Exploring traditional and novel applications for sport psychology in Masters sport

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Abstract

Due to the expanding aging population, Masters sport is becoming an increasingly popular activity for older adults (Weir et al., 2010). However, few resources are available to support lifelong sport adherence for middle-aged and older adults in competitive sport, or Masters athletes (MAs). The purpose of the thesis was to explore how MAs apply deliberate psychological strategies as a support to enhance their performance, experience, or adherence to the adult sport lifestyle. It also explored how mental performance consultants (MPCs) viewed the application of sport psychology to MAs, including content to which skills/strategies could be applied, and delivery approaches. In Manuscript 1, semi-structured interviews were conducted with eight Canadian MAs (M_{age} = 51, range 38-62; 3 males, 5 females) from 12 sports (10 individual, 2 team) to explore how they applied psychological skills/strategies as a support to the Masters sport experience. Data were thematically analyzed (Braun & Clark, 2012) deductively (Weinberg & Gould, 2015) and inductively. The results demonstrated that MAs used traditional mental skills predominantly to enhance performance, while novel Masters-specific skills were used to maintain sport adherence. MAs promptly illustrated sport psychology content, but were rather limited when discussing their methods/techniques. In Manuscript 2, five two-person semi-structured group interviews were pursued with ten professional Canadian MPCs (8 women, 2 men) who had experience consulting MAs. These interviews explored the content consultants delivered to MAs and whether there were implications of specific adult attributes associated with service delivery. Data were thematically analyzed (Braun & Clark, 2012) inductively. The results showed MPCs' perceptions on psychological content they believed was highly pertinent in their consulting practice with MAs. Specifically, they described targeted content related to performance readiness, prioritizing sport, protecting/recovering sport enjoyment, and aging/self-

compassionate considerations. MPCs also highlighted nuances related to approaches to consultation with adult sportspersons and the delivery of psychological services to MAs. In both studies with the MAs and the MPCs, interviewees described various barriers and constraints that influenced approaches to consultation and service delivery. Altogether, the corroborative results from both studies suggest the benefits of psychological support services for MAs, the use of MPCs' services and expertise as an additional support to maintain lifelong sport activity, and provide a formative guide for content and approaches to delivery with the Masters clientele.

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Chapter 1: Introduction

As many adults lack the recommended daily dose of physical activity (Colley et al., 2011), adult sport has been advocated as an underexamined yet important conduit for lifelong physical activity participation (Khan et al., 2012) and physical literacy (Jones et al., 2018). Adult sport is best highlighted by an ever-growing population of Masters athletes (MAs; Weir et al., 2010). MAs are typically 35 years or older and are formally registered in sport activities that are distinct from sport organized for youth/adolescents and young adults in the high-performance stream (i.e., collegiate, professional/semi-professional, or Olympic sports). MAs participate in regular training/practice to prepare for formalized competitive events, with these events having an inherent degree of competition ranging from recreationally competitive to competing at World Games (Young, 2011). With this operational definition in mind, this thesis will refer to MAs interchangeably as adult athletes or adult sportspersons.

Despite an increasing Masters population, limited resources are available to support MAs and their pursuit of a healthy sport lifestyle. In Jones et al.'s (2018) "Physical Literacy Model for Older Adults", the authors argued for greater consideration of support accorded to interpersonal elements, such as formal and informal relationships that may influence physical activity participation. These relationships extended to families, friends, and individuals outside an adult's broader social network (i.e., coaches, physicians). The thesis posits that another interpersonal resource within an adult's social network, namely mental performance consultants (MPCs), could be instrumental for supporting many adults' sport activity. The provision of psychological strategies by a consultant may be one avenue of substantial support to MAs. However, this avenue of support has yet to be investigated. Although Young and Callary (2018) advocated that "doing more for adult sport" should consider advances in programming, promotional campaigns,

and coaching support, they did not consider how the provision of psychological strategies may enhance the adult sport experience. Such strategies could relate to competitive performance enhancement goals, strategies for adapting and optimizing performance as one ages, or other pertinent age-related areas. The application of sport psychological strategies to enhance performance and competitive readiness by a consultant is referred to as mental skills training (MST; Vealey, 2007). MST is commonly applied with younger elite athletes (i.e., Olympic, professional, collegiate athletes) to predominantly enhance personal performance, enjoyment, and/or sport-satisfaction (Weinberg & Gould, 2015). Despite the traditional mental skills catalogue emphasizing performance related strategies that can be applied in competitive sport (Weinberg & Gould, 2015), additional novel mental skills may broadly enhance experiential or satisfactory attributes associated with sport. Yet, no research has examined the use and potential utility of either traditional or novel mental skills among MAs. Almost nothing is known about the implementation and/or need for MST in Masters sport.

The emerging psycho-social literature suggests that MAs are a heterogeneous sample, at least motivationally (Young, 2011). Although there is much participatory discourse around adult sportspersons (Dionigi et al., 2011), many MAs show an orientation towards competitiveness, competitive performance, and winning and ranking (Dionigi & O'Flynn, 2007). This suggests that issues of *performance enhancement* are of great pertinence to a sub-cohort of serious-minded MAs. Those MAs who compete primarily for performance-oriented purposes may be classified as "performance MAs". It is plausible that this sub-cohort may be interested in using traditional MST to enhance performance. They may also require novel mental skills not commonly applied among younger elite athletes. For example, due to inevitable age-related declines in physical ability, MAs may need to develop compensatory psychological strategies to

maintain and negotiate the threat of age-related decline (Langley & Knight, 1999; Rathwell & Young, 2015). Many MAs engage in sport for the overall experience associated with an adult sport lifestyle. Sport becomes a means to increase personal enjoyment, satisfaction, and/or social capital (i.e., social affiliation, travel; Dionigi et al., 2011). These MAs, while still competitive, appear to be interested in the *experience of being an athlete* and are oriented toward *maintaining/managing an athletic lifestyle*. These "experiential MAs" may use MST as a method to sustain commitment, to negotiate and manage personal responsibilities that accompany an athletic lifestyle, and to enhance sport satisfaction and enjoyment. They may require cohort-specific mental skills for these experiential purposes, especially because MAs' lived experiences in sport may differ substantially from those of younger elite adults (MacLellan et al., 2018).

The thesis aimed to investigate the pertinence of applied sport psychology amongst MAs. It explored which traditional or novel mental skills were used to enhance MAs' experiences and/or performance in sport, while determining how MPCs viewed the utility and applications for sport psychology in adult sportspersons. Understanding these perspectives related to how MAs use MST or other strategic psychological interventions may help to inform resources and supports designed to enhance MAs' performance, experience, or sport lifestyle adherence. As it is unknown whether/how MPCs may expand their services into Masters sport, the thesis aimed to understand their perspectives on potentialities for how they could use mental skills and additional strategic interventions specifically marketed to this understudied clientele.

Chapter 2: Review of Literature

Psycho-Social Perspectives on Masters Athletes

Understanding the psycho-social perspectives of MAs allows for the recognition of what may constitute a sporting lifestyle for an experiential or performance competitive MA. An adult's sporting lifestyle may be understood as encompassing various motivations, commitment profiles, psycho-social conditions that relate to seriousness of competition, and personal negotiation of age. A sport lifestyle may encompass the negotiation of personal constraints or barriers that adhere to or maintain an athletic identity (Stevenson, 2002), such as prioritizing sport into their daily life (i.e., Masters swimmer who works over lunch to accommodate early morning practices that extend into working hours). The psycho-social perspectives associated with an adult sport lifestyle will also be important to understand potential relationships to, and implications for, MST. For example, by recognizing motivational and commitment profiles, MAs may differ in both commitment and motivation to implement sport psychology services, but also in the types of motivational content they prefer to derive from these services. Understanding the competitive profiles of serious-minded MA helps contextualize why mental skills traditionally employed with younger elite athletes may pertain to MAs. At the same time, understanding how older adults uniquely negotiate age, family, and/or other personal responsibilities helps to contextualize how mental skills may differ in older cohorts and how MAs may need unique supports. Finally, the apparent heterogeneity within Masters sport could suggest additional perspectives as to how MAs use sport psychology services to support to a healthy adult sport lifestyle.

Motivational Profiles of Masters Athletes

MAs have diverse intrinsic (i.e., enjoyment, love of the game), and extrinsic (i.e., preserving health, fitness, obtaining external rewards) motives for continued sport participation (Medic et al., 2012). There is evidence to suggest that adult athletes adopt mastery motives focused on improvement and meeting personal objectives (Ogles & Masters, 2003), as well as competitive motives for social affiliation and recognition (Young, 2011) and health and fitness improvement (Ogles & Masters, 2003). In terms of achievement orientations, the profiles of older MAs generally display high task- and moderate-to-low ego-orientation profiles, which have been replicated in National Senior Games, national-level Masters track and field athletes, and World Masters Games (Young, 2011). Based off the variety in motivations and achievement orientations established in this broader literature, the potential uses for mental skills/strategies may differ amongst MAs.

Factors Influencing Sport Commitment and Adherence

Research suggests that an athlete's ability to commit to routine sport training is related to high perceptions of personal investment, enjoyment/satisfaction, and perceived lack of alternative opportunities. Perceived social influence, such as 'social constraints' or 'social support', may also influence commitment (Santi et al., 2014). These conditions may create obligatory (i.e., participation based on external factors) or functional (i.e., participating volitionally out of inherent interest and satisfaction) commitment, with the latter explaining continued persistence in physical activity (Young, 2011). Young, Piamonte et al. (2011) showed that Masters swimmers generally displayed significantly higher functional than obligatory commitment. Functional commitment was manifested by increased perceived satisfaction, personal investment, and social support, while alternative involvement opportunities and social

constraints were low. However, amongst the serious-minded MAs, obligatory commitment may cause difficulties in other areas of their life. There is a risk for obligatory commitment to translate into obsessive passion, such that these MAs may neglect duties at home, work, and may forfeit other personal responsibilities, creating interpersonal conflict because of their sport activity (Young et al., 2015). It is possible to posit that the use of MST may differ depending on individual commitment profiles among MAs.

Social support may also facilitate adherence and compliance to physical activity through sustained coping and behavioural persistence (Carron et al., 1996). Previous studies have suggested that training in groups (i.e., training with other MAs) and perceived social support from one's spouse, children, or health practitioner may be important influences to continued sport participation (Golding & Ungerleider, 1991; Young & Medic, 2011a). However, Young and Medic (2011b) questioned whether the training and lifestyle of certain international-level MAs may be facilitated by a "lone-wolf phenomenon", rather than the traditional social context for sport. Social support can differ in terms of what it provides and it can contribute to various tensions and negotiations with family (Dionigi et al., 2012). Moreover, this questions whether social support is warranted among certain MAs and whether self-support strategies may instead be important. Altogether, this literature suggests that any prospective conception of psychological content specific to this cohort may need to address complex aspects of social support differently depending on the nature of the adult athlete.

The Centrality of Competitive Performance for Serious-Minded Masters Athletes

There is a small cohort of serious-minded MAs who compete primarily to display competence in performance situations, including obtaining medals, setting records, and demonstrating superiority over other competitors (Dionigi et al., 2011; Ruiz-Juan & Sancho,

2012; Young et al., 2018). These athletes are oriented towards a performance discourse, which Dionigi and O'Flynn (2007) describe as personal striving to delay inevitable age-related declines and to achieve peak performance. These athletes differ from the larger cohort of MAs who compete primarily for the experience, such as for social affiliation, enjoyment/satisfaction, and for personal health and fitness (Appleby et al., 2012). Due to these differences in performance orientations, the use, need, and receptiveness for sport psychology services may differ among MAs.

Inevitable Age-Related Issues

Negotiating age-related decline is a reality for many MAs (Young et al., 2014). MST may be a mechanism to attenuate these performance declines by providing MAs solutions to these difficulties. Unfortunately, MAs often attribute poor performances to getting older and this is likely to threaten both performance and experiential aspects of competitive adult sport. It is possible that mental skills interventions may have to proactively address this threat to help MAs. Further, due to age-related factors, MAs are at a significantly greater risk of injury compared to younger athletes. Risk of injury may be further exacerbated for the serious-minded MAs, who may train upwards of 13 hours per week in season (Young et al., 2014). MST may provide MAs solutions to minimize and/or negotiate the risk of injury, such as reduced training load, increased recovery period, or maintaining self-confidence following injury.

Negotiating Barriers to Adult Sport

Older athletes may face real or perceived personal and/or environmental barriers that may limit adherence to sport. Cardenas et al. (2009) suggested that 'time', 'self-discipline', 'community-linked' factors (i.e., lack of facilities, programming, equipment), 'social' factors (i.e., lack of training partners, discouragement from family/friends), and 'intrapersonal' factors

(i.e., fear of injury, self-consciousness) are barriers limiting sport activity in older adults. The literature presents these barriers as constraints to be negotiated with respect to a sporting lifestyle. Additional barriers may be present (see Littlejohn et al., 2015), suggesting that a plausible role for mental skills/strategies may be related to managing these barriers.

In summary, an important precursor to the studies in this thesis was the portrayal of broader psycho-social literature on MAs. As illustrated, MAs have varying degrees of affinity towards particular motives and sources of sport commitment. They show complexities in how they negotiate issues related to aging and competitiveness, and range in terms of their social interactions and whether maintenance of their sporting lifestyle requires social negotiations. In addition to traditional content of MST (i.e., performance-oriented skills/strategies), such heterogeneity may implicate novel content to support the adult sport experience, such as content related to sport adherence, lifestyle and identity management. Seeing that the aforementioned heterogeneity may also be a function of differences accorded to performance-oriented and experiential-oriented aspects of Masters sport, the development of sport psychology supports should explicitly address these different types of adult athletes. Based on the heterogeneous facets associated with Masters sport, MAs may need compensatory strategies that could be used to enhance or maintain performance over time, or to increase their overall sport experience.

Mental Skills Training and Mental Skills Consultation

MST refers to the consistent practice of sport psychological skills for the purposes of enhancing performance, enjoyment, and/or sport self-satisfaction (Weinberg & Gould, 2015). One modality in which MST can be delivered is through mental skills consultation. Mental skills consultation requires the development of mental skills to enhance performance or personal well-being (Vealey, 2007). MST has been applied by mental performance consultants (MPCs) almost

exclusively with younger, competitive athletes, using an assortment of identifiable mental skills that have been traditionally grounded and biased towards a performance-oriented discourse (see Weinberg & Gould, 2015). Most literature still shows a strong bias emphasizing mental skills training to enhance performance specifically as it pertains to younger, non-MA populations. There has been greater discussion of mental skills training applied beyond performance enhancement, for example, the use of foundational mental skills or personal development skills in the field of positive youth development. Vealey (2007) specifically described a progressive outlook towards how mental skills training can broadly enhance aspects of personal development and well-being. Still, an inspection of Vealey's (2007) review of the state of the field and the use of mental skills training in sport showed a remaining bias towards how interventions are still used quite extensively for performance-oriented purposes.

It appears that MPCs generally facilitate the development of psychological and emotional skills, techniques, and practices, which can lead to enhanced performance in sport (Canadian Sport Psychology Association, n.d.-a). With this in mind, the current thesis refers to "traditional" skills as those skills that foremost have been used in the tradition of enhancing performance and performance readiness of athletes. Weinberg and Gould's (2015) traditional catalogue illustrates arguably the most commonly used mental skills implemented by MPCs to high-performance athletes. The traditional inventory includes: goal-setting, imagery, arousal regulation, concentration, and self-confidence. From a consultant's perspective, mental skills interventions are implemented by developing an approach, assessing an athlete's current mental skills and determining which mental skills to include in training, designing a training schedule to facilitate progressive use and refinement toward self-regulation by the athlete, and program evaluation (Weinberg & Gould, 2015). While this approach has been documented with younger, high-

performance, non-MAs, similar interventions may need to be nuanced to manage additional age-specific demands faced by older adults.

Existing Literature on Mental Skills Training, Sporting Lifestyles, and Masters Athletes

There is a dearth of applied sport psychology and mental skills literature pertaining to Masters sport. A systematic search of empirical literature related to mental skills training, psychological skills training, and performance enhancement returned zero relevant articles.[1] Another comprehensive search was completed to investigate the existing literature pertaining to mental performance consultation and adoption, maintenance, and/or adherence to an adult sporting lifestyle. An initial evaluation of all the current peer-reviewed publications for professional MPCs in Canada was conducted, specifically cross-referencing the name of each professional MPC and whether MAs and/or aspects of sport lifestyle appeared in the title or keywords of their empirical article. Names of 160 professional MPCs were extracted from the Canadian Sport Psychology Association (CSPA) website (n.d.-b) and individual websites for each consultant were examined. None of the MPCs had publications related to MAs and/or an adult sporting lifestyle. Furthermore, no MPCs appeared to be currently working with or had advertised working with MAs. Next, the primary investigator (PI) explored ten major North American applied sport psychology textbooks to evaluate chapters which may have information

[1] A Boolean search was conducted using the search engines SportDiscus and PsycINFO to gather an understanding of the existing literature surrounding MAs and MST. Search terms addressed two key concepts. First, we were interested in articles related to older athletes (i.e., Masters or Seniors athletes). Our primary search term was "adult* OR sport OR senior* OR master* OR athlete* OR ag*". Second, we were interested in search terms related to "mental skills training", but also "psychological skills training" and "performance enhancement* strateg*". Three separate searches combined the primary search term with each permutation in the second set of terms with the Boolean operator AND. The search considered English articles published between 1990 and 2018, and all returns were screened for titles and abstracts relating to eligibility criteria. Articles were excluded from the current review if: 1) athletes were not 35 years or older; 2) they were not empirical; 3) athletes had physical or intellectual impairments (i.e., blindness); and 4) athletes were not considered a MA based on the definition presented in Young (2011).

pertaining to MAs and/or a sport lifestyle.[2] Ten separate table of content visual searches for each textbook yielded no findings. Many sport psychology textbooks have added chapters on content pertaining to exercise adherence and integration of regular physical activity into daily living; yet, none address integration of sport and sport adherence into the lifestyle of older adults. This suggests that while physical activity adherence and integration into daily living is an important conduit for a physically active lifestyle, it is unknown whether MST could help MAs integrate regular sporting activity into their daily lives.

One exception was a single book chapter in which Medic (2010) proposed that applied sport psychology may have an impact on facilitating and optimizing sport performance and satisfaction for MAs. He suggested that an MPC's services may have to deal with potential motivational lapses and over-involvement in sport, while considering the probable generational gap between MAs and MPCs. Medic also suggested MPCs could help MAs adjust to inevitable performance-related declines due to aging by setting attainable long-term goals and discussing why these specific goals are important to each individual athlete. Further, he noted the importance of highly individualized services oriented to older adults' specific needs. Unfortunately, no empirical evidence supported Medic's propositions. To our knowledge, no research existed that had explicitly examined how applied sport psychology supports MAs.

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[2] The ten major applied sport psychology textbooks included: Weinberg, R.S., & Gould, D. (2015). *Foundations of Sport and Exercise Psychology* (6th ed.). Human Kinetics; Cox, R. (2012). *Sport Psychology: Concepts and Applications* (7th ed.). McGraw-Hill; Williams, J., & Krane, V. (2015). *Applied Sport Psychology: Personal Growth to Peak Potential* (7th ed.). McGraw-Hill; Tenenbaum, G., & Eklund, R. (2007). *Handbook of Sport Psychology* (3rd ed.). Wiley & Sons; Gardner, F., & Moore, Z. (2006). *Clinical Sport Psychology*. Human Kinetics; Crocker, P.R.E. (2016). *Sport and Exercise Psychology: A Canadian Perspective* (3rd ed.). Pearson Education, Inc; Raab, M., Wylleman, P., Seiler, R., Elbe, A.M., & Hatzigeorgiadis, A. (2016). *Sport and Exercise Psychology Research: From Theory to Practice*. Academic Press.; Carlstedt, R.A. (2012). *Evidence-Based Applied Sport Psychology: A Practitioners Manual*. Springer Publication.; Murphy, S.M. (2012). *The Oxford Handbook of Sport and Performance Psychology*. Oxford University Press; and Hanrahan, S.J., & Andersen, M.B. (2010). *Routledge handbook of applied sport psychology: A comprehensive guide for students and practitioners* (1st ed.). Routledge.

A few applied research studies offered some indirect evidence of the potential impact sport psychology services can have in Masters sport. For instance, some literature inspected sources of sport-confidence (Wilson et al., 2004), coping with pre-competitive stress (Hoar et al., 2012), competitive evaluations (Frey & Ruble, 1990), causal attributions (Hanrahan & Gross, 2005), and injury recovery (Beard, 2008), which may invoke mental skills/strategies to varying degrees. It is our opinion that another article, although framed for coaches of MAs, offered a "blueprint" for prospective areas where MPCs may similarly guide MAs (Young et al., 2014). Specifically, Young et al. (2014) described how MAs needed support in sustaining commitment to sport, help in acquiring strategies to negotiate age-related performance declines, and help in learning strategies to optimize their limited time for doing sport. Applying Young et al.'s considerations to sport psychology, MPCs may need to determine how each individual athlete approaches competition, while individualizing their services to each athlete. They may also need to implement strategies to negate or minimize the poignancy of age-related decline. To avoid MAs attributing poor performances to aging, strategies may need to frame goals based on within season progression or age-corrected times. Finally, MPCs may need to address time management by equipping MAs with strategies that organize and integrate training into a busy schedule. Although Young et al. addressed coaches, this parallel literature suggests that MPCs may likewise have to consider similar innovations to their service delivery in terms of content, skills, delivery approaches, and other innovations that are nuanced to MAs.

Conclusion

While traditional mental skills have been developed to enhance performance for younger elite athletes, it is unknown whether and how the traditional catalogue applies to MAs. Furthermore, due to heterogeneous properties of MAs, it is possible that MAs use novel or

Masters-specific mental skills that are beyond the traditional catalogue. These novel skills could expand the lens of traditional performance enhancement to incorporate aspects of the adult sport experience, such as identity, adherence, and/or lifestyle management. Vealey (2007) operationalized a taxonomy of mental skills (which included mental skills related to performance and personal development) and described a framework for understanding mental skills training; however, she did not consider what might be different for MAs and how sport psychology services might be used to maintain adherence to the sporting lifestyle. There is a need to better understand the use and instrumentality of sport psychology and how it can be used to support experiential- and/or performance-oriented aspects associated with an adult sport lifestyle.

The purpose of the thesis was to investigate the applications for sport psychology amongst MAs. Specifically, the thesis: 1) explored whether applied sport psychology is recognized as an experiential and/or performance-oriented enhancement strategy; 2) explored which mental skills within the traditional inventory are used (if any), why, how, and when they are applied by MAs; 3) explored whether there were novel Masters-specific skills that may help adult sportspersons; and 4) explored how MPCs viewed the utility of traditional and Masters-specific skills for performance and experiential enhancement. Finally, the thesis 5) explored how sport psychology is used as a support to help older adults negotiate/adhere to a healthy adult sport lifestyle. It was advanced that the corroboration of both MPCs and MAs on this topic would provide a better understanding regarding how sport psychology can be used to support older adults in sport.

Chapter 3: Overview of the Studies

This qualitative investigation sought to explore and understand the research purpose and objectives through the voices of both MAs and MPCs. The thesis interviewed MAs and MPCs separately to understand their individual views and perceptions related to the research purpose. The thesis' worldview was socially constructed through the interactions between researchers and participants (Guba, 1996). Thus, the analyses and results would be understood and interpreted through the perceptions of each individual participant and co-constructed based off the researcher's interpretations of their lived experiences (Lincoln et al., 2018).

Participants

MAs and MPCs were purposefully sampled using a pre-screen survey. Purposive sampling ensures an appropriate sample because it rests on an individual's ability to provide the best possible solution towards answering the research question (Higginbottom, 2004). An initial online pre-screen survey was sent via email to a pool of approximately 200 potential MAs from a pre-existing roster.[3] We resorted to snowball sampling to recruit many of our MAs because the responses to the initial survey invitations were low. Snowball sampling uses individuals with knowledge about the topic of interest to assist in the recruitment of future participants (Goodman, 1961). MPCs were sent a separate initial online pre-screen survey via email. Potential MPC participants were contacted using the publicly available email addresses on the CSPA directory (Canadian Sport Psychology Association, n.d.-b). MA and MPC pre-screens (see Appendices A and B) asked specific questions to ensure maximum variable sampling within the groups of experiential and performance MAs, as well as the MPCs.

[3] Athletes had participated in prior research, given their consent in prior research to be re-contacted again, and had voluntarily supplied their email addresses.

Pre-screen for MAs

All MA participants met inclusion criteria related to defining characteristics of MAs (Young, 2011): they acknowledged they prepared ahead of upcoming competitions; were 35+ years of age; and were formally registered to compete in sport. Further, they met an age-specific criterion of 35-65 as this encompasses most competitive MAs (Auckland Host Organizing Committee, 2017). Participants also demonstrated a minimal understanding of MST (or other psychological enhancement strategies), while also sufficiently identifying with an adult sport lifestyle (see Appendix A).

We purposively sampled eight MAs that displayed qualities of both "*experiential MAs*" and "*performance MAs*". Experiential MAs pursued competitive sport primarily for the overall experience associated with sport, including: personal enjoyment, satisfaction, and/or other social influences (e.g., social affiliation, travel). Experiential MAs were identified using their scores on questions 19-22 in Appendix A. Performance MAs, or serious-minded MAs, dedicated significant time training to pursue competitive sport primarily for performance-oriented discourses like winning, setting personal/seasonal bests, breaking cohort-specific records, or beating other athletes (Dionigi & O'Flynn, 2007). These participants were identified using their scores on questions 11-12, 15-18 in Appendix A. Purposive sampling according to self-reported experiential- and performance-oriented questioning enabled us to select a representative sample, with the potential for participants to elucidate heterogeneous uses for sport psychology. Of the eight MAs we recruited, they were classified as high performance/very high experiential (n = 2), moderate performance/very high experiential (n = 2), moderate performance/high experiential (n = 3), and moderate performance/moderate experiential (n = 1) in terms of their orientations inferred from their pre-screen survey responses. Unfortunately, we were unable to recruit

participants who could be classified as simultaneously being high performance and low/very low experiential.

Pre-screen for MPCs

Specific inclusion criteria were set for inviting ten MPCs. Professionally trained MPCs were identified as individuals having general knowledge of Masters sport, while displaying a genuine interest in working with or learning about MAs. Invited MPCs had collectively met the following criteria according to their responses to the items in Appendix B: 1) scored collectively high on rating scale questions 4-7 (i.e., MPCs' general experience/familiarity with Masters sport; MPCs' beliefs on whether MAs compete for performance, experience, or sport lifestyle purposes); 2) had professionally consulted with at least 3-5 MAs; 3) scored collectively high on rating scale question 12 (i.e., The development of mental skills resources for MAs is a worthy aim); and 4) had professional MPC designation underneath the CSPA for at least three years. It was important that the thesis contained a unique mix of MPCs who had extensive applied experience, as well as significant experience consulting with MAs.

Data Collection

The thesis contained two phases of data collection. Phase 1 consisted of eight one-on-one semi-structured interviews with MAs, while Phase 2 comprised five two-person group interviews with MPCs. Phase 2 took place shortly after the completion of phase 1.[4]

[4] We had originally planned to have an additional two phases of data collection, including: a working group; and a two-round modified Delphi survey. However, after hearing the amount of richness elucidated from both one-on-one (Phase 1) and group interviews (Phase 2), the decision was made to spend more time performing analyses on the interview data for the purposes of this thesis. Discussion of the working group and Delphi survey have been ported to Chapter 5.

Phase 1: MA One-On-One Interviews

Semi-structured interviews are an efficient and effective method to collect data since one can immediately probe and follow-up (Marshall & Rossman, 2006). One semi-structured interview was conducted in-person with eight MAs. Each interview followed the same semi-structured interview guide (see Appendix C) to allow for the exploration of topics without restriction (Rubin & Rubin, 2012). The interview guide was broken up into four main sections. First, the PI asked MAs to broadly describe their perceived importance of psychology in relation to their sport experience. Second, MAs were asked to describe how they used psychology in relation to enhancing their performance, experience, or maintenance and/or adherence to the MA sporting lifestyle. Third, deductive questions (Weinberg & Gould, 2015) asked MAs to describe situations where they used goal-setting, concentration, self-confidence, arousal regulation, and imagery. Finally, remaining questions explored age-related considerations for applied sport psychology and MAs, and various other potential uses, desires for, and barriers to accessing sport psychology services. MA interviews ranged from 65 to 121 minutes (M = 88).

Phase 2: MPC Group Interviews

About a week after our final MA interview, MPC group interviews began to expand our previous MA findings. At this point, MA data had been assigned initial codes and we had begun grouping similar codes into higher-order themes and subthemes. Analyses on MA interviews were finalized several months after starting Phase 2.

Phase 2 consisted of a five two-person group interviews with ten MPCs. This method bordered between traditional one-one-one interviews and focus groups. Focus groups are a collective conversation that capitalizes on communication between participants to generate data (Kitzinger, 1995). Five two-person group interviews allowed us to collect large amounts of data

simultaneously, reach sufficient levels of depth and richness that one would not normally see in a focus group, and capitalize on facilitative group dynamics occurring in regular focus groups. We purposefully constructed group interviews to minimize potential power differentials between participants, as well as ensuring at least one group interview participant had significant applied experience working with MAs.

Each MPC was sent a reflection exercise on the eve of their group interview (see Appendix D). The reflection exercise enabled MPCs to reflect upon the types of MAs they had in their professional practice. They were asked to reflect on the benefits and barriers to sport psychology services, as well as reflecting on how they would customize services for adult sportspersons. This reflection exercise assisted us in maximizing MPCs very limited time to participate in group interviews. The first four group interviews were conducted in-person and the final was conducted over Skype. We preferred all five group interviews to be conducted locally and in-person, however, time constraints, geographical displacements, and interviewee 'best fit' made this unfeasible. Despite our preference, Skype is still considered an effective alternative to in-person interviews (Hanna, 2012) and was an appropriate modality for our final interview. Group interviews were conducted in English by the PI, lasting between 72-88 minutes (M = 80).

Group interviews used a semi-structured interview guide that was loosely based off our initial interpretations of MA data (see Appendix E). The guide was broken up into four sections. First, the PI asked MPCs to describe the biggest area in which MAs benefitted from sport psychology services. Second, the PI posed questions related to how MAs can use sport psychology to enhance performance, experience, or adherence to the adult sporting lifestyle. Third, MPCs were asked questions loosely guided by MAs interviews. They included elaborations upon how applied sport psychology could be used in relation to age-related issues,

the necessity and benefits of positivity, and how mental tactics and strategy could be used to elicit a successful sport performance. These topics were explored further in MPC interviews because MAs provided minimal information in this regard. Finally, MPCs were posed prospective questioning around additional uses for sport psychology services (that had not been discussed during individual interviews) and their potential impact, the methods to designing customizable services, and potential barriers implicating service delivery.

Data Analyses

One-on-one and group interviews were transcribed verbatim only making edits for grammar and personally identifiable information. MA data were imported into NVivo (2018) and MPC data were imported into Microsoft Word for subsequent organization and analysis. MA and MPC data were analyzed separately. Analyses of MA data were finalized prior to organization/ analysis of MPC data. That is, only transcription of MPC interview recordings occurred while the MA analyses were finalized and fully interpreted for discussion; only then did MPC data analysis occur. Further, the researchers attempted to bracket themselves against the influence previous MA analyses had on their subsequent interpretations of MPC data. We could not deny what we had learned previously from Phase 1, but we purposefully attempted to interpret novel and unique perspectives for MPC analyses.

MA data were thematically analyzed deductively using Weinberg and Gould's (2015) traditional mental skills catalogue and inductively to elucidate novel Masters-specific skills. MPC data were analyzed inductively only. Braun and Clarke's (2012) steps for thematic analysis were followed for both MA and MPC analyses. We started out by transcribing and re-reading the transcripts to familiar ourselves with the data. We then assigned initial codes so they could be later grouped into higher-order themes and subthemes (Creswell & Poth, 2017). These codes

were critically discussed by the researchers to enhance credibility (Yardley, 2008) and to ensure a second perspective on the data. Similar codes were grouped into higher-order themes and subthemes with names and operational definitions given after critical discussions of initial codes. Finally, themes were critically reviewed, quotes and poignant excerpts were identified, and written into the thesis.

Trustworthiness and Reliability

We took several measures to ensure trustworthiness and reliability. Extensive piloting was conducted to ensure the PI could move through the guide efficiently and accurately (Creswell, 2014). Three separate pilots were conducted to prepare for MA interviews. The first pilot was a one-on-one interview with the PI's supervisor, the second was a group interview with four individuals with knowledge and understanding of Masters sport and applied sport psychology, and the final was a group interview with five varsity athletes.[5] Three separate pilots were conducted to prepare for MPC interviews. The first pilot was a one-on-one interview with the PI's supervisor, the second was a group interview with two pre-service MPCs (in training), and the final was a one-one-one interview with a local Canadian MPC.[6]

The study took additional measures to ensure reliability of qualitative methods. Rigor was established using methodological coherence, sampling sufficiency, and concurrent collection and analysis of data (Morse et al., 2002). Methodological coherence proposes congruency between the chosen research methods and question. One-one-one and group interviews were appropriate methods because we sought to understand MA and MPC perceptions related to the

[5] Early on when designing the study, the intention was to have a single focus group consisting of 6-8 MAs. However, after extensive piloting, it was evident that the data would be significantly richer in a one-on-one format compared to group interviews.

