Characteristics of Lifelong Physically Active Older Adults

Sheryl L. Chatfield

Abstract
Most adults in developed countries fail to accrue enough regular physical activity to prevent or decrease the impact of chronic diseases associated with aging. I conducted semistructured interviews with 16 purposely selected older adults ranging in age from 53 to 70 years to explore the practices of successful lifelong adherents to physical activity. I used an interpretive descriptive approach to data analysis. My findings suggest that both social and competitive motivations were important during early adulthood, although for many participants the latter were more likely to endure over time. Based on these findings, I recommend that programmers be aware of the potential for older participants to be less fulfilled by social motivations as they become more experienced exercisers.

Keywords
exercise / physical activity, older people; interpretive description; interviews, semistructured; life history; research, qualitative

In an introduction to a special series on physical activity in *The Lancet*, Das and Horton (2012) noted, “There is substantial evidence to show that physical inactivity is a major contributor to death and disability from non-communicable diseases (NCDs) worldwide” (p. 189). The results of a selective but meticulous review led Warburton, Nicol, and Bredin (2006) to assert that “there is incontrovertible evidence that regular physical activity contributes to the primary and secondary prevention of several chronic diseases” (p. 807), and that participation in physical activity is beneficial for mental health. Despite these and other reports that have identified concerns and benefits, researchers have suggested that rates of regular participation in physical activity (PA) among adults tend to be low, especially in developed countries. For example, researchers using movement sensors to assess PA in the United States (Troiano et al., 2008) and Canada (Colley et al., 2011) concluded that only about 5% of adults in those countries engaged in 30 minutes or more of moderate intensity PA on at least 5 days per week.

Background
Authors of published PA research articles have generally reported results based on data derived from survey instruments or other structured interviews (e.g., Bauman et al., 2012; Lunn 2010; Scheerder et al., 2006; Trost, Owen, Bauman, Sallis, & Brown, 2002). Shephard (2003) observed that a weakness of many PA survey instruments is an absence of questions about the environment in which activity takes place. Additional limitations associated with use of limited-response instruments include that respondents might not consistently define activity intensity, and that respondents might not be given ample opportunities to describe strategies they developed to remain regularly active over time.

According to Pearce (2009), qualitative researchers “have a particularly important role in building our understanding of physical activity from a more inductive, in-depth perspective” (p. 879). Pearce also noted that qualitative approaches to PA research offer a means to explore “the perspectives of people across the lifespan . . . as well as the role of physical activity and exercise in their lives” (p. 880). Because incidences of chronic diseases increase while reported PA decreases with age (Troiano et al., 2008), individuals who have remained continually active throughout adulthood represent potential “information rich cases” (Patton, 2002, p. 46) to improve researchers’ understanding of how to encourage regular and ongoing PA.

Authors of some prior qualitative articles that described PA practices of aging adults used random (e.g., Stead, Wimbush, Eadie, & Teer, 1997) or stratified

1University of South Alabama, Mobile, Alabama, USA.

Corresponding Author:
Sheryl L. Chatfield, University of South Alabama, Department of Health, Physical Education, & Leisure Studies, 171 Jaguar Dr., Mobile, AL 36688, USA.
Email: slchatfield@southalabama.edu
sampling techniques (e.g., Li, Du, Zhang, & Wang, 2013) to select participants. As a result, these researchers were able to provide insight into attitudes and barriers, but offered minimal information describing facilitators of continual PA participation. Stead et al. observed that participants in their research who regularly engaged in active sports “tended to be exceptions who proved the rule” (p. 7), whereas many participants “took only sporadic or no exercise” (p. 7). Li et al. found that, in general, “the amount of leisure-time activity undertaken by the elderly was lower than expected” (p. 342). Other authors using qualitative methods to explore PA participation in older adults recruited from among participants in senior or postretirement programming (e.g., de Souza and Vendruscolo, 2010; Ferrand, Nassare, Hautier, & Bonnefoy, 2012) and did not report participants’ PA participation histories.

