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A Qualitative Study of the Achievement Goals of Recreational Exercise Participants

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Abstract

Physical inactivity is a major risk factor for many of today's leading causes of ill health. In-order to increase physical activity (PA) participation and information about why people engage in PA is needed. We interviewed 11 recreational exercise participants to examine their goals for participating in recreational exercise. Our results revealed 13 first-order themes, which we reduced to seven second-order themes (personal comparison, extrinsic rewards, social, physical condition, psychological condition, mastery, and enjoyment), and two general dimensions (intrinsic and extrinsic goals). We argue that self-determination theory (SDT) of motivation provides a strong foundation for understanding the goals and motives for recreational exercise. Also, future research should aim to develop a more comprehensive measure of motivation in recreational exercise and sport contexts.

Keywords

Recreational Exercise, Motives, and Self-determination Theory (SDT)

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A Qualitative Study of the Achievement Goals of Recreational Exercise Participants

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Physical inactivity is a major risk factor for many of today's leading causes of ill health. In-order to increase physical activity (PA) participation and information about why people engage in PA is needed. We interviewed 11 recreational exercise participants to examine their goals for participating in recreational exercise. Our results revealed 13 first-order themes, which we reduced to seven second-order themes (personal comparison, extrinsic rewards, social, physical condition, psychological condition, mastery, and enjoyment), and two general dimensions (intrinsic and extrinsic goals). We argue that self-determination theory (SDT) of motivation provides a strong foundation for understanding the goals and motives for recreational exercise. Also, future research should aim to develop a more comprehensive measure of motivation in recreational exercise and sport contexts. Key Words: Recreational Exercise, Motives, and Self-determination Theory (SDT)

Introduction

The major causes of morbidity and mortality in today's society (e.g., obesity, heart disease, diabetes, and osteoporosis) are largely the result of lifestyle-related behaviours, such as physical inactivity (Armstrong, Bauman, & Davies, 2000). Consequently, increasing participation in physical activity (PA) is a top priority for experts in the health and fitness field, both as a preventive measure, and as part of the treatment for such conditions (Frederick-Recascino & Morris, 2004). Research shows that motivation for participation in PA is an important factor in regular, long-term participation in that activity (Frederick-Recascino & Morris). Therefore, before intervention strategies aimed to alter behaviours can be developed, we must first understand what motivates people to participate in PA.

Achievement Goal Theory (AGT)

Over the years, a number of theoretical frameworks, such as achievement goal theory (AGT) (Ames, 1992a; Dweck, 1986; Nicholls, 1989), have guided motivation research in the recreational sport and exercise context (Roberts, 1993). The AGT, a form of cognitive behavioural therapy that originated in the educational context, places an emphasis on understanding how cognitions (e.g., mental activities such as our thoughts) (Taylor, 2005) govern behaviour (Roberts, 1993). Building on the educational research has been a large body of work on motivational goal orientations in competitive sport (e.g., Duda, 1988, 1989; Fry & Newton, 2003; Waldron & Krane, 2005) and to a much

lesser extent, recreational sport and exercise (e.g., Duda & Tappe, 1988; Escarti & Gutierrez, 2001; Xiang, McBride, & Bruene, 2003). Ames (1992a), however, stated that AGT provides a conceptual structure for studying individuals in their environment, regardless of what that environment involves (e.g., at home, gymnasium, or sporting field). We suggest that the AGT may provide a solid theoretical background for understanding the achievement goals people have for recreational exercise. Theory and research to date has largely focused on two achievement goals, namely ego and task goals.

Ego and Task Involvement

Individuals who are highly ego-involved are considered to be mainly concerned with demonstrating their ability, where ability is compared to others. Success or failure is therefore determined for ego-involved individuals by evaluating their own performance in comparison to others (e.g., Ames, 1992b; Duda, 1993; Roberts, 1992). In contrast, task-oriented people do not judge their ability or success in comparison to others; rather, achievement and perceptions of demonstrated ability are self-referenced. Success for task-oriented people has been found to be associated with the achievement of mastering a skill, learning something new, developing new skills, or improving their own past performance (e.g., Ames, 1992a; Duda, 1993; Roberts, 1992).

Research in the Educational and Sport Context

Research on goal involvement in the educational setting is important because it provides the basis for later work within sport and exercise environments. Such research shows that students who score high on task involvement express the beliefs that success in school depends on interest, effort, co-operation, understanding, and personal improvement (Nicholls & Thorkildsen, 1989; Thorkildsen, 1988). Task involvement is shown to relate to choosing challenging tasks (Ames & Archer, 1988; Elliott & Dweck, 1988), exerting effort (Elliott & Dweck), having intrinsic interest in an activity (Butler, 1987; Meece, Blummenfeld, & Hoyle, 1988), displaying active cognitive engagement (Meece et al.), and showing persistence, especially following perceived failure (Butler, 1988; Meece et al., 1988; Nolen, 1988). These patterns of behaviour facilitate initiation and maintenance of achievement behaviour, contribute to long term learning, and have been referred to as adaptive behaviour patterns or effective learning strategies (Ames, 1992a; Digelidis, Papaioannou, Laparidis, & Christodoulidis, 2003; Roberts & Treasure, 1995).

Research supports the proposition that students who score high on ego involvement are those who are inclined to believe that to do well in school people must have higher ability than others, as well as out-perform them (Thorkildsen, 1988; Nicholls & Thorkildsen, 1989). Furthermore, research shows that when ego-involved individuals have doubts about their ability, they display maladaptive behaviour patterns, including avoiding challenging tasks by choosing tasks that are too easy or too hard (Dweck, 1986; Dweck & Leggett, 1988; Elliot & Dweck, 1988), decreasing effort, devaluing the task, losing interest, lacking persistence following failure (Frankel & Snyder, 1978; Treasure & Roberts, 1998), and a decreasing level of cognitive engagement (Meece et al., 1988).

Much of the research on achievement goals in education is replicated in the physical education or sport setting. For example, research has shown that athletes, like students, define success in terms of task-involved and ego-involved goals, so task and ego involvement are viewed as the two relevant goal perspectives operating in sport contexts (e.g., Duda, 1986; Harwood, 2005; Vealey & Campbell, 1998).

Furthermore, regardless of context, several factors have been shown to correlate with personal disposition toward task or ego involvement. These factors include age (with older adults being more likely to emphasise task orientation, and downplay the role of ego-oriented goals, see Duda, 1987; Maehr & Braskamp, 1986), gender (females are usually found to be less motivated by ego goals than males, and more by task goals than males, see Duda, 1985; Duda & Tappe, 1989; White & Zellner, 1996), and cultural background (Anglo males are more likely to define sport success in terms of ability (ego-involved), whereas Anglo females and both male and female Mexican-American athletes are more inclined to define success in terms of demonstration of effort (task-involved; Duda 1985).