[6] Early on when designing the study, the intention was to have a single focus group consisting of 8-10 MPCs. However, extensive piloting suggested richer data would come from a smaller (e.g., two-person group interview) rather than a larger focus group format.

use of applied sport psychology in Masters sport. Our pre-screen survey ensured sampling sufficiency because it enabled us to select an appropriate sample who understood, had knowledge in, and valued the purpose of the research. Finally, concurrent collection and analysis of the data involved an iterative process between collecting data and its subsequent analysis. Analyses were informed to a certain extent by what we already knew from existing interviews. With that being said, attempts were made within each phase of data collection, or from one interview to the next, to bracket against what we already knew so we could be open to unique and novel interpretations. This involved using the PI's supervisor as a critical friend, who encouraged the PI to be open to new perspectives and interpretations and to capture the breadth of participants' responses.

Implications of the Research

The thesis sought to understand the applications for sport psychology among MAs. It aimed to understand how MAs applied sport psychology in relation to enhancing their performance, experience, and sport lifestyle adherence. It explored the use of both traditional and Masters-specific mental skills, while also considering unique cohort-specific nuances related to how and why MAs apply sport psychology. By gaining the perspectives of MPCs, we expected to gather content and delivery approaches related to the age-specific demands that accompany consulting with older adults. It was anticipated that this investigation would inform a formative template or resource regarding the Masters-specific content and delivery approaches related to sport psychology services, which could be instrumental in supporting the unique psycho-social conditions that are associated with being an adult sportsperson.

Outline of Presentation of Results

To address the thesis' research purpose and objectives, Manuscript 1 addressed the sport psychological content that MAs believed was pertinent in their sport experience. It is entitled: *Masters athletes perceptions on sport psychology for performance and sport lifestyle enhancement*. Chapter 4 expanded upon the findings in Manuscript 1. It addressed MAs' views on additional considerations related to sport psychology service delivery, and elucidated nuances that applied sport psychology practitioners may have to consider when working with older adults. After hearing MAs' perceptions related to sport psychology content and delivery, we then interviewed MPCs in Manuscript 2. Manuscript 2 is entitled: *Mental performance consultant perceptions on delivering sport psychology services to Masters athletes*. It explored MPCs' views on sport psychology services as they specifically pertained to adult sportspersons. Finally, the General Discussion (Chapter 5) corroborates perspectives derived from the MAs and the MPCs, explores convergence and divergence, and attempts to bring the studies together to provide a way forward towards understanding how sport psychology services can be effectively tailored to older adults in sport.

Manuscript 1: Masters athletes' perceptions on sport psychology for performance and sport lifestyle enhancement

Masters athletes' perceptions on sport psychology for performance and sport lifestyle enhancement

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Abstract

Very little is known about how applied sport psychology might support lifelong sport activity. Questions about the effectiveness of sport psychology as a support for the Masters athlete sport experience remain under-examined. This study explored Canadian Masters athletes (MAs) perceptions on the role of sport psychology as it applies to performance, experiential, and lifestyle enhancement. Semi-structured interviews with eight MAs (M_{age}=51, range 38-62; 3 males, 5 females) from 12 sports (10 individual, 2 team) explored their applications of mental skills and strategies in their adult athlete experiences. Data were analyzed thematically (Braun & Clarke, 2006) using deductive (Weinberg & Gould, 2015) and inductive approaches. Deductive results demonstrated the benefits, situations, and techniques for goal-setting, imagery, arousal regulation, concentration, and self-confidence. MAs commonly used these traditional skills to enhance performance and obtain a competitive advantage. Inductive results revealed non-traditional applications that effectively supported the maintenance and adherence to routine sporting activity. MAs used personal prioritization ("cognitively justifying", "framing sport as an outlet", and "embodying the authentic self") and social strategies ("cultivating supportive relationships", "negotiations with significant others", "social signaling", and "obligations to training mates") to regularly pursue their sport. MAs used strategies to fit sport in ("twinning"; "scheduling/structuring"; and "managing commitment"), and "mindfulness" and "compensation" to manage age-related concerns. The results suggest nuances regarding how mental skills and strategies may better support MAs and implicate the delivery of resources and services.

Keywords: Masters athletes, applied sport psychology, mental skills, performance enhancement, sport adherence

Masters athletes' perceptions on sport psychology for performance and sport lifestyle enhancement

As the demographics of Westernized countries have aged, Masters sport has become increasingly popular for older adults seeking an active and healthy lifestyle (Weir et al., 2010). Masters sport has been shown to elevate biological, social, and psychological factors among older adults, and Masters athlete (MAs) have often been considered exemplars of successful aging (Geard et al., 2017). MAs are individuals 35+ years old who register for sport activities that are distinct from younger athletes in the high-performance stream (e.g., professional, collegiate, Olympic). They practice in order to compete in formalized competitive events, with these events having degrees of competition ranging from recreational (e.g., local tournament/jamboree) to World Masters Games (Young, 2011). With this definition in mind, MAs are often referred to as adult athletes or adult sportspersons,

MAs make deliberate attempts to maintain and adhere to the adult sporting lifestyle accompanied with routine sport participation into later years. To this end, most MAs make personal negotiations, such as those made with spouses and children, or negotiate work demands (Dionigi et al., 2012). As is the case for all forms of physical activity and exercise (Dishman, 1982), adhering to sport is a challenge. This is evidenced by declining patterns of sport activity across the lifespan (Canadian Fitness and Lifestyle Research Institute, 2018) and the vast number of barriers that personally challenge adults' participation in sport (Young, 2011). Consequently, there is a need to examine and document prospective "supports" for adult sport. Jones et al's. (2018) "Physical Literacy Model for Older Adults" argued for greater support accorded to intrapersonal elements, such as formal and informal relationships to maintain routine physical activity, including sport, while Young and Callary (2018) suggested "doing more for adult sport"

required advances in programming, promotional campaigns, and coaching support that could enhance the quality of the sport experience. Still, minimal work has looked at the available supports to maintain sport adherence and to enhance the sport experience for adult athletes.

An unexamined consideration is how applied sport psychology resources and services may provide additional support to maintain adherence to sport across the lifespan. Applied sport psychology, or the provision of psychological skills and strategies, refers to the systematic implementation of psychological skills for the purposes of enhancing performance, personal enjoyment, or sport self-satisfaction (Weinberg & Gould, 2015). Psychological skills training programs are typically implemented by mental performance consultants (MPCs) who seek to educate, foster skill acquisition, and encourage practice and real-world application of skills in sport contexts (Canadian Sport Psychology Association, n.d.). Sport psychology has almost exclusively been studied with younger elite athletes (e.g., Olympic, collegiate, professional/semi-professional, and adolescents), with applied sport practitioners traditionally applying a catalogue of mental skills to enhance performance. Although Vealey (2007) encouraged a broader framing of foundational and personal development skills in sport psychology, her review of the state of the field showed continued bias in mental skills being applied towards performance, or a continued "traditional" performance-oriented discourse. Weinberg and Gould (2015) delineated five mental skills foremost oriented towards this traditional purpose -- goal-setting, arousal regulation, imagery, concentration, and self-confidence.

MAs have been largely neglected in the extant applied sport psychology literature. To better understand the scant literature on MAs and sport psychology, we conducted three separate searches. First, Boolean searches using different permutations of MAs and applied sport psychology using the databases SportDiscus and PsycINFO returned 0 relevant articles. Second,

publications provided on each individual MPCs' website who were current members of the Canadian Sport Psychology Association were examined and revealed 0 relevant publications. Finally, ten major applied sport psychology textbooks were examined (e.g., Hanrahan & Andersen, 2010; Tenenbaum & Eklund, 2007; Weinberg & Gould, 2015; Williams & Krane, 2015) and revealed 0 book chapters related to empirically driven evidence related to adult sportspersons and sport psychology. Of the minimal literature on the topic, one notable exception was a single book chapter (Medic, 2010) suggesting that applied sport psychology may facilitate sport performance and satisfaction for MAs. Despite no empirical evidence to support his claims, Medic predicted these services could help MAs overcome motivational lapses, manage over-involvement in sport, and set age-appropriate goals. He noted probable generational age differences between MPCs and MAs and emphasized the need for individualized services tailored to their age-specific preferences. Sato and Jensen (2019) reported on an eight-month mental skills intervention with a 42-year-old kendo athlete (Japanese fencing). Following a multi-stage progression that applied an assortment of skills (goal-setting, imagery, self-talk, and attentional focus strategies), the athlete effectively displayed performance improvements, suggesting considerable benefit afforded by such interventions to adult sportspersons.

Although the tradition of applied sport psychology has been oriented towards competitive performance readiness and enhancement content in elite sport, applications for sport psychology have been broadened to include under-examined cohorts, including: intellectually disabled (Gregg, 2010), physically challenged (Martin, 2010), or hearing impaired (Vose et al., 2010). Applied sport psychology has also shown to benefit performance in non-sport populations, such as surgeons (McDonald et al., 1995), air traffic controllers (Mogford, 1997), and musicians (Hoffman & Hanrahan, 2012). The current study explores questions among MAs and therefore

follows this precedent of interrogating the use of sport psychology in both novel performance contexts and in under-considered populations. Since Masters sport traditionally lies outside elite high-performance sport (e.g., professional, collegiate, Olympic), the applications for sport psychology may parallel work previously demonstrated in these non-traditional populations.

It is reasonable to posit that MAs may be a cohort who feel they have their own special needs and demands with respect to the implementation and delivery of services. Motivations, sport commitment, and goal-orientations are heterogeneous amongst MAs (Young, 2011), while sport programming and curriculum tailored towards the six adult learning principles (see Knowles et al., 2012) often facilitate the rate of learning by older adults (Young & Callary, 2018). Considering such age-related differences between older adults and youth/young adults, there is a need to consider the prospect of age-specific, or Masters specific, content of services and modified methods when addressing middle-aged and older adult sportspersons.

Any study that explores the application of psychological skills and strategies by MAs needs to consider the remarkable heterogeneity in this cohort. Both participatory discourses and performance enhancement discourses exist in Masters sport (Dionigi & O'Flynn, 2007). Performance enhancement is of great importance to portions of the Masters population, with many MAs demonstrating orientations towards winning, ranking, competitiveness, and competitive performance (e.g., Dionigi & O'Flynn, 2007). These *performance MAs* differ from those who participate for the *overall experience of sport*, or *experiential MAs*, who may compete for personal enjoyment, satisfaction, and/or social capital (e.g., travel, social affiliation) that accompanies being a competitive adult athlete (Dionigi et al., 2011). Due to such heterogeneity, the current study explored applications for sport psychology that possibly expanded the traditional lens of performance enhancement, elucidating novel non-traditional uses specifically

applying to the unique life circumstances of adult sportspersons. These novel uses could include the management of one's identity, lifestyle, and adherence to sport, which are uses uncommonly suggested in the existing literature (Vealey, 2007). In terms of both traditional and non-traditional uses for sport psychology that may exist among MAs, there is a need to better understand the instrumentality and applications for sport psychology as it specifically pertains to this unique cohort.

This study aimed to explore MAs' perceptions and beliefs about various mental skills and strategies, including their pertinence, instrumentality and benefits, and value in relation to enhancing performance, the experience (i.e., enjoyment) of adult sport, or the management of an adult sporting lifestyle. Understanding the Masters-specific uses of sport psychology, mental skills, and their perceptions of strategic psychological interventions, may help applied sport practitioners in developing psychological support resources which may further enhance the adult sport experience. This qualitative exploration sought to understand the perspectives of MAs regarding if and how sport psychology, including traditionally-identified mental skills and potentially unique skills/strategies, are used and valued among MAs.

Methods

Using the constructivist paradigm, we sought to gain an understanding through the interpretation of each individual MA's perception (Lincoln et al., 2018). Data were co-constructed through interactions between the researcher and participants (Guba, 1996) and through further discussions with a critical friend. Prior to each interview, the researchers attempted to bracket themselves against what they already knew to minimize the influence of one individual interview on the next and to ensure an openness to varying perspectives and interpretations (Tufford & Newman, 2012).

Participants

Ethical approval was granted from a University Research Ethics Board prior to participant recruitment. Eight MAs (three males, five females; M_{age} = 51, range 38-62 yrs) from cities in Ontario and Quebec, Canada were interviewed (see Table 1 for information on participants). Variability in sport participation existed, with participants from Masters dragon boat, synchro-skating, biathlon/cross-country running, athletics (pole vault), open-water swimming, power-lifting/cross-fit, athletics (high jump/long jump), and nordic skiing. Before interviews, initial pre-screen surveys were sent by email to 65 prospective Masters participants from a pre-existing roster of MAs who consented to be re-contacted again. Completed pre-screen surveys were returned by 16. Data were used to purposively identify the eight interviewees. In addition to variability in sport involvement, we included interviewees with maximal variability in participatory motives based on their responses to four statements about *experiential* motives ('I compete for personal enjoyment'; 'I think that the experience of being a MA is what matters most') and six statements about *performance-oriented* motives ('I compete in Masters sport primarily to set personal performance records'). Respondents also judged statements for their familiarity/knowledge of mental skills training and the extent to which they made efforts to maintain a personal sporting lifestyle ('I often negotiate personal barriers to fit sport into my life') (see Table 1; for full pre-screen, please see Appendix A). We effectively recruited participants classified as high performance/very high experiential (n = 2), moderate performance/very high experiential (n = 2), moderate performance/high experiential (n = 3), and moderate performance/moderate experiential (n = 1). All participants provided informed consent and were given pseudonyms to protect confidentiality and anonymity.

Data Collection

One semi-structured interview was conducted with each MA. This allowed for the open exploration of topics without restrictions, while the conversational nature led to further questions related to poignant comments provided by each MA (Rubin & Rubin, 2012). The primary investigator (PI) led all interviews, which lasted 65-121 minutes (M = 88). He aimed for more open-ended questioning, which could elucidate additional psychological processes beyond the traditional performance-oriented discourse in which sport psychology is grounded. The semi-structured interview guide had five sections. First, the PI asked interviewees to describe situations where psychology is important to them as a MA. Second, he asked them to describe the use of psychology for enhancement of sport performance. For example, ways in which they used psychology to elevate their performance. This section also asked MAs to describe their use of psychology for enhancing the sport experience (e.g., ways to enjoy sport or maximize its' social benefits) and for any efforts to maintain their adherence to a sporting lifestyle (e.g., related to a routine surrounding being a sportsperson or how they fit sport into their life). Third, the PI asked questions about Weinberg and Gould's (2015) traditional "Big 5" mental skills catalogue, asking MAs to detail if and when they used each skill, including: goal-setting, imagery, arousal regulation, concentration, and self-confidence. Fourth, they were asked to consider unique applications for sport psychology (e.g., 'Is there anything special about being a MA that requires you to use psychology differently than someone who is not a MA?'). Finally, the PI asked about prospective uses of sport psychology and needs/resources to support the adult sport experience (e.g., 'Do you have a need or desire for more psychological strategies to help support you as a MA?'). Some of the data derived from this fifth section are presented in Chapter 4 of this thesis,

where respondents' answers specifically related to barriers and constraints to resources and services, as well as prospective services, are discussed. For full guide, see Appendix C.

The PI acknowledges that due to his initial preconceived biases around the traditional mental skills catalogue, the first several interviews placed heavier emphasis on probing the "Big 5". However, throughout the course of data collection as novel and unique applications arose over subsequent interviews, he responded by probing more extensively on these nuances.

Data Analysis

Interviews were transcribed verbatim (total = 139 single-spaced pages) only making edits for personally identifiable information and minor grammatical corrections. Interviews were thematically analyzed (Braun & Clarke, 2012) deductively using the traditional "Big 5" mental skills inventory (Weinberg & Gould, 2015), and inductively. Particularly for our deductive analyses, we initially classified and assigned meaning units to quotes representing Weinberg and Gould's "Big 5". Early on, there was a deliberate attempt to further deductively analyze quotes related to methods/techniques (e.g., process- vs. outcome-oriented goal-setting; motivational vs. auditory vs. olfactory imagery, etc.) related to these skills; however, based upon the data, we were unable to code further deductive subthemes. As a result, we inductively analyzed the quotes that had been initially grouped deductively into each of the "Big 5". We derived secondary and tertiary inductive subthemes, which were informed by the questions and probes elicited in that section of the interview guide and guided by our efforts to keep subtheme names within relatively consistent across our deductive categories.

Braun and Clark's (2012) steps for thematic analysis were followed. We familiarized ourselves with the data by transcribing and re-reading each interview. Once transcribed, initial codes were assigned, which were later grouped together into higher-level themes and subthemes

(Creswell & Poth, 2017). We discussed our coding to establish credibility (Yardley, 2008), and later engaged in critical discussions to ensure we were seeing multiple interpretations and perspectives of the data. Themes were then named, operationally defined, and written into the report (Braun & Clarke, 2012).

Themes were based on the quality and quantity of data. Generally, themes were derived based on representativeness of voices across the sample. However, particularly salient/poignant quotes were also incorporated into the creation of themes and subthemes. We took steps to ensure integrity by integrating Tracy's (2010) eight criteria to enhance the quality of our study (Smith & McGannon, 2018).

Trustworthiness and reliability

We took measures to ensure methodological coherence, sampling sufficiency, and concurrent analyses and collection of data (Morse et al., 2002). Rigorous testing of the guide ensured its questions matched the research objectives. We critically evaluated each question, making sure each was precise. Pilot testing in two group interview formats (five non-university athletes, then five university athletes) allowed for question refinement and improved the ease in which the PI navigated the guide and followed up on probes. Our pre-screen survey ensured interviewees had sufficient knowledge/understanding of sport psychology/mental skills and Masters sport. As the PI conducted the final few interviews, it appeared this study was reaching data saturation since we interpreted fewer novel responses from the athletes (Saunders et al., 2018). Finally, our analyses involved an iterative process between the PI and a critical friend (coauthor). The critical friend encouraged the PI to be open to multiple perspectives and interpretations in an attempt to understand the MAs' subjective realities.

Results

Use of the Traditional Mental Skills Catalogue

MAs identified the benefits, techniques, and situations for each of the traditional "Big 5" mental skills, which they predominantly used to enhance performance and gain a competitive advantage (see Table 2). MAs goal-set to orient training, visualized ahead of upcoming competitions, and regulated arousal prior to competitions. Further, MAs utilized focus plans prior to or during competitive events, and implemented various strategies to maintain confidence.

Goal-Setting

Benefits of Goal-Setting. MAs most heavily used goal-setting (GS) and felt the skill was of prime importance. GS was a performance enhancement strategy that provided MAs with many benefits. Specifically, it oriented training towards standards of achievement and gave their physical activities a sense of meaning. Wendy, a competitive paddler, commented on how goals were an inherent part of her orientation to training, but also most of her physical activities:

> There are always specific goals that I want to reach. If I were to just train whenever I want, to be honest I would still have some goals. Even if it's just a distance, my goal is to paddle to Red Rapids and back. I'm going to have pickups along the way and feel good. Even when I go for a bike ride …[I'm setting goals] and then see that route. I'm enjoying it. It's not as though [setting goals for a cycling outing] is miserable or anything like that. I just want to have a purpose for what I'm doing.

GS provided MAs with a sense of purpose for their sport involvement. Shannon, a weightlifter/cross-fit athlete, illustrated:

> I don't want to use the word "obsess" because it sounds negative, but like if I set a goal for myself whether it be in training or any other area of life, I know that it's a goal that I can achieve and I will achieve it. It focuses me on a specific thing and I feel like it just gives me purpose.

Most of the MAs made further deliberate attempts to *orient training schedules based off personal GS*. They identified areas for improvement, set goals for these areas, and pursued

training that would lead to their attainment. Cara, a nordic skier, explained, "[GS] shapes my training. It's not a long-term farfetched goal, it's always something achievable. When am I going to do it? How am I going to change my training to do that? Did that work? Did it work last year?" Shannon discussed how she worked towards her goal of finishing top 200 in the world for an upcoming cross-fit competition:

> I trained harder than ever before … every workout that I did, I would do the workout once and then strategize how I could maybe do better. I just really wanted to get this top 200. I ended up finishing 15th, so I crushed that goal. GS for me is the most important thing. If I set a goal, I will get it.

Similarly, most MAs were convinced of the value of having used goals to orient their training, which they believed contributed to the achievement of future goals.

Types of Goals. MAs described the content of various types of goals they considered beneficial. Specifically, they used goals related to performance measures (e.g., personal bests), progression (e.g., improvements relative to self), and those that emphasized personal control over oneself. With respect to the latter, Ben, an open-water swimmer, noted:

> I've shifted from goals that are based on other people because I'm not in control of them. I used to say I want to beat this dude. I still want to, but that guy might have a great race, might have a terrible race, or might not show up, so then the goal is kind of garbage.

Luke, a former elite high-performance athlete, still used performance- and progression-related goals, but elaborated on his newfound addition of experiential goals, "Long-term goals used to be around thinking about the Olympics. Now, it's being healthy and fit … I'm thinking about 'destination races'. Less about points related races or series, but about whether this is a destination I would like to compete at." MAs also recognized the content related to setting goals was different for older versus younger athletes. Amy noted, "With a MA, when you're 80, you're not going to run as fast as you did when you were 20. Those goals can't be those same kind of

goals." All eight MAs described, in some capacity, the benefits or specific types of personal goals and how these goals were used within competitive and/or training environments.

Imagery

Benefits of Imagery. All eight MAs described the benefits of imagery related to enhanced training behaviours, such as learning choreography, technique, or managing physical discomfort. For example, Lauren described how imagery benefitted her synchro-skating training, "Absolutely, yeah, [visualization] really helps with the learning process of the choreography. That's the thing with age, learning the choreography … It gets harder and harder to get those steps locked into my head and visualization really helps with that." Wendy used imagery "When I'm doing things [in practice] that aren't so comfortable and I want to get into a nicer space." Imagery was also recognized as a beneficial substitution for physical training because "it takes an entire training session off the track", contrasted to younger athletes where "you can just work them harder …" (Amy, athletics). Amy also recognized she could no longer perform the same physical movements compared to her younger self and used imagery occasionally instead.

One particularly salient benefit was related to *preparation for upcoming competitions* to obtain a competitive advantage. MAs often used visualization the day or week leading up to a competitive event. Amy, in athletics, noted:

> Just rehearsing whatever activity I'm going to do and running through it in my head perfectly. You kind of go "okay, this is what a perfect run or jump [would look like]." If it's a 100m dash, your imagery isn't you and 7 other people. Your imagery is you and your perfect race. "You're going to come out of the blocks like this, you're going to be in this position and this is how your breathing will feel …"

Ben further explained:

> In preparation, I visualize the course. I think about "okay, at this point of the race, what do I want to do?" A lot of times, I will go visit the race course beforehand and I'll just stare at the water for like half an hour and I'll think about "okay, so I know at this point in time, this is where I want to have my strategy", and I just visualize that strategy.

This competitive preparation technique often facilitated MAs' performance because they knew exactly how the race would play out. Luke, an expected podium finisher, associated his optimal performance with pre-competitive imagery:

> I visualized the [race] course to a "T", so much so that when I did the race it was like I was in a dream state. It was a total déjà vu moment. It's like this had already happened and now it's happening and unfolding exactly the same way. It was freaky!

Techniques Assisting Imagery. Finally, MAs elaborated upon the techniques that assisted them in utilizing imagery. For example, when she found herself challenged during a particularly effortful training bout, Wendy sustained her effort by picturing herself in a more familiar, facilitating environment. She noted:

> When I'm in a gym [a less familiar training environment for her], lots of times there aren't any windows. In my mind, I imagine myself on the river at Charlie's Bay [her regular paddling venue] and I know where I am on the river because we have a course there. I know where the 400m mark is, the 600m is, and where the 800m mark is. I can picture myself in that position, how much time I have left, and what I am dealing with.

When asked to describe the types of mental images, Cara said, "I try to make them very vivid. Like not just seeing, but hearing my breathing ... Actually trying to make it something that's more real than when I actually go through and do it [in real life]." Overall, MAs emphasized techniques associated with vividness, familiarity, and execution of the physical behaviour.

Arousal Regulation

Benefits of Arousal Regulation. All eight MAs described arousal regulation in terms of its' benefits, situations of application, or technicalities of its' use. MAs described the benefits of monitoring or managing their arousal in relation to optimal competitive performance, which implicated a need to regulate their arousal to establish a preferred activation/alertness. Many MAs had to control/monitor arousal related to nervousness. Some described how they needed to experience an enhanced level of psychosomatic activation prior to competing. Lauren explained,

"Any time we compete, it's always striking that balance. If you're not nervous at all, the worst feeling in the world is feeling flat. That's terrible." A few MAs identified benefits that resulted from being aroused prior to competition. Amy noted, "You can use nerves to help you perform better, but too much, it starts to come down the other side. You want to try and find that sweet spot where you're aroused enough, you're excited to race, and excited to compete."

Situations for Arousal Regulation. In terms of pre-competitive situations for arousal regulation, MAs referred to some sort of internal/external stimuli influencing their ability to compete. Cara, a nordic skier, noted:

> It would be just trying to calm yourself down because things aren't going as they should in the environment [just prior to competition on race day]. There are so many moving parts and things that could be late or wrong in [pre-race preparations for] skiing that you just have to be really calm by using different strategies that work for you …

When reflecting on her experiences as a relatively new weightlifter, Shannon expanded:

> [My first time competing], it was a small meet. It was at a gym that I had been to lots of times, didn't think it would be a big deal. But I remember walking up onto the [competition] platform for the first time and really noticing the adrenaline coursing through my body. I've never felt that much adrenaline before and it made me feel, almost like panicked. It almost made me feel a little light headed and shaky. I was like "oh my god, I don't even know if I'm going to be able to lift this weight."

Despite pre-performance anxiety being necessary to an extent, MAs described the importance of regulatory skills to manage pre-performance psychosomatic sensations.

Techniques for Regulating Arousal. Finally, MAs alluded to purposeful techniques for regulating arousal prior to competition, such as arousal inducing (e.g., jumping around, the use of upbeat music) and reducing (e.g., conscious breathing, self-talk) strategies. Amy, an experienced athlete, believed that regulatory arousal strategies were important for MAs because "I'm not sure [the nervous system] fires up the same way that it used to." She continued:

> Depending on where you are, if you're not aroused enough you need to kind of jump around and do some wind sprints and stuff to fire up your nervous system. If you're on

> the other side, you need to find a quiet place, close your eyes, and just calm yourself down. Sort of depends on what side you're on and what things you need to do to fix it to try and get yourself into the right spot.

Mark, a less experienced pole vaulter, mostly used slow breathing to reduce his pre-competitive arousal, "Really trying to slow down my breath, relax, wait that extra little bit just to relax ... Usually it's just that initial [moment] and once I get started, I calm down a lot quicker."

MAs also described other technical aspects to manage pre-competitive anxiety and arousal. Specifically, they identified pre-competitive rituals with training mates (e.g., slapping hands), coach directed pre-performance preparation (e.g., reassurance from coach regarding competitive performance routine), more frequent competitive scheduling (e.g., some MAs believed that more frequent races desensitized them to over-anxiousness in any one race), and sufficient physical preparation (e.g., some MAs believed that having fully prepared physically contributed to less anxiety around competitive outcomes).

Concentration and Attentional Focus

Situations Demanding Concentration. Most MAs described situations that demanded concentration. These situations were related to competitions, and preparing for attentional demands that would be required for competitions. Wendy emphasized, "We always say 'practice like you race'. You want to make sure that you're able to concentrate for the length of time that you need to, so we practice it when we do our practice sessions too." Specific external stimuli also threatened to distract MAs' competitive event-related focus and they needed to manage their concentration effectively when such situations arose. Lauren discussed the challenges of forgetting about personal mistakes incurred during early performance skates at competitions. Not ruminating on such errors, with subsequent skates still to come, prevents internal distraction, "I

spend the time in between those skates focusing on not getting too high, too nervous, or too jittery. Just really clamp down and focus on what you want to do in this [next] skate."

Other MAs described specific competitive situations that require them to strategically *manage external distractions* from other competitors, family, or friends. Shannon explained the detriment of focusing on any athlete besides oneself:

> With weightlifting, the biggest thing is you have to concentrate on your own game. If you pay attention to what other people are doing, you're looking outside of yourself and you're going to screw yourself over. When you see people missing lift after lift, it's contagious. All of a sudden, you're like 'oh my god.' You're going to go out and miss.

Lauren described her strategy of forgetting about significant others during competitive events:

> I find it much, much harder to focus on what I'm supposed to be doing when I know that my mom, my daughter, my friend, or my partner are sitting in the stands. And I know I'm not alone in that. I know that some of my teammates are like "I hate skating in [my hometown], I hate when my husband's here" … I have to pretend that they're not [watching] until we're finished skating [even though I want them to be here].

Focus Plans. Most of the MAs used competitive focus plans prior to and during events to elevate their performance. Cara's plan attended to a priority of steps leading up to her race:

> A lot of it is having a detailed plan, but also chunked. Easy skiing, intensity, getting skis, being in the warmup gate. But if things fail, the thing is to adapt and say "what is the most important thing here?" Then, you have to work backwards and say "what is the next most important thing?" … Having a plan and being adaptable, that keeps me focused instead of just saying "ahh, I got here late."

Wendy's plan attended to task-relevant cues that optimized her performance during a canoe race:

> [Focusing on each stroke] allowed me to stay focused on the task at hand. It kept my mind away from negative thoughts like losing balance. I didn't focus on anything that would detract from what I'm trying to do. Staying [focused] in the boat, I really just have to relax … then I just keep my eye on the finish line so that I'm like "okay, it's coming"… I guess it just allowed me to stay focused in the moment.

Mindfulness was also a refocusing strategy to rid one of performance-limiting thoughts. Ben added, "You acknowledge those thoughts and you let them go. Even when you're racing, 'okay, that's a weird thought', but then you just acknowledge it and let it go and don't follow up on it."

Positive Focus of Attention. More globally, MAs had a positive focus of attention to elevate all aspects of the sport experience. Many MAs sought to deliberately attend to and extract positive information from many training and competitive environments as a form of self-messaging. Rather than framing a potentially difficult aspect of sport as a negative, they employed a self-serving focus to seek out the positives. Amy noted:

> Any training, anything you're doing, if you're constantly thinking about the negative side of it, you tend to do that. Instead of thinking what not to do, I stay in the positive side of what to do and what I'm trying to do. It helps me elevate my game so I perform better.

Positive self-messaging helped Cara overcome physical discomfort during endurance races:

> If [the pain] is really, really hard, you just have ways to sort of, I don't even like to use the phrase "push through the pain", but I'd frame pain in a positive way. It's not pain, it's power … I try to put a bit of a positive spin on it.

Whether during hard exertions or in appraisals of their competitive environment, several MAs demonstrated a systemic focus on the search for positives as a means to elevate their performance and to manage physical discomfort.

Self-Confidence

Situations Affecting Self-Confidence. MAs described a need to have self-confidence to compete optimally and articulated several situations in which self-confidence is affected or threatened. MAs described how lapses in self-confidence can result from fatigue (e.g., being tired and getting beaten by other athletes in training) and following poor performances under adverse environmental conditions. Shannon felt lapses in self-confidence came from "just feeling off", explaining:

> Some days, you just approach the barbell and you know you're going to lift it. Other days, you approach the barbell and you're nervous and not confident. Those times, you miss [your lift]. The days you feel really good and confident, you make them. For me, it's directly related to confidence and how I'm feeling inside that day.

Ben discussed how expectations can influence self-confidence. He noted:

> One of the killers is when you're out there [in open water swimming] and you look up and you think you've gone a certain [distance], you think "I should be done, I should have gone two kms by now, I should be closer to this point [on race course]." Then, you look up and you're like way back from it, and you feel like "oh man". That's just crushing.

Techniques to Regain Self-Confidence. Finally, MAs alluded to certain techniques to regain self-confidence following lapses in self-belief. Our team sport athlete, Lauren, often recruited her coach as a confidence support:

> The first way I addressed [a lapse in confidence] was talking to my coach … "I'm so sorry, I'm trying to manage this knee pain, I'm going to physio, I'm doing what I can." So telling her my concerns and having her reassurance that "no, you're still keeping up, it's not a big deal"… So obviously that really helped.

When Mark's self-confidence was shaken, he self-reflected for greater perspective on why he competed in sport:

> Even if I'm not going to win some event ... I'm enjoying what I'm doing. [I reflect] back on what I read about that at the end of your life, it's the things that you didn't do that you'd regret, not the things you did do. So that's what kind of started this journey [over the past year] of trying out pole vault. It's something I'd always mentioned that I wanted to do and that certainly helps with lapses in confidence.

Additionally, MAs described other identifiable techniques such as pre-competitive routines (e.g., a habitual routine provided a calming influence to elevate confidence), cognitive reframing strategies (e.g., altering a potentially negative mental thought into something more positive or achievable), and working towards the attainment of small, progressively achievable goals.

Interim Discussion of Deductive Data

The deductive results illustrated the use of the traditional "Big 5" to enhance performance in competitive sporting environments. While there were some nuances with respect to their uses, MAs most often employed the "Big 5" similarly to what has been demonstrated extensively with younger, non-MA cohorts. MAs foremost described the beneficial outcomes resulting from mental skill use, the specific situations that required mental skill use, and the techniques

associated with each mental skill. However, data associated with technical uses (especially for how they proceduralized GS, imagery, and concentration) were not as extensive as data associated with beneficial outcomes and situational uses. Perhaps this is an indication that MAs may need assistance from applied sport practitioners (e.g., MPCs) regarding how to effectively implement these skills, or there are difficulties in conveying exactly how they used techniques despite their ability to recognize situations and benefits.