Retrospective reports of life-course PA derived via qualitative study designs are relatively rare. Examples include research studies described in articles by Scanlon-Mogel and Roberto (2004), and Dionigi, Baker, and Horton (2011). Scanlon-Mogel and Roberto gathered retrospective PA-participation information from 15 participants aged 65 to 76 years who had been regularly attending members of a recreation facility. The authors reported that some participants engaged in PA during early to middle adulthood, although in general “late adulthood marked the participants’ transition to ‘formal’ exercise” (p. 40). Early adult activity for men was frequently associated with military service.

Dionigi et al. (2011) investigated motivation among masters athletes aged 56 and older. Although the authors’ primary focus was identification of positive outcomes participants derived from engaging in competitive recreation, the authors also reported activity history as provided by participants during semistructured interviews. The 44 participants included both lifelong active individuals and those who initiated regular activity participation after turning 50. For many participants, the opportunity to regularly compete against age-group peers in organized events provided incentive to maintain a high level of PA participation throughout the year.

Although findings from the articles described above contribute to researchers’ understanding of PA habits in aging and older adults, what these reports lack are detailed descriptions of the characteristics and practices of older adults who have successfully demonstrated lifelong PA participation. I planned the research study described in this article to address this gap by investigating the practices of 16 purposely chosen lifelong physically active adults. I used an interpretive descriptive (Thorne, Reimer Kirkham, & MacDonald-Emes, 1997) approach to this research to develop a “coherent conceptual description that taps thematic patterns and commonalities” (Thorne, Reimer Kirkham & O’Flynn-Magee, 2004, p. 4).

**Methods**

**Design**

According to Thorne et al. (1997), the interpretive description approach allowed nursing researchers to investigate “a shared health or illness phenomenon from the perspective of those who live it” (p. 171). Researchers using interpretive descriptive analysis are also encouraged to respect the “inevitable individual variations” (Thorne et al., 2004, p. 4) among participants. Thorne et al. (2004) noted that researchers in other “applied disciplines” (p. 2), including social and health sciences, have effectively used this approach.

**Participants**

I have a dual identity with respect to this research because I am both a health behavior researcher and a regular masters participant in recreationally competitive events. Therefore, the first several participants I recruited for this research consisted of people I knew through training for or participation in these events. With the gracious assistance of one of the initial participants, I was able to recruit additional participants from a Web-based physical activity interest group. Participants included 5 men and 11 women with ages ranging from 53 to 70 years. My specified criteria included being age 50 or older, and being continually physically active through the adult years, which I defined as beginning in the early to middle 20s. All participants verified that they met the criteria at the time of recruitment.

**Interviews**

I chose to use interviews as the primary method for data collection to gather information about participants’ “experiences and self-understanding” (Kvale, 2009, p. 46). I developed an interview guide, informed by a review of articles in which authors described common characteristics of active people (e.g., Allender, Cowburn, & Foster, 2006; Trost et al., 2002). I supplemented the research-derived correlates with items reflecting my own observations and experiences. I pilot tested the interview guide (contained in Appendix A) with two individuals who met the participation criteria. One suggestion from a pilot participant (body image) was incorporated into the interview guide. One additional probe based on information offered by several earlier participants (mental health benefits) was added to later interviews. I conducted seven interviews in person and the remainder by telephone. Duration
of interviews ranged from 34 to 110 minutes; the average duration was 55.5 minutes.

**Data Preparation and Quality Control**

The Institutional Review Board of The University of Mississippi approved the research prior to project inception. Participants were given an information sheet in advance of interviews and were informed of their right to terminate participation at any time. Participants received no benefits for their participation in this project other than reports on the progress and dissemination of the research.