Beyond the Two Goals (Task and Ego)

Although the majority of work on achievement goal orientations has focused on testing the two-goal theory, particularly in children, some research has tested goals other than task and ego. For example, Urdan and Maehr (1995) argued that the two goals (task and ego) alone are insufficient to explain student behaviour, and that other goals, such as social goals, should be routinely included in studies on student motivation. They identified several types of social goals, namely social approval, social solidarity, and a social welfare goal, as examples of possible social goals.

Maehr and Braskamp (1986) proposed four achievement goals in their theory of personal investment (PI) designed for an adult population. The four goal orientations they proposed are accomplishment, power, affiliation, and recognition. Accomplishment, which refers to the pursuit of excellence, learning and mastery, and academic challenge, is similar to task orientation. Power is a comparison goal with the emphasis on interpersonal competition, being better than others, and having influence and control over them. The recognition goal orientation emphasises the achievement of recognition or acknowledgment of attainment received from other people. It has been found that power and recognition are highly correlated and appear to be aspects of an ego goal involvement (Tammen, 1995). Maehr and Braskamp described the affiliation goal as one of pleasing significant others, gaining social approval, and gaining pleasure from being with others in harmonious and meaningful relationships. Therefore, there are likely to be more than two goal orientations operating in any achievement situation.

Consistent with Maehr's work, Ames (1986) added a co-operative goal, and Whitehead (1995) grouped achievement goals into three categories, namely personal progress (task), beating others (ego), and pleasing others (social). This suggests that various types of social goals may have been overlooked in achievement goal research that has concentrated on task and ego goals. Perhaps in competitive sport and education settings, task and ego goals are prominent goals people have and therefore are most important.

We argue that this is unlikely to be true in all achievement situations, such as recreational sport and exercise. For example, the voluntary nature of participation in recreational exercise suggests that goals other than task and ego, such as goals of a health or social nature (e.g., fitness, weight loss, affiliation, and other goals not previously identified) are relevant in this context. Therefore, the restriction to examination of only task and ego goals in many of the previous studies may have limited our understanding of how goals influence exercise behaviour.

Limitations of Current Goal Orientation Literature

The limitations of current goal orientation literature largely centre on the participants used in research, the small amount of research in the area of recreational sport and exercise, and the measures used to identify achievement goals. The majority of goal orientation research in sport psychology to date has involved children or adolescents as participants (Battista, 1990; Gould, Medbery, & Tuffey, 2001; White, Kavussanu, Tank, & Wingate, 2004). The goal orientations of adults, however, are likely to be different from those of children, especially given that children have more constraints on how to spend their time than adults (e.g., because of lack of transport or need for adult supervision and/or approval). Adults have a wider range of options for recreational activity, but this is counterbalanced by their commitment to family and work. Therefore, adults are likely to have a more complex pattern of goals than children within their recreational and non-recreational behaviour.

Key characteristics of competitive sport include the focus on skill performance, structured competitions, public evaluation, and an elaborate set of rules and regulations (Duda, 1989). In recreational exercise, none of these characteristics are essential. Nicholls (1992) proposed that there are features of motivation common to many achievement situations, as well as unique motivational features of any particular situation. It is imperative that we recognise and study both the universal and the unique. The unique features of recreational exercise settings (e.g., individually-oriented, spontaneous, and subject to the starting and stopping of the individual) (Smith & Theberge, 1987) are largely unnoticed in previous research on goal orientations.

Current measures that are used to identify achievement goal orientations (e.g., the Perception of Success Questionnaire and the Task and Ego Orientation in Sport Questionnaire) have been developed in the sport or education context, and are largely driven by theory. Consequently, such measures may not be suitable for use in recreational exercise and sport settings, and their use in such settings may result in a misrepresentation of goals and motives for participation. Therefore, qualitative research is needed to thoroughly examine the goals people have for participating in recreational exercise and sport so important goals are not missed. This information can then be used to develop a comprehensive measure that is suitable for use in recreational exercise and recreational sport contexts.

Previous Achievement Goal Questionnaires

Two of the most frequently used questionnaires in achievement goal studies in sport and recreation are the Perceptions of Success Questionnaire and the Task and Ego Orientation in Sport Questionnaire. We now consider these measures.

Perception of Success Questionnaire (POSQ)

This 12-item scale, developed by Roberts and Balague (1989), was designed specifically to measure two major achievement goals in sports, namely competitive (ego) and mastery (task) goals. The factor structure of the POSQ was derived by administering the initial 16-item questionnaire to 143 undergraduates. Following analysis of data, the POSQ was reduced to 12 items that consistently loaded highest on one factor (task or ego) or lowest on the other.

A weakness of this measure is that it was designed specifically to measure only two goal orientations (competition and mastery), and did not allow for the possibility of other goal orientations emerging. Variations of the POSQ have only accounted for around 50% of the variance in the data, suggesting that other variables need to be considered. Furthermore, the POSQ was designed specifically for use in the competitive sport context. Because of the different goals that are likely to occur in recreational exercise and sport environments (e.g., health, fitness, weight loss, affiliation), its applicability beyond the competitive sport context is uncertain.

Task and Ego Orientation in Sport Questionnaire (TEOSQ)

The 13-item TEOSQ, developed by Duda and Nicholls (1989), is the most widely used achievement orientation questionnaire within the sport literature. The purpose of this measure is to assess task versus ego goal orientations within a sport context (Duda, 1989, 1992). The TEOSQ is a modified, sport specific version of an inventory developed by Nicholls and his colleagues (1989, as cited by Ostrow, 1996) to assess task and ego orientation in an academic classroom environment.

The initial version of the TEOSQ contained 15 items that Duda and Nicholls administered to 286 high school sports participants. Exploratory factor analysis revealed a stable two-dimensional factor structure with seven items loading on the task factor and six loading on the ego factor. Two poor performing items were removed to produce a 13-item version of the TEOSQ. Although further research has supported this factor structure (e.g., Chi & Duda, 1995), the TEOSQ has limitations. Like the POSQ, the TEOSQ was designed specifically to measure task and ego orientations in a sport setting, and it is unsurprising that research has confirmed these two goal orientations. There is no opportunity for other goal orientations to emerge. Also, its sport specific focus restricts the suitability of the TEOSQ for use in recreational exercise.

Clearly, the current measures that are used to examine achievement goals have been developed within a specific context (e.g., sport and education), and are theory driven. As a result, their applicability to recreational exercise and sport, and their ability to take into account goals other than task and ego orientations, is limited. There is no doubt that task and ego goal orientations are major influences in exercise and sport.

Nonetheless, we need to explore the possibility that other goal orientations also have relevance in recreational exercise and sport.

We suggest that interviewing recreational exercise participants in order to understand why they exercise should provide support for the AGT in recreational exercise environments and possibly provide further evidence for goals in addition to task and ego orientations. Therefore, the aim of our study was to interview recreational exercise participants in order to understand their goals for participation in exercise.