At times, MAs used many mental skills simultaneously. For example, Luke suggested that relaxation, or arousal regulation, was a precursor to using additional skills, "If you're unable to relax, the other ones are really hard to deal with. Concentration, getting nervous -- just knowing how to relax to clear your mind first. You have to empty the cup before you can fill it." Despite our representation of the data being contained to five "mental skill silos", this was not always the case. Further, MAs recognized how certain traditional mental skills depended upon the specific sporting context (e.g., differences in competitive focus plans required for nordic skiing versus road-running). With most of our sample considering themselves multi-sport athletes, interestingly, they could still identify differences in mental skill use that were dependent upon specific sport contexts.

Although all of our MAs elaborated on their use of the "Big 5", these were not their only applications for sport psychology. Namely, their use of sport psychology went beyond the traditional performance-oriented discourse to support the Masters sport lifestyle, which encompassed skills and strategies to maintain regular sport activity.

Beyond the "Big Five": Non-Traditional Uses for Sport Psychology

Our inductive results illustrate the application of non-traditional skills and strategies that uniquely capture the particularities and life stage-related needs of middle-aged/older adults. MAs

described how they applied these skills and strategies deliberately to support their routine participation in a meaningful and enjoyable sporting activity. To this end, the results illustrate personal, social, and other facilitative strategies. They often mentioned circumstances, such as age-related physical decline and injury, which they navigated using psychological strategies. MAs purposefully manipulated social environments and strategically implemented priorities to regularly engage in sport. The results also illustrate actionable strategies they use to support a sporting lifestyle and their athletic identity, including those that enable them to navigate and/or negotiate non-sport related responsibilities and commitments (see Table 3).

Placing Priorities on Continued Sport Activity

According to the MAs, their maintenance of a sporting lifestyle could be partly attributed to efforts to make sport pursuits a personal priority. This continually required one to cognitively justify why he/she needed to stay involved in sport, which included self-talk strategies that justified the need to put their health and fitness first. Placing a priority on sport provided MAs with a psychological release, reaffirmed that sport was an activity solely for them, and signified the embodiment of an authentic self.

Cognitively Justifying One's Sport Involvement. The MAs described patterned tendencies in thinking that served to legitimize their decision to pursue sport over other personal matters, and their comments sometimes expressed an obstinate commitment and intention towards this prioritization. Personal justifications were often associated with acknowledged personal sacrifices, and MAs had to be okay with those decisions. Shannon explained:

> You have to live your life so that training becomes a priority … Then you have to also become okay with making sacrifices in your life. I don't really call them sacrifices, I mostly call them choices … making it a priority is just choosing. You don't choose short term fun when you have a longer term [sport] goal.

Cara continued:

> It's important [to prioritize sport] and I would say that's it's okay to put yourself first for a little bit of time, to dedicate a certain amount of time to yourself every week or every day ... This also has to be within reason, so if you do have someone who's doing an Ironman or something like that and leaving their kids, that's not ok (laughs).

Finally, Luke emphasized that guilt often played a role when prioritizing sport, "Health has to be first, then family and friends, great projects, work, that's the way it should be. Took a while to not feel guilty about it, took a little bit longer to create a lifestyle around that." Luke was able to overcome his guilt and could justify his sport activity because "When your [work] career is over and they say thank you very much, the only thing you're going to be left with is your health."

Framing Sport as a Personal Outlet and an Investment in Oneself. The psychological strategy of placing priorities on sport was predicated to a certain extent on an awareness that the sport routine had become a psychological release from everyday potential stressors, a beneficial outlet from other areas of their lives, and an investment in oneself. This was seen amongst all but one MA. The MAs appeared to use sport as a psychological escape from the normalcy of their daily lives. Ben explained his sport routine was "For stress relief and stuff like that. There's a lot of psychology around stuff like that. That's one of the main drivers -- part of why I swim too because the rest of my life is pretty hectic and stressful." Wendy noted:

> You know at the end of a busy work day that you're going to go to the gym and that you're in many cases in a peaceful place. You're doing it for you and you want to be there. You are there with people you enjoy being with. I definitely feel like I need this in my life because it gives me balance and an outlet.

When further probed what she meant by "outlet", she continued:

> Sport is an outlet, meaning I'm just doing it for me. This is my time, there is no one else involved. It's like as though you want to be there, you're doing it, it gives you peace of mind, it's good for you.

Sport contributed to "all other elements that aren't sport-related [becoming] easier. You get that reset of sport that is your enjoyable release" (Mark, pole vault), a notion that was further exemplified by Luke who claimed that sport was a "spiritual" and "cathartic" experience.

The Authentic Self as the Embodiment of Prioritizing Sport. A salient interpretation of prioritizing sport was exemplified by Shannon, a single, 38-year-old weightlifter and cross-fit athlete. Sport enabled her to become the embodiment of her true, authentic self. Despite this benefit, she shared several other challenging experiences while pursuing her sport, such as stigma from significant others who did not understand her commitment, and difficulties finding romantic partners who shared her sport interests. Yet, she believed that living authentically positively impacted other people, while contributing to her own psychological benefit:

> I just try to live my life the way I want to live it … I like that me living my authentic journey is positively influencing other people, if that makes sense. I'm not doing it on purpose, it's just that I'm doing my thing and I feel like this is what I've been meant to do. I can tell that it's having a positive impact on others and I love that.

Being comfortable in her own skin was important for her. She felt many non-MAs do not understand the motives for one's prioritization of sport, "Learning and getting comfortable with who you are as a person and as an athlete, and owning it. People think I'm weird because of the shit I do, but I just don't care because it's who I am." By living the embodiment of her authentic self, she could justify why she needed to prioritize maintaining the Masters sporting lifestyle.

Strategies that Facilitate Fitting in Regular Sport Activity

All of the MAs elucidated personal strategies to successfully "fit sport in" among work and/or family commitments, such as integrating, scheduling, and managing commitment. These strategies were important because sustaining a habit depended upon continually 'fitting it in'.

Integrating and Twinning Sport. To supplement their regular workout routine, MAs intentionally integrated training with active commuting, or twinned workouts with existing

parental/coaching obligations. Mark fit in cross-training for pole vault by actively commuting, "I do commute to work by bike all year, but I'd never actually counted that as training … now with younger kids, when I don't have as much time, [it's] about incorporating it a little bit more." Amy continued, "Well, so I still drive my son around a lot to his hockey and soccer. While he's on the ice, I'm going to do a workout rather than sit in the stands and watch him practice." Amy often brought her son to training so she could fit it in, and there was an expectation that "he knows he needs to keep himself occupied for a few hours because I'm doing something else." Finally, Cara explained how she fit sport into her busy life:

> I'd say the thing is actually integrating things that I need to do [i.e., workouts] by active commuting. I did mention that I'm a coach and a lot of times I will do a workout with my athletes if it's not taking away from my coaching. Integrating, that's sort of a hobby [because] I'm a volunteer coach. So trying to integrate [training] into things that I do.

By integrating personal responsibilities with physical training, MAs could incorporate sport and maintain the sporting lifestyle without taking time away from other important life circumstances.

Scheduling and Structuring the Training Habit. MAs habitually structured their environment to get out the door to train. For Wendy, structure was important to maintain her sporting activity: "We're on a year-round program, so I dedicate my time and don't ever miss a workout. That's part of my life. I structure it so that I'm able to do the workouts and training that I need to do". Specifically, MAs scheduled sport very early in the day or scheduled other personal matters around sport. Scheduling sport early maximized Cara's chances of doing it:

> I find personally if it's something you had to get up to do early in the morning first thing, the chances of getting it done are like 95%. But as the day goes on, every hour, you either get work emails or other things happen that make you sit there and say "should I really do that workout tonight?" Or somebody calls and asks you to help them, you find yourself saying "what's more important?" If you can do [sport] before the day gets going, the odds of it happening for the most part are a bit higher.

With a young family, Mark needed to pursue sport "*extremely* early in the morning":

> [The night before], I am thinking about what the next day's training regimen is going to be and working back the time it's going to take, time to set my alarm, so that once my alarm goes off I don't have to think about it in the morning … It has to be a habit that you don't have to think about.

Luke proclaimed that his use of a "flip day -- where sports, health, and fitness are first, and then work is scheduled around that" effectively enabled him to structure sport into his schedule.

Managing Personal Commitment to Sport. MAs noted they occasionally altered the amount of time they committed to sport because of other life responsibilities. They saw this temporary reduction as serving their larger purpose of maintaining the sporting lifestyle. Lauren, who supplements her synchro-skating by paddling for a Masters dragon boat team in the summer, explained:

> You have to find what works for you. Maybe it's something with less of a commitment. I'm switching to dragon boat here [from synchro-skating] because some of the girls share spots on one of the teams … You paddle on Monday night and I paddle on Thursday night and we're absolutely committed to that, but twice a week would be too much. I think the team's ok with that. These are fixes [to make sport work].

This skill involved realistically managing performance expectations when commitment was altered, while recognizing that this decision allowed them to attend to non-sport responsibilities. MAs believed they could recognize when it was an appropriate time to ramp up sport and when they would need to tone it down. When asked to describe how she negotiated her sport in terms of her current level of competition and the obligations she had to her husband and family, Wendy said one has "to pick and choose and be like 'this is too much right now'. You can still do it, but you can't go to all the competitions. Later you can come back to it and you're not fully out of it." Amy concurred:

> You have to pick what you're going to do [i.e., hours committed to sport activity] that fits into your life so that you maintain your life balance. I don't want to feel like "oh, I keep saying I'm going to go to practices five days a week and I keep not making it"… I don't try to bite off more than I can chew.

Social Strategies Associated with the Continued Pursuit of Masters Sport

MAs described supportive relationships from significant others, including interactions with other MAs and family, to facilitate their continued sport activity. They attempted to structure their social world to support their sport passion, used social signaling to indicate their priority, and made social negotiations and commitments to help support their sport lifestyle.

Recognizing and Cultivating Supportive Social Environments. MAs described how relationships within the Masters community supported their regular sport activity. Their community made them feel they were not alone and were validated in their sport pursuit. Shannon felt her community provided a "huge psychological benefit" and "because of Masters sport, I can move anywhere in the world and have immediate friends" so she could experience "these awesome connections" with other MAs. Many of the MAs attempted to seek out relationships and to selectively spend their time with similarly passionate people who understood their lifestyle and their priority. Luke contributed how he sought out a social environment of sport peers and the benefits they provided, "Post-workout, I'll come back to the café and meet friends mostly from sport that are passing through my village square. Friends and other athletes just give me an incredible amount of energy that I can feed off." MAs intentionally reached out to provide support to training mates, expecting reciprocal support in return. Amy explained:

> You have this support group [of other MAs] around you where somebody would notice if you're not there. Somebody would reach out and say "how are you doing, I haven't seen you lately?" That helps to keep you in a more balanced state. I think the way we support each other in Masters sport is "hey, how's your competition going? How's your training going?" You just reach out to people.

Amy added that Masters sport "is not a 'cut-throat', here-to-beat-you'"; rather, "You encourage other people, they encourage you, and everybody works together to have a positive experience."

Social Negotiations and Strategies for Enlisting Support from Significant Others. To ensure effective support, MAs created social contracts with spouses to trade off time for each other's sporting activities, or engaged in negotiations with a significant other. Often, negotiations involved compromises with significant others to ensure their approval. Lauren noted:

> As much as you can control it, try and make sure the people in your family, in your personal life, are supportive of it. If your husband [is against it] and goes "jeeze, you're out every Wednesday night and come home super late", try to explain "yeah, but I'll be happier for the rest of the week because I've had this time away." Offer, "why don't you go bowling with your buddies every Thursday?" Try to trade off that way.

Wendy recounted negotiating strategies used to ensure reciprocal support with her husband, specifically during a period when they had two adolescents at home:

> Communication for sure. Coming up with a plan so that you make [sport adherence] work … we had a deal where we would allot time for each of us to get a workout in and we supported that. We made it so that my husband was supportive at home, to say "okay, it's your time, you go do your workout" … you make it work and you are able to help each other so that you are able to do what you want.

Unmarried MAs sought romantic relationships with those who understood and/or shared their serious sport pursuit so they would not have to forfeit their lifestyle. Shannon felt that MAs who were heavily into training "tend to be single and might have lonely times", and "when you meet those people [romantic partners] because you're very likeminded, it's awesome."

Social Signalling of One's Priority to Sport. Some of the MAs described how they intentionally signalled and sensitized employers/colleagues to their priority. Ben explained:

> My first year was hard because I had a boss who said "you're taking an hour for lunch [to go swim]?" He never became [really supportive], but he retired. My new boss is super supportive, he's really cool with it. We've adjusted my work schedule around it. In fact, we've adjusted the entire unit schedule. So when you have people around you in your life that are supportive of [your priority], that's really helpful.

By bartering with his employer, Ben was able to continue swimming at lunch. Luke described the importance of signaling the priority of one's sport involvement, "I suggest you work it into

your lifestyle right at the beginning. You let colleagues know around you and say 'no, I have a routine.'" Lauren had effectively sensitized colleagues to her routine sport commitment:

> My friends who aren't skaters know absolutely you can't ask Lauren to do anything Wednesday nights. She's committed every Wednesday night, she's not going to miss a practice for anything, so don't even invite her. It's the mindset – "[skating] comes first".

Although it seemed important for MAs to have bosses that understood their priority to their routine sport activity, some like Amy were "very conscious that I don't get pushed around at work. It's like 'no, these are my priorities, this [sport] is more important.'"

Social Commitments and Obligations. Some MAs described the use of social accountability strategies and ways of enlisting co-participants to augment their social commitment to sport practice. Cara explained, "It's having a partner or calling someone and making a date to do it. That doesn't necessarily help to fit [sport] in, but it helps to bring it up the priority list." Interestingly, Ben maintained sport activity by tracking it (e.g., on spreadsheets), telling others (i.e., friends, family), and making an initial up-front investment (e.g., purchasing a one-year membership in-full) so he had "a little bit of skin in the game." These strategies provided Ben with a "social push" to maintain his sport pursuit.

Our team sport MA, Lauren, felt obliged to go to skating because she did not want to let her teammates down. She described how she regularly pursued sport due to the obligations to her teammates and the duty she felt to reciprocate her peers' commitment to their sport training,

> I just remind myself that these are all things I like to do so it's not a major struggle every time [to get out the door to train]. I'd like to think everyone has those days where they go "oh, I don't really feel like this." The team aspect is so important to me that I know if I don't do this, it's selfish. I would be crossed, and we are crossed as a group, if we all show up for practice on a Wednesday night and two girls for no good reason haven't come … Psychologically, I know I wouldn't like it if somebody else goes "yeah, I had a hard day at work, I'm going to stay home."

Embodied in the social commitments to her team, Lauren also assumed additional responsibilities to ensure her teammates' experiences were positive. These responsibilities included regularly checking in on teammates, providing assistance to enhance her teammates' experiences, and ensuring all teammates were included within the team environment.

Managing Age-Related Concerns

Many MAs used strategies to manage age-related performance decline. Specifically, MAs used mindfulness-related strategies tailored towards accepting their physical limitations, and additional strategies to compensate for age-related performance decline.

Mindfulness Strategies. MAs expressed the need to be mindful of the nature and limitations of the aging body and to reflect upon the enjoyable experiences associated with sport as a counter to age-related decline. Mindfulness strategies were used to gain perspective on the aging process without harshly judging oneself for limitations that were inevitably shared by all athletes as they got older. Mark, who had only taken up pole vaulting in recent years, explained:

> I can feel my physical limitations compared to the springs that I used to have when I was young. [The springs] aren't there anymore (laughs); an obvious limitation physically. Mentally, first of all, I try to process that and try to be okay with that and understand that I still can enjoy learning a new skill.

Although he was mindful of his physical limitations, Mark could still enjoy pursuing sport because there were always new skills to learn. Amy also accepted physical limitations:

> You can't expect to do what you were able to do when you were 20. What your brain thinks you can do and what your body is capable of doing don't necessarily line up. You need to use your brain to talk yourself through it and say "okay, I'm trying to do this, don't overdo it, manage your expectations."

Being mindful of age-related limitations was paired with a shift towards other cognitive-related strategies (e.g., positive self-talk). While many MAs recognized managing personal performance expectations was important as an older athlete, Amy astutely pointed out that MAs "need a

regulator in your brain to say 'okay, don't overstep what your body can do. Listen to your body. It's okay to do this, and you don't have to do that'" to reinforce the aging process.

Compensatory Strategies. Many of the same MAs who were mindful of their current physical abilities also demonstrated a need to compensate for declines in physical performance. These MAs deliberately implemented strategies to compensate for age-related declines in both training and competitive environments. In particular, some MAs turned to smarter competitive psychological tactics, visualization, and mental rehearsal to find an edge that would help them try to maintain performance. Luke believed competitive race strategies "become much more significant as an older athlete. As younger athletes, you just hammer everything and the chips will fall as they may. Now, you go 'no, no, I'm going to *cheat* you [other athletes] in a way.'" When asked if sport psychology could assist in compensating for declining physical ability, Amy noted that imagery was a beneficial substitution as physical training was hard on her body:

> Absolutely, yeah, it certainly can. You can train visually instead of physically as long as you already know the [physical] skills … [Imagery is] like practicing [the physical skill] in my head and I can do lots of that. I can't actually do the jump that many times.

Additionally, other MAs noted compensatory strategies such as self-talk strategies (e.g., personal mnemonic strategies to overcome difficult sections of race course), more careful consideration to non-physical facets associated with training (e.g., monitoring nutrition), and altering training regimes. Even when negotiating age-related injury, Luke tries to "find pleasure with other things" in his training regime, such as stretching or weight training, so that injury "doesn't become lost time, it just becomes a different program."

Discussion

This study aimed to explore MAs' use of sport psychology as it pertains to enhancing performance, their experience, and the sporting lifestyle. MAs indicated uses for sport

psychology that were both traditional and non-traditional. They used traditional mental skills to enhance performance, similar to younger, high-performance athletes (Weinberg & Gould, 2015; Williams & Krane, 2015). MAs could effectively state the benefits, situations, and technical uses for goal-setting, imagery, arousal regulation, concentration, and self-confidence. Many MAs recognized they had learned these traditional skills as much younger athletes, but they had not fully considered the positive outcomes associated with sport psychology until they were older athletes. In terms of non-traditional uses for sport psychology that transcended performance enhancement, MAs richly described strategies and skills to enhance their pursuit of regular sport activity.

Dialogue on Non-Traditional Uses for Sport Psychology with Masters Athletes

Interestingly, MAs were rather confused when probed with questioning related to "How does sport psychology enhance your enjoyment or satisfaction in sport?" Their lack of responses to this probe, even when it was paraphrased in alternative forms, revealed that the MAs might have never considered this role for sport psychology. However, they were very convincing and elaborated upon the specific psychological strategies they employed to maintain the athletic lifestyle. MAs were forthcoming in describing their strategic efforts to maintain regular sport activity, including: personal prioritization strategies, using strategies to leverage their social world, and strategies to fit sport in. They were also forthcoming in describing themes around the management of age-related issues, which had benefits in terms of maintaining the lifestyle and for performance retention.

The MAs described various strategic personal and social applications that they felt enabled them to *adhere* to the adult sporting lifestyle associated with sustained sport involvement. This information is novel and interesting because of a dearth of literature on

lifelong sport adherence. Despite a long-standing line of literature describing strategies to maintain exercise adherence (e.g., see Dishman 1982; Epstein et al., 1980; Poag-DuCharme & Brawley, 1994), psychological issues surrounding sport adherence have not been addressed. The self-regulatory demands facing young exercisers and sportspersons are inherently different. The institutionalization of sport has made it easier for young populations to maintain sport adherence. Sport is generally structured/scheduled for the athlete (e.g., regular practice/training structured by sport organization), while social norms and obligations to teammates and/or coaches enable greater sport adherence. Since sport is institutionalized for young athletes, there are fewer self-regulatory processes required to maintain sport adherence. However, with less institutionalization around exercise, young exercisers often require more self-regulation because exercise adherence is more reliant and incumbent on the individual. Considering sport and exercise psychology has traditionally emphasized adolescent, young adult, and elite populations, it is perhaps unsurprising that there has not been a need to develop adherence-based strategies for sport compared to exercise.

The institutionalization of sport has not persisted across the lifespan. Less formalized structure and more reliance on the self-regulatory demands of the individual (e.g., scheduling, financing, and organizing their own sport activity) is required for middle-aged/older adults involved in sport. Thus, the development of self-regulatory processes to assist MAs' maintenance of sport becomes similar to those developed for young exercisers. However, considering the different life circumstances facing younger versus middle-aged/older adult populations (e.g., occupational duties, familial responsibilities), nuanced self-regulatory processes would be required in this regard. Sport psychology and other facilitative strategies to maintain sport adherence becomes increasingly important for MAs considering the self-

regulatory demands they assume and the constraints they navigate with less formalized supports. Considering the positive implications associated with sport across the lifespan (Geard et al., 2017), there is a need to better understand how self-help strategies can facilitate middle-aged/older adults' maintenance of a routine sport activity.

Personal and Social Strategies for Prioritizing and Adhering to Sport

MAs used personal and social strategies to maintain sport adherence. Little research has investigated the use of such strategies in sport, but we can draw upon external literature in exercise psychology and behavioural change to explore their impact. MAs cognitively justified why and displayed an intention to continue pursuing their sport despite competing demands. Buckworth & Dishman (2012) suggested that intention has positive associations to exercise adherence, and similar parallels can be drawn to sport. Living as the authentic self, or the embodiment of prioritizing the MA sport lifestyle and identity, were additional measures to maintain MAs' continued sport activity. Previous research shows that strong identity formation facilitates intention and behaviour towards physical activity maintenance (Rhodes, 2017). MAs also engaged in sport because it was a psychological release and provided them a personal outlet away from other personal responsibilities. Framing sport as an outlet is not uncommon in Masters sport (Currie, 2019), and for the purposes of our study, it enabled MAs to maintain their sport activity. MAs recognized that scheduling (Dionigi et al., 2012) and structuring their day around sport enabled them to maintain sport adherence, contributing to sport becoming a habit. Evidence in exercise psychology suggests that habit may influence action control of physical activity (Rhodes, 2017), and similar propositions can be applied to sport. Further, MAs' ability to integrate sport with other personal commitments and responsibilities contributed to greater sport adherence. Other personal strategies around altering one's commitment were effective to

maintain sport adherence, as it is not uncommon to reduce one's commitment depending upon other pertinent life circumstances at that time (Young & Medic, 2011b).

The MAs also utilized social strategies, such as purposefully cultivating supportive relationships, making negotiations with significant others, and social signalling to indicate priority, while also being committed/obligated to training mates. MAs often used strategies to seek out and leverage a socially supportive environment. Our MAs recognized and cultivated socially supportive environments (e.g., significant others, other MAs) to maintain adherence to sport. This theme show similarities to Carron et al. (1996) who described family and significant others as significant predictors of exercise adherence and compliance. Our results showed that MAs' strategically gravitated towards others who recognized their prioritization to adult sport. This involved making negotiations with significant others (e.g., scheduling workouts based around others' personal schedules), many of whom were also physically active. Dionigi et al. (2012) suggested that MAs also made negotiations with significant others (e.g., spouses), and this enabled MAs to continue their sport activity. Signalling one's priority to others (e.g., colleagues, friends) was another effective strategy utilized by MAs to maintain sport adherence. Finally, MAs were committed and obligated to teammates and training partners, which has been shown to influence MAs' sport commitment (Young & Medic, 2011a). Similar social accountability strategies and enlistment of co-participants have been effective to maintain exercise adherence (Buckworth & Dishman, 2012), and similar strategies in this regard could be effective to maintain MAs' sport adherence.

Relationship Between the MA Sporting Lifestyle, Athletic Identity, and Sport Adherence

MAs strongly identified with the lifestyle associated with being an adult sportsperson, as evidenced by Shannon "embodying the prioritization of sport". MAs' personal lives revolved

around their sport activity and it often became entangled with their existing obligations and/or commitments (Stevenson, 2002). MAs purposefully implemented priorities, social strategies, and other facilitative personal strategies to regularly pursue sport, which is an indication regarding their athletic identity because MAs would not deliberately use these strategies if they did not identify with being an adult sportsperson. It is perhaps unsurprising that the more MAs identified with being an athlete, it contributed to greater understanding regarding the learned skills and strategies to deliberately maintain their sport activity (Anderson, 2004). Our results indicated that the sport lifestyle is very intertwined with a strong athletic identity, which could be another indicator related to how MAs can maintain sport adherence.

Strategies for Managing Age-Related Issues

MAs used mindfulness and compensatory strategies to assist them in managing age-related issues. Older adults had an inherent ability to be mindful and accepting of their current physical abilities. Mindfulness is described as a two-fold model: personal attention to the immediate experience, and an orientation towards curiosity, openness, and *acceptance* (Bishop et al., 2006). MAs recognized their physical limitations and used mindfulness to tailor expectations towards what they could do physically. Tentative support has been shown that mindfulness can assist older adults in developing self-acceptance of the aging process (Turner, 2014), which is particularly important since age-related decline is evitable throughout the lifespan. MAs' mindfulness–based strategies could be an effective strategy in this regard. MAs also used strategies to compensate for physical limitations. The Model of Selective Optimization with Compensation (MSOC; Baltes & Baltes, 1990) illustrates how older adults stay involved in sport across the lifespan. Specifically, one element of the MSOC involves compensation, which refers to the use of skills and/or strategies to maintain performance despite losses in functioning (Baltes

& Baltes, 1990). Our MAs effectively utilized compensatory strategies to manage age-related decline. These strategies included: imagery, personal mnemonic strategies (Baltes & Baltes, 1990), and competitive psychological tactics/race strategy. While MAs did alter training regimes based off physical limitations, most compensatory strategies were psychological in nature. The use of compensatory strategies to manage MAs' age-related performance detriments are not uncommon. Langley and Knight (1999) demonstrated how one MA compensated for physical decline by focusing on their primary sport (e.g., tennis) rather than secondary sports, playing tennis at a club with softer surfaces, having a stronger partner in doubles tennis, and using an oversized tennis racket. Rathwell and Young (2015) illustrated how a MA compensated for losses in speed and power by substituting for more technique. While these studies mainly illustrated the use of compensatory physical strategies, our MAs predominantly described compensatory *psychological* strategies.

Interestingly, our interpretations of the data illustrated mindfulness and compensation were used in concert *and* in tension with one another. In some instances, mindfulness and compensation were used in concert because MAs first acknowledged their physical limitations, and thereafter implemented compensatory strategies to assist and redirect oneself to other avenues that reinforced or accepted aging. For instance, Amy recognized that to avoid rushing back or to potentially prevent future injury, imagery sessions were effective to minimize the strain physical training had on the body. However, another poignant interpretation of the data showed tensions between mindfulness and compensation. If MAs were truly accepting and non-judgmental regarding their physical limitations, there would be no need to implement compensatory strategies to achieve a competitive advantage. In this regard, mindfulness and compensation ran counter to one another. Some MAs resisted age-related decline and used

compensation to obtain a competitive performance advantage, such as psychological strategies to "cheat" (Luke) other athletes, or phrasing around "I'm starting to understand my physical limitations so I need the mental part to overcome that" (Mark). This interpretation and these data runs counter to mindfulness and suggests that compensation is incongruent based on the principles in which mindfulness is grounded. Dionigi et al. (2013) suggested that MAs often engage in behaviours that show tensions between efforts to resist or accept aging, which provides support to our latter interpretation. It remains unclear regarding how mindfulness and compensation can either work together or separately to reinforce and/or resist aging.

Limitations and Future Directions

MAs clearly recognized the benefits, what they were applying, and why they were using mental skills, but were more limited when discussing the exact methods/techniques regarding their use. This was especially the case for the traditional mental skills. Since we inductively analyzed the data once grouped deductively according the "Big 5", we were limited in being unable further deductively analyze on methods/techniques for the traditional skills. Future research looking at how to implement sport psychology services with MAs, particularly the methods/techniques related to the "Big 5", is required. Moreover, Vealey (2007) has argued for consistent use of operational definitions regarding skill, strategy, and target areas versus process facets within the mental skills training literature. The teasing out of skills versus strategies, for example, is difficult and future research in the Masters sport context would do well to attempt such delineations to inform frameworks on applied sport psychology interventions.

Although we had a diverse group of MAs in terms of age, race, marital status, sport, and competitive orientation (e.g., performance- versus experiential-oriented), most of the sample comprised individual sport athletes. Future research investigating the use of sport psychology in

a team-sport setting, or what Vealey (2007) termed team skills, is warranted. Future research continuing to explore the unique and facilitative applications for sport psychology, such as research with MPCs or Masters coaches, will greatly enhance our understanding of sport psychology and MAs since they would presumably have a greater understanding of the methods and service delivery, in addition to age-specific content pertinent to older adults.

What Do These Findings Mean for Prospective Sport Psychology Content and Services?

The current findings suggest that applied sport practitioners should consider the age-specific needs and preferences which apply to older adults. This may include the application of traditional and/or non-traditional facets of sport psychology. The study demonstrated a nuanced perspective regarding the application of sport psychology with older adults compared to younger sporting cohorts, with MAs applying traditional mental skills to enhance performance, and non-traditional or novel skills to maintain sport adherence. Despite understanding pertinent content areas, there is still a need to better understand how this content relates to future sport psychology curriculum, programming, and resources tailored specifically to older adults. Considering the aforementioned mental skills and strategies, hearing those who could assist us in informing the techniques, implementation, and delivery of services will continue to elucidate novel applications for sport psychology and how it can be used to support the Masters sport experience.

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Table 1

Masters Athlete Demographic Information

Name	Age	Sport	Yrs as MA	Training hrs/wk	Competitive events (past yr)	Highest competition level (past yr)	Sport expenditure ($ in past yr)	Performance[a]	Experience[a]	Lifestyle[a]	MST[b]
Wendy	62	Dragon boat/sprint canoe	10+	9-11	6-8	Intl	2000+	4	4.5	4.5	5
Cara	54	Nordic skiing	10+	12-14	15+	National	1500-1999	3.5	4.25	3	4.33
Lauren	54	Synchro skating	10+	3-5	6-8	Regional	2000+	3	4.75	5	4
Amy	58	Long jump/high jump	10+	6-8	6-8	Intl	1000-1499	3.67	3.25	4.5	5
Shannon	38	Cross-fit/power-lifting	5	15+	6-8	Intl	2000+	3.6	4.5	4.5	4.67
Luke	55	Biathlon/cross-country running	10+	15+	15+	Intl	2000+	4.33	5	4	4.67
Mark	45	Pole vault	<1	6-8	3-5	Regional	1000-1499	3.17	4.25	5	4
Ben	42	Open-water/indoor swimming	5	9-11	9-11	Intl	2000+	3.33	4	5	4.67

Note: Demographic information was collected from pre-screen survey. [a] Mean scores represent participants' orientation towards Masters sport in terms of competitive performance, appreciating the experience of sport, and maintaining sport as a lifestyle, respectively. [b] This mean score represents familiarity/understanding of mental skills training. [a,b] Ratings were from 1 (strongly disagree) to 5 (strongly agree).

Table 2

Number of Quotes Per Theme, Subtheme, and Participant for Use of the Traditional Mental Skills Catalogue

Higher order theme	Secondary theme	Tertiary theme	Wendy	Cara	Lauren	Amy	Shannon	Luke	Mark	Ben	
Goal-setting (32)	Benefits (8)	Orients training (10)	2	4	3	3	2	0	1	3	
	Types of goals (14)		1	3	1	1	2	2	0	4	
Imagery (27)	Benefits (12)	Competition preparation (11)	7	2	3	2	2	2	2	3	
	Techniques (4)		1	1	0	0	0	1	0	1	
Arousal regulation (36)	Benefits (8)		2	1	1	1	2	0	0	1	
	Situations (13)		2	2	0	3	1	4	0	1	
	Techniques (15)		2	3	3	1	0	4	1	1	
Concentration (42)	Situations (12)	Managing distractions (5)	2	3	8	1	2	0	0	1	
	Focus plans (19)		3	6	1	2	1	2	0	4	
	Positive focus of attention (6)		0	4	0	1	0	0	0	1	
Self-confidence (19)	Situations (6)		1	0	1	0	1	1	0	2	
	Techniques (13)		0	4	1	0	2	3	2	1	
		Total	23	33	22	15	15	19	6	23	**156**

Table 3

Number of Quotes per Theme, Subtheme, and Participant for Beyond the "Big Five" and Non-Traditional Uses of Sport Psychology

Higher order theme	Placing priorities on sport (30)	Strategies facilitating fitting in regular sport activity (14)	Social strategies associated with continued pursuit of Masters sport (32)	Managing age-related threats and concerns (25)	
Secondary theme	Cognitively justifying one's sport involvement (13)	Integrating/twinning sport (5)	Recognizing/cultivating social environments (10)	Mindfulness strategies (16)	
	Framing sport as a personal outlet (13)	Managing personal commitment (4)	Social negotiations/enlisting social support (8)	Compensatory strategies (9)	
	The authentic self (4)	Scheduling/structuring the training habit (5)	Social signaling/sensitizing (4)		
			Social commitments/obligations (10)		Total
Wendy	5	2	2	0	9
Cara	4	2	1	0	7
Lauren	2	1	12	1	16
Amy	1	4	5	11	21
Shannon	7	1	4	2	14
Luke	5	1	3	7	16
Mark	1	2	2	4	9
Ben	5	1	3	0	8
					100

Chapter 4: Masters athletes' perceptions on the delivery of sport psychology services

Manuscript 1 of the thesis illustrated the applications for traditional and non-traditional mental skills by MAs. Traditional mental skills (e.g., goal-setting, imagery, arousal regulation, concentration, and self-confidence) were predominantly related to performance enhancement, while non-traditional applications were related to maintaining sport adherence. These strategies included: cognitively justifying sport, framing sport as an outlet, living authentically, cultivating socially supportive relationships, social signalling one's priority, negotiating/communicating, integrating/twinning sport, managing sport commitment, scheduling/structuring sport to become a habit, and mindfulness- and compensatory-based strategies. Although Manuscript 1 analyzed and unpacked results on MAs' beliefs about psychological content pertaining to their adult sport experience, none of the analyses considered their beliefs about barriers and constraints to service delivery and personal preferences for prospective services. The purpose of the chapter was to explore MAs' perceptions related to the delivery of sport psychology services, particularly understanding any age-specific nuances that applied sport practitioners may have to consider to successfully facilitate services with older adults, including their beliefs on barriers and constraints to such services.