I digitally recorded each interview and transcribed the interviews using the “simple transcript” guidelines provided by Dressing, Pehl, and Schmieder (2013, p. 23). According to Riessman (2008), although “some may think . . . [transcription] is technical, and delegate it” (p. 29), transcription by author facilitates deeper analysis because it increases familiarity with the data. Through the course of this project it was necessary for me to listen to each interview several times, and these experiences facilitated my “immersion in the data” (Thorne et al., 1997, p. 175), which is recommended for researchers working in the interpretive description framework. I employed the following additional practices for participant confidentiality and quality control of data:

- Use of code numbers rather than names in interview transcripts; substitution of generic descriptions for other personal data (e.g., SPOUSE rather than an individual’s name);
- Retention of a list of contact information, cross referenced with code numbers, in a different location than the interviews;
- Recruitment of a graduate student who had completed necessary research ethics training to listen to the recordings and identify errors in the transcripts;
- Return of the corrected final transcripts to each participant so that he or she might make corrections, alterations, or deletions, and provide any additional information he or she thought might be beneficial;
- Deletion of contact email messages from my Web-based email system, though retaining copies of attachments and text of email messages as word processing or .PDF files; and
- Storage of all electronic files on a password-protected computer in a private office.

**Analysis**

Gibbs (2007) observed that the use of computer-assisted qualitative data analysis software (CAQDAS) is especially beneficial when dealing with large amounts of data such as that created by multiple interviews. I used NVivo Version 10 (QSR International, 2012), which facilitated organization of codes and provided me with access to the context of coded data. I also initiated the NVivo project log, which tracks every action in the project file, to contribute to quality control and transparency.

I used Chenail’s (2012) “meaningful qualitative elements” (p. 266) as coding units of analysis. I first applied a structural coding scheme, using the interview guide items as codes, to compare and compile participant attributes. According to Saldaña (2013), structural coding is especially appropriate for research with “multiple participants [and] standardized or semi-structured data gathering protocols” (p. 84). To better identify patterns, themes and variations, I recoded the data using Saldaña’s “values coding” (p. 110) scheme as my guide. Use of this scheme, in which researchers identify data that reflects “a participant’s values, attitudes, and beliefs, representing his or her perspectives and worldview” (Saldaña, p. 110), was consistent with my desire to focus on how participants described their success in remaining active. After combining like codes from the values coding process into categories, I identified four primary themes. As I considered these themes, I returned to existing research to identify parallels to help me develop an interpretive description.

I detailed development and definitions of codes and themes in memos within the NVivo (QSR International, 2012) project record. To serve as a check against my own biases originating from my personal background in PA, I solicited participant input on themes, and discussed the themes in general terms with other academics and active individuals. Although all participants enthusiastically supported the aims of my project, the level of responsiveness from participants following completion of interviews was highly variable.

I begin the report of findings with a brief summary of descriptive information so readers can become generally acquainted with the characteristics of the research participants. I follow this with a description of my thematic findings. In the discussion section following, I review parallels with existing theoretical bases and offer an interpretive summary that incorporates information from descriptive and thematic findings. I conclude with implications, limitations, and recommendations for additional research.

**Results**

**Descriptive Findings**

All participants reported being active as children, often in unstructured play. Most participants reported some involvement in organized sports up to or including
secondary or high school level, although only a small number described commitment to competitive activity through the end of high school. For several women in this cohort, organized sports for women did not yet exist in high school, although in some instances team or intramural sports opportunities were available during primary school. Several participants described parents who engaged in lifestyle activity, such as gardening, or occupational activity, such as farming, but only a few participants described parents who engaged in structured PA. Many participants initiated regular adult activity participation in some type of group setting such as a club or class. Participants frequently described competitive factors derived from groups, events, or the desire for self-improvement as early motivating factors.

Most participants engaged in much or all of their current activity or exercise alone; all participants engaged in at least some PA alone. Participants engaged in most activity outdoors. The most common activities among participants included running, walking, cycling, and a mix of activities. Nearly all participants expressed a definite preference for morning activity. Most participants engaged in activity between 4 and 6 days per week; most planned at least one weekly rest day. All participants but one were in a committed relationship at the time of the interview; several met their present partner in the context of PA. Nearly all participants had previously engaged in PA with a spouse or partner, although differences in scheduling, in activity preferences, or in ability discouraged ongoing joint activity. However, partner support was unanimously emphasized for its importance in activity adherence. As one participant said, “Just think if I were married to someone who didn’t have the same interests as I do. It would really be a challenge.”

