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Sport Psychological Constructs Related To Participation in the 2009 World Masters Games

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***Abstract*—**Whilst there is growing evidence that activity across the lifespan is beneficial for improved health, there are also many changes involved with the aging process and subsequently the potential for reduced indices of health. The nexus between all forms of health, physical activity and aging is complex and has raised much interest in recent times due to the realization that a multifaceted approached is necessary in order to counteract a growing obesity epidemic. By investigating age based trends within a population adherring to competitive sport at older ages, further insight might be gleaned to assist in understanding one of many factors influencing this relationship. This study evaluated those sport psychological constructs of health, physical fitness, mental health states, and social dimension factors in sport that were associated with factors to participate in sport and physical activity based on responses from the 2009 World Masters Games in Sydney. The sample consisted of 7846 athletes who competed at the games and who completed a 56 item sports participation survey using a 7-point Likert response (1 - not important to 7 - very important). Questions focuses on factors thought to promote participation, such as weight control, living longer, improving mental health (self-esteem, mood states), improving physical health and factors related to the athlete's competitive perspective. The most significant factors related to participation with this cohort of masters athletes were the socializing environment of sport, getting physically fit and improving competitive personal best performances. Strategies to increase participation in masters sport should focus on these factors as other factors such as weight loss, improving mental health and living longer were not identified as important determinates of sports participation at the World Masters level.

***Keywords*—**masters sport, promoting participation, sport psychology.

I. Introduction

THE World Masters Games (WMG) is the largest international sporting competition in terms of participant numbers. In 2009, the Sydney WMG attracted 28,089 competitors who represented 95 countries competing in 28 sports [1]. The most represented country at the games was the host nation, Australia [1]. Masters games athletes have either pursued a physically active lifestyle for an extended period of time or have initiated exercise/sport in later life. This unique cohort of middle to older-aged adults remains under investigated with regards to the incidence of diverse chronic disorders, associated measures of health as well as sport psychological factors that promote sport participation at an international level.

There is growing evidence that regular exercise across the lifespan is beneficial for improved health and decreased incidence of various diseases and disorders [2]-[4]. The genetic mechanisms that cause the aging process remain uncertain [5]; however its existence and the declines associated with aging are well established. Masters athletes may display an age related increase to the range of pathologies present in this population as well as physiological changes due to the aging process [3], [6], [7]. In 2010 the World Health Organisation (WHO) [8] has mandated the quantity and quality of exercise to induce health related exercise benefits, especially as physical inactivity is regarded as the fourth highest factor related to preventable death and chronic illness [8]. For masters' athletes these are at least 150 minutes of moderate-intensity aerobic physical activity throughout the week for 18-64 years and 150 minutes of moderate-intensity aerobic physical activity throughout the week for 64 plus years. It is important to emphasise although WHO defines the global recommendations on physical activity for health guidance, "WHO did not how to develop effective intervention strategies to promote physical activity in different population groups," [8]. This indicates that understanding the motivational factors determining engagement in, and adherence to physical activity is important as a significant construct in translating WHO recommendations into actual physical activity.

In the Australian context some substantive surveys have been conducted in 2009-2010 and published by the Australian Bureau of Statistics (ABS)[9], which provided some insights into the major factors promoting participation in physical activity in masters aged athletes. The sample size was approximately 8.5 million Australian people, balanced for gender and spanned the age groups in 25-34, 35-44, 45-52, 55-64 and 65 years and over age bands. Participation in these age bands for both males and females were very similar, however the participation declined from 74% in the 25-34 to 49% in the 65 plus group. The age ranges are very similar to the age bands in the World Masters Games. The sports and physical recreation activities were both organised and non-organised in nature.

Both the reasons for participating or not participating in sport or physical recreation were identified. The most common responses for not participation included; being too busy due to work or study commitments, lack of time, age (too old), health/illness related reasons and disinterest [9]. It is

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interesting to note that age and on-going injury or illnesses were the main constraints cited by those aged 55-64 years and 65 years and over (44% and 75% respectively) [9]. Motives for participation predominantly focused on factors of health, enjoyment, social and family outcomes in sport and physical recreation.