Before we discuss our study, it is important to contextualize the authors to this work. Dr. Rogers was trained in psychology and was conducting a PhD at the time of this research. Based on her examination of AGT and her experience of non-competitive physical activity, she questioned whether the two components of AGT could adequately explain all the goals for such activity, and this question was at the heart of her dissertation work. Prof. Morris, a long-time sport and exercise psychologist, supervised Dr. Roger's dissertation. He did not have a background in AGT research, but had conducted a number of studies on intrinsic-extrinsic motivation and on participation motivation. Dr. Rogers was a research assistant on a large participation motivation study during the period of her doctoral studies. Melissa Moore is a current PhD student with Prof. Morris, who works as a research assistant on participation motivation research and her dissertation is on obesity, diabetes, depression, and physical activity. Prof Morris has long favored an intrinsic-extrinsic motivation explanatory framework, self-determination theory, over AGT. Dr. Rogers was more interested in AGT. Ms. Moore was not involved in the original analysis. Instead, Ms. Moore worked on the translation of the findings and conclusions into this journal paper for *The Qualitative Report*.

Method

Participants

Our study involved 11 participants (seven female, four male), aged from 21-50 years, with a mean age of 36.1 years ($SD = 11.5$). As is common in qualitative research (Miles & Huberman, 1994; Patton, 2002), we selected participants purposively, rather than at random. We accessed participants through gymnasium contacts, and we did not know them prior to the study. We selected participants who engaged in exercise at least three times a week for at least 30-60 minutes and who had done this consistently over the last year.

Measures

Demographics and Interview

We developed an interview guide for the purpose of this investigation. Prior to the interview, participants reported demographic information, including their age, gender, and occupation. We also collected descriptive information about the type, frequency, duration, and intensity of exercise (competitive and non-competitive activities) in which participants took part. As well as providing relevant information, this part of the interview helped us to "break the ice."

Following the descriptive questions, we asked other questions about the achievement goals that participants had for engaging in exercise. We asked participants to nominate what they hoped to achieve from the recreational exercise activities they were doing, to think about the different achievement goals they had for their different recreational activities and their success to date at achieving these goals. Four questions were asked:

1. What do you hope to achieve from the non-competitive exercise activities you are involved in?
2. Do you hope to achieve different things from the different non-competitive activities?
3. How do you think the activities can help you achieve these things?
4. How successful have you been so far in achieving these goals?

We asked a similar set of questions about the competitive sport activities the participants undertook. Questions asking participants to outline each type of activity separately served three purposes. Firstly, they helped participants to separate the two types of activity (namely competitive sport and recreational exercise). Secondly, they allowed participants a greater opportunity to provide a thorough response in terms of their achievement goals. Lastly, this approach provided information about the different goals participants had for competitive sport and recreational exercise.

We asked the questions on recreational exercise first because these were the most important for our study, and we wanted participants to outline their goals for recreational exercise thoroughly and independently. We asked a final question on goals for exercise, which addressed whether participants thought other people might have goals that were different from their own. Consistent with common practice in the qualitative research tradition (Bogdan & Biklen, 1992), we structured the interview to allow for open-ended responses, and encouraged the participants to use their own words. We also used probes and follow-up questions to explore initial responses in greater depth, for example, "That's all? Is there anything else?" or "Do you feel you have been successful in the other goals you said you had now?"

Procedure

Prior to recruitment, we obtained permission from Victoria University Human Research Ethics Committee to conduct this research and standard consent procedures were used to recruit participants. An initial attempt to access participants was made by posting notices in several gymnasiums around Melbourne. Following a lack of responses to this method, we sought participants through personal gymnasium contacts, and none of the participants were known by us prior to the study. Most of those who were willing to participate either contacted us personally via a telephone number given to them by the gymnasium contact or gave their phone number to the gymnasium contact with permission to pass it on to us and we contacted them. Upon contact, an information statement regarding the study was given to the interviewees, and we gained permission from participants for the interview to be tape-recorded. We told participants that the

interview would last approximately one hour. We also answered any questions that they had at this stage. People who were willing to participate then signed a consent form.

We conducted the interviews at locations to suit the interviewees. The interview locations included one researcher's home (five interviews), several participants' homes (five interviews), and one participant's workplace. We used the interview guide to give a general structure to the interviews, we asked the questions in the same order to each participant, and we read them exactly as they were worded in the guide. Occasionally, we skipped items if the item had already been answered by the respondent in a previous question, or if the question was not applicable to the respondent. For example, if respondents indicated that they did not participate in any competitive activity, we did not ask questions referring to competitive sports played.

Interviews lasted between 30 and 60 minutes. We transcribed the interviews verbatim in preparation for data analysis. We continued the interview process until it was clear that no new goals were emerging from additional interviews, that is, until saturation was reached (Strauss & Corbin, 1998). In the process of data collection, we made four tapes of poor quality, which we were unable to transcribe. We attempted to summarise these interviews, but we had to regard them as lost and we found replacement participants.

Data Analysis Procedures

Analysis of data involved two processes: data reduction and inductive content analysis. We also used an interpretational analysis, consistent with the description by Côté, Salmela, Baria, & Russell (1993). According to Côté et al., interpretational analysis allows the elements, categories, patterns, and relationships to emerge from the data. Consequently, these elements, categories, and relationships are not predetermined. This kind of analysis is based on Glaser and Strauss' (1967) grounded theory approach to qualitative research. The focus of interpretive analysis is on the analysis of qualitative data. It does not involve a commitment to all the principles and methods underlying grounded theory as a research method. Therefore, interpretational analysis in our study allowed elements, categories, and relationships to emerge from the data with minimal overlap between categories.

Data Reduction

The first author independently read and made notes on the interview transcripts. To maximize the validity of our analysis (Côté et al., 1993), the first author then met with an external expert on AGT to discuss each interview, and came to agreement on the salient goal themes of each participant. This counterbalanced the first author's bias that exercisers have achievement goal orientations other than task and ego.

In making independent notes, these two experts each highlighted statements made by participants and tried to classify each statement in terms of achievement goal themes. Each expert noted the salient goal themes and goal statements on separate copies of the transcripts. After conducting separate coding, the experts came together to discuss each interview. Goal statements that had either been highlighted by only one analyst or that were differently labeled by each were discussed and agreed upon. The results were then

compiled into a set of raw data themes (the goal statements) and accompanying goal themes. Côté et al. (1993) called this “creating tags” and described it as separating relevant portions of data from their context.

Inductive Content Analysis

The aim of inductive content analysis is to group the goal themes expressed by individuals into meaningful integrated concepts (Patton, 2002; Strauss, 1987). We completed this process in successive stages, allowing dimensions to emerge from the patterns in the cases without presupposing in advance what these dimensions would be (Patton). We put the raw data themes for all the individuals into a pool and then sorted them into groups linking similar goal themes.

The first stage of this process was very specific, and involved linking conceptually very close or similar statements (goal themes). An example of very close concepts would be all comments related to skill improvement. In the second stage, we grouped these concepts into slightly more general concepts or factors, which enabled a large number of participants’ ideas to be drawn together. Throughout the process, categories remained flexible until we felt that the data in each category was similar to each other and yet distinct from other categories (Côté et al., 1993).