The most commonly identified constraints were injuries, often activity-related, or temporary illness. All participants experienced either or both of these at some point. However, participants who mentioned injuries had all been able to modify activity participation by changing type or amount of activity, either temporarily or permanently. Several participants also identified lack of time as a barrier that reduced duration or changed type of activity, although it did not prevent participation. According to one participant, “I would say I don’t have enough time to do what I would really like to do.” Weather extremes, hot or cold, also required adjustment by some participants, such as going outside earlier or later than normal, or engaging in activity indoors rather than outdoors.

Most participants reported a desire to maintain good health, to manage daily stressors, and to maximize overall quality of life as motivating factors for ongoing PA. Women but not men regularly mentioned weight or appearance concerns. Although several participants, at the time of the interview, were presently or had been competitors in recreational running, cycling, or triathlon events, no participant cited competition or participation in organized events as his or her current primary motivator for PA.

Most participants characterized PA participation as an important and enduring part of identity. Typical descriptions included “part of my make up,” “a given,” and “a way of life.” Responses to a question about PA identity in the eyes of others tended to reflect an impression of being known as, in the words of one participant, “that [person] that exercises all the time.”

Thematic Findings

In several instances, participants reinterpreted unstructured childhood physical activity or play as exercise. I titled this theme reflexive redefinition. As one participant stated,

> We always played. Well, the time I grew up, we didn’t have video games and such . . . and we played either some type of running activity, or games that did involve a lot of running, which worked your cardiovascular system.

Another participant, describing the general practice of walking for transportation during childhood, acknowledged this redefinition of activity: “I didn’t realize I was exercising on purpose; it just kind of happened.” According to a third participant who used a bicycle for transportation while enrolled in dance and activity classes, “That was kind of my exercise then: ballet, bicycling around, and cheerleading.”

Alternately, participants used the present active self as a baseline to compare to or contrast with actual or typical others, or with an alternative, nonactive version of the self. I combined these codes in a theme I titled juxtaposition. An example of the former was offered by one woman who observed that the lack of fitness exhibited by many of her contemporaries suggested that, unlike her, “they did not get the Jane Fonda message in the seventies,” referring to the workout books and videos the actress publicized during that decade. Examples of comparison with an alternative self included the opinion of one man: “I think it’s pretty ridiculous to get old and just turn into a little old man,” and another participant who expressed a fear of being “the one at the grocery store that they can only put two items in your bag [because] you can’t carry it.”

Another theme, evolution, described changes in motivators, goals, approach to activities, and sometimes activities themselves. Competitive motivations, frequently reported as inspirations for initiating activity, remained important for some. For others, these motivations were replaced by or shared focus with health-related motivations, although the
idea of being the oldest participant in an event was described by more than one as a worthwhile goal. According to one participant who had recently completed a half-marathon running race, “I loved it because I was the oldest finisher.” One participant instituted an ambitious achievement goal based on training duration and consistency rather than performance achievements, and used an online forum to challenge others to do the same.

One participant who did continue to compete regularly described no longer making an effort “to peak [for a given event]. . . . I just ease off the week before.” This participant described how priorities had evolved to emphasize stability rather than pure performance: “I hate to say the word, but at my age, it’s more important to keep going. All of those high gain things are also high risk; you’re more likely to injure yourself.”

I included instances of participants considering their place relevant to things outside their existence in my fourth theme, perspective. One participant described increasing focus on the “spiritual side” of activity, including opportunities “to be alone . . . to sort your thoughts, to say your prayers, or whatever it is, so I think that there’s a whole mind–body component . . . that’s real and viable for me.” Another participant noted, “I still do [a lot of mental work on my runs] and I feel that now—not every run, but often—I’ll pray on my runs or just have a lot of time to think.” For another participant, however, activity and existence had a different type of relationship. This participant’s belief, strengthened through time and experience, that, “intellectually, there is nothing beyond this [life],” inspired ongoing PA participation as a practice meant to extend both quality and duration of life.