This chapter's data were collected concurrently with data from Manuscript 1, but were put into chapter format because: 1) it would have interfered with the storyline in Manuscript 1 which was solely based around sport psychology content; and 2) if put into Manuscript 1, it would have made the manuscript exceptionally longer for the reader to read. We felt that having a chapter solely related to service delivery would allow us to explore this area in sufficient depth and unpack the richness of the data that we derived from MAs, therefore enabling us to allocate enough text related to the nuances of sport psychology service delivery for MAs.

It is reasonable to suspect that MAs might believe they are different in terms of how sport psychology services should be delivered to them as opposed to younger athletes. There is a precedent that service delivery might need to reflect the preferences of adult sportspersons, which may be different in some aspects to preferences accorded to consultancy exchanges with younger athletes. For example, in a parallel yet different interactive context, MacLellan and colleagues (2018, 2019) demonstrated that coaches who worked with Masters *and* youth used distinctive approaches when working with older athletes which reflected adults' learning preferences. These approaches were not similarly replicated when working with younger athletes. Young and Callary (2018) advocated that "doing more for adult sport" involved training coaching personnel in approaches that suited MAs, such as considering their complex life circumstances and mature perspectives. These approaches were outlined as being very different from those used to facilitate services with younger elite cohorts. Additional evidence provided by Callary et al. (2017) suggests that Masters coaches consider MAs' mature self-concept, assume that MAs can take on much self-directness, and adapt their coaching to be much more personalized in recognition of each MA's circumstances and motivation. These studies suggest that there should be something different about delivering sport psychology services and resources to MAs, and there may be unique facets regarding *how* to effectively deliver these services to adult sportspersons. By extension, we suspected there might also be unique barriers associated with services/resources related to applied sport psychology. Understanding MAs' perceptions on the topic is important considering their unique life demands compared to youth.

It is also important to consider the types of prospective psychological services desired by MAs. After interviewing MAs regarding what they wanted, needed, and currently received out of a coach, Callary et al. (2015) illustrated that MAs wanted their coaches to individualize

feedback, provide intellectually stimulating environments, and take an inherent interest in working with and around the special age-specific circumstances influencing older adults. The expectation that MAs would have certain preferences in terms of what they would like to receive from sport psychology services and providers is anticipated considering MAs' desired coaching preferences. Therefore, it is important to hear these perceptions from the athletes themselves.

The purpose of the chapter was to explore MAs' perceptions related to sport psychology service delivery. It explored what types of prospective services are desired by MAs, whether there were adult-specific nuances related to the successful delivery and implementation of services, and potential barriers that could implicate service delivery. Hearing MAs' views is important to create value/receptiveness to these services, as well as their subsequent application.

Methods

The methods and analyses used herein were similar to Manuscript 1 of the thesis (see pp. 30-34) since this chapter was an expansion of previous procedures. The same participants were used and were given the same pseudonyms as in Manuscript 1. However, differences occurred around the questions which were only asked from section five of the interview guide (see Appendix C, questions 14-16). MAs were asked to describe prospective uses for sport psychology, whether there was a need/desire for more sport psychology resources, programming, and/or services for adult sportspersons, and whether there were any barriers interfering with receiving services. Moreover, these data were only analyzed inductively (Braun & Clark, 2012).

Results

These data, based on MAs' beliefs, provided additional considerations related to how applied sport practitioners may successfully facilitate and deliver sport psychology services to MAs. MAs indicated: 1) recognizing individual differences amongst MAs; 2) attention to the

specific types of prospective services and modes of delivery; and 3) potential barriers limiting their use (for hierarchy of themes, see Table 1) as additional perspectives related to the age-specific nuances and novelties which apply to older adults receiving sport psychology services.

Table 1.

Hierarchy of Themes for Additional Considerations Related to Master Athletes' Beliefs about Service Delivery

Higher order theme	Individual differences & life experiences (14)	Beliefs about creating value for prospective services (25)	Barriers to sport psychology use (16)	
Secondary theme		*Customized services (6)*	*Benefits versus costs (7)*	
			Time (4)	Total:
Wendy	2	4	3	9
Cara	1	3	3	7
Lauren	3	3	2	8
Amy	0	5	2	7
Shannon	1	2	4	7
Luke	2	3	1	6
Mark	2	2	0	4
Ben	3	3	1	7
				55

Note: All numbers in each secondary theme represent its constituent number of quotes; all numbers in higher order themes represent its number of quotes *and* secondary theme quotes.

Individual Differences and Life Experiences of MAs

Applied sport practitioners should be willing to consider individual differences between MAs when facilitating sport psychology services, such as differences in personality, intellect, and past experiences with sport psychology. Some MAs may be less open to learning something new, such as sport psychology, as a corollary to physical training. Mark noted:

> If I've figured out the physical training, done it over and over again, and successful enough to see improvement, then it's probably going to be tougher to then have someone [tell you to] completely scrap that and start over again [using sport psychology].

Masters are generally a well-educated population. Service providers may have to consider the moderating influence that intellect has on the receptiveness to sport psychology:

> Figure skaters as a group tend to be well educated and driven … We're all university educated, we all sort of subscribe, we're all [intelligent people]. Some people just have more respect for intellect and what the brain can do compared to others … I don't think it's a tough sell for a lot of us [MAs]. We know, we value our brains, we know what [sport psychology] can do. (Lauren)

Some MAs recognized that personality characteristics such as "hubris" (Luke) may deter people away from sport psychology. Expressed rather condescendingly, these are people "who are CEOs of companies, where they're in charge, where they have all the answers, and everyone looks to them for answers. They're a little naked when it comes down to sports" (Luke). Notably, MAs often recognized and subscribed to the benefits of sport psychology more as an older adult compared to their younger sporting self. Cara explained:

> I think I did realize that when I was younger that [sport psychology] was important, but I probably didn't apply it as much as I do now … it's probably more engrained in how I do things. I would say it's something that over time, it became more and more important.

Similar views were noted by several MAs, suggesting they may be a more willing and engaged population to work with. Ben acknowledged that some MAs, especially less elite competitors, may not have the previous life experiences with sport psychology:

> With MAs, a lot of them come to sport later in life. They didn't have the early life experience with [sport psychology]. The thing is, they don't know what the psychology can do for them. To have me, some guy that swims a lot tell them about it, they just don't get it. [They think] that's something more for those elite guys. But the thing is, it almost needs to be sold to them because they don't know what the impact is.

Considering heterogeneous differences in personality, education, and life experience will likely be important for applied sport practitioners facilitating sport psychology services to MAs.

MAs' Beliefs about Creating Value Towards Prospective Psychological Services

MAs described different proposals for the effective promotion of sport psychology services to older adults, which included: self-reflection on how mental skills could influence one's life more broadly outside of sport, the integration of mental performance service providers into training regimes, and anecdotal evidence from other MAs.

Some MAs recognized that sport psychology services should be able to transcend sport, while also considering the multifunctional nature of mental skills. Cara explained:

> Maybe something like "hey, these skills are actually going to help you in your entire life and not just with your sport. If you practice them in your sport, it's actually going to help you deal with your sport, your kids, because these are probably the priorities of most MAs now."

Wendy emphasized the need for integrated sport psychology services into her Masters training program so it is not "a one-shot deal", where consultants are invited informally for one session and never return again. She noted:

> If someone has thought about [seeking sport psychology services], or has a connection, they go "oh, I know such and such, they work with teams [on mental skills], let's get them in for a session." Okay. That's it? It needs to be put in with the program. There needs to be more sport psychologists that are connected to [Masters] teams so it is the norm … [they need to be] part of the process.

MAs discussed how anecdotal evidence and storytelling (i.e., testimonials) provided by other athletes helped facilitate interest in services and resources. Mark expanded:

> Thinking about a previous talk [that I attended], it was still kind of useful hearing about other stories about what other people have used. Real life examples I suppose … Hearing those incredible feats that [another older athlete did] gave [myself] motivation that even though I'm not at that level, that [sport psychology] is something that's useful for someone to get to that level.

Other modes of delivery included scheduling mental skills workshops at times where MAs were available (e.g., practice times), the use of audio (e.g., instructional audio related to monitoring pre-competitive arousal), and incorporating coaches into the mental skills training process.

Customized psychological services were one particularly poignant prospective service desired and valued by MAs. MAs wanted services to be created specifically for each individual based off their own personal needs and/or preferences as they pertained to being an older adult:

> What one [e.g., MPC] has to do before [providing services] is essentially tailor it to that individual or to their lifestyle and the fact that they're a MA and they have all these other things going on in their life. You deal with some of those things first … because they're adults, they're supposed to be proud, they're supposed to be independent, they're supposed to be self-reliant … they have to be dealt with a little bit differently. (Luke)

After being probed about the desire to have customized sport psychology services, Amy expanded on how sport psychology services need to be put into a context where it can be absorbed and delivered specifically to older adults:

> Yes, I think that it would be good to have stuff more customized because I think I often look at things and go "yep, that's for young people" and I just dismiss it. Somebody needs to take the time to look at those things and go "okay, how could I reformulate that, reword that, resell that to this age group?" …

Many MAs recognized that service providers should customize their services based off the specific age-related concerns pertinent to each older adult. These services included coping with age-related issues and managing one's time. Part of service customization was related to individual counselling with a consultant around the reality of getting older. When asked about Masters specific uses for sport psychology, Luke responded, "Part of it is counselling someone about what you can expect at this age without saying you're going to get slower." Interestingly, Luke could recognize that coping with physical decline is a reality for most MAs, and one-on-one conversations with a consultant might assist MAs in this regard.

Barriers to Using Sport Psychology

Finally, MAs identified barriers that could minimize or restrict the use of sport psychology services, including: stigma, accessibility, and distractions (e.g., interfering thoughts regarding salient personal matters). MAs spoke about additional constraints such as lack of time and not

understanding the benefits, which could ultimately contribute to not wanting to invest financially in sport psychology services. Shannon felt that stigma towards anything to do with "psychology" was a barrier to using sport psychology services:

> I feel like still there is a bit of a stigma associated with anything with the word psychology in it, which is super unfortunate. That barrier is coming done more and more, but … I still feel like anything associated with psychology still carries a bit of stigma.

Amy noted not knowing where/who to turn to for accessible services was a personal barrier:

> Access -- from the point of view of who do you go to? You have your family doctor, your chiropractor, but how do you find a sports psych? What is an accredited sports psych? That kind of thing … I can tell you, I have no idea how to find [services] ... Maybe you need to get to your sports med doctor to get a referral. It needs to be easier, that's what it comes down to.

Amy felt that services were certainly warranted by MAs, but they had to be more accessible.

Related to barriers, many of our MAs discussed how seeking mental skills services/resources was predicated on internal comparisons of *benefits versus financial costs*. Several MAs detailed how sport psychology services and resources were not the norm:

> It's not the norm [in Masters sport]. No. [At my club], we're fortunate to have access to coaches and people on the team who have had past experiences at the Olympics or as younger athletes and they've exposed us to [sport psychology] … It's not the norm, for sure … (Wendy)

Since applied sport psychology is not commonly a part of the traditional Masters sport norm, the decision to seek out and invest in sport psychology services often depended upon each individual and required a critical internal debate to weigh the benefits versus financial costs. Unfortunately, our participants claimed that many other MAs may not understand the benefits associated with sport psychology services unless they had been previously exposed to and benefitted in some way from such services as a much younger athlete. Some MAs believed that not understanding the tangible benefits created implications for whether MAs think a financial investment in sport psychology was a worthwhile pursuit, while others suggested that they may be less willing to

invest money into a resource in which they did not clearly see the benefits or immediate results (as compared to physical preparation). Shannon, our cross-fit/weightlifting athlete, commented:

> I think that when people see immediate results of something, they all of a sudden don't mind paying for it. People love cross-fit, they see immediate results, so they don't mind paying $160.00/month … Psychological stuff, it just takes longer to see the benefits. It's not like this immediate "I'm paying $150 for this session and then I'm coming out of it being this whole new person." It takes years or at least a few months.

The final barrier described by MAs was *time*. Many MAs felt that they could not use sport psychology services because of a lack of time, such as being rushed at competitions:

> At competitions, when they run ahead of schedule or we run long in what we're doing and if we get into the dressing room and we feel rushed, I think for a lot of us it falls apart. We all have that mental, physical ritual ... a time crunch can really screw it up. (Lauren)

Many MAs recognized that other commitments/responsibilities interfered with sport psychology. Shannon noted, "A lot of MAs are juggling families, work, training, and competing, and time just becomes a barrier." Ben continued:

> A lot of the people I [train] with, they can't do that [additional preparation] because they have to pick up the kids after school. It's the timing. [Coaches] try to add extra practices in and half the people go "oh, I would really love to go but my kid has hockey."

Applied sport practitioners may have to consider nuanced approaches to navigating the barriers experienced by MAs. Despite these barriers to using sport psychology services, MAs expressed an overwhelmingly large desire for future resources and services specifically tailored to the age-related needs and/or preferences evidenced by adult sportspersons. Indeed, their responses and elaborations were conveyed during dialogue relating to how MAs like themselves could successfully negotiate prospective barriers.

Discussion

This chapter illustrated MAs' perceptions on sport psychology service delivery to their cohort. These perceptions were related to individual athlete differences, prospective services to

instill value, and potential barriers. MAs suggested applied sport practitioners consider individual differences between adult sportspersons, such as differences in intellect, personality, and life experiences. Recognizing individual differences between athletes becomes increasingly important for practitioners considering the heterogeneity encompassed within Masters sport (Young, 2011). MAs also identified promotional strategies to instill value towards sport psychology services. Integrating practitioners into training regimes, using anecdotal evidence, applying mental skills to domains expanding sport (e.g., personal life), scheduling mental skills workshops at times when MAs are available (e.g., practice times), audio mental skills training, and integrating coaches into service delivery were suggested ways to instill value towards psychological services. Further, MAs expressed a desire for customized services that considered the unique life circumstances which applied to them as middle-aged/older adults. Customized services involved counselling and the recognition that services had to be marketed differently and individually to instill value. This draws comparisons to how Masters coaches individualize their approaches when working with adult athletes. For example, Callary et al. (2017) showed evidence that Masters coaches individualize MAs' training according to the goals each athlete sets for themselves. With respect to mental skills training, service customization may also be an effective way to accommodate heterogeneous differences between MAs. Finally, MAs discussed barriers that could limit the provision of psychological self-help strategies, including: stigma, accessibility, distractions, personal internal debates regarding benefits versus financial costs, and time. Understanding what constricts MAs' receptivity to, and use of, sport psychology services is important for practitioners who wish to implement these supports with older adults.

This chapter provided additional considerations related to how applied sport practitioners can successfully implement services with MAs. While these results do not necessarily generalize

beyond our sample, these considerations likely resonate with most MAs in some capacity. By leveraging these results, practitioners may increase the successful facilitation of services since these were what instilled (or impeded) value from the perceptions of the athletes. Hearing MAs' perspectives on service delivery is an important step towards understanding the utility and receptiveness of sport psychology services amongst older adults.

While it is important to hear MAs' voices, it is also essential for us to hear from those who implement sport psychology services -- namely, mental performance consultants (MPCs). MPCs are experts in mental skills consultation and an increasing number may have had experiences working with heterogeneous groups of MAs. Understanding their perceptions related to pertinent content areas, as well as their beliefs/views regarding service delivery, is important to provide a way forward towards the creation of future sport psychology programming for MAs. MPCs could provide novel insights related to service delivery that had not been discussed previously in MAs interviews, while also providing information related to what they believed were age-specific content areas for prospective psychological services. The MPCs' perspectives could corroborate or diverge from our findings with MAs and could help nuance what we already know from MAs in this chapter and in Manuscript 1. The development of psychological supports requires input from multiple stakeholders, and the logical next step towards deepening our understanding related to the applications for sport psychology by MAs is interrogating and interpreting similar research questions with those who deliver services to these adult athletes.

Manuscript 2: Mental performance consultants' perceptions on content and service delivery to Masters athletes

Mental performance consultants' perceptions on content and service delivery to Masters athletes

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Abstract

Despite being an increasingly popular activity for many older adults (Weir et al., 2010), there are few resources to support Masters athletes' (MAs) maintenance of routine sport activity. Psychological self-help skills and strategies facilitated by mental performance consultants (MPCs) could assist MAs in this regard. Using five two-person semi-structured group interviews, the study explored ten Canadian professional MPCs' (2 male, 8 female) perceptions on delivering and facilitating mental skills content to MAs. Data were analyzed thematically (Braun & Clark, 2012) using inductive analysis. Results showed *Content of Sport Psychology Services with MAs* related to skills and strategies for performance readiness ("preparatory routines", "mental focus plans", "retrieving/protecting self-confidence", and "stress, fear, anxiety, and energy management"), prioritizing sport ("balance/time-management" and "recruiting social support"), protecting/recovering sport enjoyment ("self-reflection", "diversifying goals", and "gratitude/sport as opportunity"), and age/self-compassionate considerations ("managing injury", "compensatory strategies", and "managing changing physical reality"). Self-compassion was a highly nuanced strategy to manage MAs' changing physical reality. Results also elucidated MPCs' beliefs on nuances related to *Addressing and Delivering Sport Psychology Content to MAs*. These included considerations related to age-related attributes and associated implications ("values/identity", "engaged/invested clients", "self-awareness/previous life experiences", "addressing entrenched beliefs", and "working holistically/transferability of services") and accommodating various barriers/constraints ("time", "stigma", "age/gender discrepancies", and "ageist assumptions"). Results suggest that MPCs are a resource that MAs can leverage to provide support in their efforts to maintain sport across the lifespan.

Keywords: Masters athletes, mental performance consultants, applied sport psychology

Mental performance consultants' perceptions on content and service delivery to Masters athletes

The growth and increasing formalization of adult sport, or Masters sport, has been considerable and well documented (Weir et al., 2010). Masters athletes (MAs), who are also sometimes referred to as adult athletes or adult sportspersons, are 35+ years old who compete in organized sport that is distinct from those in the high-performance stream (e.g., Olympics, professional/semi-professional, collegiate athletes). MAs practice in order to compete and they range from recreationally competitive (e.g., local jamboree) to competing internationally at the World Masters Games (Young, 2011). MAs are a remarkably unique sporting population. Often considered exemplars of successful aging (Geard et al., 2017), they pursue sport at ages when traditionally people forfeit such pursuits. Motivationally, MAs display substantial heterogeneity, with athletes variably involved for performance-oriented (Horton et al., 2019) and/or experiential-oriented purposes (e.g., social affiliation, enjoyment; Dionigi et al., 2011). MAs are confronted with managing and navigating age-related phenomena, such as those who feel the need to compensate to resist age-related decline (Langley & Knight, 1999). MAs' sport commitment occurs against the backdrop of adult roles and responsibilities, which implicates negotiating their sport activity with family (Dionigi et al., 2012) and overcoming various obstacles (e.g., time, lack of social support; Young, 2011) that limit participation.

A significant implication associated with the growth of Masters sport is the lack of "supports", described as a lack of promotional campaigns/programming, available resources, and trained coaches for older adults involved in sport (Young & Callary, 2018). There is a need to develop resources and supports to assist MAs in maintaining sport across the lifespan. One such resource which could support MAs' lifelong sport activity is the application of sport

psychological skills and strategies. These deliberate psychological self-help strategies are most commonly implemented by mental performance consultants (MPCs) with younger, elite, high-performance athletes and are traditionally used and emphasized in the literature to enhance sport performance and readiness (see Vealey, 2007). MPCs provide support to athletes through the application of mental skills to enhance performance (e.g., goal-setting, arousal regulation, imagery, concentration, self-confidence; Weinberg & Gould, 2015), but also through additional self-help strategies tailored towards positive personal development (Canadian Sport Psychology Association, n.d.-a). Despite MPCs providing support to enhance personal development and well-being, there is little explicit empirical evidence detailing the use of mental skills in this capacity. Outside high-performance sport, mental skills training interventions put forth by MPCs have demonstrated efficacy in non-traditional sport populations such those who are intellectually disabled (Gregg, 2010) and visually impaired (Vose et al., 2010), and even for use among online gamers (Cottrell et al., 2019). Considering MPCs support heterogeneous groups of athletes, similar outcomes might be expected if services were extended to support MAs.

It is reasonable to predict that how MPCs work with MAs would be different than how they work with younger cohorts. A recent line of inquiry related to the coaching of MAs emphasizes the age-specific preferences/needs of middle-aged/older adults, and advocates for coaching approaches that align with the needs of mature adults. This research has advocated that borrowing content from coaching models traditionally applied to younger athletes is short sighted and fails to adequately support the adult sport experience (see MacLellan et al., 2018, 2019). Masters coaches are an effective resource to support MAs, especially when they have an inherent understanding related to the age-specific novelties in working with this population, such as considerations towards MAs' extensive life history and mature self-concept, preferred means

of communication, bidirectionality of MAs' willingness to know, and the creation of learner-centred goals (Callary et al., 2015, 2017). Such parallel findings suggest that the ways in which MPCs support MAs in their consultations would require nuanced delivery methods that may be different than those used with younger clienteles.

Applied sport psychology literature has not considered MAs as a beneficiary of psychological support services. After conducting Boolean searches in SportDiscus and PsycINFO using different permutations of sport psychology and MAs and after inspecting all peer-reviewed publications for professional Canadian Sport Psychology Association (CSPA) members which were listed on individual websites, we were unable to find empirical evidence related to applied sport psychology and MAs. An additional inspection of ten major North American sport and exercise psychology textbooks' table of contents revealed one book chapter related to MAs and sport psychology. In this chapter, Medic (2010) proposed that MPCs could support MAs by helping them overcome motivational lapses and setting age-appropriate goals, although no empirical evidence was cited to support his claims.

A recent study set out to explore this void and results provided promising information. Makepeace and Young (see Manuscript 1 of thesis) interviewed eight MAs from twelve sports about their use of sport psychology towards enhancing their performance, experience, and sport adherence. Deductive results showed MAs believed performance-oriented mental skills (i.e., goal-setting, imagery, arousal regulation, concentration and attentional focus, and self-confidence) enabled them to enhance performance, while inductive results showed the application of non-traditional content where MAs enacted psychological strategies to maintain sport adherence. These non-traditional strategies and skills, which represented MAs' nuanced content areas for applying sport psychology, included placing priorities on continued sport,

cultivating support and active negotiations with socially significant others, twinning and scheduling routine sport, and mindfulness-/compensatory-based strategies. Makepeace and Young demonstrated that applied sport psychology *can* be used as a support to the Masters sport experience, whether it is used to enhance performance or maintain the adult sport lifestyle.

Makepeace and Young's (Manuscript 1 of thesis) study was limited in only speaking to MAs. There is a need to understand the perspectives of MPCs who work with such clienteles. No research has specifically asked MPCs to describe what they believed were the needed content and approaches to service delivery with middle-aged/older adult sportspersons. Notably, Makepeace and Young found that MAs could describe the situations and settings (i.e., content areas) where they wished to work on and apply mental skills, yet MAs had difficulties elucidating and describing techniques and exercises related to these areas. Therefore, interviews with MPCs can inform understandings for *how MAs can implement* and *what specific methods* can serve to better support the content areas they have identified.

Building upon Makepeace and Young's (Manuscript 1 of thesis) findings, this study aimed to explore MPCs' perceptions regarding the application of sport psychology services with MAs. It explored MPCs' beliefs regarding how services could support MAs' performance, experience (i.e., enjoyment/satisfaction), and sport lifestyle adherence. This study sought to understand their perspectives on the methods/techniques underlying the application of services, while also hearing their perspectives on addressing Masters-specific content. Finally, this study explored age-specific considerations related to sport psychology service delivery with MAs to better understand the unique applications and nuances which apply to working with adult sportspersons.

Methods

Our worldview was socially constructed because we sought to understand the research purposes through the interpretations of each individual MPC, and by co-constructing the data through researcher and participant interactions (Lincoln et al., 2018). Interview biases were minimized by researchers bracketing themselves against what they already knew (Tufford & Newman, 2012), and discussions with a critical friend encouraged the principal investigator (PI) to see interpretations from multiple perspectives.

Participants

A University Research Ethics Board granted approval prior to participant recruitment. One hundred and sixty-two professional Canadian MPCs registered on the CSPA website (Canadian Sport Psychology Association, n.d.-b) were initially contacted by email for recruitment, and were invited to complete an initial pre-screening survey. Fifteen MPCs responded to our invite but did not return a survey because they were not interested in participating or had never worked professionally with MAs. Completed surveys were returned by 32 for a response rate of 20%.

Responses on the pre-screening survey (see Appendix B) were important in vetting prospective participants for various inclusion criteria to ensure maximal variability. Of the 32 responses, we purposively invited 10 participants based on inclusion criteria and availability. Included participants had consulted with at least 3-5 MAs over the course of their career, had at least three years experience working as a professional MPC, and self-reported sufficient understanding of Masters sport (‘I would consider myself to have familiarity and/or experience in Masters sport’). Included MPCs believed that the development of mental skills resources for MAs was a worthy aim. Finally, the MPCs identified whether they believed MAs’ motives for

sport were *performance-oriented* ('The purpose of Masters sport involvement should be achievement of peak performances in competition'), *experiential* ('personal enjoyment and/or other social benefits'), or to maintain the *MA sporting lifestyle* ('to maintain/adhere to an adult sporting lifestyle'). We purposively used answers oriented towards the sport motive questions to recruit participants with maximal variability on these perspectives (see Table 1). All MPCs provided informed consent and were given pseudonyms to protect confidentiality and anonymity.

Data Collection

MPCs were sent an initial document asking them to reflect upon the benefits, barriers, and individualized/customized nature of services as they specifically pertained to MAs prior to data collection (see Appendix D). We did this to get MPCs thinking about the topic, which could enable a more facilitative and rich discussion. The PI conducted five two-person semi-structured interviews. This format bordered between traditional one-on-one interviews and focus groups. This method allowed the PI to maintain sufficient depth by exploring topics without restriction (Rubin & Rubin, 2012), while still capitalizing on partner dynamics during group interviews (Kitzinger, 1995). The first four interviews were conducted in-person. To accommodate different geographical origins, interview preferences, and to expand our participant pool beyond two provinces, the final interview was via Skype (Hanna, 2012).

Interviews lasted 72-88 minutes (M = 80) and followed a semi-structured interview guide (see Appendix E). The guide was based partially off the responses from MAs in previous one-on-one interviews (Makepeace & Young, Manuscript 1) and was broken up into four sections. First, the PI asked the MPCs what they felt was "the biggest area in which psychology is beneficial to MAs?'. Second, the PI posed questions related to each MPC's experiences in facilitating mental skills to enhance performance (e.g., 'How have you seen MAs use psychology to help elevate

their performance?'), experience (e.g., 'How have you seen MAs use psychology to help elevate their experiences in Masters sport?'), and lifestyle adherence (e.g., 'How have you seen MAs use psychology to help support the lifestyle around being a MA?'). Third, the PI posed questions related to what we had discovered previously in MA interviews (Makepeace & Young, Manuscript 1). Specifically, questions related to situations/settings where psychological strategies could be used in relation to age-related issues, situations where positivity were most important or needed by MAs, and situations where performance-based mental skills or tactics were beneficial to elicit a successful sport performance. In the back and forth that ensued, the PI ensured contributions from both interviewees, afforded opportunities for each MPC to corroborate/contrast their partner's perspective, and probed for specific illustrations of methods and exercises (e.g., "How exactly do you work on that with them?") that MPCs suggested to MAs in their work. Finally, the PI asked MPCs about how to design a customizable psychological support service for MAs, and potential barriers to accessing services.

Data Analysis

Interviews were transcribed verbatim (total = 96 single-spaced pages) only making minor edits for grammar and personally identifiable information. MPC interviews were analyzed inductively using Braun and Clark's (2012) steps for thematic analysis. We transcribed and re-read each interview to familiarize ourselves with the data. Initial codes were then assigned so that they could be later grouped into higher-order themes and subthemes. Codes were critically discussed by the researchers in an attempt to see multiple interpretations and perspectives of the data. Similar codes were then grouped into higher-order themes and subthemes after extensive discussions. Finally, themes were reviewed, operationally defined, named, and written into the manuscript. Throughout our analyses, we attended to the degree that coded data represented

broader content for applications, and the extent to which they represented methods of using, or methods for teaching, mental skills. Following the precedent of Vealey (2007) who presented various operational terms for mental skills interventions, we attended to our coded data by identifying content (broadest in the hierarchy), strategies, skills, and methods/exercises (most specific in our hierarchy). Thus, we first coded data that identified topics, situations, or areas where mental skills were applied (i.e., content). After, we considered how robustly we could trace down with increasingly specific coded data for strategies and their associated skills and methods within this content. In effect, our specification of lower-order themes within any higher-order category depended on our interpretation of being able to trace some progression from content to methods, though the granular distinctions between each of these hierarchical terms were not always clear. We did our best to incorporate similar and consistent terminology throughout our analyses.

Trustworthiness and reliability

Extensive pilot testing was conducted to ensure the PI could move through the semi-structured interview guide efficiently and elicit additional probes or follow-ups where necessary (Creswell, 2014). The interview guide was first vetted, discussed, and refined amongst the researchers. It was also piloted in interviews with two pre-service MPCs (in training) and in a final interview with a fully accredited active MPC, allowing for further refinement of questions and facilitating the ease in which the PI could move through the guide.

Methodological coherence, sampling sufficiency, and concurrent analyses and collection of data were additional measures to ensure trustworthiness and reliability (Morse et al., 2002). Pilot testing ensured the guide (e.g., questions/probes) was critically and rigorously evaluated to facilitate the likelihood that participant responses aligned with the research purpose. Both

researchers had backgrounds in qualitative methods and analyses, including experiences with a methodologically similar study (Makepeace & Young, Manuscript 1), further enhancing trustworthiness and reliability. We also took measures through our pre-screening to ensure MPCs had sufficient experience consulting with MAs so that data were based off personal experience. Finally, the second author served as a critical friend. He encouraged the PI to consider multiple interpretations and perspectives in an attempt to better understand the MPCs' subjective realities.

Results

After interpreting MPCs' perceptions related to the use of applied sport psychology and MAs, MPCs foremost described *Content of Sport Psychology Services* and information related to *Addressing and Delivering Sport Psychology Content* to adult sportspersons.

Perceptions on the Content and Methods of Sport Psychology Services

Results demonstrated specific content and their associated strategies, skills, and methods that MPCs recognized as being highly pertinent in their consulting practice with MAs (see Table 2). Performance readiness content within a MPCs' consulting practice prepared MAs to execute a successful performance. Some MPCs initially noted that the content of their approaches did not deviate from what they did with younger athletes. Susan noted, "I don't really see a difference in terms of the performance readiness. When you're preparing for performance you're preparing for performance." Despite some MPCs initially commenting that their performance readiness approaches were not cohort-specific, their elaborations on various themes illustrated nuance with respect to the application and reasons for their approaches with MAs. Many content areas that MPCs acknowledged were tailored towards the age-specific needs displayed by middle-aged/older adults. This was especially the case for content related to prioritizing sport

involvement, protecting and recovering sport enjoyment and motivation, and aging and self-compassionate considerations.

Performance Readiness

MPCs described how MAs used their services to enhance performance readiness predominantly in competitive environments, including: preparatory routines, focus plans, retrieving/protecting self-confidence, and stress/anxiety/fear/energy management.

Preparatory Routines. MPCs described specifically working on preparatory routines to enhance MAs' competitive performance readiness. They described how preparatory routines benefitted adult sportspersons, particularly leading to more certainty and less anxiety prior to competition. Irene commented how she worked on imagery because it "fit into a lot of different areas" within these routines, and incorporated imagery to get MAs into the "optimal performance zone" so they could "visualize the type of athlete they wanted to be" in key scenarios. Susan explained that working on pre-performance content required working on a conjunction of skills and strategies with MAs. However, she also noted that imagery was definitively central in this readiness process and readied MAs to "work through what they're about to perform, to work through potential obstacles and obstacle planning for best and worst case [competition/race scenarios]." She helped MAs tie imagery to the "mitigation of worries", "breathing, relaxation, and active mindfulness", and coached them to integrate it into warm-ups.

Some MPCs noted that these routines needed to consider changing life circumstances. Irene explained how some "MAs have been athletes their whole lives, so with their pre-performance routine … they are thinking of it as when they were younger." They needed to coach MAs to be open to adjust for the fact they are getting older. For example, the MAs often

needed to consider new facets (e.g., bathroom routines, having more supplies on hand) and framed these new routine encumbrances from "'ugh, that's awful' to 'this is what I need now'".

