

Research article

MOOD CHANGES FOLLOWING GOLF AMONG SENIOR RECREATIONAL PLAYERS

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ABSTRACT

Golf has been recommended as a relatively risk-free form of exercise for an ageing population. The aim of this study was to investigate the effects of playing a round of golf on mood states in recreational players. Ageing male golfers (N = 34; Age: M = 68.7, SD = 5.4 years) completed a mood measure immediately before and after an 18-hole round of golf. Distance walked per game was measured using a pedometer. Results indicate reported scores on Anger, Depression, and Fatigue increased and Vigor reduced following the game. However, it should be noted that although there was an increase in unpleasant mood states, this should be seen in the context of the overall mood profile, which was positive. Pedometer results indicated golfers walked a mean distance of 10.21 km (\pm 1.11). Results show participants of this age-group engaged in a meaningful exercise session and that mood scores deteriorated following play. Findings from the present study show that elderly golfers experienced mood profiles following golf similar to younger athletes following competition. For golf to be recommended as an activity for promoting physical activity among an aging population, the player's ability to regulate unpleasant mood states should be considered. Future research should investigate the effects of experiencing negative mood states following golf on motivation to participate.

KEY WORDS: Health, affective states, exercise, emotion, and fitness.

INTRODUCTION

It is commonly accepted that participating in regular exercise has numerous health related benefits including reduced risk of coronary heart disease, weight control, improved cardiovascular efficiency and improved psychological well-being (Blair and Morrow, 1998; Craig et al., 1999; Kopelman, 2001; US Department of Health and Human Services, 1996). Walking is a rhythmic, dynamic aerobic physical activity that confers the multifarious benefits of this with minimal adverse effects. Moreover, it is manifestly a sensible and relatively risk-free form of exercise, particularly for potential sensitive groups such as pregnant women (Sternfeld, 1997) and for the elderly (Morris and Hardmann, 1997).

Golf includes long bouts of low to moderate intensity walking, which have been shown to have

favourable effects on many health and fitness indicators in middle aged men and has been recommended as an appropriate and risk-free form of health-enhancing physical activity (Parkkari et al., 2000). Participation in golf has risen most notably in the 50-59 age group (Theriatut and Lachanche, 1998). However, while physical benefits of golf have been demonstrated, psychological effects are less well understood.

A great deal of research has investigated changes in psychological states assessed by self-report measures such as the Profile of Mood States (McNair et al., 1971) following exercise (Biddle, 1995; Mutrie and Biddle, 1995). In a review of salient research, Berger and Motl (2000) cited evidence of both acute and chronic mood enhancement following exercise, and identified several factors proposed to maximize its mood-enhancing effects. These factors included duration of

20 - 30 minutes; moderate intensity; regular frequency (3 x week); rhythmic breathing; predictable and repetitive movements; and an absence of interpersonal competition.

It is argued that playing golf for an ageing-population is light to moderately intense exercise, has rhythmic breathing, with some degree of predictable and repetitive movements. An 18-hole round of golf will typically last over an hour. Although it might be speculated that the majority of elderly golfers play for recreational and health-related reasons, a competitive element remains, although there is an absence of research investigating participation motives toward playing golf in this age group. It should be noted that the changes in mood following competition are different to those reported following exercise (see Abele and Brehm, 1993; Berger and Motl, 2000). Successful performance has been found to be associated with positive mood (Biddle and Hill, 1991; Hall and Terry, 1995; Hassmén and Blomstrand, 1995). Unsuccessful performance is related to negative mood (Biddle and Hill, 1991; Hall and Terry, 1995; Hassmén and Blomstrand, 1995; Hoffman et al., 1999; Lane et al., 2002; Lowther and Lane, 2002). Therefore, golf could be associated with negative mood states following competition.

Several studies have investigated psychological states experienced playing competitive golf among a range of different populations (Cohn, 1990; Beauchamp et al., 1996; Thomas and Fogarty, 1997; Kirschenbaum et al., 1998; Giacobbi et al., 2004). Giacobbi et al. (2004) explored cognitive and emotional responses to playing golf among a sample of 11 players using qualitative techniques. They found golfers experience a range of discrete and intense emotional responses during competition, arguing the golfers should be taught a range of psychological skills. This finding is consistent with previous research with non-elite golfers (Cohn, 1990; Beauchamp et al., 1996; Thomas and Fogarty, 1997; Kirschenbaum et al., 1998).

