

Leadership in Physical Activity Groups for Older Adults: A Qualitative Analysis

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The purpose of this study was to determine whether a theory-based framework could be used to deductively identify and understand the characteristics of motivational leaders of physical activity groups for older adults. Participants were 23 older adults (mean age = 78.5 ± 8.0 years, 65% women). An interview-guide approach was employed to elicit older adults' thoughts on important characteristics of physical activity group leaders. The data suggested that effective leaders are those whom the participants feel are properly qualified, are able to develop a personal bond with participants, and can use their knowledge and the group to demonstrate collective accomplishments. It was concluded that the findings could be used to extend the leadership activities beyond the traditional technical performance and individual feedback to include activities of social integration. Furthermore, the conceptual framework identified can serve as a valuable tool in guiding future researchers in their examination of leadership in physical activity groups for older adults.

Key Words: exercise, group dynamics, instruction, social support

The initiation and maintenance of regular physical activity for older adults is a strong indicator of health even for the "oldest old" (i.e., >85 years). The benefits of physical activity for older adults include a significant reduction in risk of disease, positive health for virtually every system of the human body, and sustained independent living (Abete et al., 2001; Brazier, Davey, Munroe, & Nicholl, 1997; Chrysohoou, Panagiotakos, Pitsavos, Stefanadis, & Toutouzas, 2001; Evans & Fiatarone, 1990; Mazzeo & Tanaka, 2001; McCulloch, 1996; Shephard, 1997; U.S. Department of Health & Human Services, 2000). Unfortunately, only about one in

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four adults over the age of 65 years participates in regular physical activity. Almost half are completely inactive, making it critical to determine mechanisms that could promote activity in the elderly population (National Center for Chronic Disease Prevention & Health Promotion, 2002).

One potential mechanism is a motivational physical activity leader. Health professionals have long been interested in the role that physical activity leaders play in participants' attitudes toward, and adherence to, physical activity programs. Little research has been conducted, however, specifically examining the role of leadership in physical activity programs for older adults. This might be, in part, because findings suggest that the majority of older adults prefer to exercise at home rather than in groups (e.g., King, Haskell, Taylor, Kraemer, & Debusk, 1991). This same literature, however, indicates that there is a large proportion of older adults who prefer group exercise. Furthermore, recent evidence suggests that preference might simply be an indicator of self-efficacy. In their study on the feasibility of a group-based exercise program for frail older adults, Fox and Estabrooks (2003) found a significant correlation between self-efficacy and preference to exercise at home or in groups. Specifically, those with lower self-efficacy expressed a stronger preference for exercising at home.

The large proportion of older adults who prefer group exercise and the possibility that more older adults would choose group exercise with measures to increase self-efficacy suggest a need to examine group-related mechanisms of physical activity initiation and maintenance in this population. Leadership has been described as perhaps the most important determinant of participation in physical activity groups. For example, Oldridge (1977) concluded that the exercise leader is "the pivot on which the success or failure of a program will depend" (p. 86). In addition, when Franklin (1988) compiled a list of over 30 variables that influence dropout behavior from physical activity programs, he identified the exercise leader as "the single most important variable affecting exercise compliance" (p. 238).

Unfortunately, recent research has not supported the hypothesis that physical activity leaders are crucial to participant adherence. Carron, Hausenblas, and Mack (1996) summarized the impact of social influences—including leadership—on exercise adherence. Using the findings from nine studies that reported on data collected from 533 participants, they found only a small effect between leadership and adherence behavior, although the confidence interval ranged from a small negative effect to a large positive effect. More recently, Fox, Gauvin, and Rejeski (2000) investigated the impact of leadership style and group dynamics on intention to return to a structured fitness class. Each participant completed a single program session under four conditions in which both leadership style (i.e., enriched vs. bland) and group environment (i.e., enriched vs. bland) were systematically varied. At the completion of the session, the participants completed assessments of intention to return to a similar class and enjoyment of the previous session. The study results showed no effect of leadership on the participants' intention to return to a similar class (Fox et al., 2000).