Discussion

According to Ross, McFarland, and Fletcher (1981), under certain circumstances, “attitudes can exert a directive influence on recall of personal histories” (p. 632). This might explain participants’ reinterpretation of past events to be consistent with current values, as exemplified in the reflexive redefinition theme. Ross (1989) expanded on these findings, suggesting that recall is also influenced by whether individuals perceive themselves as stable or changeable over time. The activity histories provided by this group of participants support the former; none of the participants reported having had a sedentary or inactive past. Recasting childhood play as exercise, then, indicates that these participants believed that regular participation in purposive or meaningful PA began early in life.

The proposed comparisons included under the juxtaposition theme reflected potential realities rather than memories of actual experiences. Markus and Nurius (1986) described how people develop “possible selves” (p. 954) that comprise “the cognitive manifestation of enduring goals, aspirations, motives, fears and threats” (p. 954). Murru and Martin Ginis (2010) extended this theory for use in an exercise intervention, but reported no statistically significant difference in exercise behaviors between university student participants guided to imagine a positive or “hoped for” (p. 538) possible self vs. a negative or “feared” (p. 538) possible self. However, the participants in this research all provided examples of feared possible selves, usually reflecting fear of loss of functional ability. It might be that older adults are more aware of potential for age-related declines, making the feared possible self more salient.

The evolution theme provided examples of changes and adaptations to those changes. This is consistent with Baltes and Baltes’s (1990) selective optimization with compensation (SOC) model of aging. According to this model, individuals respond to potential age-related declines through thoughtful choice of goals, wise utilization of strategies to achieve those goals, and emphasis of areas of strength rather than weakness. Ebner, Freund, and Baltes (2006) suggested that with age, goals change focus away from development or expansion to retention and maintenance. This is supported by the findings from this research. Examples of goal selection described by participants included changes in expectations, such as focusing on being the oldest finisher rather than one of the fastest. Strategies or optimization choices included exercising alone, which might prevent the stress of planning around an exercise partner or group. Compensation practices included thoughtful approach to strenuous or training-type activity.

Ebner et al. (2006) also suggested that, despite a general trend toward maintenance goals in aging individuals, goals that emphasize development are not abandoned; in fact, older adults “may still perceive many chances for positive future development and increase of their potential” (p. 676). This assertion is likewise supported by findings from this research.

A parallel with the perspective theme can be found in Reed’s (2009) theory of self-transcendence, which applies to individuals experiencing “expanded self-boundaries and awareness of dimensions greater than self without devaluing the individual” (p. 397). The practice of self-transcendence, according to Reed, might be initiated at various times during the lifespan, although it is frequently associated with perceptions of “vulnerability or mortality” (p. 397) that might occur increasingly with age. Self-transcendence is facilitated by “reflecting on or exploring one’s spiritual perspectives” (p. 398), and is believed to be associated with improvements in quality of life and to facilitate resilience. The latter in particular is a trait that many participants in this research demonstrated.

Desired outcomes of an interpretive descriptive approach include contributions to “new knowledge pertaining to the subjective, experiential, tacit, and patterned
aspects of human health experience” (Thorne, 2008, p. 36). Toward that end, I offer the following composite picture of the lifelong active older adult based on these research participants. Participants generally described a strong exercise identity that originated during their younger years. They described changes in motivation over time, including a move away from socialization provided by group activities toward greater emphasis on stress relief found in solo participation. Participating alone also provided an opportunity to contemplate one’s place in the universe, whether through relationship with a higher power or a more humanist focus.

Women credited exercise with weight management and a fit appearance, especially when compared to inactive peers. Spousal or partner companionship during activity was not a priority, but partner support for activity participation was critical. No participants made mention of abandoning or decreasing PA participation with increasing age, including those who had already made modifications for injuries or fear of injury.