The major research focus was on whether or not the World Masters athletes displayed similar reasons for participation in sport and physical recreation as the extensive Australian derived sample.

II. Method

The 2009 Sydney World Masters Games featured 28,089 competitors representing 95 countries and competing in competing in 28 sports. Approval for this study was granted by the research ethics committee (at the Australian Catholic University) in accordance with the ethical standards of the Helsinki Declaration of 1975 (revised in 2008). In the analysis a total 7846 athletes completed the survey, however it is important to note that each question with a valid response using the scoring criteria was approximately 5100. This indicated that approximately a third of respondents did not complete the reasons for sport participation survey used in his research. The motive to participate were based on a series of 56 questions and scored on a seven point Likert scale, where athletes were requested to rate each of the following items according to the scale below in terms of how important it is as a reason for why you participate in your sport. A score of 1 would indicate that the item is "not a reason" for participation, whereas a score of 7 indicates that the item is a "very important reason" for participation and scores in-between these extremes represented relative degrees of each reason. The following are sample questions which sought responses to word stems such as; “To control my weight, To compete with others, To earn respect of peers, To improve my sporting performance, To earn respect of people in general, To socialise with other participants, To improve my health, To compete with myself, To become less anxious, To improve my self esteem, To have something in common with other people, To add a sense of meaning to my life, To prolong my life and To become less depressed.”

The results were analysed descriptively to compare the more extreme differences in terms of percentage responses against each Likert score, which is 1 through 7. A comparison was also conducted in qualitative terms with the Australian based data [9] for reasons to participate in sport and physical activity. Analysis of the data was completed using PASW (Statistics 18) [10]. The data in this study have been pooled for both males and female athletes to derive an overall understanding of what factors were associated with participation.

III. Results

The table of results for the extremes in responses, 1 as compared to 7, for each question is presented in table 1. The word stem for each question is included. The weight control questions indicated these athletes did not place priority on this construct, whereas the health related question. The question, “To improve my fitness” scored highly (38.6%), however paradoxically to prolong my life and to reduce risk of heart attack were not scored high. Being physically fit and staying in physical condition did score high, however issue of physical attractiveness did not score high. Issues of performance goals such as “To improve my sporting performance” also score highly, a construct of improving personal best performance. In terms of the dimensions of mental health such as self-esteem, reduce depression, reduce anxiety, reduce daily worries, improve mood and have a more purposeful life were regarded by most athletes as not important determinants of participation.