Does this mean that leadership is not an important correlate of physical activity adherence? Not necessarily. In a review article, Chemers (2000) wrote that general leadership research has "been regarded as a fractured and confusing set of contradictory findings and assertions without coherence or interpretability" (p. 27).

This lack of coherence was attributed to the many different, and often unidimensional, conceptualizations of leadership. Chemers's conclusions from the general body of literature on leadership seem to generalize to research in the physical activity domain. For example, in the physical activity literature, leadership has been conceptualized as professional expertise (e.g., Bouillon, Desharnais, & Godin, 1987; Gillett et al., 1993; Oldridge, 1977; Shea, 1986), a general influence (e.g., Fridinger, Hammond, & Leonard, 2000; Jacobson & McAuley, 1991), enriched versus bland (e.g., Fox et al., 2000; Turner, Rejeski, & Brawley, 1997), physical characteristics of the leader (e.g., Wininger, 2002), and the ability to provide feedback (e.g., Brawley, Carron, & Widmeyer, 1990; Myers, Remers, Widmeyer, & Williams, 1995). The multiple, and distinct, conceptualizations used suggest that there is a need to examine the basic nature of leadership in physical activity groups for older adults and to provide an appropriate framework encompassing the many potential dimensions.

Chelladurai's (1990) multidimensional model of leadership, developed for examining leadership in sports teams, might be one solution that outlines the need for a comprehensive leadership model in physical activity groups for older adults (Biddle & Mutrie, 2001). In the model, group performance and member satisfaction are considered a function of five dimensions (positive feedback, social support, training and instruction, democratic behavior, and autocratic behavior; Chelladurai). There is strong support for the relationships between athlete perceptions of the five dimensions of leadership behavior with athlete satisfaction and performance (Chelladurai).

Rosenkranz (2001) attempted to determine the utility of Chelladurai's model to predict satisfaction with, and adherence to, group exercise programs for older adults. In a study of 128 older adults attending 13 different physical activity classes, she developed and tested the Leadership Scale for Physical Activity Group Instructors. The results of the study confirmed the factor structure of the scale: The participants' perceptions of their instructors' behavior across the five dimensions explained approximately 50% of the variance in their satisfaction with the class. Perceptions of leader behaviors explained only 2% of the variance in attendance, however.

It might be necessary to expand the view of leadership beyond the leader behaviors identified by Chelladurai as important for coaches dealing with athletes. A starting point to expand this view and understand the nature of leadership in physical activity groups for older adults is Chemers's (2000) functional integration of the leadership literature. The integration is based on a comprehensive review of the leadership literature that included a review of behavioral, trait, and transformational leadership research across educational settings, sports teams (although tangentially), and work groups. In this work, Chemers defined leadership as "a process of social influence in which one person is able to enlist the aid and support of others in the accomplishment of a common task" (p. 27). In physical activity classes for older adults, the common task of the participants and leader is to maintain the participation of the entire group. For the fitness class to exist and continue, it needs to have regular attendees. Hence, leadership in physical activity groups involves encouraging participants to attend regular sessions (i.e., enlist the aid and support of class members; Chelladurai, 1990; Kluge & Savis, 2001; Van-Norman,

1998). In addition, leadership can be defined by the roles associated with its processes (Chemers). With respect to the physical activity groups, leadership has been described as a prescribed role (Carron & Hausenblas, 1998). Simply put, the physical activity leader occupies a role that is specifically prescribed by an organization or group. Every leader has two responsibilities: to ensure that the demands of the organization are satisfied (e.g., have enough people in a class to make it fiscally viable) and that the needs and aspirations of group members are satisfied (e.g., provide a class that the participants enjoy and feel is beneficial; Carron & Hausenblas).