Limitations of this research include that this was a relatively small and similar group of individuals; all were White and all had completed at least some postsecondary education. The participants represented geographical diversity within the United States as well as participation in a range of activities, but most were or had at some time been participants in endurance sports such as running, cycling, swimming, or triathlon. The fact that I conducted all of the interviews had the benefit of providing consistency in how questions were phrased. My personal experience contributed to my familiarity with some of the common language of sport and recreational activity. I believe those participants who knew my activity history might have been more explicit in describing their own activity with me than with an interviewer who had less direct experience with PA, but I might have missed opportunities to probe for details that an interviewer with a different background might have identified.

One thing I did not address in this research is how experiences of individuals who initiated regular adult PA participation during middle age might compare with this group. Identification of similarities and differences between early adult adherents and midlife initiators might provide additional insight into how activity evolves through the adult years. This comparison might also provide information that helps encourage activity initiation and adherence in middle-aged individuals who are at increasing risk for chronic conditions.

The finding of most practical significance might be the possibility that motivations evolve based on PA lifespan rather than chronological lifespan. Some authors (e.g., Allender et al., 2006; de Souza and Vendruscolo, 2010) have suggested that social motivations are key for older exercisers, and much older adult PA programming centers around group activities. However, if motivations are instead associated with PA lifespan, recreation and fitness programmers should consider the potential that senior exercisers might place increasing value on additional factors such as stress relief or transcendent needs, and develop alternatives to meet these needs. It is also worthwhile to consider that competitive motivations described by these research participants were more enduring than social motivations. This suggests that programmers might need to provide ample direction in areas such as development of self-competitive goals, to support transitions into individual activities.

Additional research efforts might help clarify some of the questions suggested by this research, including:

- How do motivating factors at activity initiation differ from motivations after time? What is the relationship between evolution of motivations and adherence? Is evolution of motivations necessary for lifelong adherence to PA?
- Is the belief that one’s exercise behavior patterns are stable (e.g., the recollection by active adults that they were active children) a factor that influences PA adherence, or is the belief a result of PA adherence?
- Do the relative effectiveness of negative and positive “possible selves” (Markus & Nurius, 1986, p. 954) as motivational strategies vary with chronological age?
- How influential is time of day for activity in long-term PA adherence?

Both the findings and the questions raised by this research project support Pearce’s (2009) suggestion of the value of qualitative approaches to PA research. The findings of this research also demonstrate the value of purposive sampling to identify practices of successful adherents. Additional qualitative research focused on physically active adults has the potential to provide both researchers and practitioners with additional direction for research interventions and programming that might help encourage and increase adherence in adult populations.

**Appendix A**

**Interview Guide**

Q.1. Tell me about your history with physical activity.
Q.2.A. What motivates you to be physically active?
Q.2.B. How important is activity in your life?
Q.3.A. How much of your identity has to do with your activity?
Q.3.B. How do others view your physical activity?
Q.4. Describe your parents’ physical activity.
Q.5. How has your activity changed as you have experienced transitions in your life?
Q.6.A. Who do you engage in active recreation with?
Q.6.B. Describe ways your partner or family support your physical activity.
Q.7.A. What barriers or constraints have you encountered?
Q.7.B. How have you negotiated constraints?
Q.8.A. How many days a week are you generally active?
Q.8.B. What time of the day do you prefer for activity?
Q.8.C. Estimate how many hours per week you spend in physically active recreation.
Q.9. Is your activity motivated by concerns about appearance or body image?
Q.10. What else would you like to offer that I did not ask?

The following question was added to the later interviews:

Q.11. What mental health or cognitive benefits do you derive from activity?

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Author Biography

Sheryl L. Chatfield, PhD, CTRS, is an assistant professor in the Department of Health, Physical Education, & Leisure Studies at the University of South Alabama, Mobile, Alabama, USA.