TABLE I
THE EXTREME LIKERT RESPONSES 1 AS COMPARED TO 7 AS A PERCENT OF TOTAL SAMPLE RESPONSE

Item Constructs	Percent Response Likert scores 1 & 7
To control my weight	(1) 24.7: (7) 10.7
To compete with others	(1) 4.8: (7) 27.8
To earn respect of peers	(1) 30.2: (7) 5
To reduce my weight	(1) 34.1: (7) 7
To improve my sporting performance	(1) 6.0: (7) 28.1
To earn respect of people in general	(1) 32.7: (7) 3.9
To socialise with other participants	(1) 2.5: (7) 40.4
To improve my health	(1) 4.8: (7) 38.6
To compete with myself	(1) 12.0: (7) 25.2
To become less anxious	(1) 45.8: (7) 3.7
To improve my self esteem	(1) 33.8: (7) 6.3
To have something in common with other people	(1) 22.0: (7) 9.7
To add a sense of meaning to my life	(1) 23.2: (7) 10.2
To prolong my life	(1) 17.2: (7) 19.4
To become less depressed	(1) 51.0: (7) 5.1
To meet people	(1) 9.0: (7) 22.0
To become more physically fit	(1) 4.1: (7) 38.2
To distract myself from daily worries	(1) 29.1: (7) 7.1
To make my family and friends proud of me	(1) 30.4: (7) 4.7
To make my life more purposeful	(1) 27.1: (7) 6.7
To look leaner	(1) 26.0: (7) 7.2
To try to perform better	(1) 6.6: (7) 22.9
To feel more confident about myself	(1) 22.4: (7) 8.8
To participate with my family or friends	(1) 11.8: (7) 26.9
To make myself feel whole	(1) 35.6: (7) 6.3
To reduce my chance of having a heart attack	(1) 25.4: (7) 10.7
To make myself more complete	(1) 28.1: (7) 7.3
To improve my mood	(1) 27.5: (7) 6.8
To improve my sense of self worth	(1) 34.2: (7) 4.9
To share a group identity with other participants	(1) 15.0: (7) 13.8
It is a positive emotional experience	(1) 9.4: (7) 22.5
To feel proud of myself	(1) 12.1: (7) 18.5
To visit with friends	(1) 14:9 (7) 17.0
To feel a sense of achievement	(1) 5.0: (7) 21.6
To push myself beyond my current limit	(1) 6.1: (7) 26.3
To have time alone to sought things out	(1) 41.5: (7) 4.6
To say in physical condition	(1) 5.0: (7) 32.1
To concentrate on my thoughts	(1) 38.6: (7) 4.8
To solve problems	(1) 45.7: (7) 2.9
To see how high I can place in my sport	(1) 16.8: (7) 20.1
To feel a sense of belonging in nature	(1) 42.0: (7) 4.7
To stay physically attractive	(1) 19.5: (7) 11.9
To get a better performance than my friends	(1) 41.4: (7) 4.1
To prevent illness	(1) 16.4: (7) 15.8
People will look after me	(1) 42.2: (7) 2.7
To see if I can beat a certain performance	(1) 18.9: (7) 16.8
To blow off steam	(1) 35.4: (7) 5.0
Brings me recognition	(1) 39.4: (7) 13.5
To have time alone with the world	(1) 50.7: (7) 4.1
To get away from it all	(1) 41.1: (7) 4.8
To make my body better than before	(1) 14.3: (7) 15.3

To beat someone I've never beaten before	(1) 34.5:	(7) 8.4
To feel mentally in my control of my body	(1) 24.6:	(7) 10.2
To get compliments from others	(1) 41.7:	(7) 2.7
To feel at peace with the world	(1) 42.9:	(7) 5.6
To feel like a winner	(1) 26.6:	(7) 9.8

Some of the highest percentage scores were for socializing factors, such as socializing with others, meeting people and being with family and friends.

IV. DISCUSSION

Due to the large number competitors at the Sydney WMG (n=28,089). There is the potential to promote this form of physical activity across the lifespan for this unique cohort as having many positive outcomes in terms of health related fitness, general motor fitness, injury reduction, sport specific fitness and mental health. The most important construct is to promote sport and physical recreation engagement and adherence to develop the attendant health related outcomes. However, the incentive structuring model to promote participation in sport and exercise should be based on promoting those psychological constructs that might be regarded as important to achieve these outcomes. I this research the factors identified as enhancing participation were sport as a socialization environment, being physically fit and athletes focused improving personal best performances.

Factors such as mental health constructs such as self-esteem, reducing depression, anxiety, daily worries, improving mood and having a more purposeful life were regarded by most athletes as not important determinants of participation and may not be successful if utilised to promote participation. The construct of getting fit as a reason to participate for masters athletes was very similar to the ABS data [9] as to why older Australians' participate in sport and physical recreation. However, it is important to highlight that the construct of weight control was not identified as a significant factor for participation.

V.CONCLUSION

Designing programs to increase participation in master's sports to accrue health related fitness outcomes should be based on those constructs as the socializing environment of sport and improving physical fitness. Other factors such as weight control, mental health states and living longer were not identified as important determinants of participation and highlighting these as important might have minimal effects in increasing participation in masters' sports.

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