To complement this definition and description of leadership, Chemers (2000) subsequently proposed a multidimensional framework of leadership. This integration of leadership literature led to the identification of three major functions of successful leadership. The first function is termed image management and is predicated on the postulate that “a leader must build credibility in the legitimacy of his or her authority by projecting an image that arouses feelings of trust in followers” (Chemers, p. 37). The second function, relationship development, is based on the postulate that “a leader must develop relationships with subordinates that enable those subordinates to move toward individual and collective goal attainment” (Chemers, p. 37). The third function, resource deployment, is based on the postulate that “leaders must effectively use the knowledge, skills, and material resources present within their group to accomplish the group’s mission” (Chemers, p. 37).

To promote physical activity in older adults and the potential of physical activity group leaders to influence participation, the primary purpose of this investigation was to determine whether Chemers’s (2000) functional integration could be used to identify and understand the characteristics of successful leaders of physical activity groups targeting older adult members through deductive analyses. A second purpose was to provide elaboration to Chemers’s multidimensional framework through detailed content analyses. The rich data gathered from a qualitative methodology would provide a greater understanding of the perceptions of older adults regarding their physical activity group leader. Furthermore, the analysis would reveal additional leadership variables not previously identified.

Method

PARTICIPANTS

Twenty-three older adults agreed to participate in the study. Their average age was 78.5 years ($SD = 8.0$), and the majority were women (65%). The sample was well educated (43% completed at least high school, 39% completed an undergraduate degree, and 13% completed graduate degrees). The sample was not ethnically diverse (95% White) but did reflect the regional population where the data were collected. Finally, all participants were mobile, living independently, and had no adverse health conditions that would preclude regular physical activity. About half of the participants were currently involved in a physical activity program (8 women, 4 men), and the remainder had previously been involved but currently were not (7 women, 4 men). No participants had been or currently were involved in the same physical activity program.

PROCEDURE

Ethical approval was obtained from an institutional review board, and all participants provided informed consent for participation. A description of the project and a copy of the ethical approval for the study were provided to physical activity group leaders. In the region where this study was completed, there are 113 physical activity programs offering group sessions for older adults. Physical activity group leaders were asked to provide names of a current and a former physical activity group member for possible participation in the study. These names were added to a list ($N = 215$) and categorized based on individual involvement (i.e., currently involved or no longer involved), gender, and program they currently or had previously attended. A stratified random selection of 30 participants was completed. At random, we selected 7 men and 7 women who were currently not involved in a program and 8 men and 8 women who were. To ensure exposure and reference to a variety of leaders, when a participant was randomly selected from a given class, other individuals who had been or currently were attending the same class were excluded.

Trained research assistants contacted each of the 30 potential participants, introduced themselves, described the study and how we obtained their name, and asked if they would be interested in participating in the study. Each research assistant had conducted interviews previously and was trained extensively by a qualitative researcher. Seven individuals (all men, 4 currently involved in a program) declined participation in the study. Given the necessity to protect the rights of those who declined participation, we were not able to ask about specific reasons for their choice, but it appeared that not wanting to do an interview was the reason each declined. The remaining 23 were scheduled for, and completed, qualitative interviewing. Before each interview, the researchers engaged in a brief conversation of introduction and exchanged informal information to develop a rapport and again described the rationale for the study, how the data would be used, and that the participant responses would be confidential. The researchers also asked permission to audiotape and take notes during the interview. Note taking is important for two reasons: It allows the interviewer to formulate new questions or probes as the interview progresses and it helps the researcher locate important quotations in later analysis (Patton, 1990). All participants provided informed consent.

Personal interviews were used to elicit information regarding older adults' thoughts on important characteristics of a physical activity group leader. Each interview occurred at a place convenient for the participant, most often in the participant's home. An interview-guide approach was employed (Patton, 1990), which uses topics to be covered during the interview but does not specify the exact sequencing of the questions. This allows for the addition or elimination of questions and the introduction of new ideas as the interview progresses. The questions in the interview guide were generated based on Chemers's functional integration of the leadership literature and thus represented a deductive approach. Each interview was begun by asking the participants about the characteristics of a competent physical activity leader, a motivational leader, and, finally, one who ensures regular attendance. Participants were then asked to provide situations and examples of essential leader qualities. Finally, the participants were asked to identify behaviors that make or made a leader effective and helped them to attend class. Probing

techniques were used in order to better understand the participants' thoughts on each question. Probes differed slightly among the participants, depending on their responses to the questions. Each interview lasted between 45 and 60 min.