Given the notion that golf is recommended as a relatively risk-free form of exercise for potential sensitive groups such as an ageing population, findings that show mild to moderate exercise is associated with positive mood, but with counter findings showing that golf is associated with stress. Therefore, the aim of this study, was to explore the effects of playing a round of golf on mood states in ageing recreational players. On one hand, the nature of the exercise experience should promote mood-enhancement, but on the other hand, unsuccessful performance, which in terms of playing golf could mean playing below handicap or performers worse

than playing partners, should be associated with increased unpleasant mood.

METHODS

Participants

Thirty-four regular male golfers from an ageing population (Age: $M = 68.68$, $SD = 5.41$ years) completed a mood measure immediately before and after an 18-hole round of golf. All participants were regular golfers (> 1 day per week) and members of the seniors section of a private golf club. An acknowledged limitation of the present samples was that participation motives to playing golf were not explored.

Measures

Mood

Mood was measured using a 32-item scale that used subscales from two previously validated scales (Matthews et al., 1990; Terry et al., 1999; 2003). The Brunel Mood Scale (Terry et al., 1999; 2003) is based on the Profile of Mood States (McNair et al., 1971) and assesses the mood states of anger, confusion, depression, fatigue, tension, and vigour. The subscales of happiness and calmness were taken from the UWIST (Matthews et al., 1990). Recent research has questioned the use of the POMS model of mood in an exercise setting (Ekkekakis and Petruzzello, 2002). Ekkekakis and Petruzzello (2002) suggested the use of the circumplex model as a conceptual and measurement model for studying affect in the context of exercise. A limitation of the POMS model of mood is that it does not address the full range of positive mood states with recent research suggesting that positive mood dimensions, such as happiness and calmness, may also influence sports performance (Hanin, 2000). It is suggested that the eight mood dimensions assessed provide a more balanced assessment of positive mood and negative mood.

Anger items include "Bad-tempered" and "Angry", Confusion items include "Mixed-up" and "Uncertain", Depression items include "Depressed" and "Downhearted", Fatigue items include "Worn out" and "Tired", Tension items include "Anxious" and "Panicky", and Vigor items include "Alert" and "Energetic". Calmness items include "Calm" and "Relaxed" and Happiness items include "Cheerful" and "Happy". Items are rated on a 5-point scale anchored by "not at all" (0) to "extremely" (4).

Terry et al. (1999; 2003) provided comprehensive evidence of factorial, concurrent and predictive validity of the BRUMS. Matthews et al. (1990) provided evidence of factorial validity. Internal consistency coefficients for subscales were:

Anger, alpha = .88; Calmness, alpha = .84; Confusion, alpha = .72; Depression, alpha = .74; Fatigue, alpha = .88; Happiness, alpha = .89; Tension, alpha = .74; and Vigour, alpha = .87.

Distance walked

Distance walked per game was measured using a pedometer.

Procedure

Data were collected during the day of the 'monthly medal', an in-house and light-hearted social competition between golf club members. Participants competed against their friends and other players in the club. All participants were seated in the lounge area of the golf club and issued with the BRUMS during the 5-minute period immediately prior to starting play. Each participant then played 18 holes of golf at their regular pace with their normal playing partners. The weather was clear and pleasant with no precipitation. Following the round of golf, participants were allowed 5 minutes to put away their golf clubs and change footwear before returning to the lounge where a second BRUMS questionnaire was administered.

RESULTS

Repeated measures multivariate analysis of variance compared mood scores over time and indicated a multivariate effect (Wilks lambda $_{8,26} = 0.59$, $P < 0.05$, $\text{Eta}^2 = 0.41$, see Table 1). Univariate results indicated that post-game mood scores were higher for Anger ($F_{1,33} = 12.17$, $p < 0.01$, $\text{Eta}^2 = 0.27$), Depression ($F_{1,33} = 6.54$, $p < 0.05$, $\text{Eta}^2 = 0.17$) and Fatigue ($F_{1,33} = 8.57$, $p < 0.001$, $\text{Eta}^2 = 0.21$), with lower scores on Vigor ($F_{1,33} = 9.10$, $p < 0.01$, $\text{Eta}^2 = 0.22$). Pedometer results indicated golfers walked a mean distance of 10.21 km (± 1.11). Results showed that participants of this age-group engaged in a meaningful exercise session and that mood scores deteriorated following play. Although results showed mood deteriorated, after-game variability as indicated by the standard deviation of mood scores was larger than pre-game mood ($p < 0.05$).

DISCUSSION

The aim of the present study was to explore mood state responses to playing a round of golf. Results of the present study indicate that playing golf is associated with increased unpleasant mood states, a mood profile more associated losing or poor performance (see Biddle and Hill, 1991; Lane et al., 2002; Lowther and Lane, 2002) than exercise. These results show that elderly golfers experienced mood profiles following golf similar to younger athletes following competition. Although the walking element of golf resulted in players engaging in a meaningful exercise session for their age, the psychological response seems to suggest that positive feelings that should accompany exercise are not so consistent.