Continuing the above example, the slightly more general concept might include a number of specific concepts all related to mastery of activity; for instance, skill improvement, learning new skills, and improving one’s previous performance. We grouped the raw data themes into 13 integrated concepts (first-order themes) in this manner (Côté et al., 1993). At each stage, the process was conducted independently by the first author and the external expert on AGT, and later discussed by them to reach consensus. We found that consistency of results was high.

We reduced the 13 first-order themes into seven general factors (second-order themes) by further linking connecting ideas. First- and second-order themes are the terms that describe statements made by participants that seem to refer to similar issues. The purpose of the second-order themes was to reduce the amount of data and to identify patterns that could contribute to our understanding of the underlying dynamics (Miles & Huberman, 1994). We continued this process as long as we could see meaningful connections between factors. In this way, we grouped the seven factors into two broader themes or general dimensions.

Establishing Quality and Credibility

Qualitative analysis is continually questioned regarding the quality and credibility of the research process. Given that human judgments are generally believed to be less accurate than statistical ones (Miles & Huberman, 1994), careful scrutiny of qualitative analysis is justified. Patton (2002) proposed that several procedures should be undertaken in qualitative research, to enhance the validity and credibility of the qualitative analysis. These procedures include careful reporting of methods and results, using a sample carefully selected to maximize the collection of relevant information, minimising researcher effects, using peer review (or multiple analysts) to review findings, and the testing of rival explanations to those derived from qualitative analysis. We ensured that

all of these procedures were satisfied in our study. For example, with reference to reporting, in the methods section of this paper, we believe we have provided a thorough explanation of the sampling and testing procedures that were used to enable readers to get a clear understanding of these processes as applied to this study. Additionally, in the results section, we have provided detailed reporting of our results and analysis.

The population of interest in our study was adult recreational exercise participants. To ensure that we had an appropriate sample, the selection of participants was purposive, and we used a maximum variation strategy (Patton, 2002). That is, we chose participants to cover a range of ages in both genders, to obtain maximum differences about why they participate in recreational exercise.

Patton (2002) argued that in any study, particularly in qualitative research, the credibility of the data is directly tied to the credibility of the author. We believe that we have satisfied Patton's procedure of minimizing any researcher effects for the following reasons. The first author in this study, who conducted the study as part of her dissertation, had sufficient training and experience in both data collection and analysis of goal orientation and motivation research. With regard to interview experience, the first author had done training in psychological counseling as part of a Masters of Educational Psychology, using many similar skills. Additionally, prior to conducting interviews, the first author read widely on the subject of qualitative interviewing techniques, and conducted two trial interviews. During the interview, researcher bias was minimized by reading the interview questions verbatim, and any supplementary comments that were made were limited to probes directly related to or repeating a statement by the participant in order to clarify or gain further insight into their response.

To minimise any intrinsic bias that may have arisen from limiting the review to only one reviewer (Patton, 2002), we used peer review at several stages in the analysis of the interview transcripts. The credibility of the initial analysis was enhanced by using two reviewers who independently read the transcripts and then grouped the raw data themes. In most cases, both reviewers came up with the same groups, indicating a high degree of consensus between the reviewers. The extent of agreement between the reviewers was also assessed when grouping the raw data themes into integrated concepts. Multiple reviewers were consulted in grouping the integrated concepts into more general factors. These factors were then presented to two of our peers for independent grouping. The factors they arrived at were very similar to those we had generated, confirming the seven-category framework.

Testing rival explanations to those derived from qualitative analysis is important when establishing the credibility of a study (Patton, 2002). We believe that there are two main rival explanations for our data. The most obvious rival explanation is that the data reflects motives for participants, rather than achievement goals of participants. We were very careful to use the terminology of "goals" and "success," so the focus was on achievement goals. We made particular efforts to ensure we did not use the terms "motives" or "reasons" for participation. Despite this, however, participants mostly referred to their motives, rather than their achievement goals. A more detailed explanation of our position on this rival explanation is provided in the methodological issues section of this paper.

Another possible rival explanation is that although a wide variety of goals were cited, they represent only a small proportion of the goals mentioned by participants, the vast majority of responses being classed as task and/or ego goals. The percentage of times each of the 13 concepts was cited in our study, however, suggests that this is not the case. For example, mastery goals represented 13% of responses and ego goals represented 3% of responses. Anti-competitive statements represented 5% of interview responses. Of the remaining interview responses, 16% reflected fun goals, 14% represented fitness and health, 14% were appearance-related, 11% related to social goals, 10% were relaxation and stress release oriented, 5% were social comparison, and the remaining 9% of goals referred to others expectations, extrinsic rewards, self esteem, medical, and psychological well-being. Although statistics such as these are not usually mentioned in qualitative analysis, in this study we consider that the number of participants who make a particular response and the intensity with which responses are made are both useful in interpreting data, particularly in determining key themes. It is clear that task and ego goals represented only a small proportion (16%) of participant goal statements, and therefore are not likely to dominate perceptions of the participants about their exercise.

Results

Before discussing our results, it is appropriate to re-state that at the outset of this study, we intended to investigate the different types of achievement goals that people have for recreational exercise. The results, however, indicated that the two-goal (task and ego) theory of achievement motivation could not adequately account for all the goals nominated by participants. Although task and ego goals emerged in our study, participants gave a wider range of goals which we present in this section that could not be explained simply in terms of task and ego achievement orientations. Therefore, the range of participants' responses to questions about their achievement goals led us to look beyond AGT to other work on motivation, for a framework to help us explain the results.

Two motivation questionnaires that include motives that are either consistent with Deci and Ryan's (1985) Self Determination Theory (SDT), or that specifically use SDT as their underlying theory, are the Participation Motivation Questionnaire (PMQ; Gill, Gross, & Huddleston, 1983), and the Motivation for Physical Activities Measure (MPAM; Frederick & Ryan, 1993), respectively. Our results were similar to the motives listed in the PMQ which suggested to us that participants in our study were citing motives, rather than goals. Additionally, our results were similar to, yet broader than, the participation motives in the MPAM. Therefore, this led us to the proposal that SDT, a well-constructed motivational theory, provides a stronger basis than AGT for understanding the results obtained in our study.

It is important to acknowledge that we had previously conducted research on the PMQ, which has SDT as its theoretical underpinning. This included a study of 2,601 participants in 14 different sport and exercise activities (Clayton, Morris, Power, & Han Jin-song, 1995; Morris, Clayton, Power, & Han Jin-Song, 1995). Consequently, this may have biased our interpretation in the current research. As we have already mentioned, however, to counterbalance this potential bias, we involved an AGT expert in the inductive content analysis. The external expert agreed on the themes that were developed.

It was at that stage that we began to consider SDT as a theoretical framework for understanding the present results. We further consider the similarities between our results and the motivation items in both the PMQ and MPAM in the Discussion section.