DATA ANALYSIS

The investigators imposed deductive reasoning (Edwards, Kingston, Hardy, & Gould, 2002; Patton, 1990; White & Hardy, 1998) on the data by developing an interview guide derived from Chemers's theoretical framework and a content analysis of underlying leadership variables that emerged from the higher order themes. Four investigators independently undertook the deductive analysis. Transcripts were read and reread by all four investigators so that they could become familiar with the data.

The raw data (open-ended responses) were divided into meaning units—a word, phrase, or paragraph containing one idea (Tesch, 1990). The meaning units were then organized into raw data themes, which were then clustered into higher order themes (Edwards et al., 2002; White & Hardy, 1998). A hierarchical tree was thus developed (Figure 1). Leadership was the highest level, with Chemers's three leadership dimensions (image management, relationship development, or resource deployment) representing the second highest level. Levels 3 and 4 of the hierarchical tree represent elaborations to Chemers's framework that were generated from the raw data. All meaning units were successfully categorized as reflection one of the three higher order themes of Chemers's functional integration of the leadership literature. The codes for Level 3 and Level 4 were based on Guba's (1978) suggestions. Patterns in the data are established by finding "recurring regularities." These patterns can then be sorted into categories that are ultimately judged by two criteria: internal and external homogeneity. Internal homogeneity assumes that the data in the categories hold together because of their similarities. External homogeneity assumes that the categories are distinct from one another.

For the analysis, each rater developed a database file that organized the meaning units by higher order theme (i.e., image management, resource deployment, relationship development). The four databases were then merged, and meaning-unit assignment to theme was compared across the four columns. Interrater reliability was determined by dividing the number of agreed-upon codes by the total number of raw meaning units. The four raters agreed on 96% of the meaning units deductively coded to the higher order themes (Levels 1 and 2). Content analysis to determine underlying categories was initially completed independently. The four researchers then met, compared category headings (i.e., Levels 3 & 4), came to consensus on labels, and compared meaning-unit assignment. The level of agreement was lower for the coding of Levels 3 and 4 (80%). In each case, when disagreements occurred, the text units were reread and discussed until a consensus was reached.²

Results

The results outline the characteristics of a leader that were derived from the participants' responses (meaning units). Figure 1 depicts the leader characteristics