Although results show an increase in unpleasant mood states following playing golf, it should be noted that participants reported much larger scores for pleasant mood states than unpleasant mood states. Therefore, it could be argued that although there was an increase in unpleasant mood states, this should be seen in the context of the overall mood profile, which was positive. Research has emphasised the importance of exploring the interplay between mood states (Lane and Terry, 2000). In the present study, increased anger showed the largest effect size, and previous research has shown anger can be facilitative of performance under certain conditions (see Beedie et al., 2000; Lane and Terry, 2000). It is suggested that increased arousal associated with anger might be helpful for performance if it enables players to increase concentration. Research has found that individuals are aware of mood states associated with performance (Hanin, 2000) and make attempts to regulate mood to optimal states. Thus, among some individuals, anger might be perceived as helpful, and when a player feels increases in anger, attempts to reduce anger are not attempted. Lane and Terry (2000) indicated that anger experienced with depression is qualitatively different to anger experienced with positive mood states such as vigor.

Table 1. Pre round and post round mood scores among golfers (N = 34). Data are means (\pm SD).

	Pre-round	Post-round	F _{1,33}	P	Eta ²
Anger	.24 (.74)	2.35 (3.45)	12.17	.001	.27
Calmness	10.44 (3.90)	9.38 (3.60)	3.46	.072	.10
Confusion	.41 (.70)	.85 (1.92)	1.81	.187	.05
Depression	.41 (.99)	1.62 (2.57)	6.54	.015	.17
Fatigue	2.62 (3.03)	4.62 (4.38)	8.57	.006	.21
Happiness	11.21 (4.40)	9.71 (4.84)	3.80	.060	.10
Tension	1.00 (1.69)	.56 (1.50)	2.05	.161	.06
Vigor	9.85 (2.84)	8.32 (3.98)	9.10	.005	.22

In the present study, results suggest individuals reported feelings of anger, calmness and happiness simultaneously. It is suggested that some individuals use feelings associated with anger as a strategy to aid performance.

Findings of the present study lend support to previous research that has investigated psychological state responses to playing golf (Cohn, 1990; Beauchamp et al., 1996; Thomas and Fogarty, 1997; Kirschenbaum et al., 1998; Giacobbi et al., 2004). Consistent with suggestions of Giacobbi et al. (2004), intervention strategies designed to teach golfers emotional control techniques should be considered. Following Giacobbi et al. (2004) suggestions, the Rational Emotive Behavioral Therapy program that teaches individuals how to document negative, self-demeaning dialogs, emotional reactions, and the circumstances that give rise to these reactions should be considered. Encouraging golfers simulate stressful situations on the golf course (e.g., hitting a difficult shot, performing in front of others, or playing with good golfers) could assist in developing of strategies for regulating negative mood states. Therefore, golfers of all skill levels should be encouraged to regularly practice behavioral simulations in the presence of other people with the driving range offering a possible place for such practice to occur.

We suggest that future research investigates mood changes following performance on an intra-individual basis. Individuals who consistently experience unpleasant mood states following performance are likely to develop negative expectations toward playing, which in turn can become de-motivational. For golf to be recommended as an activity for promoting physical activity among an aging population, players should be taught strategies to regulate unpleasant mood states. A strategy for regulating negative mood among elderly players should be to encourage social interaction. The benefits of social support gained from interacting with peers whilst playing golf should be considered as a potential strategy for mood-regulation. Thayer et al. (1994) found that social support was a commonly used and effective self-regulation strategy to counter negative mood states, a finding that was supported on a sample of athletes by Stevens and Lane (2001).

There are several limitations to the results of the present study. First, the stability of mood changes during competition and following competition were not known. Mood has been found to be an ephemeral construct and thus it was possible that mood states changed from hole to hole. Second, the sample size was relatively small even for this specific population. Third, measures of goal attainment and goal expectancy were not assessed. Understanding the link

between goal outcome and mood states might offer a clearer rationale for mood responses in golf.

CONCLUSION

In conclusion, results suggest that while golf provides a sufficient walking for health related benefits it could promote negative mood disturbance, something that should be considered by practitioners if golf is to be recommended as a strategy for exercise among an ageing population by practitioners.

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KEY POINTS

- Findings show ageing male golfers engaged in a meaningful exercise session and that mood scores deteriorated following play.
- Mood profiles before and after playing golf for elderly golfers were similar to younger athletes following competition.
- For golf to be recommended as an activity for promoting physical activity among an aging population, the player's ability to regulate unpleasant mood states should be considered.

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