Focus Plans. MPCs also worked on mental focus plans. Stacy helped MAs equip themselves with "facilitative self-instruction techniques and self-motivational beliefs" by doing "full performance debriefs with them so they can continuously learn, adapt, and grow" after competitions and this contributed to new aspects into MAs' focus and refocus plans. Other MPCs provided illustrations of how these plans were effective in helping MAs prepare for and overcome difficult or challenging portions of a race course. Steve worked with MAs on a "focus plan around hard events" so they "have a plan when their thoughts start shifting" unhelpfully. He believed this was "really important for MAs because these hard parts … how they react to these sorts of thoughts … are really going to influence their motivation going forward." He coached them to include if/then statements (e.g., if this happens, then I'll do this) and self-regulation strategies (e.g., segmenting longer races into smaller sections they can attend to). Karen also encouraged segmentation of race courses and encouraged MAs to attach positive self-talk and imagery to their plans for very challenging parts. For example, she encouraged skiers to "practice changing that negative 'uh oh' thought into a more positive thought", while visualizing the course and attaching technical cues they needed in difficult sections.

Linda coached MAs to incorporate imagery into their planning and anticipation for competitions, which later became embedded into their mental focus plans. With a marathon runner who was experiencing more age-related injuries and discomfort, she:

> … used quite a bit of imagery for anticipating when things start to hurt in certain parts of the race and how you compensate for that. Using imagery to get you through those obstacles rather than running your perfect race. Using that imagery to recognize that these things will happen and it's not necessarily a bad thing. It's about coming up with a plan about how I'm going to overcome that obstacle when it happens or to deal with the discomfort of when things happen.

Retrieving and Protecting Self-Confidence. MPCs often consulted with MAs around retrieving and protecting their self-confidence and self-beliefs prior to competition. This involved positive self-talk, imagery, and making rational appraisals. Jenn explained how some MAs found ways to lower their own confidence:

> [MAs] are already hard enough on themselves … I often tell them, if it were a friend that you were talking to and this friend was saying "I should've pushed harder in this training", what would your answer be to this friend knowing that they've done exactly the same training as you did? Often, they're like "I'd say my friend is good!" Then I say "well, why are you so hard on yourself?"

Being kind to oneself was effective for some MAs. In other cases, MPCs strategically challenged MAs' beliefs to help them retrieve their self-confidence. For example, when dealing with a highly self-deprecating tennis player, Robert respectfully confronted the client, "well, what's the point of even competing if you're already going to think the match is over?" The MA responded by detailing their motives for competing and realizing the irrationality of their self-effacement.

As another means to protect MAs' self-confidence, the MPCs taught MAs how to set realistic and process-oriented goals. Robert discussed how "some MAs feel that time is against them … there might be this fear of not progressing enough" and his services were tailored towards "helping them with how to improve and how to look at their improvements … [I challenge them to put] a greater emphasis on process versus result-oriented goals." Stacy noted:

> Because they're a bit older, some of their habits are well engrained. My most recent client … his beliefs were too narrow, stringent, and he was highly perfectionistic. His belief was that he had to be perfect all the time. This was becoming unhealthy because he wasn't allowing himself the space, the time to actually be making mistakes and to learn and to grow in order to have optimal performances. He's a perfect example of someone who needed to learn how to set goals that were aligned with a realistic belief.

Managing Stress, Anxiety, Fear, and Energy. MPCs noted that MAs are often influenced by physiological arousal during their preparations immediately prior to competitions.

Some MPCs detailed the importance of helping MAs manage their pre-competitive arousal, in particular, assisting MAs in managing stress, anxiety, fear, and energy. They used self-talk and cue words, imagery, mindfulness and relaxation, and simulation training (i.e., training in anxiety provoking environments so that one desensitizes and becomes less anxious with respect to competitions). Susan, who has worked with MAs in sports with very high risk for injury (e.g., three stage eventing equestrian, open water marathon swimming), explained:

> There's a lot a fear around injury and severe injury, some athletes have died over the years. I think with an older demographic, they see the potential for harm a lot more than a young person. The kinds of things that we do are a lot of physiological regulation like breathing and relaxation, but then acceptance, commitment, and CBT (cognitive behavioural therapy) work. A lot of reframing thoughts, getting used to anxiety and fear responses, and being able to talk them down and say "ok, this response is here for a purpose, but it might not be the purpose I need right now. The fear response is allowed to be here, but I'm going to keep performing."

This multifaceted approach was effective with Susan's clients to manage fear, risk, and anxiety.

Another area for addressing stress related to self-pressure. Stacy felt that some MAs placed greater pressure on themselves to perform well. She encouraged clients to interrogate where the stress was coming from and who was imposing it:

> I think because time is finite and their career as a MA is also finite, some seem to put that extra pressure on themselves. They think "I'm not going to be doing this for very long so I need to perform. Other people expect these things of me [such as] to win at an international competition." It's the idea that they have to be perfect … Many times it's self-imposed, so just asking [MAs] "is this something that you think your teammates and coaches actually expect of you? Is this something you would expect of them?" Usually the answer is "no", so working through whether there are better ways to perceive things. That will be more facilitative instead of them putting all that pressure on themselves.

She applied her approach to individual sport athletes, but also team sport players who were feeling undue stress from "carrying their team on their shoulders." Robert also spoke about working with MAs to "externalize" self-pressuring internal dialogue. He asked them to "imagine one of your greatest supporters or a family member telling you all this [irrational] stuff. Would

that be helpful?" and often had them "attach an image to it". He found such methods made adult clients aware of the irrationally of negative self-talk, moving the conversation towards substituting alternative dialogue. Finally, MPCs worked with MAs on managing their current energy levels prior to competition. When assessing MAs' energy, Stacy posed questions around "how quickly do you get depleted?" and "how stressed and tired do you feel?" She felt that "incorporating more recovery periods if they are stressed more quickly or easily, or fatigued" was an effective way to manage their energy levels to execute a successful sport performance.

Prioritization of Sport

MPCs recognized that MAs prioritized sport and implemented personal and social strategies to maintain the priority. MPCs noted that MAs viewed sport as an outlet for personal release, such as framing it as an "outlet" or "bubble" (Brooke), enabling priority maintenance and sport adherence. Susan explained why she counselled MAs to engage in positive reminders:

> [MAs'] life outside of sport is difficult and I think the positive spin on sport can be helpful [in these cases]. Finding times where sport can really just be a release, rather than just another intense context that needs to be won or successful. [The key is] finding a positive spin where it's an outlet and someplace where they can just enjoy themselves and have a good time. It's easy to forget with the really competitive [MAs], but they're doing it for a reason. As a MA, they're doing it for those more positive reasons and so that reminder can be helpful if you can put a positive spin on [sport] when it's lost.

She continued: "that's the reason they're seeking mental training to begin with. It's because [sport] was a release, but suddenly they've hit a block and need help getting that back. It's a huge loss when it goes."

Balance and Effective Time-Management. MPCs acknowledged that MAs made sport a priority by having balance and understanding effective time-management in relation to all "they have to juggle" (Brooke). She added "they have families, work, their sport and

extracurricular activities, volunteer work, all of that. Their time is very limited. The balancing act is a real big one." When asked how MPCs can help MAs find balance, Linda replied:

> … If they're competing and training for something and are able to balance everything [important to them], some things will have to go off to the side. I find the big part of it is recognizing that they need to be okay with that. They have to set their boundaries with the people around them that they will allow them to dedicate the amount of time that they need, but then to balance back. The balance isn't just a fine line of always giving equal time. It's just more of a spreading when you would need to dive in more and being okay with diving in more time to the things that you need, and then balancing back and spending more time with family, or work, or whatever it is.

Linda saw balance as something MAs needed to shift depending on what was pertinent in their life at that time. To assist MAs in managing their time in various life spheres, Robert resorted to a "wheel of life template", which helps MAs identify where they allot their time each day:

> I try to separate it into work, work-related homework or hours like that, but most [MAs] will include their training schedules first. [That's followed by] work, then responsibilities at home. They really feel like they can't take time out of any of those other categories, so what tends to suffer are the sacrifices they tend to make in social category … Sacrifices have to be made and managing time is a difficult thing to do, but it comes down to their level of motivation and what they want to achieve.

Other MPCs, such as Abby, described how being "in the moment" was effective in "balancing the life commitments and challenges that comes with being an athlete who likely has a full-time job and in a lot of cases has children and a spouse." Being present involved methods such as mindfulness, goal-setting, distraction management, and focus activities.

MPCs described some specific skills and methods MAs used to effectively balance and time-manage, including: planning/scheduling; giving self-permission; and negotiations and communications. *Planning and scheduling* were proactive and personally beneficial to "create space". Steve noted:

> There's no one right over top of them scheduling all this stuff [e.g., sport-related activities]. They're taking all this on themselves. They don't have somebody doing [this for them]. There's that extra work involved too [because] if you're a 16-year-old, somebody is kind of mapping things out for you for the most part [such as] either your

> parents or your coach. You don't have that as often [as a MA]… I don't see that being too scheduled. MAs have a big responsibility there. It just becomes a more effortful thing, the planning side of things in their life. Prioritizing.

Brooke explained how she helps MAs prioritize their personal schedules:

> Basically, we have a big discussion about what's important in their life. From there, we talk about where most of their time is spent [e.g., percentages] … I find a lot of my [MAs are] visual. I work a lot with charts, clipboards, doodling, writing, fine-tuning. Some of them have created major charts, master plans, and matrixes. [Priorities] have to shift at different times. If you're in competitive mode, everything else has to take second or third fiddle, but if you're not in competitive mode, what should be a priority?

Some MPCs counselled MAs around giving themselves permission. *Self-permission* allowed MAs to not feel guilt for placing priorities on their continued sport pursuit. Linda noted:

> [My work with] one athlete was more around giving herself the permission to take this time for herself and to dedicate the training in order to be able to compete … "These are the things that you know you need to do, this is important time, but you're *allowed* to take this time. You're *allowed* to give yourself the permission to put in that quality time and be focused in. You're not being a bad parent, a bad spouse, or a bad employee to take the time to do this stuff … In fact, you're actually happy with yourself and with what you're doing and pursuing a goal of yours. You're going to be much more able to engage with your family, your work, and everything else if you're happy. That ties into my counselling, that's a big part of it. To show and to discuss giving self-permission to do the things you need to do and that you're not taking away from other things. I think that actually brings up way more enjoyment and way more engagement.

MPCs also recognized the social context. They proposed strategies to help adults avoid negative repercussions/resentment with socially significant others, thus creating space for their sport activity. This involved effective *communication and negotiations* with spouses and peers:

> If they're family people, whether they have kids or not, there's a negotiation … "Well my husband also runs, so we have to figure out who gets to run on Sunday and watches the kids and who watches the kids and runs on Saturday." It's that kind of thing. Those runs are important to [MAs'] goals. It's this give and take. If you're 21 and say you're single, this is not even on the radar … when you're older, you just have to negotiate. It's just the stage of life that you're in, everything is a negotiation. Sometimes you don't get all the time that you want, but it's a skill that I think is more prevalent [for MAs]. I call it a skill because it is. You have to have those conversations. (Steve)

MPCs recognized MAs had to have on-going conversations with their support team, including spouses, to maintain the priority without sacrificing too much from familial responsibilities.

Recruiting Social Support. MPCs discussed the importance of MAs learning to effectively recruit social support to maintain the priority. Jenn noted her work with one MA to enlist social support from friends:

> Her friends didn't understand what was going on and why she was pushing herself so much [in her sport activity] … We tried to work it out so she had those difficult conversations with her friends to say "you know what, this is what matters to me right now" … She's like "this is crucial friendship, I don't want to lose that." I said "how about you involve them as well … tell them the next time they come to your place, grab a post-it and slam it [on the 'wall of compliments']. [Tell them to write] one thing that they love about you and they can leave the post-it there" … They felt part of it. For her, it was really meaningful.

Jenn also discussed how "including their kids or family members" was effective so that MAs didn't experience "that disconnection like they're missing out on something or that other people around them are starting to be resentful." Another social accountability strategy to maintain priority involved recruiting co-participants. Robert explained:

> The most classic one I can think of [to stay involved in sport] is getting a buddy to workout with. Doesn't matter what level of performance, most MAs are really aware of this relatedness piece. If they are setting a New Year's resolution to go to the gym more, they are going to adhere to that resolution a lot more if they include a friend.

Other MPCs felt that "knowing who you can count on and in what situation" was important, which was facilitated by frequent communication with those "support team members" (e.g., spouse, kids, physiotherapist) regarding "how much time they can contribute and in what ways they can contribute" (Irene). However, MPCs conveyed an element of social tension in their work with MAs. Susan described how "managing my peers in order to achieve what I want to achieve" and "managing the social component but not in a positive way" were particularly poignant services offered to performance-oriented MAs to strategically manage less competitive

peers. Strategies related to conflict resolution, communication, self-talk, and emotional regulation were effective to manage tension resulting from differing competitive orientations.

Protecting and Recovering Sport Enjoyment

MPCs noted that MAs must have some level of personal enjoyment to continue their sport activity or else there would be no purpose for continuing. Susan remarked:

> I can buy-in-large say that every single MA that has walked through my door is because of that loss of joy. Something has created a downturn in the joy they're feeling and they're looking to get it back. That's at a competitive level and a recreational level. They come in saying "I've hit this road block and I can't keep doing my sport unless I find a way to get back to where I was before."

She added:

> I work with the mental skills to help them figure out why they're doing it for themselves and not other people. This has been big with a lot of my MAs. Keeping that in check. The cognitive processes, the self-talk, the "meaning making" they've put around their sport, making sure that sticks with them and why they're doing it. Their values, their goals, not letting that go into the hands of other people like coaches or peers.

MPCs also acknowledged that MAs have a unique perspective surrounding sport and are often "protectionistic" (Steve) towards their sport activity. This meant that MAs took deliberate and proactively optimistic measures to protect their sport activity so they could stay joyfully involved across the lifespan. Essentially, many MAs at some point have made a conscious decision that sport is what they want to do, as an "idea for enjoyment", and they are ready to "honour their purpose" in sport and are "not compromising with this". Steve described this protectionist perspective as a "wisdom that comes with age":

> [Many MAs] apply a perspective to what they do … They look at other things to draw out why this [sport activity] is still worth doing, even when they can't make their goal … Almost every race, people are like "yeah I want to get a personal best." That's impossible in theory and in practice, and MAs are willing to concede this, but not let the "failure of not reaching a goal" bring them down. They have disappointment, but they do apply this perspective … "Oh well, yeah, it was good to bring my family [to the event]", or "that's alright, I had a good time. It was fun being in that atmosphere." That kind of thing … That's how I think they protect the enjoyment of the process.

Other MPCs felt that MAs could strategically maintain such a perspective through self-talk, managing expectations, realistic goal-setting, and imagery. Other poignant methods, such as self-reflection, diversifying personal goals, and to be gracious and see sport as an opportunity, were used by MPCs with MAs to protect and recover personal sport enjoyment.

Self-Reflection. Reflecting upon MAs' definition of success sustained sport enjoyment:

> Redefining what success is for that individual [is effective to maintaining perspective]. What success means to them right now might be very different than five years ago. Having that conversation of what motivates them to continue and going deeper into that reflection and thinking "why am I participating?" Asking athletes "ok, what are you getting out of this [sport]? Can you get more out of this depending on things like [setting new] expectations and managing that, and using skills to be able to reach those expectations and achieve those goals?" (Abby)

Robert sometimes prompted these exercises by respectfully challenging MAs' motives, asking an adult who was trying to recover their passion: "[if it's that bad], well, why haven't you quit?" He has found that many MAs respond with "well, here's why I haven't" and the "intrinsic motivation comes out, they are reminded there is something positive that they can yearn for when participating in sport." He believed that MAs needed to deliberately remind themselves of that from time to time. Similarly, many MPCs suggested "highlight tracking" (Robert), an exercise in which MAs tangibly wrote down their little successes, as an effective way for MAs to focus their perspective on the enjoyable aspects associated with sport.

Diversifying Goals. MPCs discussed how diversifying personal goals allowed MAs to enhance enjoyment and can be furthered by working on "the types of goals they set":

> It's not just about performance, it's about what do you want to get out of sport? What kind of experience? Do you want to be happy and satisfied? What does that look like and what do you need to make that happen? Making sure that they're able to engage in this positive thought process to help them feel good about themselves. (Stacy)

Robert noted that goals should not necessarily be foreclosed around outcomes (e.g., winning, losing, or a result), but needed to include goals on things "they feel like they can control and to continue to improve at." He felt he had a role in prompting them to think about goals more broadly, so they "realize they can think about their sporting environments differently, and then in turn it will have a more positive affect." Holistically, Stacy explained the need for MAs to set "well-being goals" (e.g., engaging in regular self-care, making sure they book and attend regular appointments, phone loved ones regularly, pursuing goals that ensure autonomy and independence) as helpful measures to protect and recover MAs' sport enjoyment.

Seeing Sport as an Opportunity and Expressing Gratitude. MPCs encouraged MAs to *see sport as an opportunity* and to *express gratitude* towards their sport activity. Stacy works to help them find positive facets they have taken for granted:

> Are they approaching sport as an opportunity to enjoy themselves, to learn, to grow, to possibly contribute to something larger, rather than an opportunity to keep comparing themselves to others and possibly fail? … We discuss that and try to help adjust, if necessary. Some, it's interesting, they're not even aware …When you question them around it and suggest there could be possibly another way to look at it, they go "oh, never thought of it that way." They're just used to seeing the world a certain way.

Irene often begins by challenging MAs' broader framing of sport:

> For some athletes, they are looking at competition differently, more from the enjoyment side. They're kind of looking at it as "I'm 60 and I have X years before I die. I've had 60 years of life and during that time I've competed at this level for this long and I've had these experiences. What experiences do I want to have [for the rest of my life]? How does sport help me feel the way I want to feel?" … It does come down to enjoyment.

She then segues these thoughts to "practice gratitude and cue words". She added "If [MAs] catch themselves going into a headspace that isn't helpful, they can use a cue word to get themselves into the mindset of enjoyment again." The use of specific exercises where MPCs asked MAs how they wanted to feel in sport effectively elucidated gratitude for sport as an opportunity:

> At the foundation of it is always asking the athlete how it is they want to feel when they're doing the thing they love to do. So [in] their sport, but also in their life in general. It's this holistic thing. Often, there's elements off that that then connect them to the idea that being an athlete, no matter what age you are, is a process. In that process, there are things that you do to bring out the feelings that you want, the experience that you want, and there's obstacles to that. (Steve)

Steve saw MPCs as having a role in helping MAs address "obstacles" interfering with how they wanted to feel, with self-talk as a key supporting skill. Irene used goal-setting to ask MAs "how do you want to feel during the performance". The MAs then derive emotive keywords they could employ to ensure "they're feeling connected [to their performance] the whole time." MPCs also recognized that enjoyment increased when MAs saw their affiliation with the Masters sport community as an opportunity. Linda discussed: "There's a certain aspect of community and team that brings MAs together … they have the opportunity to be part of something [bigger than themselves]." Counselling MAs around how they can utilize the social elements of sport were means to enhance personal enjoyment.

Aging and Self-Compassionate Considerations

MPCs noted applied content that was highly pertinent to coping with age and its associated limitations. This included managing susceptibility to injury, compensating for losses in physical performance, and assisting MAs in coping with changing physical realities. A poignant coping strategy involved self-compassion, where MAs treated themselves with kindness and managed performance expectations accordingly.

Managing Susceptibility to Injury. MPCs recognized susceptibility to injury was often a lot higher when working with MAs and this often involved counselling them around the evaluation of risk and/or reward associated with their sport activity. Susan commented:

> That question of "if this injury happens again, is this still worth it for you to be training if it's going to detract you from other areas of your life?" The specific stuff I do with MAs for that would look the same as with a younger athlete who is returning to sport from an

> injury, but I think the considerations of how does this affect their life outside of sport are bigger a lot of the time.

Part of a MPC's role was to have "serious conversations" (Brooke) with MAs around whether their sport activity was still worth doing, despite it potentially detracting from other areas of their life. Brooke noted how "you can have these life chats with MAs" around "what are the costs of this [injury] later on" that they did not necessarily have with younger athletes. Susan described how she works with MAs on skills for pain management and a "return to sport process", which involves "finding ways to still be active and enjoy themselves using what they have."

With injured athletes, MPCs often prompted discussion to redirect their clients' priorities to other activities they have "postponed because of sport" (Jenn):

> It's a great opportunity to emphasize those other areas of their life they felt like they might've been missing out on because of their sport. "Ok, you're dealing with an injury, there's rehab that has to happen. Now, it's a great opportunity to reach out to some of those friends or people that you feel like you haven't been seeing enough of." (Robert)

Robert called such redirection to other valuable interests a "positive distraction" strategy.

Compensatory Strategies. MPCs discussed how age-related performance decrements are inevitable, but many MAs approached them to find strategies and methods to offset, or compensate for, such decline. Abby attested to how some golf clients used mental skills to "help them level the playing field a bit more" as they got older:

> At some point, they can't hit the ball as far, that starts changing the way they play the game. They say, "it's hard to compete against the young'uns." But when you look at really good older players, at the different parts of their game, they are much more consistent and reliable on more psychological parts like putting and short game. When they're playing a tournament against people of all ages, they have this comfort from having these other tools in their pocket that compensate for some physical "deficiencies."

Imagery was applied strategically by many MAs to compensate for age-related decline, including visualization practice when they were injured and unable to physically train. Brooke recalled

working with a sprinter who injured herself one month ahead of the World Masters Games; they substituted physical training for intensive imagery to "keep her dream alive and to get her there."

Managing Changing Physical Realities. The MPCs described how many MAs reluctantly conceded they no longer have the same physical abilities they once had. The notion of "I used to be able to do this, and now I no longer can" (Susan) meant MPCs often had to consult around managing changing physical realities using cognitive behavioural approaches. MPCs used goal-related practices to enable small successes. Stacy explained her proactive approach:

> One of the concepts I use is setting *elastic goals* -- to stretch out your goals and not make them so inflexible and narrow [so it increases MAs'] chances of success. Helping them set more elastic goals, which would feed into their motivation and their confidence. You're hoping they're going to experience little successes on an ongoing basis.

Alternatively, Robert uses focusing and refocusing strategies to help MAs cope:

> I want to tie in focusing and refocusing strategies too when age-related issues start popping up in say a competition. "Back in my old days I could've gone faster, I could've gone harder, why can't I do this at the same speed anymore?" To find a way, not necessarily to block that out, but to work with what our responses are going to be and just accept that for what it is and to stay focused regardless. To refocus on something that's a lot more controllable than "what if?" thinking.

Susan acknowledged the "why can't I do this? I used to be able to do this" phenomenon resulted in frustrations that required some MAs to practice emotional regulation, cognitive reframing using self-talk, and realistic goal setting. Realistic goal setting meant "adjusting goals and coming to terms with new impediments" (Abby) or greater focus on "committing to new goals, not reliving old goals, but constantly setting things that are really based on that more immediate space that they're in and being in the present" (Susan).

A poignant and highly nuanced strategy that nearly all the MPCs used with MAs to assist with changing physical realities involved *self-compassion*. Self-compassionate exercises enabled MAs to "listen to their body" (Steve), "accept things for the way they are" (Robert), "become

aware of something less than what they already knew, then accepting it" (Brooke), and "be flexible with themselves with how they're performing, then setting their standards accordingly" (Susan). Stacy worked on self-compassion because "MAs are tough on themselves because of those [age-related] changes. They're either kind of in denial, or they get frustrated with the changes that they're not able to do anymore." Self-compassion enabled MAs to accept that they were not the same type of athlete they used to be and to be okay with their physical changes. Self-compassion placed an emphasis on MAs being *kind* to oneself and accepting one's age-related limitations, which Steve felt was important for age-related issues with recovery:

> When you do [a taxing event] when you're 25 versus 45, the effects the next day or week are going to be different. The ability to say "no, I need to take a little bit more time off to recover." To be able to do that, to understand that, is an important skill. [MAs should be able to say] "I need this recovery, I don't want to go back into it and hurt myself."

He coached MAs to be more accepting towards "what your body is telling you" and to be "kinder to one's body". He stressed that MAs needed to "realize this is what happens, *everybody* who's in this age recovers slower", and "being nice to yourself" (Jenn) was important when facing age-related limitations. Susan saw this as not judging oneself harshly for "being able to take a step back in the interest of getting back to sport." Karen added, "a MA who has been doing this for 10 years has to recognize being 50 is not the same as being 40. Some MAs are not very forgiving of themselves and bringing up normalizing and self-compassion is important."

In parallel with accepting age-related limitations, the MPCs consulted with MAs to transition their thinking towards what they could do rather than what they could not do physically. They also encouraged the use of mindfulness as a method to enable self-compassion and acceptance. Irene discussed:

> One main thing I work with all my clients on is understanding your body and how it reacts to different things and how it contributes to different mindsets. For example, I have [in my practice where athletes can identify how they're feeling as] red, green, and blue.

> Green zone is where you want to be, blue zone is indifferent or feeling sluggish, and the red is fast racing thoughts and bodily responses. For MAs, I think it would be incorporating that [more and] making sure you're mindful of how your body has changed, whether that involves being mindful of an injury or arthritis. A big part of that is accepting that you have to think of these different things too.

These exercises (such as identifying whether they were red, green, or blue) enabled MAs to become mindful of how they were feeling, thereafter facilitating acceptance of the aging process. Other strategies to assist MAs in becoming more self-compassionate included realistic goal-setting and positive self-talk to "be nice to oneself" (Irene). Susan noted that approaches to "reduce comparisons to younger people or your past self" had positive effects:

> Whether you're at a recreational or a highly competitive level, it's going to be your own voice inside your head that's causing that kind of comparison or getting down on yourself. Ultimately, you're going to be more positive and more forward thinking and you're going to perform better if you're not caught up in that comparison …

Perceptions on Approaches Associated with the Delivery of Services

This section describes MPCs' considerations for how they addressed and delivered resources/services to MAs. MPCs proposed different modalities for prospective services that may be effective. They foremost talked about their roles as consultants or counselors in dyadic formats, though they did also occasionally describe delivering larger workshops to MAs. Susan noted that although not yet commonly used, a "peer-to-peer [mental skills training] would potentially work with MAs". In terms of the consultant role, Stacy eluded to herself as a "mental coach" because "it's not always about teaching skills, it's helping them figure things out for themselves. It's more of the counselling aspect for them."

MPCs described how the goal of individualizing services was *no different* with MAs than it was with younger elite athletes. Many MPCs emphasized that "When I work with my clients, it's all individualized. It's no different for a MA" (Stacy) and "Everything is customized to every individual's needs" (Abby). Robert added, "it's an individualized program", noting the criticality

of initial consultations is establishing this tone. These initial consultations included the intake, initial profiling, and periodization of skills training. Some MPCs built customized services around the question "how do you want this to feel?" (Steve), and they did this irrespective of whether athletes were Masters, collegiate, or Olympic calibre. Despite these claims that on the surface mental performance consulting practices were no different with respect to MAs, under probing, the MPCs did elaborate upon significant nuances in terms of the delivery and implications associated with services pertaining to adult sportspersons (see Table 3).

Age-Related Attributes of Adult Clients and Implications for Service Delivery

MPCs described various age-related attributes of adult sportspersons that had implications for how they deliver sport psychology services. These attributes implicated: recognizing MAs' identity and values; leveraging MAs' self-awareness and past experiences; knowing how to work with actively engaged and invested clients; addressing adults' entrenched beliefs; and working holistically with adults by recognizing the transferability of services.

Recognition of MAs' Values and Identity. MPCs believed it was important to recognize MAs' identity and values on initiation to, and continuously throughout, service delivery. Understanding complexities surrounding MAs' identities and values is important because they dictate the direction of MPCs' consulting practice with older adults. Susan discussed how values are fundamental: "Values are going to be integrated into performance phase mental skills, you're going to use those values to inform the kind of self-talk they're going to use … [and] the routines they build." Steve explained that recognizing a MA's identity (e.g., I'm a runner, I'm a dad, I'm a surgeon) early in the consultant-client relationship assisted them in developing mental performance plans for their clients:

> It comes down to a little bit of identity … Depending on what they talk about and how they see themselves is really going to dictate [the types of consulting offered]. If you're

> looking at some high-performance stuff, we can focus on that if that's what they value the most … It's important to know that in these early conversations.

Working with Actively Engaged and Personally Invested Clients. MPCs suggested that most MAs fully understood their rationale for seeking services, which made them more motivated to work on and build their mental skills inventory. Generally, MAs tended to be actively engaged, invested, and were more likely to "buy-in faster [to consulting] and get [the homework] done faster" (Linda). Linda commented how "MAs are more to the point with their things because they don't have time", adding, "they have kids, all these other things, they just want to get it done. That's a big difference. It's not so much the skills or the tools or the strategies, it's that they implement them much faster." MPCs described MAs as invested and keenly interested clients, noting how they rarely had to prepare for consulting sessions because of MAs' willingness to engage and respond to questioning. Jenn commented:

> *It's so different.* You could have this same type of workshop that you're giving to 10-15, 15-20 [year-olds], then to Masters. The content per se is pretty much the same thing, how you introduce some of the theory behind it, the strategies and whatsoever, but the difference is in the discussions … [MAs are] not afraid of sharing. They're not afraid of asking questions. That is the richest part of MAs when you're working in a workshop. Even in an individual one-on-one, they're not afraid. They're just going to say it as it is. You can work and go so much further with that.

Robert noted MAs "are very quick to summarize their improvements or to share their struggles", while Irene felt that allowing MAs to "tell their story" was particularly effective in her consulting practice with middle-aged/older adults. Abby also discussed how MAs are "much better story-tellers", and keeping with this sentiment, Robert noted that sessions tended to be "very free-flowing" with MAs. Overall, the MPCs recognized that MAs subscribed to the understanding of *how* and *why* sport psychology worked, and appreciated experiencing the skills themselves during sessions. The implications were that MPCs had to be ready to answer a

plethora of questions (e.g., how do services work?), they anticipated richer discussions and higher compliancy to homework, and allowed MAs to share their story during early discussions.

Leveraging MAs' Self-Awareness and Previous Life Experiences. MPCs described how they can leverage MAs' self-awareness and previous life experiences when delivering services to middle-aged/older adults. The MPCs noted MAs have increased self-awareness and self-reflection compared to younger cohorts. As a result, the MPCs believed MAs applied, adhered to, and understood mental skills content more readily than many non-MAs. Susan noted:

> I find MAs adhere to [mental skills training] a lot more easily than younger athletes. Like they're ready to do the hard work, whereas younger athletes you sometimes have to push and grind in order to get it done. [MAs] are willing to do the self-awareness work and really dive into it a lot of the time.

Nearly all the MPCs believed MAs' elevated self-awareness resulted from previous life experiences. It was a client resource that the MPCs explicitly accessed. Susan noted, "Often, I won't go into the past [experiences] with a lot of my younger athletes, but for the MAs it becomes important". Jenn described how MAs "have so much experience, good and bad, and you can really take that and use it", with Abby commenting that she can "get a lot richer information from a MA than she would from a 20 or 15-year-old because they have that much more experience". Karen felt the biggest difference consulting with adults is you can "tap the experience" more. Steve explained the importance of using poignant happenings in other areas of an adult's life to contextualize what they were resolving in sport:

> We're dealing with people with all this experience in life … There's parallels you can draw on, like you that can help them understand that they can do things and they have been mentally preparing in ways that they don't really know. Someone who is 18, they've never given a big speech at a board meeting before or operated on someone's brain (laughs). These types of things [influence MAs] because they're at a different stage of their life. It's interesting. Age-related issues that comes in due to experience in other areas of their life, dealing with a sick child, or all these other things. Adversity in other ways. There are things that make this population a little bit unique that way, but we as

> consultants can draw upon or bring parallels in a different way than you can with a younger athlete. Not necessarily in a better way, just *in a different way*.

MPCs suggested that MAs' previous life experiences were intertwined with their mature self-concept, which implied they should recognize the need for adult sportspersons to assume more self-directedness during counseling. Stacy emphasized, "they're the expert of themselves. They can decide what the priorities are, they drive the process." Nine MPCs commented on this theme, reinforcing their readiness to leverage MAs' past experiences, self-awareness and self-reflective capabilities, and their consequent expectation for freer-flowing and more effective sessions.

In order to leverage MAs' past experiences, the MPCs believed they needed to frame their role in relation to *MAs' current resources and constraints*. It was important for MPCs to understand what each MA already knew regarding applied sport psychology, or the habits and/or routines they had already put in place. To that end, it was also important for MPCs to understand what could potentially negatively influence the services they provided. Stacy explained:

> I just make sure I have a really good grasp of their resources and their constraints. They may have different needs at that point [as an older adult]. I would certainly want to know what their skills are and what their resources are coming in so we can leverage that to help them on issues that they may have or to optimize their performance … Just knowing what their medical history is or those injuries that they've had. Any current concerns that could limit their potential or their performance. You need to have a good grasp.

This often implicated the type of language MPCs used. For example, Abby was careful to respect any pre-existing pre-performance plan that a MA brought to consultation, not to assume it deficient until they could figure otherwise, and conveyed language such as "we're just going to fine tune it" rather than de-construct it. Linda worked from "where MAs already were":

> With most MAs, they've been in sport for so many years, so they have a pretty good idea of what works and doesn't work for them. Sometimes revisiting [the existing pre-performance readiness plan] and going through what you could add or incorporate, say some imagery or mindfulness or self-talk, those skills. Incorporating that into their pre-performance routines and plans so they get a refreshing of what they've always done, but really looking at "are those pieces still working for you?" or "can you add more and take

> some things out?". Because most have been doing it for so long, maybe they take for granted the things they've been doing or they only focus on certain things that don't work for them anymore, but they still include them because that's what they've always done.