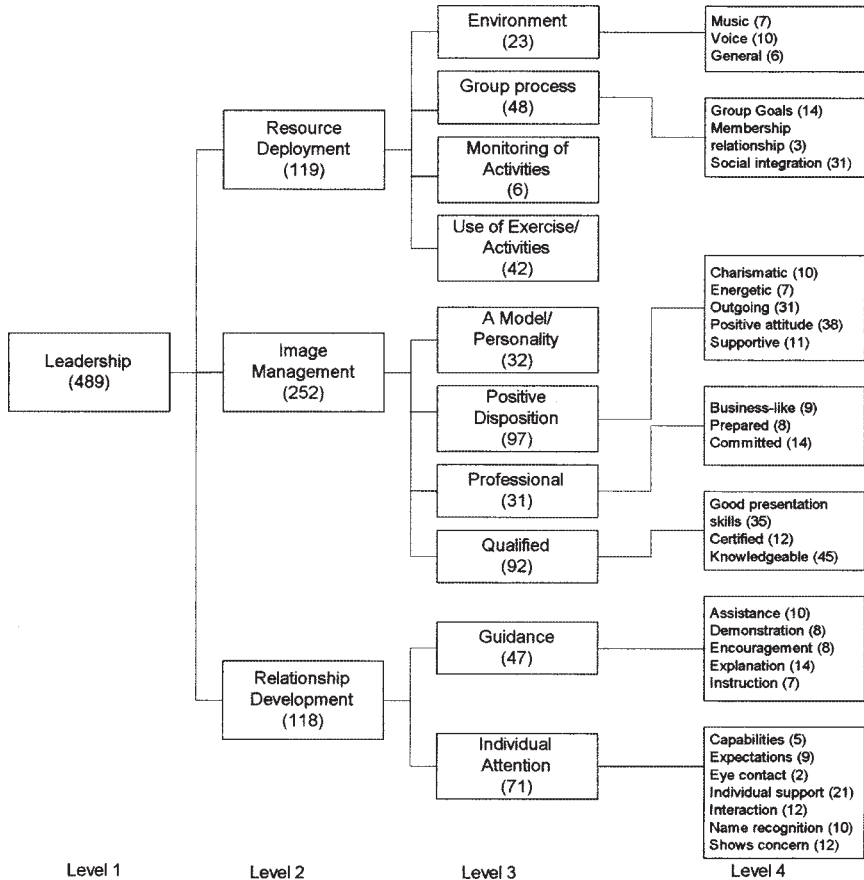


Figure 1. Flowchart representing the components and categories of leadership for physical activity classes as indicated by a sample of older adults.

in a left-to-right order. Figure 1 consists of four levels: Level 1 is the highest order theme or category, leadership; Level 2 represents the second highest order themes including resource deployment, image management, and relationship development; and Levels 3 and 4 represent more general leadership qualities that were derived from the interviews.

The number of responses (meaning units) elicited from the participants was used to determine the frequencies. Overall, a total of 489 meaning units were obtained from the participants. As Figure 1 shows, the frequency of responses in image management (252 meaning units) was more than double the frequencies found for both resource deployment (119 meaning units) and relationship development (118 meaning units). These frequencies are secondary to the actual analysis

because a particular leadership quality (e.g., eye contact) might not have been mentioned as frequently as another source (e.g., individual support) but still could be very important to some participants. Therefore, the values in the figure should be interpreted with some caution.

RESOURCE DEPLOYMENT

A total of 119 meaning units were obtained for resource deployment (Figure 1, Level 2), which is composed of any characteristic that results in the successful completion of group goals (Chemers, 2000). This is further divided into environment (23 meaning units), group processes (48 meaning units), monitoring of activities (6 meaning units), and use of exercise/activity (42 meaning units; Figure 1, Level 3). Group process, the most frequently cited category in resource deployment, includes a group goal, membership responsibility, and social integration. One female participant expressed the need for social integration in a leader with the following comment: “He [the leader] gets everyone involved in such a way that they feel like they are contributing a lot [to the class] too.” The idea of a group goal is evident in the following quotation from a female participant: “[The instructors] let the class choose the length of each session.” The use of various exercises and activities by the leader is the next most frequently cited category. The leader “keeps changing routines to make it interesting” and “keeps changing [routines] so we continue to get results” are comments from a female participant exemplifying this quality. The environment category is associated with the leader providing the appropriate atmosphere such as music and voice control and is exemplified in the following quotation by a male participant: “It is very important that they [the leaders] have a good voice so the senior can hear their instructions.” In addition, 1 female participant stated that the leader was “considerate of class by adjusting the music type and volume.” Finally, monitoring of activity was another category under resource deployment. This consisted of keeping diaries and logging attendance; for example, “when she [the leader] takes role call, it makes it seem important that we showed up” and “the leader should have each individual keep a diary.”

IMAGE MANAGEMENT

Image management (Figure 1, Level 2) refers to the qualities in a leader that result in credibility (Chemers, 2000). This category resulted in 252 meaning units and is comprised of four higher order themes including being a model/personality (42 meaning units), having a positive disposition (97 meaning units), being professional (31 meaning units), and being qualified (92 meaning units; Figure 1, Level 3). Positive disposition was the most frequently cited higher order theme. This included such qualities as being charismatic, energetic, outgoing, supportive, and positive and is exemplified in the following statements: “They [the leaders] need to have a really positive attitude,” and “they need to be very friendly.” Furthermore, leaders need to be “nice and understanding.” The next most frequently cited category was being qualified. Many participants expressed the importance of the leader being knowledgeable, having the proper certification, and possessing good presentation skills. One male participant stated that a leader “must give accurate information and know how to use proper form” when describing an exercise. Another male

