship	3.98 (1.57)	3.46 (1.49)	4.88 (1.27)
Instrumental	3.25 (1.69)	3.02 (1.70)	3.66 (1.59)
Informational	4.06 (1.48)	3.67 (1.40)	4.74 (1.39)
Validation	3.43 (1.53)	3.12 (1.47)	3.99 (1.49)

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Table 2.

Correlations of Endogenous Variables (n=506)

	1.	2.	3.	4.	5.	6.	7.
1. Emotional	1						
2. Validation	.33**	1					
3. Informational	.50**	.51**	1				
4. Instrumental	.38**	.24**	.27**	1			
5. Companionship	.61**	.48**	.57**	.35**	1		
6. Exercise Identity	.39**	.39**	.47**	.17**	.46**	1	
7. MET-mins/wk	.24**	.21**	.36**	.22**	.41**	.46**	1

**
p < .01

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