Addressing MAs' Potentially Entrenched Beliefs. MPCs recognized they often had to address entrenched beliefs when working with MAs. To do so, many MPCs described how they "can really challenge a MA" (Brooke) and their beliefs. Brooke continued, "With a younger athlete, you can challenge, but at a different level. You can really just straight on say [to MAs] 'why are you doing that?'" MAs sometimes have beliefs that can be quite entrenched due to their extensive life history, and these beliefs often need to be navigated. Stacy noted some MAs "may be set in their own ways and have these [rigid] personality traits". However, she continued:

> [I like to make MAs] realize that even though they've been doing it this way for so long, you *can* change the way you approach [sport]. You *can* form new habits, but it requires training and repetition. That's where we would need to build in the time and the practice for them to relearn a skill or to learn a particularly new skill. Then it's just sharing the cutting-edge science that supports that.

It was noteworthy that despite her perspective she could change MAs' fixed beliefs, Stacy felt she needed to leverage evidence-based practice to convince some MAs to make changes.

Working Holistically and Transferability of Services. MPCs recognized the complexities surrounding MAs' live and described how they needed to work more holistically with MAs. Susan noted, "You've gotta be ready to work with a holistic view of the human and not just the performer." Stacy exemplified this:

> One of my recent clients competes internationally and they had challenges at work, had challenges in their family, recently divorced, and brother just diagnosed with cancer. Sometimes depending on the timing, [those concerns can be] more important than the other [performance] issues. That's where we can also help support them, just these daily life issues. Nothing clinical of course … well-being issues, day-to-day life functioning, that's how we [MPCs] can help them out … They're people first, then they're athletes …

MPCs discussed the transferability of mental skills, or "life skills" (Brooke), to non-sport related domains. When asked what sort of mental skills would also be considered life skills, Brooke and Susan one after another said, "All of them". Susan continued:

> [I need to] make sure the things that I'm working on [with MAs] are transferable skills. Then it's not like this one thing that's suddenly shattered, you're still working towards something bigger. Emphasizing the process that you're working on and having the outcome as goals you want to achieve, but it's not all going to be about one competition.

The MPCs believed they had to be ready to expand services both inside and outside of sport, while illustrating to MAs the applicability of mental skills in multiple life domains.

Barriers, Constraints, and Their Implications for Service Delivery

MPCs suggested barriers and constraints that could minimize MAs' ability to access services, including: lack of time; stigma; age/gender discrepancies; and potential ageist assumptions between the consultant and athlete.

Accommodating MAs' Time Constraints. MPCs recognized that MAs had atypical personal schedules, which required accommodations and flexibility. Sessions often needed to be scheduled during the evenings, weekends, or immediately after practice, or by MPCs holding Skype sessions. When conducting sessions with MAs, "it's always after work hours" (Abby) because "our clients' needs just happen to not be in a 9-5, Monday to Friday". Linda added:

> Sometimes it's very difficult to [schedule sessions]. I have a couple of MAs that I know they don't fit into my normal everyday schedule, so I have to see them in the evenings (laughs). I have a 7 o'clock appointment tonight rather than in my regular day. That's somewhat of a barrier if MPCs don't work evenings or weekends.

In addition to "working around their hours", Linda offered, "you go to where they are rather than them coming to me" to accommodate MAs' time constraints.

Navigating and Being Aware of Stigma Towards Sport Psychology. MPCs described how MAs' often stigmatized, or were privately worried about the stigma, of sport psychology.

MAs were at times reluctant to seek out MPCs because of "a taboo of seeking help" (Abby) still associated with receiving psychological services. Robert commented:

> I would say the normalization isn't quite there with MAs. I was working with a MA who was embarrassed that she was working with me. She didn't want to admit to others how seriously she was taking her sport. A completely different form of stigma … This setting was "I don't want others to know how seriously I'm taking [my sport activity]."

Abby often makes accommodations because of the stigma MAs felt towards her services:

> I golf at a course where the average age is about 60-65. I encounter some [MAs] where they'll be like "yeah, I want to talk to you, I want to make an appointment. Maybe we could just play a round together instead?" Sitting down and actually talking about our feelings [doesn't happen as much].

Additionally, MPCs discussed how MAs may not feel entitled to sport psychology services because it is almost exclusively marketed to high-performance elite sport. Since most MPCs work in high-performance sport, Robert felt "it could be that perception is felt by MAs" because "maybe they feel that [sport psychology services] are not for me". As Stacy explained, that perception may be warranted because organizations (e.g., CSPA) "are not promoting services targeting the Masters population and that's a gap". Recognizing there may be hesitancy or reluctance in seeking out mental performance services is important when delivering services to MAs, which further implicates accommodations by the MPC.

Being Sensitive to Consultant-Client Discrepancies in Age and Gender. MPCs described how discrepancies in age and gender may influence the delivery of services. Many of our MPCs were younger than their MA clients. They conveyed that other service providers may need to be sensitized to the fact that MAs may be less receptive to their services given that they often have more life experience than MPCs. Irene explained, "There's always the age difference between the MPC and the MA. It could be triggering for them if they're working with a younger person." Often, MPCs navigated this age-related obstacle by "acknowledging my clients'

experience and abilities and being aware that I can't go in and pretend I know more than these individuals" (Abby). Interestingly, several of our younger, female MPCs brought up how they have a tougher time consulting with older male MAs. Abby described how sometimes "the buy-in took longer … there's this perception of 'what do you know that I don't already know', particularly in male athletes who are over 40." In discussing older male golfers' reluctance to schedule sessions with her, she added, "Maybe it's my gender or my age, that it just takes some ego to ask a young lady for some help on the golf course. Some men are not comfortable with that." Sensitizing service providers to probable discrepancies in age and gender is another implication associated with the delivery of services to older adults.

Being Sensitive to Potential Ageist Assumptions. Finally, MPCs acknowledged that ageism may be a contextual consideration related to service delivery. Whether it is meant to be intentional or not, MPCs should be cognizant of the overriding context of services to avoid ageist assumptions. Robert discussed a time where he held a series of mental training workshops for athletes of all ages, including MAs:

> I said "what do you guys want to talk about? I understand that your performance needs are different." The [MAs] got offended. They said "no, we want to do the same thing [as the younger athletic groups]" … That was a poor assumption I made … I share that anecdote to really share my experience with mental skills and mental tactics being very similar regardless of the level that athletes' performing.

His quote illustrates that MPCs should not assume the types of services desired by older adults. MPCs also noted how certain services may be interpreted as being patronizing or ageist, such as the use of gratitude exercises. Abby discussed how during motivational inventory exercises, strategies encouraging MAs that they "should be grateful for" being able to still do sport at their age, or strategies for "staying positive" by recognizing what a MA is able to do at their age, can often be interpreted as patronizing. She explained how "most of the [serious-minded] MAs I

would work with would scoff at the idea of taking that [positive] spin with [sport]" because many of her clients try to resist the traditional aging discourse. Altogether, the MPCs conveyed a need to consider how their messaging is received by MAs within the context of aging.

Discussion

This study explored MPCs' perceptions related to the content and delivery of sport psychology services to MAs. While this study was not a comparison between consulting with older adults versus younger clienteles, it did reveal MPCs' beliefs regarding differences and nuances in terms of the content and how services could be uniquely delivered to adult sportspersons. Content areas were mostly related to performance readiness, prioritizing sport, protecting and recovering sport enjoyment, and additional age and self-compassionate considerations related to getting older. Many of these content areas required a conjunction of mental skills that were not necessarily different than traditionally implemented mental skills with younger athletes. MPCs also elucidated nuance related to the approaches taken when interacting with MAs (i.e., how they approached the delivery of mental skills content and skills). While MPCs superficially described how service delivery was not much different from their traditional clientele, after further exploration, the findings showed otherwise. The MPCs noted substantial nuance related to how they considered age-related attributes and the resultant implications associated with service delivery. Further, MPCs described age-specific barriers and constraints that demanded accommodation and sensitivity when they implemented their services.

Content of Sport Psychology Services with MAs

MPCs identified content that has and has not been illustrated previously in the applied literature. To enhance performance readiness, MPCs worked with MAs on competitive preparatory routines, focus plans, strategies to protect/recover self-confidence, and strategies to

manage fear, anxiety, stress, and energy. The mental skills/strategies used in these cases were like those previously demonstrated with high-performance non-Masters sport (Vealey, 2007).

To protect or recover MAs' sport enjoyment, MPCs' work appeared to leverage emotional resonance, a consulting approach that essentially understands how individuals want to feel when performing optimally. Encapsulated by the Resonance Performance Model (RPM; Newburg et al., 2002), this cyclical approach is predicated upon a dream (i.e., a desired feeling an individual seeks), preparation (i.e., action(s) taken to elicit dream), obstacles that disrupt the dream, and revisiting the dream or desired personal feeling. When protecting/recovering sport enjoyment, most MPCs had MAs introspect upon how they wanted to feel (e.g., MAs' dream) that brought them the most enjoyment. This notion is important because sport adherence as an older adult should be intrinsically tied to enjoyment and motivation. Collins and Durand-Bush's (2014) work guided by the RPM found that coach-guided self-reflection enabled elite curlers to achieve their desired thoughts, feelings, and standards. Similar self-reflection was facilitated by MPCs to enable MAs to become resonant. While not explicitly outlined in the RPM, gratitude may also assist in achieving resonance. Gabana et al. (2019) found that gratitude interventions increased state gratitude and decreased burnout in collegiate athletes, which could be effective in supporting the desired dream state, particularly during preparation and overcoming obstacles. MPCs recommended that MAs adopt gratitude practices, using various exercises and strategies including self-reflection, to perceive sport as an opportunity to grow as an athlete and person. MPCs also encouraged realistic and elastic goal-setting practices for MAs' self-confidence and self-worth. MPCs' recommendation for diversified goals aligned with Medic's (2010) position that MAs should diversify personal goals rather than having them solely performance-based.

Results showed the importance of applied content positioned around prioritizing sport, which is critical to sport adherence. MPCs recognized that MAs had many life commitments, responsibilities, and obligations that needed to be navigated to maintain the priority. This is an important recognition by MPCs because Makepeace and Young (Manuscript 1 of thesis) have speculated that prioritizing sport involvement is of significantly greater consideration for older adults than younger sport performers. Balance and time-management required MAs to employ methods such as planning/scheduling, giving oneself permission, and negotiating and communicating with significant others to maintain priority. Similar methods have been noted elsewhere in the Masters literature. After investigating elite Masters cyclists' (7 male, 3 female) involvement in competitive sport, Appleby and Dieffenbach (2016) found that life balance was important to continue performing competitively. Specifically, negotiations with family, social networks, and the workplace were challenges needed to be overcome by MAs, and careful scheduling and clear communication were effective to maintain adherence. Based on interviews with fourteen MAs (9 male, 5 female) examining the nature and source of family influences on sport participation, Dionigi et al. (2012) highlighted how active and passive (permissive) support from spouses and children, while actively scheduling and negotiating with spouses, influenced MAs' sport activity. Dionigi et al.'s MAs did not require self-permission because they were given permission and "allowed" to continue their sport activity by spouses. Depending upon the levels and types of social support provided by significant others, MAs may need more strategies related to self-permission to maintain priority. Finally, as is the case in exercise adherence literature (see Kowal & Fortier, 2007; Van Dyck et al., 2017), strategies for recruiting co-participants (such as a gym buddy) allowed for instrumental social support, which were associated with the priority and sport adherence for MPCs' Masters clients.

The discussion of age and its associated limitations arose frequently in MPCs' practice with MAs. MPCs recognized that susceptibility to injury was often much higher with older adults, and their services could be beneficial in assisting MAs to cope with age-related injuries. Further, they consulted with MAs around the use of compensatory strategies to maintain performance despite physical limitations. The use of imagery and attention to psychological components of sport (e.g., short game in golf) assisted MAs in managing performance decline, and other studies have supported this notion that compensatory strategies are effective as physical age-related slowing occurs (Langley & Knight, 1999; Rathwell & Young, 2015). Managing changing physical realities is another highly relevant and novel content area in MPCs' work with MAs. Expanding realistic goals and focusing/refocusing strategies, MPCs counselled MAs to accept age-related limitations, to manage expectations accordingly, to avoid social comparisons, and to see aging as something that is encountered by all older adults.

MPCs used self-compassion to assist MAs in accepting they were not the same type of athlete they used to be. Neff (2003) conceived self-compassion as comprising three interacting elements: self-kindness, common humanity, and mindfulness. MPCs felt that *self-kindness*, being nice to oneself, and acceptance towards one's physical limitations were important for MAs coping with changing physical realities. When faced with age-related limitations, MPCs counselled MAs to realize these same experiences were shared by all adult sportspersons, which demonstrates the element of *common humanity*. Common humanity represents imperfections and weakness as being a shared human condition (Neff, 2003). This is particularly important since age-related decline is inevitable for all adult athletes. Finally, MPCs used *mindfulness*, or non-judgmental recognitions of one's negative self-perceptions (Neff, 2003), to reduce judgmental

tendencies that many MAs had regarding their inability to perform physically like they used to. Once becoming mindful, MAs could thereafter accept their current physical abilities.

Although self-compassion has become increasing considered among younger elite athletes, especially females (e.g., Mosewich et al., 2019), our results are the first instance where its applicability has been impressed on the MAs' sport experience. Research in older adult non-sport populations suggests self-compassion increased with age, uniquely predicted psychological well-being, and moderated subjective ratings of overall health and depression (Homan, 2016). Older adults high in self-compassion predicted more positive responses to aging (e.g., retirement, seeing grandchild get married) and fewer negative responses to aging (e.g., arthritis, loss of hearing) compared to those low in self-compassion (Allen & Leary, 2014). Expanding to sport, it appears self-compassion may enable adult sportspersons to successfully cope with age.

Addressing and Delivering Sport Psychology Content to MAs

MPCs used special approaches and considerations in their consultation with MAs. They considered MAs' mature self-concept, values, and identity, and considered and leveraged MAs' extensive life history to facilitate services. Remarkably, the MPCs portrayal of these approaches is very much in line with many adult learning principles (Knowles et al., 2012), or andragogic principles that guide teachers on how to interact with mature adult learners.

MPCs were ready to satisfy MAs' *need to know* (Knowles et al., 2012) by recognizing that working with older adults involved collaborative and interactive discussion, and a readiness to answer many questions from MAs. Sessions typically contained richer discussions resulting from MAs' openness to questioning, personal engagement, and need to know the rationale behind MPCs' recommendations. Due to the mature *self-concept of the adult* (Knowles et al., 2012), MPCs assumed that MAs could be more self-directed and often challenged them in

learning situations. MAs drove consulting sessions based off what they wanted to get out of them, and MPCs almost always expected MAs to complete homework. In terms of *prior experiences* (Knowles et al., 2012), the MPCs recognized they could leverage past life (and sport psychology) experiences in a different way (i.e., as assets for learning) than with younger clienteles. However, MPCs often navigated MAs' personally entrenched beliefs, which were constraints resulting from previous life experiences. MPCs satisfied adults' tendency to pursue a problem-focused *orientation to learn* (Knowles et al., 2012). MAs sought out MPCs to solve a problem (e.g., loss of enjoyment), and MPCs provided MAs with homework and training on actionable strategies to resolve that issue (e.g., seeing sport as an opportunity). Finally, MAs were keen and *motivated to learn* during sessions (Knowles et al., 2012). MPCs recognized that MAs valued, took the onus to understand, and were driven to rapidly apply content.

Interestingly, these same adult learning principles have been applied by coaches working with MAs (see MacLellan et al., 2018, 2019). Our inspection of Callary et al.'s (2017) work on these coaches suggests similarities in approaches by Masters coaches and MPCs. For example, our MPCs often found themselves challenging and placing the onus back onto the athlete when faced with difficulties, which was comparable to how Masters coaches created autonomous learning environments that placed ownership and independence on adult athletes. Moreover, our MPCs, like Callary et al.'s (2017) Masters coaches, recognized the heterogeneity encompassed within Masters sport and individualized their services/support accordingly to adjust for individual differences between sportspersons. With Masters coaches more associated with coaching techniques/methods for *physical* preparation, and our MPCs associated with *mental* skill preparation, these approach similarities with adults suggest a possible need to redefine the branding of mental performance services with adult sportspersons. Rather than MPCs, the terms

"performance coaches" or "sport lifestyle coaches" may be beneficial, especially considering some of the stigma-related barriers related to sport psychology services. Generationally speaking, these labels could be effective considering the current cohort of MAs may be less socialized to seek help or to reluctantly engage in health-seeking behaviours. However, this could change as younger generations reach the Masters-level since mental health and other health-seeking behaviours may become less stigmatized and more normalized.

Navigating Barriers and Constraints to Service Delivery

MPCs noted various barriers and constraining conditions that could interfere with the implementation of services. Time was a barrier for MPCs since many MAs had little time to participate in sessions. MPCs implemented proactive solutions, such as being very flexible with scheduling sessions (e.g., via Skype, going to the athlete, holding sessions after work hours). MPCs also felt that there was stigma towards seeking services in older adulthood, a notion that has also been echoed by Masters-aged coaches (M_{age} = 45.25) seeking mental skills training by MPCs (Sheehy et al., 2019). MPCs also suggested discrepancies in age/gender, as well as being wary of potential ageist assumptions, as sensitivities that if not considered/negotiated could compromise service delivery. Despite not being explicitly mentioned, we interpreted a lack of Masters-specific formalized training/curricular content for MPCs as additional obstacles faced in service delivery. MPCs appeared to learn to consult with MAs from experiential-based learning, rather than formalized training or educational curricular content dedicated to this athletic cohort. To continue enhancing the utility and receptiveness for psychological resources and services, and to enhance the benefits of their services for MAs, MPCs will need more formalized educational resources/content designed specifically for working with this novel population.

Limitations, Future Directions, and Conclusion

One limitation was a gender disproportion displayed by our sample. Despite having more female professional CSPA members (https://www.cspa-acps.com/professional-members), it is not the 80/20 split evidenced in our sample. Future research exploring additional perceptions of male MPCs' work with MAs is warranted. This study did also not include the perceptions of additional Masters stakeholders, such as Masters coaches or adult sport researchers, regarding their beliefs about sport psychology services among MAs. Understanding how these stakeholders view curricular content and modes of delivery would be important for the development of future psychological resources and services designed specifically for older adults. Finally, despite our attempt to hierarchically organize content, strategies, skills, and methods according to the precedent set by Vealey (2007), this was at times very difficult to do. While some of the services provided by MPCs in this study were noted in Vealey (2007) and were classified as such, much content described in their services were not. Therefore, there were instances where we were unable to perfectly represent the applied content in our data as a strategy, skill, or method because it was not always clear. Future research that is able to distinguish and further classify data on applied content vis-à-vis appropriate terminology would greatly expand the applicability of results to the Masters community.

The study's purpose was to understand MPCs' perceptions and beliefs related to the application of sport psychology with MAs. The study leveraged MPCs' expertise to uncover how and what mental skills content they applied with MAs, while also elucidating additional considerations related to service delivery and their resultant implications. Since the current research program continues to explore the creation and development of sport psychology curriculum and resources for older athletes, it was important to hear from mental skills experts,

such as MPCs, who had an invested interest in working with and had previous consulting experience with MAs. This enabled us to elucidate content that expanded the perspectives of the athletes (Makepeace & Young, Manuscript 1 of thesis), particularly highlighting the approach and how the MPCs thought such content should be delivered. Most poignantly, this study corroborated and accentuated the MAs' assertion that MPCs *can* be used as a support to the Masters sport experience. Furthermore, the present results underscore that MPCs are willing and able to provide services to MAs and detail nuanced Masters-oriented approaches that accompany their service delivery with this population compared to their traditional clientele. Incorporating MPCs that recognized the heterogeneity within Masters sport enabled us to elucidate content and delivery approaches that could expand a host of MAs, including specific services based around performance, and others around maintaining the Masters sporting lifestyle.

Findings from this study, as well as Makepeace and Young (Manuscript 1 of thesis) and Chapter 4, provide a way forward towards the creation of mental performance content/services designed specifically for MAs. These studies foremost outlined the *use* and *desire* for sport psychology services by adult sportspersons. They included both corroborative and divergent content and delivery approaches that could be used by many MAs and MPCs to support the Masters sport experience and lifestyle. MPCs reading these articles would have a better understanding of the novelties and nuances in consulting with older adults, such as information related to delivering services and pertinent content areas. Considering the unique stage of life related to this athletic population, there is a need to continue gathering information related to how these services can be implemented and deliberated to further support adult sportspersons.

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Table 1.

Mental Performance Consultant Demographic Information Derived From Pre-Screening Survey

Name	Province of origin	Years working as MPC	# of MA clients	Familiarity[a]	Performance[b]	Enjoyment[b]	Lifestyle[b]	Worthy aim[c]
Jenn	QC	18	15+	4	4	4	4	5
Robert	QC	3	15+	5	2	4	4	5
Karen	ON	20	3-5	5	2	5	5	4
Susan	ON	7	6-8	5	3	5	4	4
Steve	ON	16	15+	4	2	4	5	3
Brooke	ON	7	3-5	3	4	4	4	4
Abby	NS	8	6-8	4	4	4	4	4
Linda	ON	12	15+	4	3	3	3	4
Irene	ON	5	3-5	5	2	4	2	5
Stacy	ON	24	3-5	4	4	5	5	4

Note: [a] Mean scores for familiarity of Masters sport; [b] Mean scores for MPCs' perceptions of whether MAs' motives for sport are primarily for performance, enjoyment, or lifestyle-oriented, respectively; [c] Mean score for whether the development of a mental skills resource for MAs was a worthy aim. [a,b,c] Ratings were from 1 (strongly disagree) to 5 (strongly agree).

Table 2

Hierarchy of Themes and Subthemes Associated with the Content of Sport Psychology Services with Masters Athletes

Higher order theme	Secondary theme	Tertiary theme		
Performance readiness	Preparatory routines			
	Focus plans			
	Retrieving/protecting self-confidence			
	Managing stress, anxiety, fear, & energy			
Prioritizing sport	Balance/time-management	Planning/ scheduling	Self-permission	Negotiations/ communication
	Recruiting social support			
Protecting/recovering enjoyment	Self-reflection			
	Diversifying goals			
	Sport as an opportunity/gratitude			
Age/self-compassionate considerations	Managing susceptibility to injury			
	Compensatory strategies			
	Managing changing physical realities	Self-compassion		

Table 3

Hierarchy of Themes and Subthemes Associated with Approaches to Delivering Sport Psychology Content to Masters Athletes

Higher order theme	Secondary theme	Tertiary theme
Age-related attributes & implications	Values & identity	
	Engaged/invested clients	
	Self-awareness & life experiences	Resources & constraints
	Addressing entrenched beliefs	
	Working holistically & transferability of skills	
Barriers, constraints, & their implications	Accommodating time constraints	
	Stigma towards sport psychology	
	Age/gender discrepancies	
	Sensitivity to ageist assumptions	

Chapter 5: General Discussion

The purpose of the thesis was to explore Masters athletes' (MAs) applications for sport psychology as it pertains to enhancing performance, experience, and sport lifestyle adherence. The findings demonstrated how traditional mental skill use aligned with the existing dialogue regarding mental skills training for performance readiness/enhancement, while applications for novel Masters-specific mental skills were used to enhance sport enjoyment (Manuscript 2) and adherence to the MAs sport lifestyle (Manuscripts 1 and 2). These latter uses for mental skills training lend support towards the use of mental skills to maintain adherence and to manage the athletic lifestyle and identity, which are content areas within the existing literature that are not discussed as extensively compared to performance readiness/enhancement. The thesis also revealed nuanced understandings related to the specific approaches and considerations for service delivery (Chapter 4 and Manuscript 2). Overall, the corroboration of evidence across Manuscript 1, Chapter 4, and Manuscript 2 suggests that sport psychology *can* support older adults in sport. The diverse set of mental skills and strategies uncovered from the perspectives of MAs and mental performance consultants (MPCs) in this thesis accounts for the evidenced heterogeneity within Masters sport, meaning that all adult sportspersons should identify with at least some of the thesis findings (for visual representation of these findings, see Appendices F & G). Despite few resources available to support MAs, the thesis provides a way forward towards how applied sport psychology, as a discipline and its practicing members, can support MAs' personal strivings for performance, experiential, and adult sporting lifestyle enhancement.

What are the Implications of the Findings for Services with Masters Athletes?

Establishing value is a precursor for any athlete using sport psychology services. As opposed to non-MAs populations who are at times not seeking sport psychology services out of

their own volition (because they may be directed to do so by parents, coaches, or sport organizations), MAs particularly need to value what they are contributing both with their time and money to pursue programming related to applied sport psychology. Arguably, they are at *all times* seeking services out of their own volition. The thesis illustrated that value appeared to be predicated upon MPCs' ability to market services to middle-aged and older adults with Masters-specific content/strategies in mind. Value was predicated upon MPCs' ability to consider novel considerations of skills, including how mental skills and strategies can be applied uniquely to achieve peak performance and adherence to the adult sport lifestyle. Additionally, value was established through applying approaches that recognized the heterogeneity encompassed within Masters sport, the need to work holistically based upon life circumstances pertinent to each MA, to recognize the barriers that could limit service delivery, knowing how to consult effectively/appropriately with middle-aged/older adults, and knowing how to alter services according to the age-specific demands faced by each MA. Services related to managing age-related limitations were poignant content areas for MAs, and instilling value towards sport psychology services meant assisting MAs in navigating these obstacles that could be detrimental to their self-worth. Overall, the thesis provided evidence for how to effectively consult with MAs by integrating content and approaches that met the needs, preferences, and realities of the Masters context, which would likely maximize personal value towards prospective services.

Delivering Services to a Heterogeneous Clientele

Recognizing the heterogeneity within Masters sport is an important consideration for applied sport practitioners working with MAs. Recognizing differences in personality, education, and previous life experiences (including variability in prior sport psychology experiences) of the athletes was important. In terms of personality, for example, Luke discussed how some MAs

display “hubris” and may be unwilling to accept direction from MPCs because “they have all the answers” (Chapter 4). Rathwell et al.’s (2015) narratives on Masters swimmers, and in particular a narrative on “Controlling Connor”, illustrated the type of hubris shown by some MAs, such as being unwilling to accept coaches’ feedback or perceiving oneself as being more knowledgeable than coaches. This notion that MPCs might sometimes have to consider intransigent personalities of MAs was echoed in in Manuscript 2 since MPCs often had to navigate MAs’ personally entrenched beliefs associated with “rigid personality traits.” Female MPCs noted how older male MAs were at times less receptive to services. MAs identified themselves as being potentially less open to new forms of training (i.e., mental skills training; Chapter 4) and unfortunately this could be exacerbated when female MPCs are delivering services.

In Chapter 4, MAs noted that their sport cohort tends to be highly-educated and intelligent, a notion acknowledged by the MPCs in Manuscript 2. This remarkably educated profile of MAs has been shown elsewhere (Weir et al., 2010). Highly educated MAs could be more willing to seek out sport psychology services. Ungerleider et al.’s (1989) quantitative research with those qualified for the National Masters Championship showed educational attainment was significantly associated with mental practice, including highest rates of mental practice in those with graduate degrees and lowest in those with high school diplomas. As evidenced by MAs in Chapter 4, highly educated MAs may be more likely to seek out and benefit from sport psychology services compared to those who are not. In terms of life experiences, both the MAs and the MPCs acknowledged that adults brought their experiences to the consulting venue and this could be both beneficial, but also a circumstance that might need to be navigated. Throughout Manuscript 1 and Chapter 4, the life (and sport psychology) experiences shown by MAs were quite broad, and these experiences were often leveraged in a

positive, facilitating manner by MPCs in Manuscript 2. Alternatively, life experiences were also potentially detrimental to the consultant-client relationship if MAs had past negative experiences with sport psychology consultation and were wary on seeking prospective services due to these experiences (Chapter 4). Recognizing the roles/impacts of personality, education, and life experience will be important to service delivery with MAs.

An important consideration for practitioners is how psychological skills and strategies related to sport performance, enjoyment, and sport lifestyle adherence may differ between athletes. There is heterogeneity in competitive orientation among adult clients. Some MAs are predominantly performance-oriented (Dionigi & O'Flynn, 2007), while others are experiential- and/or lifestyle-oriented (Dionigi et al., 2011). Findings within this thesis provided service content for all types of competitive MAs, since participant recruitment screened for heterogeneity in competitive orientations, applied consulting experience across MPC careers, applied consulting experience specifically with MAs, and potential uses for sport psychology. Performance-oriented MAs, or MPCs working with these individuals, describe addressing content related to performance enhancement similarly to those services traditionally delivered to younger clienteles (i.e., not with MAs; see Weinberg & Gould, 2015). However, performance-oriented content revealed in Manuscripts 1 and 2 did show subtle nuances in terms of the application of these traditional skills by MAs. For example, MAs in Manuscript 1 goal set based off self-progression and improvement, which was a method used many times by MPCs in Manuscript 2. MAs were also aware that their nervous systems did not always "fire up the same way that it used to" (Manuscript 1); MPCs did not say this explicitly, but they likely recognized this reality and used energy management strategies (Manuscript 2) to help MAs in this regard.

In terms of performance enhancement, there were discrepancies for strategies related to self-confidence building in the views of the MAs and the MPCs. Self-confidence was our least robust traditional mental skill described by the MAs in Manuscript 1. A possible interpretation of this finding might be that MAs do not require strategies to maintain/enhance self-confidence. In Manuscript 2, however, one of the strategies related to performance readiness commonly implemented by MPCs was related to protecting/recovering MAs' self-confidence using methods such as imagery, positive self-talk, and realistic goal-setting. Further exploration into why these perceptional differences occurred is warranted. In terms of convergence, the use and implementation of focus plans were corroborated across Manuscripts 1 and 2. MAs used focus plans to enhance performance readiness (Manuscript 1), while MPCs instructed MAs to set focus plans which enabled them to overcome difficult or challenging portions of race courses (Manuscript 2). Finally, MAs used imagery as a dedicated skill, for example, to visualize upcoming competitions, to learn physical technique, and to substitute for physical training (Manuscript 1). However, unlike MAs, MPCs rarely used imagery as a standalone method. MPCs often combined imagery with other methods and mental skills to protect/recover self-confidence and to manage pre-competitive arousal, while also incorporating imagery into focus plans and preparatory routines. This finding highlights how MPCs' expertise in mental skills training could elucidate additional uses for mental skills that expand what MAs already know.

In terms of divergence, there was a lack of corroborative evidence between Manuscripts 1 and 2 regarding the use of sport psychology to enhance sport enjoyment. While MPCs noted how MAs most frequently sought their services to protect/recover sport enjoyment, this was not evidenced by the athletes in Manuscript 1. MPCs richly described how they encouraged MAs to self-reflect, diversify personal goals, and to express gratitude and see sport as an opportunity to

protect/recover sport enjoyment. MAs did diversify personal goals, albeit as a performance enhancement strategy (Manuscript 1), but not to maintain sport enjoyment. Reflecting on the process and formative analyses in this thesis, at the end of analyses in Manuscript 1, I felt that sport psychology services may not be useful for enhancing MAs' sport enjoyment. However, after completing Manuscript 2, this interpretation was refuted since a large role within a MPC's consulting practice with MAs was clearly helping them maintain sport enjoyment. Dionigi et al.'s (2013) work on how MAs negotiate the context of sport and ageing shows that competing for enjoyment, comradery, and social affiliation helps reinforces a positive aging discourse. The application of sport psychology services to protect/recover sport enjoyment could help further reinforce this narrative.

There was corroboration between Manuscripts 1 and 2 related to how sport psychology content can enable MAs to maintain sport adherence. In addition to facing real and perceived barriers (e.g., time, lack of programming/facilities; Young, 2011), there are likely greater self-regulatory demands needed by older adults to maintain sport adherence. There is less institutionalization in adult sport compared to younger elite sport, such that the onus for scheduling, organizing, and financing sport is taken on by the adult sportsperson compared to these same measures normally structured and/or taken by sport organizations, teams, or parents with younger athletes. This particularly demands that MAs would require more self-regulatory skills/strategies to adhere to their sport in the absence of such structures. This demand is further exaggerated if sport is construed as an adult lifestyle, as it was by most MAs in the current thesis. Considering this and according to our findings, this implicates a critical role for MPCs, in addition to possible guidelines for content related to the creation of psychological self-help strategies, to maintain sport adherence.

In Manuscript 1, MAs described strategies to prioritize sport ("cognitively justifying"; "framing sport as an outlet"; "living authentically"), to fit sport in ("integrating/twinning"; "scheduling/structuring"; "altering personal commitment"), and to recruit social support ("recognizing/cultivating support"; "negotiations/ enlisting support"; "social signalling"; "social commitments/obligations") to maintain adherence to the MA sport lifestyle. In Manuscript 2, MPCs acknowledged that MAs prioritized sport and noted strategies related to balance, effective time-management, and recruiting social support to ensure the priority. Moreover, MPCs described planning/scheduling, negotiating/communicating with significant others, and giving oneself permission as specific methods assisting MAs to maintain life balance and ensure effective time-management. MAs in Manuscript 1 described how the use of effective scheduling and negotiations/communications with spouses were poignant in maintaining sport adherence. Appleby and Dieffenbach's (2016) qualitative research with elite Masters cyclists provides further support to this notion, suggesting that life balance and continued sport activity are facilitated by scheduling, negotiating, and communicating with significant others. In Manuscript 2, the MPCs also discussed how social accountability and recruitment strategies enabled MAs to maintain priority. Such forms of instrumental support have been effective at maintaining exercise adherence in older adults (see Kowal & Fortier, 2007; Van Dyck et al., 2017), and the current descriptions show that these strategies can be effective at maintaining sport adherence. These social accountability and recruitment strategies were corroborated in Manuscript 1, where MAs described purposefully cultivating/recognizing socially supportive environments and the value of social obligations/commitments to teammates/training partners to encourage their adherence. Recently, Newland et al.'s (2020) work examining mental skill use (e.g., coping with adversity, concentration, confidence and achievement motivation, goal-setting) and grit (i.e., perseverance/

passion towards long-term goals) in Senior Olympic athletes (M_{age} = 68) showed some evidence to suggest that Senior athletes using more mental skills displayed higher levels of grit. Since there is likely a positive association between grit and sport adherence, their finding aligns with the thesis' claim that sport psychology can assist MAs in maintaining sport adherence.