participant said that a leader must “be able to present in a competent manner.” The participants in the present study also voiced the need for a leader to be a model for the rest of the group. This is evident in the following citation from a male participant: “I have to be able to look up to the individual [the leader] in such a way that I realize what he is trying to do.” Moreover, participants stated that it was important for the leader to “look the part” and “should be in good physical shape themselves.” The final higher order theme under image management was professionalism. This category was further composed of being business-like, prepared, and committed. A leader “needs to be very punctual” and “cares about doing a good job” are examples taken from 2 female participants of a leader being prepared and committed.

RELATIONSHIP DEVELOPMENT

A total of 118 meaning units was obtained for relationship development (Figure 1, Level 2), consisting of leadership qualities that result in follower motivation (Chemers, 2000). The higher order themes include personal interest (57 meaning units), guidance (47 meaning units), and individual attention (14 meaning units; Figure 1, Level 3). Personal interest, the most frequently cited category under relationship development, contains important leadership qualities such as having good eye contact, providing individual support and interaction, recognizing participants’ names, and showing concern. “She made us feel appreciated,” “she talked to us as people,” and “she showed an interest in everyone” are examples of personal interest provided by 2 different participants. Guidance (Figure 1, Level 3) is the next most frequently cited category under relationship development. This category includes the qualities that a leader needs to exhibit in order to guide the participants during a class. For instance, assisting, demonstrating, encouraging, explaining, and instructing are all higher order themes of guidance. One female participant liked the fact that “if I don’t understand it, she explains it,” and another woman stated that “they [the leaders] tell you you’re doing great while you’re exercising.” These quotations are indicative of explaining and encouraging, respectively. Two other participants stated that the leader was “observing to make sure everyone had good form” and “showing us new things several times,” which are indicative of assisting and demonstrating, respectively. The final category under relationship development is individual attention (Figure 1, Level 3). Although they reported it at a far lesser frequency than guidance or personal interest, participants expressed the need for leaders to understand their capabilities and their expectations. One male participant stated, “I think the instructor has to know the individual capabilities of each person in the class,” which is an example of understanding one’s capabilities, whereas another man said, “the instructor has to know the individual desires of each person in the class,” which provides an example of expectations.

Discussion

The general purpose of our research was to examine the utility of Chemers’s multidimensional framework of leadership in physical activity classes for older adults. The results showed that older adults’ perceptions of what makes a good physical activity group leader could be described by Chemers’s heuristic of

successful leadership. Each perception of older adults regarding their physical activity group leader was successfully categorized into one of three dimensions—image management, relationship development, or resource deployment. The findings support four generalizations regarding the understanding of leadership in the context of physical activity groups for older adults.

First, leaders of physical activity programs for older adults need to demonstrate that they are competent and well qualified to lead exercises. This characteristic is the primary focus of most health professionals and has received the most attention in printed form (e.g., Keller & Turner, 1986; Kluge & Savis, 2001; Van-Norman, 1998). Health professionals are concerned that leaders of physical activity programs be well trained in the appropriate exercises and techniques for older adults (Keller & Turner; Kluge & Savis; Van-Norman). This is of practical concern to ensure the best possible results from regular activity while at the same time minimizing potential hazards. It should not be surprising that older adults who have participated in physical activity programs also need to feel that their leaders are qualified. In previous research, many older adults suggested that they were worried about doing physical activities that might be harmful rather than helpful (King et al., 2000). Similarly, older adults perceive the necessity of the program leader to be a good example or a model of behavior. This finding corresponds to Bandura's (1997) conceptualization of modeling and vicarious experience as antecedents to self-efficacy, learning, and performance.