In the following section, we present the results that emerged from the inductive content analysis, which is depicted in Table 1. In Table 1, we present results of a hierarchical inductive content analysis, in which we grouped raw data themes into first-order themes, which we then brought together under broader second-order themes, and these were finally classified in general dimensions. To describe this hierarchical structure, we consider each general dimension in turn, examining the second-order themes grouped under that general dimension. Within each second-order theme, we consider the first-order themes that were part of that second order theme.

Table 1

Hierarchical Development of the Raw Data, First Order, and Second Order Themes, and General Dimensions

Raw Data Themes	1st Order Themes	2 nd Order Themes	General Dimension
I exercise to compete with others (6) I exercise to compete with my own expectations (1) The competitive nature of the physical activity turns me against that activity (2) (N)	Competition	Personal Comparison	EXTRINSIC
I exercise to show off my physical appearance (1) I compare my fitness level and exercise regime with others (6)	Social comparison		
I exercise to keep my figure (3) I exercise to get my figure into shape (1) (1) I exercise to tone up (4) I exercise to look better (2) I exercise for weight loss so that I look good (4)	Appearance		EXTRINSIC
I exercise because it provides monetary rewards (2)	Extrinsic reward	Extrinsic Rewards	
I exercise to meet others expectations (1) I exercise to meet my own expectations (1)	Others' expectations	Social	

I exercise for the social aspects/atmosphere (10) I exercise for the companionship (3) Exercising with others enhances my motivation and adherence to exercise (2) Exercising with others offers a chance to meet new people (2) I meet with friends and we exercise together (1)	Affiliation		
I exercise to improve my health and fitness (3) I exercise to improve my health (2) I exercise to improve my fitness(11) I exercise to prevent being overweight (1) I exercise to improve my cardiovascular fitness (1) I exercise to improve my endurance (1)	Fitness and health	Physical Condition	EXTRINSIC
Exercising helps to improve a medical condition (1)	Medical		
Exercising improves my psychological health (3) Exercising contributes to a balanced lifestyle (1)	Psycho-logical well-being	Psycho-logical Condition	
Exercising makes me feel good about myself (3)	Self esteem		
Exercise provides time-out for myself (6) Exercise is a form of relaxation and stress release (7)	Relaxation		
The personal satisfaction of completing a health and fitness goal (4) Exercising provides a personal challenge (7) I exercise to improve my skills (7)	Mastery	Mastery	INTRINSIC
Exercise is enjoyable (14) Exercise is fun (3) The activity is exhilarating (3) I did not really like exercising (1) (N)	Enjoyment	Enjoyment	

General Dimension One: Extrinsic Motivation

According to SDT (Deci & Ryan, 1985), extrinsic motivation for participation in PA involves gaining satisfaction from rewards or outcomes that are separate from the activity itself. Also, pressure to participate and that resulting from the need for status or approval reflect an extrinsic motivational orientation (Frederick & Ryan, 1993; Ryan, Frederick, Lepe, Rubio, & Sheldon, 1997). The activity in this case is a means to an end, rather than an end in itself (Deci & Ryan). This dimension comprises five second-order

themes which are personal comparison, extrinsic reward, social, physical condition, and psychological condition.

The second-order theme personal comparison reflects competing against others to demonstrate superiority in some respect. It contains three first-order themes, namely competition/ego, social comparison, and appearance. The first-order theme competition/ego refers to competition directly related to the exercise being undertaken. For example, running faster or for longer than others, or doing an exercise more easily than others; anything that reflects comparison of ability in the activity being done. Examples of this are “I still like to compete...even now down at the gym, if we go for a five k, I always like to try to be up there in the top two or three, even with the young guys,” and “I’m a very competitive person.”

The next first-order theme is social comparison. Participants with a social comparison goal exercise because they want to impress others by their looks, fitness, or simply by the fact that they exercise. This differs from the first-order theme labeled others expectations, because here the participant is out to impress people in general or compare themselves to others in general (social comparison), rather than to satisfy the wishes of one or several particular person(s) (others’ expectation). Comments such as “a lot of people who go to gym because they’re the body beautiful...they sort of parade around you know” and “people say: oh you know. Do you go to the gym?...How many times a week do you go?” These comments reflect different aspects of this goal.

The third first-order theme is appearance. This theme refers to the instrumental aim of changing or maintaining one’s body shape or size through exercise, and includes goals, such as losing, gaining, or maintaining weight, increasing muscle size, and toning up. Examples of appearance goals are “It was more the fact that I wanted to keep my figure now” and “It used to be weight loss, but I don’t want that. I want to just be more toned, muscle defined.”

The next second-order theme in the extrinsic motivation general dimension is extrinsic reward. It refers to any external reward, such as money, a medal, or some other material object, or praise from a significant person given to the participant for doing the activity. This may be given either for completing the activity, or for completing it to a specified standard, or for performing better than others. The theme contains only the first-order theme labeled extrinsic reward, and is represented in the comments “but in terms of aerobics I’m pretty pleased...did the instructors’ course...and then got employment” and “it gives you a reason for being there, it gives you some money.”

The third second-order theme is social. It contains two first-order themes, others’ expectations and affiliation. Others’ expectations includes any reasons for exercise that are to do with pleasing others, or doing it because it is expected by other people, such as family members, friends, or medical practitioners. Examples of this include “It’s really for myself I ’spose. (Fred) likes me to look a certain way but...in the long run I’m doing it for myself,” which suggests that Fred may have some influence on the participant’s exercise habits, and, “ the reason I started was ’cause my father was saying ‘you’re unfit, you have to go’ and I started going.”

The other first-order theme is affiliation which involves two aspects. In the first, exercise participants who have affiliation as a goal for exercise do exercise because it enables them to be with and talk to their friends who exercise at the same time, or because it enables them to relate to others who also exercise. Comments reflecting this

aspect include “I sort of went to an aerobics class with a friend of mine,” and “a lot of my friends had newish bikes and they were doing a lot of riding.” The second aspect of the affiliation goal is to meet new people or to make new friends. Examples of this are “when I first started it was more to get out and probably meet people...but it sort of changed” and “meeting different people and just being in a different environment.”

The fourth second-order theme, physical condition, is about goals that reflect the physical aspects of health, fitness, and meeting medical requirements. It contains two first-order themes, namely fitness and meeting medical requirements. The first-order theme fitness refers to maintaining or increasing fitness levels by participating in exercise. Examples of this goal are “I suppose, if I didn’t value health and fitness, I wouldn’t be at the gym any more,” “I think it’s just fitness,” and “just greater fitness level and overall healthiness.”

The second first-order theme is meeting medical requirements. This theme directly relates to improving an existing medical condition as well as to avoid further health problems in the future. The crucial distinction between fitness and medical categories is that medical relates directly to a specific health problem the participant is being or has been treated for, whereas fitness relates to general overall health. An example of a medical goal is “I guess the reason I started...I used to have um a back problem...and I found the gym strengthened the muscles.”