There is a need to consider the many uses and applications for sport psychology when working with MAs. Specifically, considerations towards how MAs may use services differently, such as mental skills to enhance performance or Masters-specific skills related to enhancing enjoyment and/or adherence to the MA sport lifestyle, are warranted. Further, noting the influence that personality variables, intellect, and life experience may have on service delivery is important when consulting with MAs. Overall, the application and successful facilitation of services depends upon the recognition of heterogeneity and the role it has within Masters sport.

Services Related to Managing Aging

A commonality shown across the thesis was the need to manage age-related limitations. Both the MPCs and the MAs recognized that sport psychology services were beneficial in supporting older adults in overcoming age-related barriers and/or limitations. Specifically, the use of psychological compensatory strategies was evidenced by MPCs and MAs. MAs used imagery, competitive psychological tactics/race strategies, self-talk, and attention to non-physical aspects of training (e.g., nutrition) to compensate for age-related decline. Similarly, MPCs described how MAs can strategically pay closer attention to psychological aspects of training (e.g., short game in putting) and use imagery to substitute for physical training to make up for age-related decline. The manuscripts' findings align with prior work in the Masters sport literature corroborating the use of compensatory strategies by aging athletes (Langley & Knight, 1999; Rathwell & Young, 2015). For example, Langley and Knight (1999) showed how a 68-

year-old tennis player played tennis at clay courts because it was easier on his body, he emphasized cardiovascular and weight training for off-court workouts, and changed to a stronger doubles partner to compensate for age-related decline.

Interestingly, there was little explicit evidence in Manuscript 1 detailing how MAs used sport psychology to overcome injury. For example, Amy commented how imagery was a beneficial substitute for physical training because she could not "do the jumps that many times." We assume that Amy used imagery to avoid injury (i.e., overtraining), however, she did not say it explicitly. MPCs acknowledged that susceptibility to injury was a lot higher in MAs, and consequently a poignant service offered to older adults involved "risk/reward evaluation" and "priority redirection" to help athletes' efforts in managing/overcoming injury. Thus, the MPCs tackled the injury management topic more directly. This discrepancy could be due to MAs not knowing the utility for sport psychology in overcoming injury, or perhaps MAs bring themselves to recognize the harm/negative possibilities surrounding injury and require having these difficult conversations with MPCs to manage/overcome their personal detriment.

MAs and MPCs both discussed how managing performance and physical expectations were important for adult sportspersons, such as MAs being mindful of what they could do physically and MPCs helping MAs cope with the reality that they cannot perform the same way they used to. A highly nuanced and poignant strategy to assist MPCs in this regard involved self-compassion, which Neff (2003) conceived as comprising three interacting elements: self-kindness, common humanity, and mindfulness. MPCs coached MAs to be kind to oneself and accept their physical limitations (self-kindness), to recognize their physical limitations as something encountered by all adult sportspeople (common humanity), and to be mindful and non-judgemental regarding their physical limitations (mindfulness) (Neff, 2003). Inductive

results based on the MAs' perspectives in Manuscript 1 were not interpreted through the lens of self-compassion. In hindsight, there were instances in MAs' responses that suggested they saw the value of being self-compassionate. MAs were forthright in suggesting they were mindful and non-judgemental regarding what they could do physically, and in light of aging, they purposefully redirected priorities to other avenues of sport that were commensurate with accepting aging such as placing an emphasis on being able to learn a new skill (rather than performance outcomes) or non-judgementally managing performance expectations. There were aspects in their responses that indicated they made efforts to be kind to oneself, such as Amy noting, "It's okay to do this, but I don't *have* to do that." Had I performed the MPC focus groups and Manuscript 2 analyses prior to my work with the MAs, I would have engaged the athletes, like Amy, in further probing on these responses to more fully expand their perspectives on self-kindness. Research in non-sport older adult populations shows self-compassion increases with age and uniquely predicts psychological well-being (Homan, 2016), while predicting more positive responses to aging and fewer negative responses to aging (Allen & Leary, 2014). Findings from this thesis illustrate self-compassion may be an effective strategy to reinforce a positive aging discourse, especially among MAs who are serious-minded and hard on themselves. Future research explicitly testing the utility and efficacy for self-compassion in MAs will be required to explore this further.

Barriers and Constraints Associated with Service Delivery

Both MAs and MPCs suggested there were barriers and constraints impacting the delivery of sport psychology services to adult athletes. Some barriers were corroborated across Chapter 4 (the MAs) and Manuscript 2 (the MPCs), while others were unique and novel to either athletes or consultants. Stigma was a common barrier identified by the MAs and the MPCs, with

both groups suggesting that a barrier implicating service delivery with older adults was related to existing stigma towards "psychology". In a different but relevant context, Sheehy et al. (2019) showed Masters-aged coaches (M_{age} = 45.25) were hesitant to seek out mental skills training due to stigma, suggesting this barrier may be more prevalent in older adults compared to youth.

Chapter 4 discussed how many MAs had little time to commit to services due to existing personal commitments (e.g., picking kids up from school), whereas MPCs in Manuscript 2 corroborated time as a barrier by implying they had to flexibly schedule sessions (e.g., via Skype, holding sessions during the evenings or weekends) to navigate and accommodate MAs' time constraints. MPCs knew that MAs had little time for sessions, which further emphasized the need to make accommodations on behalf of the MPC.

Two further barriers that were described by MAs, but not by the MPCs, were "benefits versus financial costs" and "accessibility". Since it usually takes time to see the benefits of sport psychology services, MAs discussed that some may be less willing to invest financially into these services unless they already knew the benefits or had previous positive experiences. Further, MAs noted accessibility or not knowing where/who to go for services was another barrier implicating service delivery. If practitioners made content more readily accessible and user-friendly outlining the anticipated benefits and outcomes of services for the MA cohort, this could instill value and receptiveness towards prospective services; thus, attracting new clients.

Sensitivity to age/gender discrepancies and potential ageist assumptions were constraints to service delivery uniquely outlined by the MPCs. Some female MPCs described how MAs (particularly older male MAs) were less receptive to their services because of their age/gender. Specifically, the younger MPCs acknowledged the constraint that buy-in towards services took longer in older male MAs, and that a strictly directing and advising approach (rather than a

collaborative exchange) could potentially "trigger" defensive hubris in MAs. Additionally, the MPCs also had to be careful to avoid expressing potentially ageist assumptions. They had to be cognizant of the underlying context for service delivery to avoid potential ageism. For example, MPCs had to ensure that they did not assume the types of services desired by MAs that reinforced aging stereotypes (e.g., thinking MAs did not desire performance-oriented services; when using gratitude exercises). Recognizing and navigating the barriers and constraints implicating service delivery is important if sport psychology services are to be effectively delivered to support MAs.

Delivering Services and Consultation Approaches with Adult Sportspersons

The General Discussion thus far has emphasized content for services and potential barriers implicating service delivery with MAs. Service delivery is predicated upon the recognition of what content is most pertinent to MAs and what may interfere as potential barriers. Expanding this position, the thesis provided findings regarding the types of approaches that were facilitative to service delivery with MAs. This included approaches related to what MAs wanted to receive in terms of prospective services, as well as what MPCs explicitly did in their approaches to facilitate services to adult sportspersons. In essence, knowing *how* to effectively deliver services is essential to instill value for adult clients.

Chapter 4 provided evidence that MAs wanted services to transcend and be transferable to non-sport domains. This notion was recognized by MPCs in Manuscript 2 since they were prepared to work holistically with MAs, therefore ensuring services could be applied within and outside sport. MAs in Chapter 4 also desired customized sport psychology services that were dependent upon the personalized, life stage-related needs of each individual MA. The findings from Chapter 4 revealed that MAs wanted services to be exclusively marketed to support the

demands faced by older adults and to be put into a context where they could be absorbed/valued by each MA. MPCs (Manuscript 2) illustrated how it did not matter who the client was because "everything is customized to every individual's needs", including the initial intake and performance profiling. In addition to the value added to services by such customization (i.e., tailoring towards what each MA wanted to get out of sessions, irrespective of age cohort), the MPCs also described how they could instill value when their services recognized the types of content areas that were most pertinent to older adults.

MAs in Chapter 4 also outlined prospective services which could instill value, including: integrated services into practice regimes; mental skills workshops at times when MAs were available (e.g., practice times); audio mental skills training; and incorporating coaches into mental skills training interventions. Besides some MPCs having had experiences with delivering mental skills workshops to MAs, none of these same services were illustrated in Manuscript 2. However, the MPCs did identify peer-to-peer mental skills training as being a promising modality with MAs compared to other younger clienteles. These perspectives should likely be considered when designing prospective services.

Very notably, the findings from Manuscript 2 showed how the MPCs consulted differently with MAs. They adopted novel approaches to their consultation practices when working with these adults. The MPCs leveraged MAs' previous life experiences and considered MAs' mature self-concept, values, and identities. They anticipated higher compliancy to homework with MAs compared to their younger clienteles, and expected richer discussions during sessions because of MAs' willingness to ask questions and their need to know the rationale behind service delivery. MPCs work with MAs shows parallels to approaches advocated in conceptualizations of adult learning principles (Knowles et al., 2012) and sport

andragogy principles in coaching (MacLellan et al., 2019). There is perhaps a need to consider the findings from the MPCs' descriptions of approaches in Manuscript 2 as preliminary principles for *consulting* with MAs. These adult-oriented sport consultancy approaches included (see Appendix G): leveraging MAs' life experiences; taking an individualized approach towards the needs of older adults (e.g., engaging their readiness to invest and apply skills; recognizing values and identities; recognizing existing resources and individual constraints); recognizing heterogeneous differences between adult sportspersons (e.g., personality, education; values; identity; life experience; competitive orientations); the need to work holistically and ensure transferability of mental skills; and purposeful minimization of Masters-specific barriers implicating service delivery (e.g., lack of time). These principles can be acted upon and applied variably by MPCs working with middle-aged and older sportspersons to instill value towards prospective services. Their application as approaches can be broadly framed within the recognition of larger contextual constraints/barriers implicating service delivery (e.g., stigma, ageism), and prevailing age-specific sport psychology content (e.g., making it a priority, managing aging; see Appendix F). Appendices F and G provide a preliminary evidence-based framework for consulting with older adults, including: Masters-specific content; and adult-oriented consultancy approaches.

Where Do We Go from Here?

The lack of Masters-specific educational content/resources for MAs *and* MPCs was evidenced by the thesis. Therefore, there is a need to hear other Masters stakeholders (i.e., Masters coaches, adult sport researchers), as well as hearing additional MAs' and MPCs' voices, regarding how we can develop these content/resources to further support MAs. If Appendices F and G are considered the foundations for future development of content/resources for MAs, they

will need to undergo further critical refinement and possible expansion. Specifically, future work will need to evaluate whether anything is missing or should be added to the figures based upon multiple stakeholders' beliefs and perceptions. I propose using a working group followed by a two-round Delphi survey to assist in developing additional content, methods, and delivery approaches related to future sport psychology programming for MAs. Using groups of "experts", or individuals with knowledge and expertise in applied sport psychology and/or Masters sport (Keeney et al., 2011), I believe will be effective to expand the current findings so that we can provide additional curricular content and support to older adults in sport.

Working Group

A working group (WG), or consensus conference, looks to achieve consensus through interactive discussions with other experts (Keeney et al., 2011). The WG could consist of ten experts who are either MAs, MPCs, adult sport researchers, applied sport psychology researchers, Masters coaches, gerontologists, older adult physical activity specialists, or other Masters stakeholders. The WG's purpose would be to refine/critically evaluate Appendices F and G. Experts would be questioned on whether anything should be added (i.e., methods/techniques related to content), removed, or modified from the figures. The WG would expand our existing thesis data to elucidate other potential avenues for sport psychology and MAs. Once the figures have been vetted/discussed in the WG, the figures would undergo another evaluative process in the Delphi survey. WG members would not be asked to participate in the Delphi survey, but each member would be required to nominate 5-10 individuals with expertise/knowledge related to sport psychology and/or Masters sport who could participate in the subsequent Delphi survey (Jones et al., 2018).

Delphi Survey

Delphi surveys are an iterative, multistage, mixed-method technique that looks to achieve consensus using a panel of experts (Keeney et al., 2011). Following refinement and possible expansion in the WG, a two-round Delphi survey would be appropriately timed to achieve consensus on the refined figures (Appendices F & G) from the WG. Each figure's elements (i.e., individual components on a figure) would be put into an online survey format and rated on a 7-pt Likert scale anchored at 7 "strongly agree" and 1 "strongly disagree" (see Jones et al., 2018 for similar application of a Delphi survey). Likert scales enumerated and analyzed across panel members are often used in Delphi research to achieve consensus (Sasahara et al., 2009).

I recommend that in the first Delphi round, the nominated experts (50-100 respondents) be asked to rate each item/figure element from 1-7. Following each rating, they will also be asked to provide constructive feedback regarding how to improve each item in an open-text box (i.e., what should be modified, removed, and/or added). Responses will be analyzed for consensus using an inspection of median scores of > 5 (indicating agreement) and standard deviations < 1 (indicating limited variability) (Feo et al., 2018). Experts' open-ended text box comments will be collated, and refinements will be made to those items not reaching consensus. Item refinements will be made using open-ended text box comments, and these refined non-consensus items will be put into Delphi 2 for a final evaluative process. Items reaching consensus in Delphi 1 will not be put into Delphi 2. A second Delphi survey will be then sent to the same group of experts. This survey will contain the refined items from Delphi 1 and experts will only be asked to rate items on the same 7-pt Likert scale. Once the same consensus criteria have been achieved, only those reaching consensus (including those that had already reached

consensus in Delphi 1) will be put into the final figures outlining how sport psychology can effectively support MAs in sport.

The working group and Delphi survey provides a way forward towards the creation of educational curricular content/resources designed specifically to support older adults in sport. The figures will provide: 1) Masters-specific content and methods; and 2) approaches for effective service delivery. Ideally, these figures would become an empirically grounded blueprint for how to consult with MAs and may provide a framework for classifying content, strategies, skills, and methods as it pertains to MAs. With this research program striving to create psychological resources to support the adult sport experience, this subsequent research phase would be effective at providing rigour, reliability, and expand our current findings.

Limitations and Additional Future Directions

One of the thesis limitations was that we only considered the use of sport psychology to *keep* older adults in sport, rather than as a support to help them transition into/out of sport. It is possible that some adult sportspersons are psychologically, emotionally, and physically unhealthy as a result of their prolonged sport activity and may find themselves not wanting to continue or are irrationally feeling obligated to continue. In certain cases, MPCs could be a resource for having hard discussions on how to transition out of Masters sport in a dignified way. Another limitation is that we did not hear enough from team sport MAs and MPCs having worked within the Masters team sport context. This limitation is not surprising as most initial psycho-social research in various areas of Masters sport has focused on more prevalent individual sport phenomena and not team sports (Currie, 2019). Hearing these perceptions will expand our findings towards more than just predominantly individual sport athletes. Despite our sample's age being representative of most MAs (35-65 yrs old; Auckland Host Organizing

Committee, 2017), there is a need to consider how athletes 65+ use applied sport psychology the same *or* differently than their younger Masters counterparts. Understanding how sport psychology persists and can be used to support MAs across the lifespan will enhance our understanding related to how these services can be applied and valued by older adults. Finally, future research should likely tease apart the classifications of strategies, skills, and methods as it specifically pertains to content areas affecting MAs. Despite Vealey's (2007) attempt to operationalize a mental skills training intervention, the definitions for strategies, skills, and methods were not always clear and consistent. This limitation is further exacerbated when one considers Vealey's model did not elaborate upon how to implement a successful mental skills training intervention with MAs. There were findings in this thesis that described facets of approaches to service delivery with MAs that could represent a mediator for her model of effective interventions, specifically 'consultant effectiveness' and within a particular 'sociocultural context' of consultation (i.e., Masters sport and aging athletes). Using Vealey (2007) as a starting point, future research should likely update and further operationalize her model, including the content and delivery approaches elucidated in this thesis, to understand how MPCs can facilitate a successful mental skills intervention with MAs.

Conclusion

The thesis described new understandings for how MAs can use sport psychology to support their performance, experience, and sport lifestyle adherence. The application of traditional mental skills was effective in enhancing MAs' performance readiness, while novel Masters-specific skills enhanced MAs' sport enjoyment and facilitated their adherence to an adult sport lifestyle. The thesis also provided Masters-specific content for MPCs and other applied sport practitioners looking to facilitate services to older adults. The findings revealed

nuances in terms of service delivery and approaches to service delivery with MAs. Overall, findings considered the unique barriers and life stage-related needs and preferences associated with MA clients. However, to create more psychological supports with implications for consultation and self-help resources, there is a need to consider the perceptions of additional Masters stakeholders regarding how they view the application of sport psychology services. Future work will hopefully provide additional voices, beliefs, and perceptions regarding the application of Masters-specific skills, while illustrating educational curricular content/resources for both MAs and their MPCs. Moreover, this work will ensure the integrity of the supports that are being developed and in doing so will hopefully help to promote the normalcy and value of such supports for the ever-growing MA cohort. Continuing to explore how applied sport psychology can be used by older adults will provide support to enable a personally meaningful sport activity across the lifespan.

Statement of Contributions

As the primary investigator of this thesis, my contributions included designing the study, generating and obtaining research ethics from the University of Ottawa University Research Ethics Board, conducting and scheduling pilot interviews, conducting and scheduling each individual and group interview, transcribing interviews, data analyses, writing both manuscripts, and writing the full thesis. My supervisor, Dr. Bradley Young, was responsible for providing critical consultation and refinements to the design of the study methods, assisting with the generation of research ethics from the University of Ottawa University Research Ethics Board, provision of the existing roster of Masters athletes for initial recruitment invitations in Manuscript 1, assisting in the piloting process, assisting in all data analyses as a critical friend, providing edits on both manuscripts, and editing the full thesis.

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Appendices

Appendix A: Screening Questionnaire for Prospective Masters Athletes Participants

1. Are you currently competing in Masters sport?

   Responses: Yes or no

2. What is your primary Masters sport?

   Please specify here:

3. How long have you competed in Masters sport?

   Responses: Less than 1 year, 2 years, 3 years, 4 years, 5 years, 6 years, 7 years, 8 years, 9 years, 10+ years

4. What is your current age?

   Please specify here:

5. I am formally registered with Masters sport, such as an event, tournament, or championship.

   Responses: Yes or no

6. On average, I spend _____ each year on Masters sport (e.g., new equipment, registration fees, accommodations at competitions, coaches, etc.).

   Responses: $0.00-$499.99, $500.00-$999.99, $1,000.00-$1,499.000, $1,500.00-$1,999.00, $2,000.00+

7. I am currently training with a coach.

   Responses: Yes or no

8. I typically practice for _____ hours per week in season.

   Reponses: 0-2, 3-5, 6-8, 9-11, 12-14, 15+

9. I have entered _____ competition(s) in the past year.

Responses: 0-2, 3-5, 6-8, 9-11, 12-14, 15+

10. I have competed in Masters sport _____ in the past year.

    Responses: regionally, nationally, internationally, other (please specify)

11. I think competitions are important.

    Responses: 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5-strongly agree

12. If I were not able to compete at Masters competitions, I would not enjoy being a Masters athlete.

    Responses: 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5-strongly agree

13. I think that the lifestyle associated with being a Masters athlete is important.

    Responses: 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5-strongly agree

14. I often negotiate personal constraints or barriers (i.e., work, family, other responsibilities, etc.) to fit sport into my life.

    Responses: 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5-strongly agree

15. I compete in Masters sport primarily to set personal performance records or seasonal performance bests in competitions.

    Responses: 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5-strongly agree

16. I compete in Masters sport primarily to beat other athletes in competition.

    Responses: 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5-strongly agree

17. I compete in Masters sport primarily to set cohort-specific records in competition.

    Responses: 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5-strongly agree

18. I think it is important to be recognized for my results in competition (e.g., winning medals).

    Responses: 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5-strongly agree

19. I think that the experience of being a Masters athlete is what matters most.

    Responses: 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5-strongly agree

20. I compete in Masters sport primarily for personal enjoyment.

    Responses: 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5-strongly agree

21. I compete in Masters sport primarily for personal satisfaction.

    Responses: 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5-strongly agree

22. I compete in Masters sport primarily to meet other athletes.

    Responses: 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5-strongly agree

23. I am familiar with mental skills training, psychological skills training, or other psychological enhancement strategies that can increase performance or experience in sport.

    Responses: 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5-strongly agree

24. I have used mental skills training, psychological skills training, or other psychological enhancement strategies to increase my performance or experience in sport.

    Responses: 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5-strongly agree

25. The development of mental skills resources for Masters athletes is a worthy aim.

    Responses: 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5-strongly agree

26. I would be able to dedicate an allotted amount of time towards creating a mental skills training resource designed specifically for Masters athletes.

    Responses: 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5-strongly agree

Appendix B: Screening Questionnaire for Prospective Mental Performance Consultants

1. I am currently a professional member of the Canadian Sport Psychology Association.

   Responses: Yes or no

2. I have been a professional member of the Canadian Sport Psychology Association for _____ years.

   Responses: 0-2, 3-5, 6-8, 9-11, 12-14, 15+

3. I have been working for _____ year(s) as a professional mental performance consultant.

4. I would consider myself to have familiarity and/or experience in Masters sport.

   Responses: 1-strongly disagree, 2-disagree, 3-uncertain, 4-agree, 5-strongly agree

5. I believe the purpose of Masters sport involvement should be the achievement of peak performances in competition.

   Responses: 1-strongly disagree, 2-disagree, 3-uncertain, 4-agree, 5-strongly agree

6. I believe the purpose of Masters sport involvement should be for personal enjoyment, satisfaction, and/or other social benefits.

   Responses: 1-strongly disagree, 2-disagree, 3-uncertain, 4-agree, 5-strongly agree

7. I believe the purpose of Masters sport involvement should be to adhere to and maintain an adult sporting lifestyle.

   Responses: 1-strongly disagree, 2-disagree, 3-uncertain, 4-agree, 5-strongly agree

8. I have worked professionally as a mental performance consultant with _____.

   Responses: 0-2 Masters athletes, 3-5 Masters athletes, 6-8 Masters athletes, 9-11 Masters athletes, 12-14 Masters athletes, 15+ Masters athletes

9. I know other professional mental performance consultants who have worked with Masters athletes.

   Responses: 1-very few, 2-a few, 3-uncertain, 4-quite a few, 5-know a lot

10. I would consider having Masters athletes as clients for my professional practice.

    Responses: 1-strongly disagree, 2-disagree, 3-uncertain, 4-agree, 5-strongly agree

11. I know enough about the Masters sport context to be able to work with Masters athletes on mental skills training.

    Responses: 1-strongly disagree, 2-disagree, 3-uncertain, 4-agree, 5-strongly agree

12. The development of mental skills resources for Masters athletes is a worthy aim.

    Responses: 1-strongly disagree, 2-disagree, 3-uncertain, 4-agree, 5-strongly agree

13. I would be able to dedicate some time towards creating a mental skills training resource designed specifically for Masters athletes.

    Responses: 1-very small amount of time, 2-small amount of time, 3-uncertain, 4-an above average amount of time, 5-a lot of time

Appendix C: Semi-Structured Interview Guide for Masters Athletes

PART A: BROAD OPENING INTO SPORT PSYCHOLOGY

Walk in: Hello, thank you for being here today. My name is Tyler Makepeace, I am a Master of Arts candidate here at the University of Ottawa. What I will be exploring here today is essentially looking at how particular aspects of psychology applies to you as a MA. Psychology essentially refers to the mind/body connection, how individuals use mental strategies to alter behaviour, how your mind and body interact, how you may use certain mental strategies to facilitate things you want to do and achieve in your sport experience, or ways that you strategically think or prepares you for sport that enriches your experience. I would like to consider some things that you may purposefully do as a MA to address psychology, or instances of your sport experience and its connection to psychology. No research has explicitly looked at psychology and MAs, so I'm excited for what you may all have to share on this topic.

What I will be doing today is asking a series of questions. While there is no right or wrong answer, I'm really looking forward to hearing your perspective on this topic. If you see me taking notes, it's simply a way for me to record some of your comments, or to ask you questions later in the interview. This conversation will be audio-recorded to ensure I don't miss any of your comments. None of the information that you provide here today will be attached to your name.

Participant introductions here: Name, what Masters sport you participate in, why you compete as a MA.

Okay, so with this discussion focusing on Masters sport and the relationship to psychology, or how the mind and body interact, how you use certain mental strategies that facilitate things you want to do and achieve in your sport experiences, or ways that you strategically think about or prepare for your sport that enriches your experience…

1. How important is psychology to you as a MA? (**Probe:** has it always been important to you?)
2. A) Could you describe to me a situation in which psychology is *important* to you as a MA?
   B) Could you describe to me a situation in which you *need* psychology as a MA?
   C) Could you describe to me a situation in which you *find* psychology *helpful* as a MA?

Probes for Qs 2 a-c: a) Where was the situation; b) did this situation help you; c) in what context was this situation (competition, training, enjoying sport more often, etc.)

These Qs can infer needs, wants, and benefits

PART B: PSYCHOLOGY IN RELATION TO PERFORMANCE, EXPERIENCE, & LIFESTYLE

Walk in: I really like the dialogue into this discussion. The purpose of the first few questions were to essentially get you guys thinking about psychology broadly in your life as a MA. Now, the next few questions are going to be getting a little more specific. Specifically, I will be wanting your input regarding whether you have used psychology in relation to enhancing your performance, experience, or the lifestyle of a MA.

3. In terms of your performance, such as aspects in and around competitive performance, ways that help you perform better in competition, or to improve your performance in sport, have you ever used psychology to elevate your performance in Masters sport competitions?
4. In terms of your experience, such as how much you enjoy being a MA or the sport itself, the satisfaction you get from Masters sport, or other social benefits you may get from Masters sport, have you ever used psychology to elevate these experiences in Masters sport?
5. Finally, in terms of the lifestyle associated with being a MA, such as aspects related to how you develop and maintain a routine surrounding being a sportsperson, or possibly how you fit sport into your life, have you ever used psychology to help maintain or adhere to the lifestyle of a MA (**If not brought up, probe for time management here**).

Probes for Qs 3-5: a) Context (in what ways); b) how (often); c) what was the outcome/did this help you?

PART C: BIG 5 DEDUCTIVE Qs
(note: detail in part C will depend on the what has already been discussed)

Walk in: *[give myself opportunity to touch upon what's already been said]* What we will be focusing on here in the next section is related to specific psychological strategies, or mental skills, that have been documented as highly beneficial for younger athletic cohorts such as collegiate athletes, Olympic athletes, or varsity athletes. There are 5 traditional mental skills that have been used with these younger athletic cohorts. As you are obviously a much different cohort than these younger athletes, it will be important to hear your perspectives on what you do to involve or could relate to using these mental skills in your sport. To summarize the 5 mental skills, the 1st is goal-setting, which as you might expect involves setting goals for yourself; 2nd is arousal regulation, which essentially refers to how you are able to control or monitor your arousal, emotions, or nerves in sport; 3rd is self-confidence, which as you might expect is how much confidence you have in yourself, 4th is concentration, which is the ability to concentrate or focus; and the final mental skill is imagery, which essentially refers to the ability to see or visualize images in your mind. In these next few questions, I want you to think about situations where you may have struggled, been challenged, or where you were trying to get an edge in sport, where you may have used these 5 mental skills.

6. Could you describe to me a situation in which you have used goal-setting as a MA?
7. Could you describe to me a situation in which you have had to monitor or control your emotions/arousal/nerves as a MA?

8. Could you describe to me a situation in where your self-confidence has been challenged? How did you address these challenges? (Probe: in what ways, how, increase, decrease, maintain)
9. Could you describe to me a situation where you have had challenges with concentration/focus in sport? How did you did address these challenges? (Probe: how do you increase this, how often/details/context)
10. Could you describe to me a situation in which you have used imagery/visualization as a MA?

Probes for Qs 6-10: a) how (i.e., technique); b) how often; c) details/context (i.e., what was the outcome); d) did you find this mental skill helpful?

PART D: NUANCES OF MST IN MASTERS SPORT

Walk in: Based on a lot of the responses that you have provided me so far, there have been a lot of nuances with respect to the Masters cohort in how you use psychology and specific mental skills in adult sport. On the board here we have a list of mental skills, that as mentioned have been shown to be clearly beneficial to younger athletes. Clearly your sport experience is different than these younger cohorts…

11. Would there be anything that you would like to add to the board that identifies how psychology is unique and/or special to you as a MA that is not represented here? Is there anything special about being a Masters athlete that requires you to use psychology differently than someone who is not a MA (i.e., collegiate, Olympic, varsity athlete)? How might psychology differ for you now as a MA compared to younger athletes?
12. A) Can you describe to me a situation where you learned or had figured out how to use a mental skill that you found valuable? [*Or, a situation in which you learned that a mental skill was valuable to you as a MA, and how do you use this skill]]*.
    B) How did you learn this? Did you figure this out on your own or did you learn this from somebody else?
13. How do you "make sport fit" in your life?

PART E: PROSPECTIVE USES AND IMPLEMENTATION OF MST

Walk in: So we've talked a lot now about how you currently use psychology and mental skills in Masters sport. The final few questions of the focus group will involve you thinking about other prospective uses (that have not already been mentioned) that psychology could provide MAs, and how these psychological strategies may be implemented.

14. Can you think of any other potential uses of psychological strategies that could help support you as a MA?
    a. How might these help you? In what ways?
    b. Are there any situations or contexts (that you have not yet here identified) where you would like help, psychologically, which allow you to be more successful in Masters sport?
15. As a MAs, do you have a need/desire for more psychological strategies to help support you as a MA?

   a. How would you like to access or get this type of information?
   b. Do you have a need for sport psychology services (i.e., MPCs)?
   c. How would you like these services delivered to you (i.e., in-person, online, empirical articles; organizing framework)
16. What barriers might contribute to you using psychological strategies on a routine basis in sport?

Concluding remarks: That now concludes the interview. I would like to thank you for your participation today and all the valuable comments you have provided me. Before you go, is there anything that was discussed today that you would like to provide clarification on or to provide additional information which could help us better understand your perspective regarding psychology and Masters sport? **Remind MAs that they may be contacted in the future for a subsequent phase of the study.**

Questions for me?

Appendix D: Pre-Interview Reflection Questions for Mental Performance Consultants

Instructions:
For the purposes of this discussion, we will be focusing on your applied experience working with Masters athletes. Masters athletes are generally 40 years and older who compete in competitive sport that is separate from individuals competing in the high-performance stream (i.e., collegiate, Olympic athletes, professional athletes). Masters athletes can compete at international (i.e., World Masters Games), National (i.e., Canadian Masters Athletics Championships), Provincial (i.e., Ontario Senior Games), and regional (i.e., Ottawa Race Weekend) competitions, however, do not compete at high-performance stream events (i.e., Olympic games). Although Masters athletes can be very competitive, they can also be very recreational in a sense that they enjoy Masters sport for motives outside of competition. Based on what we have classified as a Masters athlete, I would like for you to reflect on these types of athletes in your professional practice.

During the focus group, I will be asking you a series of questions. While there is no right or wrong answer, I'm just really looking forward to hearing different points of view on the topic. I will go through each question, allowing each focus group participant an opportunity to speak and share their thoughts on the question. Since this discussion will be kept relatively informal, if you have something to share on a question, feel free to answer the question without being called upon. If another group member shares their thoughts and you have something to add, I encourage you to do so. However, by no means do you have to answer every question. If the conversation gets off topic, I may politely interject to get the focus back on track. If you see me taking notes, it's simply a way for me to record some of your comments, or to ask you questions later in the interview. This conversation will be audio-recorded to ensure I don't miss any of your comments.

As mentioned, this discussion will be kept relatively informal, but to ensure an appropriate and respectful dialogue, I would like to point out just a few house-keeping items on the day of the focus group. I would like to remind you to respect everyone's opinion, to not talk over one another, and to wait until each person is finished talking before you start. If you have cell phones, if possible please have them on silent. If you do have to take a phone call, you can do so outside the hall. If I notice that any one person is talking more frequently than others, I may interject to allow quieter individuals the opportunity to speak. Finally, since this is a group discussion, I would like to remind you to respect each other's confidentiality and privacy and to keep all discussions within the group. None of the information that you provide here today will be attached to your name.

Pre-focus group reflection questions:

1. What do you feel are the biggest areas in which sport psychology services are helpful to Masters athletes?
2. What potential sport psychology services do you feel are most beneficial to Masters athletes?
3. How would you design a customized or individualized psychological support service for Masters athletes?
4. What barriers do you foresee when attempting to facilitate mental performance services to Masters athletes?

Appendix E: Semi-Structured Interview Guide for Mental Performance Consultants

PART A: BROAD OPENING INTO SPORT PSYCHOLOGY

Walk in: Hello, thank you for being here today. My name is Tyler Makepeace, I am a Master of Arts candidate here at the University of Ottawa. What we will be looking to explore here today is how you, as an MPC, would facilitate and deliver particular aspects of applied sport psychology or mental skills training to MAs. There has never been research conducted in the field of sport psychology and Masters sport, so I'm really looking forward to hearing your perspective on the topic.