Second, leaders of physical activity programs for older adults need to portray the sense they are interested in each individual group member. A consistent theme revealed by the participants was that a successful leader provided personalized feedback, gave individual encouragement, and understood the needs of each class member. These types of leadership activities were the basis of the enriched leadership style used by Turner and associates (Cooper, 1984; Fox et al., 2000) that resulted in improved enjoyment of a physical activity session for young adults. These findings also suggest that older and younger adults might be similar in their desire for individualized feedback and social support from the physical activity leader.

Third, leaders of physical activity programs for older adults need to demonstrate that they can set an appropriate physical environment, facilitate group integration, vary the pattern of activities, and monitor group progress. The participants identified each of these themes, which typify resource deployment, as important characteristics of a physical activity group leader. The data suggest that group leaders have an important role in setting the environment of physical activity classes. Not only do leaders need to use the appropriate music and instructional voice but they should also actively facilitate social interactions between class members—independent of their interactions with the leaders—that develop a sense of membership and cohesion. In support of the importance of developing a sense of group cohesion in physical activity classes for older adults, a number of studies have shown that increased perceptions of group integration are associated with increased perceptions of control, attitudes, and long-term physical activity adherence (Estabrooks, 2000; Estabrooks & Carron, 1999a, 1999b). In contrast, younger adults are typically motivated by their individual attractions to the group's task (Carron & Spink, 1993).

Fourth, these findings support the idea that Chelladurai's five dimensions of leader behavior are necessary, but insufficient, to describe leadership behaviors identified by older adults for their physical activity class leaders. Participants provided responses that endorsed positive feedback (individual attention), social support (individual attention), training and instruction (guidance), and democratic/autocratic behavior (professional). The primary extension of Chelladurai's model was the leader behaviors associated with resource deployment. These behaviors have been a consistent omission across leadership studies in the physical activity domain, with one exception. Fox and colleagues (2000) demonstrated that younger adults were more likely to return to a fitness class when enriched peer confederates were added to a physical activity group. Tying this research to the current findings suggests that if a leader can enhance the group environment of a given class, participants will be more likely to adhere to the program. This finding also suggests that both younger and older adults are motivated by enhanced group properties facilitated by a group leader.

A number of caveats should be considered when one interprets the results of this study. First, the findings suggest that leadership is a multidimensional phenomenon that can be described by Chemers's heuristic. The findings do not, however, provide information regarding the relative importance, interrelationships, or direction of influence for each of the highlighted components of leadership. Nor do they provide a definitive statement about the factor structure underlying the components of leadership. Second, this study does not examine the interrelationships between factors, the potential reciprocal influence between the leader and group members, or the issue of perceived, preferred, and actual leader behavior (Chelladurai, 1990). Third, the generalizability of these findings is unknown. Chemers (2000) developed this framework to provide a blueprint for leadership research and application in a broad array of settings. As such, we would suggest that the higher order characteristics (i.e., image management, resource deployment, and relationship development) should generalize to other physical activity contexts with a variety of populations. Conversely, different leader behaviors in different contexts could result in the higher order characteristics. Consequently, these findings might not generalize to younger populations. Understanding the phenomenon underlying each of these caveats was beyond the scope of this study, but each also provides a valuable avenue for future research.

In conclusion, the study provides information that can be used by both practitioners and researchers interested in physical activity and older adults. For practitioners, the findings can be used to extend the leadership activities beyond the traditional technical performance and individual feedback to include activities of social integration. A better understanding of the leadership qualities in physical activity groups for older adults can facilitate the development of more effective activity classes. The conceptual framework (Figure 1) can serve as a valuable tool in guiding future researchers in their examination of leadership in physical activity groups for older adults. The findings provide a template that could be used to develop a quantitative measure of perceived leadership for older adults participating in physical activity groups, which would allow for the testing of relative importance of the dimensions and their relationships with physical activity social cognitions and behavior.

Authors' Note

The interview guide is available from the first author on request.

We did examine the data for distinct perspectives (those currently vs. previously attending exercise classes) and found that for both subsamples results are almost identical in proportion of meaning units by category.

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