The fifth second-order theme is psychological condition. This theme is about the mental aspects of health, that is, how we think, feel, and act in any given situation or context, and it contains three first-order themes, namely psychological well-being self-esteem, and relaxation. Psychological well-being refers to the idea of PA as part of overall mental health and to promote a healthy mind. Participant statements, such as “healthy mind, healthy body,” and “a sound mind and a sound body” reflect this theme.

The second first-order theme, self-esteem, is about doing exercise to improve the value the participant puts on themselves. Exercising to improve one’s self-esteem does not mean that people must improve on their previous performance or beat others to feel better about themselves. Just having participated may be sufficient. Therefore, exercising to improve self-esteem is different from ego or mastery goals. Examples of the self-esteem first-order theme are “...the fact that I’m doing exercise makes me feel good about myself,” and, “if I have a week off I feel really depressed.”

The third first-order theme, relaxation, encompasses exercise goals, such as relaxation, stress reduction, and getting away from other things. Examples of this are “health and fitness number one, peace of mind number two...it’s like my hour and a half that I have to myself,” “exercise is more to relieve the stress levels,” and “I feel so much more relaxed when I exercise.”

General Dimension Two: Intrinsic Motivation

Intrinsic motivation, which is also a sub-component of Deci and Ryan’s (1985) SDT, can be inferred when a person does an activity for internal rewards, such as interest and personal improvement or mastery, and in the absence of a reward, contingency, or control. Therefore, a state of intrinsic motivation has an internal perceived locus of causality, and is associated with feelings of satisfaction, enjoyment, competence, and a

desire to persist at the activity (Frederick-Recascino & Morris, 2004). This dimension contains two second-order themes, namely mastery and enjoyment.

The second-order theme mastery is about improving or acquiring skills in the exercise activity being undertaken. It contains one first-order theme, which is also termed mastery because the first- and second-order themes are identical, that is, no further themes could be added at this stage. The first- and second-order theme of mastery includes goals, such as learning and improving skills, and meeting personal challenges. Examples of this theme are “I just want to accomplish...get faster and longer distances,” and “just small improvements like if you improve or you get up a hill that normally kills you, it sort of makes me feel better about myself.”

The second-order theme, enjoyment, is about exercising because it is fun, or doing something just because you want to. It contains one first-order theme, also labeled enjoyment because no further themes could be added to the category enjoyment at the second-order theme stage. This first-order theme includes four raw data themes. Two raw data themes refer to people who exercise for fun and enjoyment. Examples of this are “I do exercise because I want to do an exercise and that’s just a small part of my life,” “I’ve just always loved it,” and “I felt I needed an outlet...and I really enjoyed it.” A third raw data theme identifies the negative aspect of enjoyment, that is, some people said they did not like exercising. The final raw data theme involves exercising because it feels good, or gives people a “buzz”. Examples of this are “you get on a real adrenaline high the more you do” and “Skiing...That’s much more exhilarating.”

In summary, we identified 13 first-order themes, which we grouped into seven second-order themes, namely personal comparison, extrinsic rewards, social, psychological condition, physical condition, mastery, and enjoyment. We then categorised these themes into two general dimensions, intrinsic and extrinsic goals of exercise.

Discussion

In the following section, we consider implications of the first- and second-order themes, and general dimensions that emerged from our study. Although some of the categories were immediately identifiable, other groupings were not self-evident. We had to make inferences from what participants said. Here we discuss those interpretations. We then relate our findings to AGT, to other work on motivation, and to Deci and Ryan’s (1985) SDT. To conclude, we discuss the methodological issues associated with this study, ideas for future research, and the implications that our findings have for practice.

Linking the Initial 13 First-order Themes

Consistent with our expectations, and a second-order theme, labeled social goals emerged. It included the aspects of making new friends, being with friends, and the desire to please others. We predicted that recreational exercise participants would cite instrumental goals for their exercise behaviour. Although instrumental goals did emerge from the data, we consider that their nature was too diverse to classify them as a single factor. We argue that the medical and fitness related goals represent the physical

components of health. Thus, we combined these two goals to form the second-order theme labeled physical condition.

We propose that the goals of relaxation, self-esteem, and psychological well-being/balance represent the mental aspects of health, so we grouped these first-order themes together to form the second-order theme psychological condition. We thought that it was important to maintain a distinction between mental and physical aspects of health initially because they were both quite extensive and rich factors in their own right.

We retained the goal of extrinsic reward, such as monetary payment, in its own right, so it formed the second-order theme of extrinsic rewards. The presence of this goal indicated that participants were doing exercise partly for money or other external reward, such as prizes or praise. We suggest that a participant who cited money or prizes as a motivating goal could not be classified strictly as a recreational participant. We included this factor, however, because the participants who did cite it all gave it as an additional goal or bonus on top of other, more important, goals for participation. Additionally, we propose that the extrinsic rewards theme may be useful in making the results applicable to a wider range of sport and exercise participants.

The first-order theme of social comparison referred to comparing and competing with others at the exercise being undertaken in aspects other than ability. This included competition in body-related aspects, such as size and shape. Social comparison also included competition about the amount of, or type of, participation, and of exercise being thought of as a “proper” thing to do by some participants. We linked the social comparison, appearance, and the competitive first-order themes to form the second-order theme labeled personal comparison. We did this because of the competitive nature, and personal focus of all three goals. Participants who cited social comparison goals competed with others in terms of looks or behaviour, whereas those who cited competition goals competed directly in terms of frequency, duration, or intensity of the activity being done. As we anticipated, mastery goals emerged from the data as a first-order theme. We kept this goal separate, so it formed the second-order theme of mastery. Similarly, we retained enjoyment, a frequently cited goal, as a second-order theme in its own right.

Finally, in light of the overall structure, we grouped competition, personal comparison, extrinsic reward, social, and health factors together in a general dimension called extrinsic goals. We suggest that these second-order themes all reflect goals for exercise that are external to the exercise itself. We grouped mastery and enjoyment as intrinsic goals, as we propose they reflect goals satisfied directly from doing the activity. Deci and Ryan (1985) defined intrinsic motives as needs for competence and self-determination that relate to the motives of interest and enjoyment, and promote interactions with the environment that seek to challenge one’s self. They defined extrinsic motives as behaviours, where the motive for doing the activity is something other than the activity itself. We propose that the seven second-order themes clearly fall into these two general dimensions.

Relationship of Results to Achievement Goal Theory (AGT)

As we have highlighted, we initially intended to investigate the different types of achievement goals that people have for recreational exercise, but the results indicated that

the two-goal (task and ego) theory of achievement motivation could not adequately account for all the goals nominated by participants. For example, we identified seven second-order themes in our study, namely personal comparison, extrinsic rewards, social, physical condition, psychological condition, mastery, and enjoyment. One of the three personal comparison themes, namely competition/ego, and mastery are equivalent to the two achievement goals, task and ego. Although task and ego goals emerged in our study, participants gave a wider range of goals that could not be explained simply in terms of task and ego achievement orientations. For example, social goals have previously been mentioned in some achievement goal studies (e.g., Maehr, 1984, 1991; Maehr & Braskamp, 1986; Whitehead, 1995), and these, too, emerged in our study.

As we anticipated, there were a number of goals cited by participants in a recreational exercise context that have not previously been discussed in the achievement motivation literature. These goals include our second-order themes of extrinsic reward, psychological condition, physical condition, and enjoyment. We argue that these are not true achievement goals, that is, people with these goals are not trying to achieve those outcomes from their involvement in that activity, but they have these experiences when they exercise. Therefore the range of participants' responses to questions about their achievement goals lead us to look beyond AGT to other work on motivation, for a framework to help us explain the results.

Relationship of Results to Research Involving the Participation Motivation Questionnaire (PMQ)

Our results look very similar to outcomes of studies using the Participation Motivation Questionnaire (PMQ). Gill, Gross, and Huddleston (1983) designed the 30-item PMQ in which participants are asked to rate the importance of a number of participation motives on a five-point Likert scale. Gill et al. tested the PMQ on 1,138 youth participants in a sports summer camp. Factor analysis identified eight factors underlying the PMQ: achievement/status, team orientation, fitness, energy release, skill development, affiliation, fun, and a miscellaneous factor.

Several subsequent studies have used the PMQ and modified versions of it to investigate motives of participants in a range of contexts, such as youth multi-sport (Sutherland, & Morris, 1997; Weinberg et al., 2000), youth specific sport (Gould, Feltz, & Weiss, 1985; Kirby, Kolt, & Liu, 1999), a specific sport or exercise activity across the life span (Morris & Han, 1991; Morris, Power, & Pappalardo, 1993), and multi-sport or exercise across the lifespan (Morris et al., 1995).

The main motives and factors or grouping of motives for participation has varied slightly, most likely because of the different activities and age groups investigated (Morris et al., 1995). For example, Morris et al., administered their 50-item version of the PMQ to 2,601 participants, aged between six and over 80 years, who were involved in 14 different kinds of activity. The activities were chosen to represent five categories of PA, namely body movement sports (gymnastics, swimming), racquet sports (tennis, table tennis, squash), team ball games (lacrosse, netball, basketball, volleyball), exercise activities (aerobics, weight training), and martial arts (karate, tae kwon do, tai chi).

Morris et al. (1995) conducted an exploratory factor analysis, which revealed nine factors, namely skills, challenge, fun, health, affiliation, relaxation/aesthetic, status,

environment, and to be occupied. The only first-order theme from our study that is not covered in the PMQ studies adequately is self-esteem. Our observation that the motives listed in the PMQ are comparable to the goals we found suggests that the same underlying concept could be under investigation. This raises the question of whether the responses made in the present study represent participation motives, rather than achievement goals. The PMQ, however, is a descriptive tool, and as such, we believe it does not provide any theoretical basis for our results.

Relationship of Results to Research Involving the Motivation for Physical Activities Measure (MPAM)

The achievement goals that we found also have similarities with participation motives described by Frederick and Ryan (1993). Frederick and Ryan designed the Motivation for Physical Activities Measure (MPAM) to examine three types of reasons for engaging in PA (namely competence, body-related, and interest-enjoyment reasons). They derived these three categories from a literature review, pilot studies, and Deci and Ryan's (1985) self-determination theory (SDT). In revising the MPAM as the basis of the first study, Ryan, Frederick, Lepes, Rubio, and Sheldon (1997) separated the body-related questions into two factors, fitness and appearance. They also added a social factor. The revised MPAM, the MPAM-R, referred to physical health and fitness, however, no questions covered any aspect of psychological health.

The MPAM-R included a group of items relating to social motives for PA, because a review of literature suggested social goals are important goals for participation. These items reflected being with friends and meeting new people. The item relating to competition in the competence factor of the original MPAM was dropped in the revised version, leaving the remaining items all reflecting skill maintenance and improvement. Although the factors of the MPAM and MPAM-R are similar to the groupings in the present study, neither the MPAM, nor the MPAM-R, adequately covers the range of goals found in our study, because they omit some of our first-order themes (e.g., competition, social comparison, others' expectations, medical reasons, self-esteem, psychological well-being/balance, relaxation, and extrinsic reward). The SDT from which the MPAM was developed, is a well-constructed motivational theory that offers a framework through which to understand motivation within recreational exercise.

We suggest that the SDT, in particular, the division into intrinsic and extrinsic motivation, provides a stronger basis from which to explain the broad range of goals and motives for participation in recreational exercise than achievement goal orientation theory. Note, although intrinsic and extrinsic motivation are two distinct forms of motivation, they are not mutually exclusive in a given person's motivational schema. For example, a game of tennis may simultaneously motivate a person by the prospect of winning to gain a prize (extrinsic) and by their enjoyment of the activity, regardless of the outcome (intrinsic).

The SDT is able to explain the classic achievement goals of task and ego, as well as the range of other goals and motives found in our study. Consequently, we will refer to motives, as well as goals for participation in recreational exercise. Although SDT provides a solid theory from which to explain our results, current questionnaires (e.g., MPAM and MPAM-R), which have been developed from SDT, are not broad enough to

measure the range of goals we found in this study. Therefore, future research would benefit from the development of a more comprehensive measure of participation motivation, utilising the SDT as its theoretical framework.

Methodological Issues

The methodological issues of our study revolve largely around the responses of participants and our sample size. The main dilemma we found is that when participants were asked about their achievement goals for recreational exercise, their responses were more consistent with participation motives than achievement goals and with participation motivation (PM) research, rather than achievement goal research. This outcome may have been the result of interviewer bias and the types of questions asked.

More specifically, a goal is a specific external target, whereas a motive is an internal drive influencing behavior (Reber, 1985). Achievement goal researchers generally refer to outcomes such as winning a race or getting a personal best as task and mastery goals. PM researchers on the other hand refer to outcomes such as winning or learning new skills as motives. In this case, the goals in achievement orientation theory such as skill improvement, winning are really motives, as they are driving the achievement behavior. When a specific external target, such as to reach a particular speed, is identified, then goal would be an appropriate term.

Another distinction is that AGT goals are theoretically determined. Nicholl's theory is based on displaying perceived ability. It makes predictions. PM research is atheoretical, empirical and descriptive. It simply examines the reasons people give for doing exercise, their motives.

Although both achievement goal research and PM research are measuring motives, we believe there is a difference between the two lines of study. The research on task and ego orientation is examining achievement motives, where achievement refers to achievement directly related to the activity itself, whether it be to perform better than an opponent or your own past performance. The other motives found in our study, such as fitness, health, socializing, and relaxing all refer to achievements that are attained through the activity and do not relate directly to the activity being undertaken. Ultimately, one could say that ego orientation relates to being better than others and task orientation relates to a sense of accomplishment or mastery. The important aspect which distinguishes the motives within goal orientation theory is that the beating of others or mastery of a task only relates to the activity being done. Thus, motives within AGT are a subset of a broader set of motives that govern behavior in contexts like exercise or PA generally.

To maximise the quality and validity of our results, we satisfied each of the criteria proposed by Patton (2002), namely careful reporting methods and results, using a representative sample, minimising researcher effects, using peer review (or multiple analysts) to review findings, and the testing of rival explanations to those derived from qualitative analysis.

We consider that participants were not lead to respond with motives, rather than achievement goals, because the questions we asked were those on the interview transcript and were related to achievement goals. Through these questions, we asked participants what they had hoped to achieve, how the activities could help them achieve their goals,

and how successful they have been at achieving their goals in recreational exercise. We were careful not to refer to motives.

A major difference in the questions we asked from questions in most previous research is their open-ended nature. The TEOSQ, for example, asks participants to respond on a Likert scale to a number of statements beginning ‘I feel most successful when....’ (Duda, 1989, 1992). The items that follow reflect task and ego goals. Clearly, the problem with the closed question format is that participants are limited to the goals presented to them. Therefore, other goals participants may have, in addition to those presented, which may be more important to them, remain unaccounted for. In our study, task and ego goals did emerge from the interview, but so did other goals, indicating that perhaps this closed questionnaire format is too limiting in the recreational exercise environment. Consequently, we propose that we conducted the interview process in a suitable manner and that it generated a relatively wide and representative range of responses that genuinely reflected participants’ thoughts about their exercise involvement.

Like most qualitative studies, the sample size of 11 participants in our study was small. The interview process was very labour intensive, with each interview taking up to one hour. Additionally, we had to transcribe and analyse in detail, each interview. Realistically, it is impractical to do large-scale studies using such methods unless a very large team of interviewers and transcribers is available to carry out that work. Although our sample size was small, we included participants of both sexes with a range of ages, to get a diversity of opinions. Further, we continued interviewing new participants until we considered that theoretical saturation was reached (Strauss & Corbin, 1998). That is, our final interviews generated no new goals. Thus, it is hard to see how a larger sample would have altered the results.

Unavoidably, our sample was also biased because of the nature of collecting the sample; relying on contacts to identify suitable participants. It is very difficult to persuade people to participate in a study that takes so much of their time, without offering some sort of reward. Again, the range of age, gender, and exercise in which our participants took part was quite diverse, reducing the likelihood that the data was strongly biased. Despite the concerns with sample size and bias, we feel that the study provided a useful insight into the motives of the participants and the range of goals people have for participating in PA.

Future Research

Our results indicate that AGT, based on task and ego orientation, does not sufficiently explain the variety of goals of recreational exercise participants. Clearly, more qualitative and non questionnaire-based research on the goals of recreational exercise participants is needed, to replicate our findings and identify other goals or motives. Additionally, further qualitative studies could explore this issue in different contexts, such as competitive sports, to see if the same kinds of categories are found.

The categories we found in our study were very similar to those in participation motivation questionnaires that are popular in sport and exercise research (e.g., PMQ, MPAM, and MPAM-R). Our categories, however, are broader than those of existing questionnaires. This is perhaps because our study was more in-depth than those from

which existing questionnaires were developed (e.g., Gill, et al., 1983; Morris & Han, 1991), or because we explored goals or motives in an open-ended way, which allowed people to present their own reasons for participation in their own words. More specifically, existing measures contain mostly predetermined motives. As a result, other motives that people have for participation in recreational exercise may not be represented. Interviewing recreational exercise participants in our study, however, allowed recreational exercise goals and motives to emerge from exercisers. Therefore, future research should look at developing a more comprehensive measure for recreational exercise, using results from interview-based research, such as the present study.

Implications for Practice

The research reported here represents only a single study; therefore, before our findings can be used in practical settings, other studies are needed to build on our results in different populations. Our findings, however, do provide valuable information for health and fitness professionals working to enhance motivation and adherence to exercise. More specifically, the results of our study suggest that health and fitness professionals need to consider the range of goals and motives people have for exercising, rather than concentrate on two (task and ego) goals, as AGT suggests. Further research might also show that a wider range of goals and motives is more appropriate for recreational sport environments. Such information may affect the way in which health and fitness professionals go about enhancing their clients' motivation and adherence to recreational exercise and recreational sport.

Our research showed that people exercise for a range of reasons, and practitioners should also be aware that a large number of these reasons constitute extrinsic motives. Goals, such as body toning, looking better than others, and meeting people, are all extrinsic motives. In the SDT, Deci and Ryan (1985) stated that compared to extrinsic motives, intrinsic motives (e.g., the feeling of satisfaction, enjoyment, competence, and a desire to persist at the activity) usually lead to greater persistence at that activity than extrinsic motives. Therefore, long term adherence to participation in PA is more likely to occur if individuals are intrinsically motivated. Our research is a valuable step in the development of a comprehensive participation motivation questionnaire. With the aid of such a questionnaire, health and fitness professionals can identify the nature of people's motivation, and encourage and promote intrinsic motives for participation in PA.

Conclusion

The initial aim of our study was to examine the range of achievement goals that recreational exercise participants have by asking them to nominate their goals, rather than forcing them to agree or disagree with a list of pre-selected goals, as is traditionally done in achievement goal research using questionnaires like the POSQ and TEOSQ. Our results indicated that the two-goal theory of achievement motivation could not adequately account for all the goals nominated by participants. The 13 first-order themes we identified in our study included competition/ego, appearance/social comparison, appearance, extrinsic reward, others' expectations, affiliation/social, fitness and health, medical, psychological well-being, self-esteem, relaxation, mastery, and enjoyment.

Evidently, the goals of participants in our study were more adequately encompassed by questionnaires used in motivation research, such as the PMQ, MPAM, and MPAM-R. The PMQ, however, is a descriptive tool, and is therefore lacking a substantial theoretical basis to help us explain participation motivation. Self-determination theory (SDT), in particular the division into intrinsic and extrinsic motivation, as described by Deci and Ryan (1985), appears to provide a solid theoretical base from which to understand motivation within recreational exercise. This theory can be used to explain behaviour in achievement situations, as well as situations in which participants may not be entirely achievement-oriented.

The MPAM and MPAM-R were developed from the SDT to measure motives for participation in PA, and the factors of both questionnaires are similar to groupings found in our study. Neither the MPAM nor the MPAM-R, however, adequately covers the range of goals we found. Therefore, existing motivation questionnaires are not broad enough to measure the range of goals and motives found in our study. Further qualitative studies are needed to replicate our findings, and to see whether people in other contexts such as competitive sports have similar or different motivations for participation. Additionally, future research should consider developing a more comprehensive motivation questionnaire for recreational exercise and recreational sport contexts, as measures of motivation in current use do not account for all the goals and motives people may have for participation in these activities.

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