Over the past few months, I have had the opportunity to speak with several MAs about how they use aspects of applied sport psychology in their sport experience. These include areas to enhance performance, their experience, and to manage or adhere to the lifestyle of being a MA. The goal here today is to use your expertise in applied sport psych to inform how MAs may apply various mental skills or psychological strategies in their everyday sport experience.

1. Keeping in mind the MAs that you generally work with, what do you feel is the biggest area in which psychology is beneficial to MAs?
   A) Could you provide me an example in order to justify that?

PART B: PSYCHOLOGY IN RELATION TO PERFORMANCE, EXPERIENCE, & LIFESTYLE

Walk in: I really like the dialogue into this discussion. The purpose of the first few questions were to essentially get you thinking more broadly about your experiences working as an MPC with MAs. Now, the next few questions are going to be getting a little more specific. Specifically, I will be wanting your input regarding whether your interactions in working as an MPC with MAs have been used to enhance performance, experience, or the lifestyle of being a MA.

2. In terms of a MAs performance, such as aspects in and around competitive performance and performance readiness, ways that help MA perform better in competition, or to improve MAs performance in sport, how have you seen MAs use psychology to help elevate their performance in Masters sport competitions?
3. In terms of the experience of being a MA, such as ways that would make MAs enjoy sport more or the satisfaction they get from being a MA, how have you seen MAs use psychology to help elevate these experiences in Masters sport?
   Follow-up: a) in terms of the experience, such as other social benefits resulting from Masters sport participation, have you ever seen MAs use psychology to enhance these experiences?
4. In terms of the lifestyle associated with being a MA and how MAs possibly fit sport in their lives, how have you seen MAs use psychology to help support the lifestyle around being a MA?

Follow up: a) How have you seen MAs use psychology to prioritize sport into one's life; b) how have you seen MAs use sport as a psychological release from their everyday life?

Probes for Qs 2-4: a) Context (in what ways; training, competition, other); b) what specific psychological techniques do they use to do this; c) are there any additional techniques they "could use"; d) how could psychology be beneficial using these techniques?

PART C: WHAT MASTERS ATHLETES HAVE TOLD US

Walk in: What we will be focusing on in this section of the interview is related to what MAs have told us so far during the earlier stages of the study. MAs have identified various unique strategies for psychology in order to enhance their sport experience. They have identified uses related to how MAs can use psychology to help with **inevitable age-related issues**, **the importance of positivity or putting a positive spin on sport** and the use of **tactics and pre-performance strategies** in order to prepare for upcoming competitions. I am going to ask you to consider from an applied practitioner perspective how MAs can use psychology in each of these 3 areas.

5. Could you describe to me a situation where a MA could deliberately use various psychological strategies in relation to age-related issues?
   Probes: a) Could you describe to me a situation where a MA could deliberately use various psychological strategies to help compensate for age-related issues; b) Could you describe to me a situation how a MA could use psychology to help recover from or prevent injuries or other negative age-related circumstances in sport; c) Could you describe to me a situation where a MA could deliberately use various psychological strategies to help with declining physical ability?
6. Could you describe to me a situation that putting a positive spin around sport is most important or needed by MAs?
   Probes: a) what are these situations; b) how does positivity help in these situations?
7. Could you describe to me a situation in which MAs could deliberately use various competitive strategies or tactics which are beneficial to elicit a successful sport performance?

Probes for Qs 5-7: a) how (i.e., technique); b) benefits; c) details/context

8. Thinking about what might be different with MAs and what's been covered so far, are there other means of applied sport psych or mental skills that you think are important to MAs?
9. What sorts of potential psychological services do you feel would be most beneficial for MAs to know in their sport experience?
   Probes: a) how would these services help MAs; b) from an applied perspective, how would you go about implementing these services; c) are there additional psychological services that would be important for a MA to understand

10. How would you go about designing a customized/individualized psychological support service for MAs?
    A) What mental skills would you include? Are there reasons these mental skills are included?
11. What sorts of barriers do you foresee in the delivery and facilitation of sport psych services to MAs?

Probes: a) as an MPC, how could you ensure MAs don't face these barriers; b) are there any barriers that you experience as an MPC when trying to deliver these services to MAs?

Concluding remarks: That now concludes the focus group. I would like to thank you for your participation today and all the valuable comments you have provided me. Before you go, is there anything that was discussed today that you would like to provide clarification on or to provide additional information which could help us better understand your perspective regarding psychology and Masters sport? **Remind FG members that they may be contacted in the future for a subsequent phase of the study. Questions for me?**

Appendix F: Sport Psychology Service Content for Masters Athletes

Masters-Specific Psychological Skills/Strategies Related to Maintaining the Adult Sporting Lifestyle

Age-Related Issues: Skills and strategies to manage/overcome age-related issues.

- *Self-compassion*: self-acceptance; self-kindness; realistically managing performance expectations; ageing as a common experience; mindfulness; positive self-talk
- *Compensatory strategies*: imagery; tactics/competitive race strategy; personal mnemonics; altering training regimes
- *Managing injury*: Risk/reward evaluation; pain management; priority redirection

Sport Enjoyment: Skills and strategies related to recovering and protecting sport enjoyment.

- Positive focus of attention
- Protectionistic towards process of sport
- Self-reflection
- Setting self-progression/well-being goals
- Seeing sport as an opportunity to learn/grow
- Expressing gratitude toward one's sport activity

Sport Adherence: Skills and strategies enabling adherence to lifelong sport activity.

- Cognitively justifying one's sport priority
- Framing sport as a personal outlet
- Understanding balance and effective time-management
- Effective planning/scheduling
- Giving oneself permission to pursue sport
- Active negotiations/communications with significant others
- Recruiting social support
- Living authentically according to one's sport priority
- Integrating/twinning sport with personal responsibilities
- Managing sport commitment depending on other pertinent life circumstances
- Cultivating socially supportive environments
- Social signaling of the sport priority
- Social obligations/commitments to training mates/partners
- Structuring sport to become a habit

Traditional Mental Skills/Strategies for Performance Readiness and Enhancement

Performance Outcomes using the Big-5: Applications for the Big-5 are predominantly related to enhancing Masters athletes' personal training/competitive performance.

- *Goal-setting (GS)*: gives training a purpose; orients training based off personal GS; process-oriented GS
- *Imagery*: learning technique; competitive preparation; overcoming difficult parts of training
- *Arousal regulation*: establishing optimal pre-competitive arousal; inducing (e.g., music), reducing (e.g., conscious breathing), and ritualistic strategies to manage arousal
- *Concentration/attentional focus*: removing pre-competitive/competitive distractions (e.g., family, intruding thoughts); mindfulness to refocus attention
- *Self-confidence (SC):* protecting/retrieving SC involves recruiting social support, self-reflection, cognitive reframing, routines, positive self-talk, imagery, and realistic/process-oriented GS

Additional Strategies: Additional personal strategies (and associated skills/methods) to enhance Masters athletes' performance readiness.

- *Preparatory routines*: imagery; anxiety mitigation; active breathing, relaxation, mindfulness; openness
- *Focus plans*: self-reflection; segmentation; if/then statements; positive self-talk; imagery; positive focus of attention
- *Stress/anxiety/fear/energy management*: positive self-talk; cue words; imagery; mindfulness; simulation training; self-reflection

Appendix G: Considerations Related to Sport Psychology Service Delivery with Masters Athletes

Delivering Sport Psychology Services to Adult Clients

Considerations Towards Age-Related Attributes of Adult Clients:

- Recognizing adult's personal values and identities
- Anticipating how to engage keen and invested clients
- Leveraging adult's self-awareness and previous life experiences
- Framing practitioner's role in relation to adult's current resources and constraints
- Addressing adult's potentially entrenched beliefs
- Ensuring services are transferable to non-sport domains
- Purposefully attempting to work holistically
- Recognizing heterogeneity of adult clients (e.g., intellect, competitive orientation, personality, personal responsibilities/ obligations)
- Purposefully integrate services into adult's personal training regimes
- Leveraging anecdotal evidence/testimonials provided by other athletes who use sport psychology services (e.g., Olympic athletes, World Masters Games competitors)
- Scheduling services at times when adult athletes are going to be available (e.g., prior to/following practice; evenings)
- Customizing services based off the age-specific needs of each adult athlete

Navigating Barriers and Constraints to Service Delivery:

- *Lack of time*: Practitioners can provide flexibility to overcome adult athletes' time constraints, including: holding sessions virtually (e.g., Skype); going to the athlete rather than them coming to you; and scheduling sessions during the evening or weekends
- *Stigma*: Practitioners should be cognizant of the overarching stigma associated with seeking sport psychology services. Accommodations may need to be made which consider confidentiality and promote normalcy associated with services.
- *Lack of formalized practitioner education/training*: Organizations such as the Canadian Sport Psychology Association do not currently educate practitioners on how to consult with adult athletes.
- *Accessibility*: Many adult sportspersons express not knowing who or where to go to when seeking sport psychology services. This contributes to adult athletes not thinking these services are for them.
- *Perceived benefits versus financial costs*: Adult sportspersons may be less willing to invest financially in sport psychology services if they do not perceive them as a benefit.
- *Age/gender discrepancies between client/practitioner*: Practitioners should be cognizant of possible discrepancies in age, as well as potential gender discrepancies between the practitioner and client, and the implications these discrepancies may have on service delivery.
- *Potential ageist assumptions*: Practitioners should be cognizant of potentially ageist stereotypes when working with adult clients.

Appendix H: Certificate of Ethics Approval

04/07/2019

Université d'Ottawa
Bureau d'éthique et d'intégrité de la recherche

University of Ottawa
Office of Research Ethics and Integrity

CERTIFICAT D'APPROBATION ÉTHIQUE I CERTIFICATE OF ETHICS APPROVAL

Numéro du dossier / Ethics File Number	H-05-19-3657
Titre du projet / Project Title	Exploring the pertinence of mental skills training amongst Masters athletes
Type de projet / Project Type	Thèse de maîtrise / Master's thesis
Statut du projet / Project Status	Approuvé / Approved
Date d'approbation (jj/mm/aaaa) / Approval Date (dd/mm/yyyy)	04/07/2019
Date d'expiration (jj/mm/aaaa) / Expiry Date (dd/mm/yyyy)	03/07/2020

Équipe de recherche / Research Team

Chercheur / Researcher	Affiliation	Role
Tyler MAKEPEACE	École des sciences de l'activité physique / School of Human Kinetics	Chercheur Principal / Principal Investigator
Bradley YOUNG	École des sciences de l'activité physique / School of Human Kinetics	Superviseur / Supervisor

Conditions spéciales ou commentaires / Special conditions or comments

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Appendix I: Masters Athlete Initial Pre-Screen Letter of Information

Title of the study: Exploring the pertinence of mental skills training amongst Masters athletes

Principal investigator:
Tyler Makepeace, MA(c), School of Human Kinetics, Faculty of Health Sciences, University of Ottawa

Project supervisor:
Bradley W. Young, Ph.D., Full Professor, School of Human Kinetics, Faculty of Health Sciences, University of Ottawa, Ph: (613) 562-5800 ext. 4280, email: byoung@uottawa.ca

Invitation to Participate: You are being invited to participate in a study conducted by Tyler Makepeace, MA(c), and Bradley W. Young, Ph.D., which seeks to explore the pertinence of mental skills training amongst Masters athletes. This study is being conducted as part of a master's thesis project in the School of Human Kinetics at the University of Ottawa.

Purpose of the Study: The purpose of the thesis is to investigate the pertinence of mental skills training and mental performance services amongst Masters athletes (athletes 35+ who are involved in organized sport). Specifically, the thesis will examine whether there is a desire for, a need, and will describe anticipated benefits for using mental skills training and mental performance services in Masters sport. It will explore which mental skills and aspects of delivery derive from a traditional mental performance inventory and why, when, and how they could be integrated into services for Masters athletes. It will explore whether there are additional mental skills and aspects of delivery that may help Masters athletes. The study seeks the views of both athletes and mental performance consultants regarding the utility of traditional and additional mental skills for enhancing performance and experiential aspects of Masters sport.

Participation: You have been invited to participate in a short 5-7 minute survey. The survey will contain a list of items, which will be important to identify Masters athletes based on a pre-existing inclusion study criteria. The purpose of having a pre-existing inclusion criteria is to purposefully identify various motivational underpinnings that Masters athletes have to do sport. Based off the responses we receive from you and other Masters athletes, we will purposefully select six Masters athletes to participate in subsequent phases of the study. The information you provide in the survey will be appraised in relation to the study's objectives and selection criteria, and compared to that provided by other prospective Masters athletes. Masters athletes who speak English and best satisfy the established criteria will be selected and asked to participate in future phases of the study. In particular, we will be selecting participants for further stages of our research that allow for us to have varying voices in our semi-structured interviews, including athletes who are in Masters sport for competitive reasons, for experiential reasons, and for lifestyle reasons. You will be asked to provide your email so that once selections are made we can follow-up with you accordingly to advise you of further invitations for participation in the study. Subsequently, the screening page information collected from individuals who are not selected will be permanently deleted and destroyed by the study's researchers.

Risks: The risks you may experience by completing this survey can be considered minimal risk. Should you experience any types of discomfort as a result of this survey, The Canadian Sport Helpline is a confidential listening and referral service for athletes wishing to share the stresses or obtain information about how they can get help to deal with stresses in sport. Operated by the Canadian Centre for Mental Health and Sport, this line connects you with a team of practitioners with expertise in counselling, psychology, and sport. The toll-free Helpline is available from 8 a.m. to 8 p.m. (Eastern Time), seven days per week by telephone or text message at: 1-888-83SPORT or 1-888-837-7678.

Benefits: Results of this study may highlight how mental skills training can be used as an experiential or performance-oriented enhancement strategy in Masters sport. Further, your participation may help us to understand how mental skills training can be used to support a healthy adult sport lifestyle. Using this information, the goal of this study will be to develop a framework that will frame our understanding regarding the pertinence of mental skills training, mental performance services, and how they may be used to support a healthy adult sport lifestyle.

Confidentiality and anonymity: Should you agree to participate, the information you provide will remain entirely confidential. The email address that you may provide at the end of the screening survey will be used solely to follow-up with you regarding the invitation to the subsequent semi-structured interview phase of the study. The email address will be safely deleted from our records after our email follow-up with you. Throughout the study, you are not required to respond to any questions with answers that you do not wish to share with the other participants in the group. Additionally, the researchers will not disclose any identifying information, such as names/affiliations of participants or others spoken about during the interviews. All participants will be given pseudonyms in the written document of the study so that any published data does not include identifiable information. In order to minimize the risk of security breaches and to help ensure your confidentiality, we recommend that you use standard safety measures such as signing out of your account, closing your browser, and locking your screen or device when you are no longer using them/when you have completed the study.

Conservation of data: The data for those selected will be kept for 10 years on a password-protected zip drive in the locked residence of the PI. A copy of the data will also be kept for 10 years on a password protected computer in the project supervisor's locked lab at the University of Ottawa. For individuals not selected, their data will be permanently deleted and destroyed by the study's researchers.

Voluntary Participation: The study is being conducted in accordance with research ethics procedures at the University of Ottawa. Your involvement is entirely voluntary, and there will be no negative consequences should you choose not to participate. If at any time during the study you wish to discontinue your participation, you may do so without penalty or consequence. Please be advised that if you decide to withdraw from the study, you may request to retract your data by emailing the primary investigator or his supervisor using the same email address you used to complete the pre-screen survey.

Acceptance: By completing and sending/scanning back the questionnaire to the primary investigator, I hereby grant my informed consent to participate in the survey. If I am invited back to participate in subsequent phases of the study, I will grant informed consent for those phases at that time. Please download and/or print a copy of this consent document for your own records.

If you have any questions regarding the ethical conduct of this study, you may contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 154, Ottawa, ON, K1N 6N5
Tel.: (613) 562-5387
Email: ethics@uottawa.ca

Appendix J: Mental Performance Consultant Initial Pre-Screen Letter of Information

Title of the study: Exploring the pertinence of mental skills training amongst Masters athletes

Principal investigator:
Tyler Makepeace, MA(c), School of Human Kinetics, Faculty of Health Sciences, University of Ottawa

Project supervisor:
Bradley W. Young, Ph.D., Full Professor, School of Human Kinetics, Faculty of Health Sciences, University of Ottawa, Ph: (613) 562-5800 ext. 4280, email: byoung@uottawa.ca

Invitation to Participate: You are being invited to participate in a study conducted by Tyler Makepeace, MA(c), and Bradley W. Young, Ph.D., which seeks to explore the pertinence of mental skills training amongst Masters athletes. This study is being conducted as part of a master's thesis project in the School of Human Kinetics at the University of Ottawa.

Purpose of the Study: The purpose of the thesis is to investigate the pertinence of mental skills training and mental performance services amongst Masters athletes (athletes 35+ who are involved in organized sport). Specifically, the thesis will examine whether there is a desire for, a need, and will describe anticipated benefits for using mental skills training and mental performance services in Masters sport. It will explore which mental skills and aspects of delivery derive from a traditional mental performance inventory and why, when, and how they could be integrated into services for Masters athletes. It will explore whether there are additional mental skills and aspects of delivery that may help Masters athletes. The study seeks the views of both athletes and mental performance consultants (MPCs) regarding the utility of traditional and additional mental skills for enhancing performance and experiential aspects of Masters sport.

Participation: You have been invited to participate in a short 5-minute survey. The survey will contain a list of items, which will be important to identify MPCs based on a pre-existing inclusion study criteria. The purpose of having a pre-existing inclusion criteria is to purposefully identify MPCs who have knowledge and/or expertise in Masters sport. Based off the responses we receive from you and other MPCs, we will purposefully select six MPCs to participate in subsequent phases of the study. The information you provide in the survey will be appraised in relation to the study's objectives and selection criteria, and compared to that provided by other prospective MPCs. MPCs who speak English and best satisfy the established criteria will be selected and asked to participate in future phases of the study. In particular, we will be selecting participants for further stages of our research that allow for us to have voices in the focus groups who are familiar with adult and Masters sport, and who may have had some experience working with middle-aged or older athletes on mental strategies in sport. You will be asked to provide your email so that once selections are made we can follow-up with you accordingly to advise you of further invitations for participation in the study. Subsequently, the screening page information collected from individuals who are not selected will be permanently deleted and destroyed by the study's researchers.

Risks: The risks you may experience by completing this survey can be considered minimal risk. Should you experience any types of discomfort as a result of this survey, The Canadian Sport Helpline is a confidential listening and referral service for athletes wishing to share the stresses or obtain information about how they can get help to deal with stresses in sport. Operated by the Canadian Centre for Mental Health and Sport, this line connects you with a team of practitioners with expertise in counselling, psychology, and sport. The toll-free Helpline is available from 8 a.m. to 8 p.m. (Eastern Time), seven days per week by telephone or text message at: 1-888-83SPORT or 1-888-837-7678.

Benefits: Results of this study may highlight how mental skills training can be used as an experiential or performance-oriented enhancement strategy in Masters sport. Further, your participation may help us to understand how mental skills training can be used to support a healthy adult sport lifestyle. Using this information, the goal of this study will be to develop a framework that will frame our understanding regarding the pertinence of mental skills training, mental performance services, and how they may be used to support a healthy adult sport lifestyle.

Confidentiality and anonymity: Should you agree to participate, the information you provide will remain entirely confidential. The email address that you may provide at the end of the screening survey will be used solely to follow-up with you regarding the invitation to the subsequent focus group phase of the study. The email address will be safely deleted from our records after our email follow-up with you. Throughout the study, you are not required to respond to any questions with answers that you do not wish to share with the other participants in the group. Additionally, the researchers will not disclose any identifying information, such as names/affiliations of participants or others spoken about during the group interviews. All participants will be given pseudonyms in the written document of the study so that any published data does not include identifiable information. In order to minimize the risk of security breaches and to help ensure your confidentiality, we recommend that you use standard safety measures such as signing out of your account, closing your browser, and locking your screen or device when you are no longer using them/when you have completed the study.

Conservation of data: The data for those selected will be kept for 10 years on a password-protected zip drive in the locked residence of the PI. A copy of the data will also be kept for 10 years on a password protected computer in the project supervisor's locked lab at the University of Ottawa. For individuals not selected, their data will be permanently deleted and destroyed by the study's researchers.

Voluntary Participation: The study is being conducted in accordance with research ethics procedures at the University of Ottawa. Your involvement is entirely voluntary, and there will be no negative consequences should you choose not to participate. If at any time during the study you wish to discontinue your participation, you may do so without penalty or consequence. Please be advised that if you decide to withdraw from the study, you may request to retract your data by emailing the primary investigator or his supervisor using the same email address you used to complete the pre-screen survey.

Acceptance: By completing and sending/scanning back the questionnaire to the primary investigator, I hereby grant my informed consent to participate in the survey. If I am invited back to participate in subsequent phases of the study, I will grant informed consent for those phases at that time. Please download and/or print a copy of this consent document for your own records.

If you have any questions regarding the ethical conduct of this study, you may contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 154, Ottawa, ON, K1N 6N5
Tel.: (613) 562-5387
Email: ethics@uottawa.ca

Appendix K: Masters Athlete Interview Letter of Information

Title of the study: Exploring the pertinence of mental skills training amongst Masters athletes

Principal investigator:
Tyler Makepeace, MA(c), School of Human Kinetics, Faculty of Health Sciences, University of Ottawa

Project supervisor:
Bradley W. Young, Ph.D., Full Professor, School of Human Kinetics, Faculty of Health Sciences, University of Ottawa, Ph: (613) 562-5800 ext. 4280, email: byoung@uottawa.ca

Invitation to Participate: You are being invited to participate in a study conducted by Tyler Makepeace, MA(c), and Bradley W. Young, Ph.D., which seeks to explore the pertinence of mental skills training amongst Masters athletes. This study is being conducted as part of a master's thesis project in the School of Human Kinetics at the University of Ottawa. You have been invited to participate based off your responses in the prescreen survey.

Purpose of the Study: The purpose of the thesis is to investigate the pertinence of mental skills training and mental performance services amongst Masters athletes (athletes 35+ who are involved in organized sport). Specifically, the thesis will examine whether there is a desire for, a need, and will describe anticipated benefits for using mental skills training and mental performance services in Masters sport. It will explore which mental skills and aspects of delivery derive from a traditional mental performance inventory and why, when, and how they could be integrated into services for Masters athletes. It will explore whether there are additional mental skills and aspects of delivery that may help Masters athletes. The study seeks the views of both athletes and mental performance consultants regarding the utility of traditional and additional mental skills for enhancing performance and experiential aspects of Masters sport.

Participation: We have chosen to select three participants whose responses indicate that they do Masters sport predominantly for the experience, pleasure, and satisfaction of a sporting lifestyle, and three participants whose responses indicate they do Masters sport predominantly for performance enhancement and competitive reasons. These participants have been chosen based off their responses to the prescreen survey. As one of these six participants, you will be invited to attend one 75-minute one-on-one interview with the primary investigator. You will be asked to respond to questions relating to the pertinence of mental skills training and mental performance services in adult sport. In this interview, interviewees will be posed a series of questions related to current and prospective uses of mental skills training and how it may impact your experience and/or performance as a Masters athlete.

Please note that by responding to this current consent letter you are acknowledging that you will participate in the one-on-one interview and that there is a possibility that you will be invited to participate in a final working group later in the study. Specifically, three interviewed participants may be invited to participate in a working group approximately one month after your original interview. If you are invited back to participate in the working group discussion later on, you

will be granted an opportunity to participate with informed consent or opt out at that time. This working group will consist of an audio-recorded teleconference discussion, moderated by the principal investigator, that will include four additional members who are Canadian professional mental sport performance consultants. The purpose of the teleconference will be to critically discuss and analyze the information that was elucidated in the prior interviews. Please be advised that only three out of the six interviewed Masters athletes will be invited to the working group. Masters athletes who best satisfy the established criteria will be selected. They should also be willing to vet a working document prior to the working group meeting. Twenty days prior to the working group, they should be willing to receive a working document by email; they will be asked to spend 30-35 minutes on their own time to critically comment upon and appraise this working document, which summarizes the investigators' findings from the interviews. They should be willing to return this document by email to the investigators within two weeks of reception, and are comfortable with their comments being collated and shared alongside seven others' comments at the teleconference working group meeting. The collated information will be presented quasi-anonymously at the upcoming working group meeting, for all to see, without your identity being attached to your comments. However, participants will be asked at the working group meeting to comment on all collated information from all members as they pertain to emerging findings. This teleconference should take no longer than 90 minutes to complete and will be conducted in English.

Risks: The emotional or psychological discomfort, or social repercussions you may experience during this study are minimal risk. There is a minimal risk that the information you provide in the working group could be shared by other participating members outside the group discussions. We cannot guarantee anonymity and confidentiality of the information you share within the group. We invite all potential participants to not repeat any information that is shared by others during the study to protect anonymity and confidentiality of other potential participants. Additionally, as participants, you are reminded that you do not have to answer any questions that you do not feel comfortable discussing.

Should you experience any types of discomfort as a result of the study, The Canadian Sport Helpline is a confidential listening and referral service for athletes wishing to share the stresses or obtain information about how they can get help to deal with stresses in sport. Operated by the Canadian Centre for Mental Health and Sport, this line connects you with a team of practitioners with expertise in counselling, psychology, and sport. The toll-free Helpline is available from 8 a.m. to 8 p.m. (Eastern Time), seven days per week by telephone or text message at: 1-888-83SPORT or 1-888-837-7678.

Benefits: Results of this study may highlight how mental skills training can be used as an experiential or performance-oriented enhancement strategy in Masters sport. Further, your participation may help us to understand how mental skills training can be used to support a healthy adult sport lifestyle. Using this information, the goal of this study will be to develop a framework that will frame our understanding regarding the pertinence of mental skills training, mental performance services, and how they may be used to support a healthy adult sport lifestyle.

Confidentiality and anonymity: Should you agree to participate, the information you provide will remain entirely confidential. Throughout the study, you are not required to respond to any questions with answers that you do not wish to share with the other participants in the group. Additionally, the researchers will not disclose any identifying information, such as names/affiliations of participants or others spoken about, during the individual or group interviews. All participants will be given pseudonyms in the written document of the study so that any published data does not include identifiable information.

Conservation of data: The data and audio recordings will be kept for 10 years on a password-protected zip drive in the locked residence of the PI. A copy of the data will also be kept for 10 years on a password protected computer in the project supervisor's locked lab at the University of Ottawa.

Voluntary Participation: The study is being conducted in accordance with research ethics procedures at the University of Ottawa. Your involvement is entirely voluntary, and there will be no negative consequences should you choose not to participate. If at any time during the study you wish to discontinue your participation, you may do so without penalty or consequence. For example, were you to agree to participate in the one-on-one interview, you can freely elect to not participate in the subsequent working group exercise without penalty. Due to the dynamics of the working group discussion and given the fact that the data is interdependent, please be advised that if you decide to withdraw we will not be able to identify and remove the data of those who withdraw from the study. You can also freely refuse to answer any questions without suffering any negative consequences.

Acceptance: I, _____, agree to participate in the above research study conducted by Tyler Makepeace, MA (c), of the School of Human Kinetics, Faculty of Health Sciences, University of Ottawa, which research is under the supervision of Dr. Bradley W. Young, Ph.D.

If you have any questions about the study, you may contact the researcher or his supervisor.

If you have any questions regarding the ethical conduct of this study, you may contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 154, Ottawa, ON K1N 6N5

Tel.: (613) 562-5387

Email: ethics@uottawa.ca

There are two copies of the consent form, one of which is yours to keep.

Participant's signature: Date:
Researcher's signature: Date:

Appendix L: Mental Performance Consultant Interview Letter of Information

Title of the study: Exploring the pertinence of mental skills training amongst Masters athletes

Principal investigator:
Tyler Makepeace, MA(c), School of Human Kinetics, Faculty of Health Sciences, University of Ottawa

Project supervisor:
Bradley W. Young, Ph.D., Full Professor, School of Human Kinetics, Faculty of Health Sciences, University of Ottawa, Ph: (613) 562-5800 ext. 4280, email: byoung@uottawa.ca

Invitation to Participate: You are being invited to participate in a study conducted by Tyler Makepeace, MA(c), and Bradley W. Young, Ph.D., which seeks to explore the pertinence of mental skills training amongst Masters athletes. This study is being conducted as part of a master's thesis project in the School of Human Kinetics at the University of Ottawa. You have been invited to participate based off your responses in the prescreen survey.

Purpose of the Study: The purpose of the thesis is to investigate the pertinence of mental skills training and mental performance services amongst Masters athletes (athletes 35+ who are involved in organized sport). Specifically, the thesis will examine whether there is a desire for, a need, and will describe anticipated benefits for using mental skills training and mental performance services in Masters sport. It will explore which mental skills and aspects of delivery derive from a traditional mental performance inventory and why, when, and how they could be integrated into services for Masters athletes. It will explore whether there are additional mental skills and aspects of delivery that may help Masters athletes. The study seeks the views of both athletes and mental performance consultants (MPCs) regarding the utility of traditional and additional mental skills for enhancing performance and experiential aspects of Masters sport.

Participation: We have chosen to select eight participants whose responses indicate sufficient understanding of, and interest in working with, Masters athletes. These participants have been chosen based off their responses in the prescreen survey. As one of these eight participants, you will be invited to attend one 90-minute focus group to respond to questions relating to the pertinence of mental skills training and mental performance services in adult sport. In this focus group, interviewees will be posed a series of questions related to current and prospective uses of mental skills training and how it may impact the experiences and/or performances of a Masters athlete.

Please note that by responding to this current consent letter you are acknowledging that you will participate in the focus group and that there is a possibility that you will be invited to participate in a final working group later in the study. Specifically, four participants from the focus group may be invited to participate in a working group approximately one month after the focus group. If you are invited back to participate in the working group discussion later on, you will be granted an opportunity to participate with informed consent or opt out at that time. This working group activity will consist of an audio-recorded teleconference discussion, moderated by the

principal investigator, that will include four additional members who are competing as Masters athletes. The purpose of the teleconference will be to critically discuss and analyze the information that was elucidated in the prior focus group. Please be advised that only four out of the eight MPCs from the focus group will be invited to the working group. MPCs who best satisfy the established criteria will be selected. They should also be willing to vet a working document prior to the working group meeting. Twenty days prior to the working group, they should be willing to receive a working document by email; they will be asked to spend 30-35 minutes on their own time to critically comment upon and appraise this working document, which summarizes the investigators' findings from the focus group. They should be willing to return this document by email to the investigators within two weeks of reception, and are comfortable with their comments being collated and shared alongside seven others' comments at the teleconference working group meeting. The collated information will be presented quasi-anonymously at the upcoming working group meeting, for all to see, without your identity being attached to your comments. However, participants will be asked at the working group meeting to comment on all collated information from all members as they pertain to emerging findings. This teleconference should take no longer than 90 minutes to complete and will be conducted in English.

Risks: The emotional or psychological discomfort, or social repercussions you may experience during this study are minimal risk. There is a minimal risk that the information you provide in focus groups and/or the working group could be shared by other participating members outside the group discussions. We cannot guarantee anonymity and confidentiality of the information you share within the group. We invite all potential participants to not repeat any information that is shared by others during the study to protect anonymity and confidentiality of other potential participants. Additionally, as participants, you are reminded that you do not have to answer any questions that you do not feel comfortable discussing.

Benefits: Results of this study may highlight how mental skills training can be used as an experiential or performance-oriented enhancement strategy in Masters sport. Further, your participation may help us to understand how mental skills training can be used to support a healthy adult sport lifestyle. Using this information, the goal of this study will be to develop a framework that will frame our understanding regarding the pertinence of mental skills training, mental performance services, and how they may be used to support a healthy adult sport lifestyle.

Confidentiality and anonymity: Should you agree to participate, the information you provide will remain entirely confidential. Throughout the study, you are not required to respond to any questions with answers that you do not wish to share with the other participants in the group. Additionally, the researchers will not disclose any identifying information, such as names/affiliations of participants or others spoken about during the group interviews. All participants will be given pseudonyms in the written document of the study so that any published data does not include identifiable information.

Conservation of data: The data and audio recordings will be kept for 10 years on a password-protected zip drive in the locked residence of the PI. A copy of the data will also be kept for 10

years on a password protected computer in the project supervisor's locked lab at the University of Ottawa.

Voluntary Participation: The study is being conducted in accordance with research ethics procedures at the University of Ottawa. Your involvement is entirely voluntary, and there will be no negative consequences should you choose not to participate. If at any time during the study you wish to discontinue your participation, you may do so without penalty or consequence. For example, were you to agree to participate in the focus group, you can freely elect to not participate in the subsequent working group exercise without penalty. Due to the dynamics of the focus group discussion and given the fact that the data is interdependent, please be advised that if you decide to withdraw we will not be able to identify and remove the data of those who withdraw from the study. You can also freely refuse to answer any questions without suffering any negative consequences.

Acceptance: I, _____, agree to participate in the above research study conducted by Tyler Makepeace, MA (c), of the School of Human Kinetics, Faculty of Health Sciences, University of Ottawa, which research is under the supervision of Dr. Bradley W. Young, Ph.D.

If you have any questions about the study, you may contact the researcher or his supervisor.

If I have any questions regarding the ethical conduct of this study, I may contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 154, Ottawa, ON K1N 6N5

Tel.: (613) 562-5387

Email: ethics@uottawa.ca

There are two copies of the consent form, one of which is yours to keep.

Participant's signature: Date:
Researcher's signature: Date: