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Abstract
Masculinity frameworks in men's health research have focussed on masculine ideals and norms to describe men's health practices. However, little attention has been paid to inductively deriving insights about what constitutes health-related masculine values among young men. A sequential exploratory mixed methods design, comprising a qualitative lead to derive health-related masculine values with a follow-up quantitative arm to test the items, was used. Drawing on a sample of 15-29 year old Canadian male interview participants (n=30) and survey respondents (n=600) five health-related masculine values were highlighted; 1) Selflessness, 2) Openness, 3) Well-being, 4) Strength and 5) Autonomy. Selflessness was characterized by caring for and helping others. Openness included the willingness to gain exposure from new experiences, ideas and people. Well-being was linked to fitness and masculine body ideals and aesthetics. In terms of strength, men endorsed intellectual, emotional and physical strength. Regarding autonomy, there was agreement that men should be self-sufficient and make their own decisions, while being independent drew less endorsement. Highlighting the interdependency of these domains, exploratory factor analysis yielded two overarching reliable quantitative dimensions characterised by domains of being Inclusive (Openness & Selflessness; α=.88) and Empowered (Well-being & Autonomy; α=.85). Some inductively derived and pilot tested values may run counter to longstanding claims that young men are typically hedonistic, hypercompetitive and estranged from self-health. Study findings are discussed detailing how the evaluation of specific health-related masculine values in sub-groups of men might advance masculinities-focused men's health research, and inform the next generation of targeted gender-sensitized services.

Keywords: masculinity, men's health, masculine values, mixed-methods research

Introduction

In the broad context of masculinity and men's health research, foundational are two prevailing factors. First, Western men's reduced life expectancy compared to women has been ever-present in the call for research focussed on the gendered aspects of men's health (Goldenberg, 2014). Second, men's alignments to masculine ideals and norms have been linked to risking and/or promoting male health, with some researchers arguing for strength-based approaches to advance the well-being of men and address the life expectancy sex disparity (Macdonald, 2016; Robertson, 2007; Sloane, Gough & Connor, 2010). Empirical work describing how men distance themselves from and align themselves with masculine ideals and norms in their health practices and illnesses experiences has emerged, but there has been limited empirical work investigating the potential positive strengths for men who identify with traditional masculinity (Hammer & Good, 2010). There has also been little attention to describing what counts as contemporary and/or life course specific health-related masculine values.

The current article offers empirical insights to the health-related masculine values of young men who reside in Western Canada, and in doing so responds to recommendations to unearth what constitutes masculinity in the lives of young men (Kaplan, Rosenmann, & Shuhendler, 2016; Thompson & Bennett, 2015). By definition, values are abstract principles that guide men's lives. Culturally transmitted and subject to change over time, values can be understood as fundamental concepts that indicate what men and social groups attest to be most worthwhile (Rokeach, 2008). Whereas masculine norms and ideals comprise standards or rules directing men's social behaviours, values are principles that guide men's practices and philosophies. Briefly described in the following background section are details about the use of social constructionist masculine ideals (Connell, 1995), and socialization-based masculine norms (Mahalik, Burns, & Syzdek, 2007) in men's health research to contextualize the potential advancements afforded by the current study.

Background

Social Constructionism and Masculine Ideals in Men's Health Research

Social constructionist frameworks have employed a range of qualitative methodologies and methods to chronicle patterns and plurality in the connections between masculinities and men's health practices and illness experiences (Gough, 2006, 2007; Oliffe, 2005; Oliffe, Ogrodniczuk, Bottorff, Johnson, & Hoyak, 2012; Robertson, 2006). Within this context the focus has often been on the hierarchical and plural nature of masculinities where the centrepiece has been hegemonic masculinity; that is, men's alignments with masculine ideals have been understood as levering actions across a continuum ranging from risk-taking to promoting selfhealth (Broom & Tovey, 2009). This approach originated with Courtenay's (2000) compelling script, in which he applied Connell's (1995) meta-theory of social power and hierarchies of masculinity to men's health, making an argument for how masculine ideals negatively influenced men's health practices. In essence, this early work highlighted how practices relating to fulfilling masculine ideals fueled men's risk taking and restrained their help-seeking and the utilization of professional health care services (Courtenay, 2000). Though Courtenay's (2000) argument was heavily weighted toward theorizing how men's alignment to masculine ideals worked against

men's health, some balance soon emerged in the literature. Robertson (2007), for example, mapped linkages to a schema of "control" and "release", and "should care" and "don't care" attitudes, with masculine ideals at the centre influencing men's health practices in one of four zones (i.e., should care-control; should care-release; don't care-control; don't care-release). By arguing against masculine ideals being entirely bad for men's health, and in recognising the structural embedding of masculinity practices, this work also countered assertions that redressing masculinity at an individual level alone was the gateway to promoting men's health. Robertson (2007) paved the way for Lohan's (2007) life course perspectives, Anderson's (2009) call for inclusive masculinity, Creighton and Oliffe's (2010) communities of practice frame, Evans, Frank, Oliffe and Gregory's (2011) social determinants of health, and Griffith's (2012) assertions about the need for intersectionality, (the integration of gender with other health axes including race, social class and socio economic status), to provide nuanced accounts about the connections between masculinities and men's health and illness.

Building on the potential for men's alignments to masculine ideals to risk and/or promote men's health, and guided by the understanding of masculinities as a plural concept, an array of strength-based men-centred health promotion programs and interventions emerged, anchoring some aspects of masculinity as positive for self-health (Ogrodniczuk, Oliffe, Kuhl, & Gross, 2016; Kiselica, Benton-Wright & Englar-Carlson, 2016). Within this context the focus was less on changing men and more on working with them to challenge some idealized and potentially health-damaging constructs and explore a wider spectrum for embodying healthy masculinities. The backdrop however was one that presumed most men aligned to risky masculine ideals, and by extension, those men were likely estranged from their health (Rowlands & Gough, 2016). Connected to these presumptions were the following masculine health practices: women as the primary health providers in men's lives (Lee & Owens, 2002); men's reticence for engaging professional health care services (Galdas, Cheater, & Marshall, 2005; O'Brien, Hunt, & Hart, 2005); and, the denial of illness for fear of being seen as weak (Johnson, Oliffe, Kelly, Galdas, & Ogrodniczuk, 2012). While these patterns were well-supported in qualitative studies, the taken for- granted nature of masculine ideals became increasingly problematic, primarily due to the unitary theoretical base of hegemonic masculinity from which men's health practices and illness experiences were described and interpreted (Robertson, Williams, & Oliffe, 2016). Additionally, a significant body of quantitative work was emerging that demonstrated a complex picture regarding men's health practices in that it confirmed men's espoused collective reluctance to seek professional help and delay accessing health services (Wang, Freemantle, Nazareth & Hunter, 2014; Wang, Hunt, Nazareth, Freemantle, & Petersen, 2013).

This controversy in the literature raised the need for a focus on defining the normative in masculine identities, without losing complexity, sites of resistance to hegemonic gender order, and the considerable divergence in masculine behaviours across locale, community, cultures and illness contexts. Otherwise, the risk remained that the 'masculine turn' in gender/health scholarship would simplify or even misrepresent men's lived experience of illness, health and (social) care. The heavy reliance on theories of hegemonic masculinity would gradually evolve into a more rounded analysis of intersectionality, multiplicity and the constantly evolving influence of masculine identities on men's health practices.

Socialization and Masculine Norms in Men's Health Research

Much of the broader work on socialization and masculinity has focussed on quantitative measures of masculinity and masculine ideology across a diverse array of topics and issues (Thompson & Bennett, 2015). Three well-known instruments developed by psychologists to measure different aspects of masculinity are the Conformity to Masculine Norms Inventory (CMNI), the Male Role Norms Inventory (MRNI), and the Gender Role Conflict Scale (GRCS). Factor analytic methods have shown that the CMNI-46, MRNI-short form and the GRCS-short form assess distinct masculinity constructs as intended by the scale developers (Levant, Hall, Weigold, & McCurdy, 2015). For the CMNI-46 and the MRNI-short form, statistical analyses also indicated these two measures have validity in assessing a general underlying factor or broad masculinity construct, as represented by the total scale scores (degree of conformity to traditional masculine norms, and degree of endorsement of traditional masculine ideologies, respectively) (Levant et al., 2015). The GRCS also has good validity and reliability and convergent validity with other masculinity measures (O'Neil, 2008). A vast body of research supports GRC theory and use of the GRCS. Overall, the work confirms that restricted masculine roles and gender role conflict contributes to negative psychological health for men and boys (O'Neil, 2008).

In the specific context of men's health, few masculinity measures have been consistently used (Griffith, Gunter, & Watkins, 2012). The CMNI (inclusive of its many versions) is perhaps the most well-known and applied masculinity measure in men's health research (Addis & Mahalik, 2003; Mahalik, Burns, & Syzdek, 2007; Mahalik & Rochlen, 2006; Chambers et al., 2016; Griffith, Gilbert, Bruce, & Thorpe, 2016). Using sub-scales and items to list predetermined masculine norms, the CMNI has been used to solicit respondents' level of agreement as a means to gauging the extent to which men's affective, behavioral, and cognitive functioning adhere to dominant (or "hegemonic") norms of masculinity. The predominant masculine scripts (i.e., emotional control, risk taking, self-reliance, etc.) drawn from men's responses to the CMNI items and subscales have been used to explain and predict specific health practices (Addis & Mahalik, 2003; Mahalik et al., 2007; Mahalik, Levi-Minzi, & Walker, 2007; Mahalik & Rochlen, 2006; Smiler, 2006). For example, the following practices have been identified: attention to body image issues among gay men (Kimmel & Mahalik, 2005), substance use among Asian American men (Liu & Iwamoto, 2007), preferences for therapy or executive coaching (McKelley & Rochlen, 2010), men's perceptions of prostate cancer (Burns & Mahalik, 2008) and men's health help-seeking (Vogel, Heimerdinger-Edwards, Hammer, & Hubbard, 2011). From these and other socialization studies both positive and negative relationships between masculinity and men's health have been reported (Levant & Wimer, 2014). Herein, it is increasingly accepted that alignments to masculine norms are contextual, existing across a continuum rather than exclusively connected to either men's health risk or promotion (Griffith et al., 2016; Levant & Wimer, 2014; Thompson & Bennett, 2015). Such insights may have informed the proliferation of masculinity measures, including one by Chambers et al. (2016) focussed explicitly on men's chronic disease.

There are uncertainties among some socialization researchers about what constitutes masculine norms among specific sub-groups (Kaplan et al., 2016; Thompson & Bennett, 2015). For example, Thompson and Bennett's (2015) review findings indicated there was a departure from assigning traditional masculinity to men, in general, across North America. Recent socialization work and masculinity measures have directed attention to geographies of masculinity. By mapping masculinities among men from diverse birth places, life stages, social class, sexual

orientation, cultures and race, pre-determined masculine norms were expanded with the recognition that men's health practices were diverse (Kaplan et al., 2016; Thompson & Bennett, 2015; Griffith et al., 2016). Moving forward, Thompson and Bennett (2015, p. 115) urged socialization researchers to design "masculinity measures to capture the changing face of men's gendered lives."

Characterized by different methodologies, a core distinction between social constructionist and socialization approaches has been the debate over masculinity as an external relational social construct versus an interior trait or individual characteristic. Despite this ontological and epistemological divide, empirically there has been consensus among social constructionist and socialization men's health researchers that masculinity is contextual and fluid rather than being entirely good or bad for the health of men (Oliffe, 2015). There has also been increasing uncertainty in the literature about the relevance of traditional hegemonic masculinity, and the degree to which masculine ideals can be applied to specific sub-groups of men (Anderson, 2009). Similarly, it can be argued that measures used to assess conformity to and endorsement of masculine norms and ideologies have focussed on men's traditional masculine behaviors (de Visser & McDonnell, 2013). Cormie et al. (2016) recently argued for a focus on masculine values in attracting men who experience prostate cancer to a physical exercise intervention. In this specific context, exercise was valued (Cormie et al., 2016), offering what deVisser and McDonnell (2013) label masculine capital to potential end-users of the intervention. Building on this lead, and early work indicating sex differences in male and female values (Beutel & Marini, 1995), it seems entirely reasonable, if not critical, to inductively derive broader understandings about men's health-related masculine values, in thoughtfully mapping men's health practices and illness experiences.

Rather than debating baseline generalizable hegemonic masculine ideals and norms, the need to focus on both the plurality and patterns in masculinities by distilling age and/or locale specific values can be used to inform and leverage tailored interventions. In the current study, we have used the term health-related 'masculine values' to describe the values that young men declared as important in their lives. Offered here are insights into the health-related masculine values of young men who reside in Western Canada ahead of discussing the implications for future men's health research and services. The focus on health-related masculine values is not intended as a replacement for masculine ideologies, but rather as a fruitful avenue for inductively deriving insights about what young men value, as a means to advance men's health. Therefore, the current study addressed the question: What are the health-related masculine values among young men who reside in Western Canada?

Methods

Isacco (2015) suggested that mixed method studies are an essential but often times missing step for identifying new themes, surveys, scale items, and emergent theories in masculinity research. Moreover, mixed method designs can be used to bridge divergent theoretical frameworks (i.e., social constructionist and socialization approaches) producing higher-quality results than mono-methods (Johnson & Onwuegbuzie, 2004). We chose to lead with a qualitative component and quantitative follow-up to purposefully pilot test the inductively derived health-related masculine values and contribute to the ever changing field of masculinity and men's health research (Cresswell, Shope, Plano Clark, & Green, 2006; Morgan, 2015). In responding to Isacco's

(2015) call to action, the current study employed a sequential exploratory mixed methods design (Hanson, Creswell, Clark, Petska, & Creswell, 2005; Mortenson & Oliffe, 2009) to explore the health-related masculine values of young men in Western Canada. As Hanson et al. (2005) suggests this design was appropriate for testing nascent concepts, developing new instruments, and exploring relationships between unknown variables. The qualitative arm utilized interpretive descriptive methods including individual, semi-structured interviews (Thorne, 2016). Inductively derived from these analyses were five values that were subsequently pilot tested with young men (15-29 years old) through a questionnaire comprising 15 items (Fetters, Curry, & Creswell, 2013). Please see Figure 1 for the study design and procedures. The study received approval from a Western Canadian university behavioral ethics review board.

Qualitative Phase: Sample, Data Collection and Data Analysis

Potential participants (i.e., male, 15-29 years old, residing in Western Canada and English speaking) were accessed via an online panel and provided an 'opt in' choice to express their interest in completing a paid (CAD$100) individual interview for a project focussed on men's health-related values. A total of 52 men opted in and provided their contact information to the project manager. Potential participants were then contacted by the project recruiter and rescreened for eligibility based on the inclusion criterion and scheduling availability. Eligible men who were willing to be interviewed in person, telephone or via Skype™ were recruited and a purposive sample of 30 young men participated in 2015 (Please see Table 1 for participant details). The interviews lasted 60-90 minutes and were conducted using an interview guide (Please see Appendix 1) by Masters prepared male researchers with previous experience in qualitative men's health research. Male interviewers were used out of convenience (i.e., they were available) but we acknowledge gender as relational and co-constructed, and therefore the gender and perceived demographics of the interviewer likely influenced the interview dynamics and the data collected (Seale, Charteris-Black, Dumelow, Locock, & Ziebland, 2008). Specific interview questions included, What do you value in terms of lifestyle? What are some of the important experiences or milestones that have made you the man you are today? What first comes into your mind when you think of sports/exercise? The quality of the interview data collected in the first five interviews was evaluated and minor adjustments were made to the interview questions to follow some emergent leads. For example, additional prompts were included to more fully explore participant's references to caring for others and specificities about what comprised strength. Participants were encouraged to draw on prior and current life experiences and the interviewers solicited specific examples and clarified details in the men's interviews using probe and loop questions (Oliffe & Mroz, 2005).

The audio and video recorded interviews were transcribed verbatim and checked for accuracy. Reading the interview transcripts, data were analyzed independently by three experts in qualitative approaches to masculinities and men's health research. The methods used were drawn from interpretive description wherein analytical tools and approaches from a range of qualitative traditions were adapted and applied to inductively derive insights to men's health-related masculine values (Thorne, 2016). Specifically, the data were read and analyzed line by line with the three researchers independently making jottings in the margins to note interpretations and develop preliminary codes for organizing the data (Thorne, 2016). Using constant comparison techniques data were compared within and across the interviews, and data segments were allocated to descriptive codes (Strauss & Corbin, 1998). Early on, numerous codes were used,

some of which were subsumed as the data were re-assigned and significant overlap noted (i.e., double coding). For example, caring and self-reliance were included in the original coding schedule but these codes and the data assigned to those codes were eventually subsumed under the selfless and autonomy codes respectively. Five broad codes regarding participants' health-related masculine values were inductively derived through this analytic approach; 1) Selflessness, 2) Openness, 3) Well-being, 4) Strength and, 5) Autonomy. Data assigned to each value was then read independently by three authors with a view to developing survey items for each value. The purpose of utilizing the descriptive qualitative findings to develop a survey instrument was to pilot test the five health-related masculine values in a population sample to determine their transferability (Creswell, Plano Clark, Gutman, & Hanson, 2003; Kaplan et al., 2016; Morgan, 2015, Salah, Deslauriers, & Knüsel, 2016).

We concede biases were present prior to the study wherein there were expectations that masculinities and men's health practices would likely vary across history, and within age specific cohorts of men. However those biases were mitigated through discussion amongst the three researchers leading the analyses and their collective frankness in comparing and explaining their interpretations of the data (Hill et al., 2005; Tracy, 2010). Through these processes consensus amongst the team was reached about the top three items for each of the five values, resulting in a total of 15 items for the health-related masculine values survey. For example, drawing from the men's interview references to selflessness, three items were developed; A man should, 1) care about others, 2) help other people, and 3) give back to his community. Similarly, this analytic approach was applied to the other four values to develop three survey items for each value. The decision to use three items for each value was based on their 'weight' within the qualitative data, and a desire to be consistent in terms of the number of items used for each value. Further, given the initial a priori approach taken in regards to the number of possible factors (i.e., five), inclusion of a consistent number of three items per masculine value enabled each value to be equally represented in the subsequent principal components analysis. This approach ensured; (1) a high quality item pool, and (2) that all items clearly represented the constructs of interest (Worthington & Whittaker, 2006).

Quantitative Phase: Sample, Data Collection and Data Analysis

A convenience sample of young Canadian men were recruited from an online sample provider and screened to ensure they met survey eligibility requirements (i.e., male, 15-29 years old, residing in Western Canada and English speaking). Online panels offer important avenues for survey data collection with benefits including reduced pre-recruitment field times and efficiencies for accessing target samples (Goritz, 2007; Pedersen & Nielson, 2016). The survey topic was not disclosed in the initial survey invitation, and only potential respondents who went to the survey introduction page were advised that the focus was on young men's health-related masculine values. Of the 1,209 respondents who went to the introduction page, a total of 1,183 (98%) answered ''yes'' to opt in. This sample was reduced to 600 using post opt-in screening and stratification quotas. Respondents who did not complete the survey, those providing nondifferential responses (straight-lining) and respondents who completed the survey significantly faster than average (speeding) were excluded. Respondents were incentivized with proprietary panel points, which could later be exchanged for various rewards. IP addresses were monitored to eliminate the likelihood of duplicate responses. The 10-minute online survey was administered

December 17, 2015 to January 14, 2016 and was completed by 600 respondents (Please see Table 2 for participant details). Responses to the survey items were made using a five point Likert scale (strongly agree, agree, neutral, disagree, and strongly disagree). For each item, the proportions of the sample endorsing each scale point are reported. Principal component analysis (with direct oblimin rotation) was conducted to determine underlying factors within the data. Cronbach alpha coefficients were calculated to evaluate subscale internal consistency.

Findings

Qualitative Results

1. Selflessness.

Most participants indicated that putting the welfare of others ahead of themselves was a masculine value. This took the form of being supportive and demonstrating care for others. Adam, a 16-year-old participant affirmed that, "a man is really kind and generous to everyone." Similarly, Blake, an 18-year-old participant suggested that men needed to prove their compassion;

> I think a man is supposed to be a supporter of everything... By supporter I mean somebody who has the opportunity, and can lift someone's experience of life, abilities in life and understanding in life...Unless you live all alone in the woods, you're relying on other people for everyday transactions. And by supporting people, you give somebody else the benefit.

The value of being selfless was linked to social connectedness, helping others and contributing to community, and many participants suggested such actions signalled authenticity. Caleb, a 23-year-old participant confirmed that his selfless deeds were done without ulterior motives;

> I've always volunteered - it's very satisfying to help people. Doing something without getting anything tangible in return is good. I like making people's lives better… Plus it's a very good way to make connections in the community.

Participants indicated that being selfless often drew on emotional rather than financial masculine capital, in suggesting that young men can, and should, feel and care for others in tangible ways. Dylan, a 22-year-old participant explained;

> I think nowadays, being a man, you can be more emotional. Growing up, guys that cried or boys that cried were made fun of. But now there's more acknowledgment that having emotion isn't so bad…and people who are in touch with their emotions typically make better decisions.

Drawing from the men's references to selflessness three items were developed; A man should, 1) care about others, 2) help other people, and 3) give back to his community.

2. Openness

The men indicated openness was an important health-related masculine value, and suggested that being open to experiences, ideas and people were key to developing fully, and living life to the fullest. Most participants' alignment to openness was linked to actively seeking out new

experiences as a means to making the most of their freedoms. As Ethan, a 22-year-old participant, suggested;

> You have the opportunity to do whatever you want. The doors are open, and all you have to do is walk through them. And if you don't take those opportunities, it's your own fault... If you don't seize the opportunities, you're going to look back and feel bitter.

Evident here and in many men's narratives was the tendency to distance from more conservative masculine practices, wherein stalwart actions embracing freedom and discovery were made amid the recognition that being young could afford opportunities that might diminish with time, age and the accumulation of other responsibilities. Closely tied also were men's aspirations to learn from experience. Finn, a 28-year-old participant, explained;

> You need to keep yourself open to other ideas as well. Instead of being stubborn...if you don't open yourself up, how do you know if you're wrong? It's nice to have a different perspective.

This openness to new ideas and ways of thinking was consistently linked to connecting with an array of diverse people. Sometimes this included travelling and/or experiencing new places. Caleb, a 23-year-old participant, explained;

> I've always enjoyed new experiences and meeting new people... So travelling, I've found, opens my eyes to what's going on in the world, because sometimes growing up we get kind of close-eyed to what's going on... I've always had humbling experiences when I go somewhere where things aren't the same, and it really kind of puts your life into perspective and makes you realize that you really take your life for granted.

There was strong emphasis on 'openness' from the participants, and this related to being open to new experiences, ideas and people. Drawing from participant quotes about the masculine value of openness, three items were developed. A man should be open to new, 1) experiences, 2) ideas, and 3) people.

3. Well-being

Participants valued feeling and looking well as a means to both enhancing life quality and living longer. Gavin, a 26-year-old participant, said;

> My lifestyle is all about health - good health. It's the key to life. I had one grandparent that lived to be 105 years old. It's the best thing to be healthy all the time.

Conscious of idealized representations of masculinity in media and popular culture, participants also valued looking good as a by-product of optimizing their well-being. Many men explained that they felt driven to achieve specific body goals. Harrison, a 27-year-old participant, referencing his training regimen said, "if I notice myself getting a little pudgy, or losing a little bit of weight, I push harder to keep at a good level." Ian, a 26-year-old participant, described how working out at the gym was about achieving an idealized male body aesthetic, as much as it was about reaching his fitness goals;

> I think in this day and age having more muscles and going to the gym is so prevalent. It probably wasn't to this extent 40 years ago. Now men just care so much more about how they look.

Participants connected their desire for muscularity with other qualities including confidence, leadership and self-esteem. Jordan, a 28-year-old participant, suggested;

> You make this assumption that the person takes care of himself, and I guess this sounds kind of shallow, but that they're a good man and a leader because they take the time to take care of themselves.

Gavin, a 26-year-old participant, acknowledged the pressure to achieve an idealized male body, but insisted this motivated him to pursue higher levels of well-being and fitness;

> The stereotype is tough but it does get you going to the gym – it promotes a healthier lifestyle.

Because most men talked to body image and the desire to be and look fit, we included the following items under the core value of well-being; A man should, 1) be fit and healthy, 2) stay in good shape, and 3) take care of his appearance.

4. Strength

Participants valued physical, emotional and intellectual strength. Kaleb, a 27-year-old participant, said, "I think of a lion" in referencing his ideals about embodying manly physical strength. Indeed, iconic masculine stereotypes were drawn on to signal the strength that young men suggested they were expected to exhibit. Levi, an 18-year-old participant, explained;

> It's about being masculine and stronger. I think of people like Superman. Being a man is about being invincible, where nothing can hurt you, where you don't cry, and you're always there to save the day.

Amid affirming longstanding references to physical strength, participants were also conscious of the limits of such masculine stereotypes, and described their agency in contesting and deviating from those ideals and norms depending on the context. Jordan, a 28-year-old participant, confirmed;

> I feel like there are expectations of a man to be strong, solid and never wavering in emotion – those sort of stereotypical expectations about strength... I don't follow all those expectations, but in certain situations I will subconsciously hold that up.

Most men also asserted emotional and intellectual strength as core contemporary masculine values. Miles, an 18-year-old participant, asserted that for young men it is "more mind over muscle," because "if you want to have a job in the future you need to go to university and be smart."

The values of contemporary masculinity were also referenced by Nathan, a 24-year-old participant, in validating the emergence of successful men who embodied intellectual and entrepreneurial strength;

> Before the internet, it would be these great athletes that people idolized and recognized. But now it's more the Warren Buffets, the Bill Gates, the Steve Jobs...We've transitioned from a society based on physical characteristics like physical ability, speed and charisma, to something more on the mental side in terms of knowledge and intelligence.

Participants clearly delineated their value for masculine strength, and based on the findings three items were developed: A man should have, 1) intellectual strength, 2) emotional strength, and 3) physical strength.

5. Autonomy

Autonomy was an important part of being a man for most participants. The men valued the freedoms that came from taking care of themselves. Owen, an 18-year-old participant, linked his self-reliance to functioning effectively within society;

> Not having to rely on anyone is freeing. To find your own way, and be able to do everything yourself – well not everything – but to know how to function in society and be able to get around.

Making choices and deciding without consultation or constraint was also linked to masculinity. Preston, a 16-year-old participant, explained;

> Making your own choices and deciding what you want to do on your own, I think that's what being a man is about. Making your own choices and deciding without the influence of other people...We live in a society where we operate on the basis of free will, and the right to do what you want to pursue happiness, and I think that a man should be able to pursue those rights to the full extent, and have the confidence to make his own choices.

The expression of autonomy, especially in terms of the ability to be self-reliant, mapped onto many men's quest to be fully independent. As is often the case, the value of being independent was also juxtaposed with the weakness associated with being dependent. For example, Quinn, a 29-year-old participant, explained the avoidance of depending on others was critical to staking claim on masculine autonomy;

> I want to be able to function in society and carry out tasks, and I don't want to be limited...Independence is another way of looking at it. Being weak means you always have to depend on someone else, and that's embarrassing.

Based on the participants' references to autonomy, three items were inductively derived to solicit men's responses; A man should, 1) be self-sufficient, 2) make his own decisions and, 3) be independent.

Quantitative Results

Overall, there were high levels of endorsement across all 15 items on the survey (Please see Table 3). Respondents most strongly endorsed (i.e., responded 'strongly agree' or 'agree') to the items "A man should help other people" (90.7%; n=544) and "A man should care about other people" (89%; n=534). The lowest endorsement was for the items, "A man should be independent" (77.5%; n=465) and ''A man should have physical strength'' (75%; n=450). Prior to conducting factor analysis, we examined sampling adequacy using the Kaiser-Meyer-Olkin value (KMO > 0.5) and Bartlett's Test of Sphericity ($p < .05$). The KMO value examines whether the data is likely to yield distinct and reliable factors, while Bartlett's Test indicates whether inter-item correlations are of an appropriate magnitude for factor analysis. The present KMO value was 0.939 and Bartlett's Test of Sphericity was significant ($p<.001$), indicating excellent factorability of the data (Tabachnick & Fidell, 2014). Bivariate correlations were inspected, with all inter-item correlations statistically significant ($p's<.001$) and in the weak-moderate range.

Skewness and kurtosis values were in the acceptable normal range (Please see Table 4). Principal component analysis (direct oblimin rotation) was subsequently conducted. Inspection of the elbow of the scree plot indicated two distinct factors, each with eigenvalues >1 (7.25 and 1.40 respectively). The two-factor solution converged in 9 rotations and accounted for 57.69% of total scale variance. The two factors each demonstrated satisfactory internal consistently, and were named Inclusive (Open & Selfless α=.88) and Empowered (Well-being & Autonomy α=.85). The two factors correlated significantly (r=.631, p<.000).The component scores, along with item means and SDs are displayed in Table 4. Three of the original 15 items were omitted after rotation. These items related to intellectual strength, emotional strength, and taking care of appearance.

Discussion

Empirically, the current study findings revealed novel patterns regarding health-related masculine values among young men based in Western Canada, all of which have implications for future masculinities and men's health research. Akin to research in positive psychology that has argued masculinity can be associated with positive psychological strengths in men (Hammer & Good, 2010; Kiselica & Englar-Carlson, 2010), the current study findings revealed the endorsement of positive health-related masculine values, including caring and concern for others, as well as autonomy, a more traditional value for men. Caring and connecting qualities are often perceived as feminine ideals (Oliffe, Kelly, Bottorff, Johnson, & Wong, 2011); however, within the field of positive psychology, male ways of caring and male relational styles have been theorized as positive masculine strengths (Kiselica & Enlar-Carlson, 2010). As such, the masculine values identified in the current study may be of interest to researchers and clinicians who have adopted the strength-based masculinity framework developed by proponents of positive psychology. For clinicians, these findings provide evidence for counseling approaches that affirm positive masculine strengths, which may be drawn on to promote healthy lifestyle practices and reduce destructive health behaviors. For researchers, these findings point to complexities in how men and masculinities are conceptualised, and the need to explore the ways in which young men's identities differentiate from, align to and perhaps challenge traditional expressions of masculinity. Within this context, we acknowledge the findings regarding a shift in masculinity towards incorporating caring, selfless ideals among young men may be specific to Canadian social and political values (Sabin & Kirkup, 2016).

The masculine values identified by participants extended beyond traditional male protector and provider roles. That said, the extent to which participants' responses represent the adoption of traditional feminine values, a reframe of traditional masculinity, or a contemporary shift in masculinity is debatable. In terms of a shift, the current findings contrast Canadian research from 20 years ago reporting men as identifying more with agentic values compared to women's compassion and caring based values (Di Dio, Saragovi, Koestner, & Aubé, 1996). More recent research by Lyons, Duxbury, & Higgins (2005) reported that a value termed "benevolence" (concern for the welfare of others) was more highly endorsed by female Baby Boomers (born 1945 - 1964) compared to generation matched males but there was no significant difference in alignment to this value between Generation X (born 1965 - 1979) men and women. It is also important to point out that concern for the welfare of others can motivate some men to look after their own physical and mental health in order to assume such caring responsibilities (Oliffe et al., 2012; Robinson, Bottorff, Pesut, Oliffe & Tomlinson, 2014). The endorsement of selflessness

might also be understood as reflecting generation specific experiences about what enables survival and prospering, in the modern (largely metropolitan) world (Ng, Schweitzer, & Lyons, 2010). Strong agreement with openness as a health-related masculine value was interpreted as reflecting the young men's age and interest in gathering diverse experiences in formulating their masculine identities. Building on this latter point, there may be significant health gains by targeting health promotion messages to young men who are inclusive (i.e., selfless and open) to ease transitions including entering college, forming intimate relationships, and embarking on fatherhood.

The high endorsement of well-being as a core value amongst young men may be surprising given the longstanding influence of scholarship arguing that men risk and/or neglect their health (Courtenay, 2000). Indeed, the author team comprising researchers immersed in the masculinities literature had not expected well-being to emerge as a masculine value. In line with Hill et al. (2005) direction we discussed these biases at length (constructivistic) ensuring equitable discussion inclusive of disagreements before reaching consensus. Based on these consensus building processes we suggest that the men's endorsement of well-being in the current study must be cautiously interpreted. For example, the body aesthetic items (a man should stay in good shape, and a man should care about his appearance) might also reflect emergent body image issues among young men (Lefkowich, Oliffe, Hurd-Clarke, & Hannan-Leith, 2017). Nonetheless, while the current study suggests looking well yields significant masculine capital, this finding offers a much needed empirically informed departure from claims about most men's estrangement from, limited interest in, and lack of responsibility for, their well-being. One explanation for respondent's endorsement of well-being as a value is that they, in contrast to previous generations of men, grew up with and positively responded to an abundance of e-health and lifestyle information and health promotion campaigns garnering their investment in wellbeing. Autonomy, by contrast, has long been understood as a hegemonic masculine ideal and norm. The findings from the current study however indicated that while making one's own decisions and being self-sufficient drew strong agreement, there was less value assigned to being independent. This might be interpreted to signal young men's investment in social connectedness, and this is supported by work suggesting young men's increasing comfort with emotional openness and overt expressions of homosociality (Anderson, 2009). Or alternatively, with the diminishing influence of social and family ties, increasing exposure to global values, and necessity of mobile careers, the valorisation of independence may be an increasingly precarious form of capital, even for men. For instance, relevant to the claims of the realignment of men's attitudes to values such as independence and emotional openness, Kimmel (2008) observed that young men are at school longer and find paid work, marriage, and careers later in their lives compared to previous generations. These trends, chronicled in US based young men (Kimmel, 2008), may also be understood as simply delaying independence among the current Canadian based study respondents. Characterized by the domain of empowerment, respondent's endorsement of well-being and autonomy may afford significant opportunities for engaging young men in self-health strategies.

That strength values drew less agreement might be interpreted as an easing in young men's purchase on these hegemonic masculine ideals and norms. While strength has been a much cited masculine ideal and norm, the current study findings indicated that intellectual and emotional strength were more highly valued than physical strength. Indeed, physical strength was the least

endorsed of the 15 items. Given reductions in demand for men's paid manual labor in Western nations (Min, Park, Hwang, & Min, 2015; Virtanen, Hammarström, & Janlert, 2016), this finding may reflect young men's recognition of the value of knowledge and the need to develop skill in connecting and collaborating with others in a service driven economy with increasing demands for emotional labour and interpersonal dexterity (Roberts, 2012). Generational shifts, including the shifting demands of the (male) workforce in urban areas, may also be influencing the relevance and credibility of such erstwhile 'masculine' traits.

While not having data from other age specific male cohorts to make formal comparisons, one might speculate that the health-related masculine values of young men based in Western Canada differ from men in other locales and of other generations. That said, polls by YouGov (Moore, 2016) similarly argued a decline in what they termed 'traditional masculinity' among young US based men. The potential for emergent changes in masculine qualities and values that are increasingly acceptable to and admired by young men will hopefully translate into lifelong health promotion practices. Linking to broader men's health issues, we speculated there may be some connection between emergent health-related masculine values and the dwindling life expectancy sex differences in Canada. For example, in Canada, men's life expectancy has increased by 5 years since 1990, wherein men born in 2012 will, on average, are expected to live 80 years (Statistics Canada, 2012). Within this context the difference between Canadian men's and women's life expectancy has decreased by 4 years, perhaps affirming some of the gains made possible through shifting masculine values and advances in health information access and services. In saying this, it is worth considering that generational shifts inevitably come with unintended consequences, with emergent health-related masculine values likely to produce new and important pressures on men and women. Thus, while some of the emergent values seem counter to tradition and even problematic for promoting men's health (i.e., high value on the idealized male body), on-going investigation into what new ideals and norms do, for whom and to what end is critical. Moreover, it is important to continue explorations within sub-populations of men, and accommodate a sense of how culture, race, sexuality and class may variably (depending on context) mediate the resonance and relevance of emerging masculine values. As was the case for delineating hegemonic masculinity, there may be greater opportunities for assuming novel perspectives and practices (e.g., selflessness, contributions to society, caring for others) amongst certain cohorts of the male population, offering new understandings across diverse groups of men. Conversely, de Visser and McDonnell's (2013) work on masculine capital gives pause to also consider whether values such as openness and selflessness in one setting may simply arm men with justifications to take health risks in other settings.

Regarding methods, the use of mixed methods for the current study made possible inductively derived health-related masculine values drawn from and pilot tested among two samples matched by age and locale (i.e., young men 15-29 based in Western Canada). By leveraging the qualitative data to test survey items on masculine values, we were able to draw on the strengths of both qualitative (depth and meaning) and quantitative (measurement) approaches in men's health work. Within this context, the current study bypassed long standing ontological and epistemological divides in social constructionist and socialization theory, to produce empirical findings useful to both disciplines. By extending the reach of a small interview study, strategically developing those findings to inform the questionnaire, and then interpreting the statistical results drawn from the quantitative arm, insights were garnered that would otherwise

not be possible with only one phase of the study. While this mixed methods approach is well established (Creswell et al, 2003; Hanson et al., 2005; Morgan, 2015, Salah et al., 2016), with few exceptions (see de Visser & McDonnell, 2013) masculinity and men's health studies have not employed such designs. Future work may benefit from mixed methods study designs, especially given that the burden of proof weighs heavily on efforts to lobby targeted men's health services and policy.

Findings from the exploratory factor analysis indicated that young men's responses reflected an overlap between items connected to openness and selflessness, and also between items connected to well-being and autonomy. These two factors derived from the masculine values scale may be useful constructs for researchers and clinicians invested in generating insights into men's values and for practitioners designing gender sensitized health programs. While the in-depth interviews with young men identified five core values, results from the factor analysis indicted that a two-factor solution best accounted for young men's health-related masculine values. In a statistical sense, rather than contradicting the qualitative results, the factor analysis indicated that young men's values appear organised according to two overarching constructs, suggesting conceptual overlap in those scale items assessing openness and selflessness, and those assessing well-being and autonomy. Hence, while young men may perceive qualitative differences between these four domains (as indicated by the in-depth interview data), there was less observable differentiation when examining from a psychometric perspective. Items assessing intellectual and emotional strength, and care of appearance, each had relatively low factor loadings. Despite endorsement within the in-depth interviews, the factor analysis suggests that physical strength appears to have primacy over non-physical aspects of strength for young men, and that physical appearance is valued by young men less consistently than other domains. Taken overall, the present findings suggest two overarching latent constructs, inclusive and empowered, under which four core values for young men appear to be situated.

We recommend for others to examine (and ideally confirm) this factor structure in broader samples of men, and explore nuances in associations between the two subscales and other indicators of men's health. Indeed, the current study adds important context relevant to the small number of tools designed to derive insights from men about masculinity and being a man (Kaplan, Rosenmann, & Schuhendler, 2016; Wong et al., 2013). Amongst these, Wong et al.'s (2013) Subjective Masculinity Stress Scale invited respondents to complete the sentence: As a *man…* 10 times, as requisite to soliciting their responses to how often each experience was stressful (never/almost never, rarely sometimes, often, always/almost always). There is also the Kaplan et al. (2016) New Masculinity Inventory (NMI), which comprises a 17-item Likert-based survey measuring men's adherence to non-traditional masculinity ideologies (as distinct from measuring the extent to which men refute or adhere to traditional masculinity). Taken together, the empirical findings derived from these surveys reveal a picture of masculinities that may contradict long-standing stereotypes, including those that position men as uninterested in their health, being prone to destructive health behaviors, and highly resistant to caring roles within families and the community.

Of course, there are study limitations that need to be acknowledged, including the crosssectional design. In offering this snapshot of young men's health-related masculine values in Western Canada, limits prevail about the transferability to other sub-groups of young men, and what can

be claimed as potential shifts or sustained changes in masculinity across generations and/or men's life course. Related to this, there were differences in the key variables of the qualitative and quantitative samples; ethnicity data was not collected from survey questionnaire respondents, limiting our knowledge about the potential match between the two samples, and the relevance of the findings to the broader population of young Canadian men living in Western Canada. Data collection for the qualitative interviews utilized three mediums (telephone, Skype, and face-to-face) and this may have also influenced the data collected. In addition, panel conditioning or bias can exist wherein online panelists' ongoing participation in surveys can muster change in respondents' attitudes and behaviours (Goritz, 2007). Study limitations also relate to the survey/checklist. For example, the neutral response item offered little to advance interpretations of the findings, affirming work by Moors (2008). Further, the inclusion of 'a man should' stem in the items may have garnered agree responses while not necessarily talking explicitly to the respondents' health practices. Conceded also is the likelihood that there are practices that young men do, as men, that don't necessarily reflect what they value in other men. Related to this limitation is the phenomenon of acquiescence bias in Likert surveys, wherein respondents may agree with items as presented rather than disagree in order to present themselves favourably. However, by acknowledging these limitations, new research questions are made available. For example, are there generational shifts in masculinity that will sustain values to inform 'new' masculine ideals and norms, and by extension men's health practices? Or, do traditional structures and agency characterized by power differentials serve to eventually render young men complicit in sustaining hegemonic masculinity, and adhering to the masculine ideals and norms that health researchers have documented over time? Future work might employ longitudinal mixed methods studies comparing men by age, sexuality and locale to advance the field and application of masculinities to men's health and illness research.

Conclusion

Masculinities and men's health research has been characterized by frameworks and surveys with pre-determined masculine ideals and norms. To be nimble in providing effectual gender sensitized health interventions, knowledge about men's health-related masculine values should be routinely collected and integrated into efforts for advancing the health of men and their families. Offered here are some novel empirical insights and mixed methods toward that end. Focussing work on younger populations is key to tailoring a fit between men's health service needs and the services and interventions afforded to them. By demonstrating the usefulness of a focus on young men's health-related masculine values, the current study also points to avenues to further investigate potential shifts in masculinity that might be harnessed to benefit men and their families.

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Figure 1: Research Design Phase Procedure

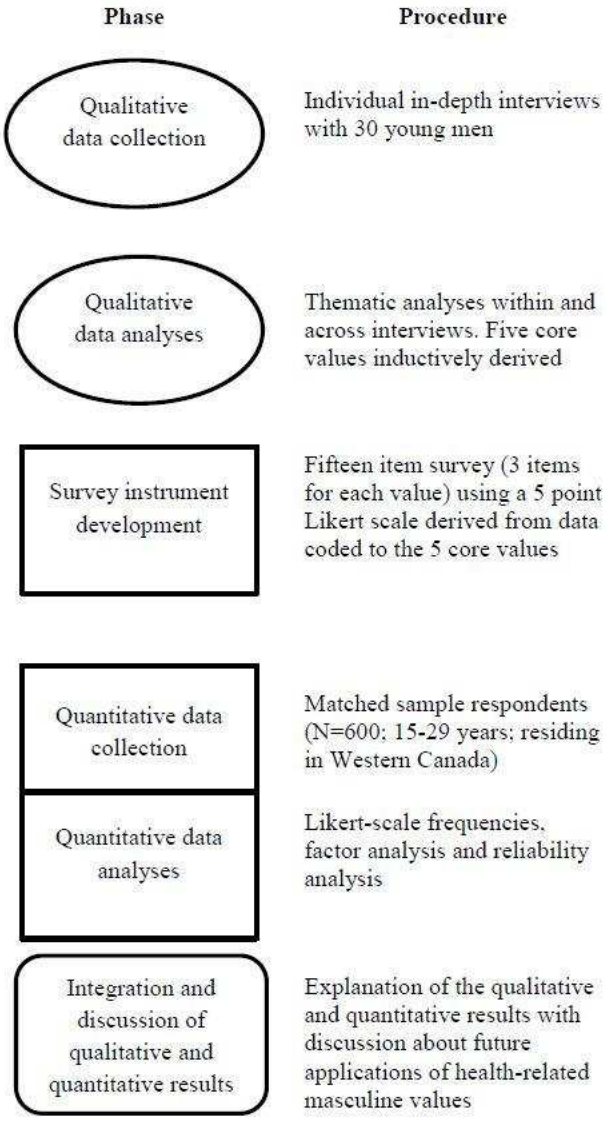

Table 1

Qualitative Participant Demographics

Participants	N=30	
Mean Age	21	
	N	**%**
Ethnicity		
Caucasian	15	50.0%
Asian	5	16.7%
Indian/S. Asian	4	13.3%
Other	6	20.0%
Employment		
Employed Full Time	9	30.0%
Employed Part Time	2	6.7%
Student	16	53.3%
Unemployed	1	3.3%
Other	0	0.0%
Prefer not to say	2	6.7%
Marital Status		
Single	22	73.3%
Married	2	6.7%
Live with Partner	3	10.0%
Other	0	0.0%
Prefer not to say	3	10.0%
Education Level		
High School	12	40.0%
Post-secondary, incomplete	9	30.0%
Post-secondary, complete	7	23.3%
Graduate degree, incomplete	1	3.3%
Graduate degree, complete	0	0.0%
Prefer not to say	1	3.3%
Province		
British Columbia	12	40.0%
Alberta	14	46.7%
Saskatchewan/Manitoba	4	13.3%

Table 2

Quantitative Participant Demographics

Respondents	N=600	
Mean Age	24	
	N	%
Employment		
Employed Full Time	285	47.5%
Employed Part Time	56	9.3%
Student	83	13.8%
Unemployed	54	9.0%
Other	73	12.2%
Prefer not to say	49	8.2%
Marital Status		
Single	329	54.8%
Married	97	16.2%
Live with Partner	32	5.3%
Other	10	1.7%
Prefer not to say	132	22.0%
Education Level		
High School	101	16.8%
Post-secondary, incomplete	101	16.8%
Post-secondary, complete	199	33.2%
Graduate degree, incomplete	14	2.3%
Graduate degree, complete	54	9.0%
Prefer not to say	131	21.8%
Province		
British Columbia	207	34.5%
Alberta	230	38.3%
Saskatchewan/Manitoba	163	27.1%

Table 3

Quantitative Results: Intensions Health-Related Masculine Values Scale (IHRMV-15)

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Selflessness	A man should care about other people	54.7%	34.3%	9.0%	1.5%	0.5%
	A man should help other people	52.5%	38.2%	7.2%	1.5%	0.7%
	A man should give back to his community	36.7%	42.8%	17.5%	2.3%	0.7%
Openness	A man should be open to new ideas	47.2%	41.0%	10.3%	1.2%	0.3%
	A man should be open to new experiences	42.8%	45.8%	9.5%	1.3%	0.5%
	A man should be open to new people	36.3%	45.8%	14.0%	3.3%	0.5%
Well-being	A man should be fit and healthy	45.0%	41.5%	11.5%	1.7%	0.3%
	A man should stay in good shape	41.8%	43.7%	12.5%	1.5%	0.5%
	A man should take care of his appearance	39.5%	46.5%	11.5%	1.8%	0.7%
Strength	A man should have intellectual strength	46.0%	41.0%	11.3%	1.2%	0.5%
	A man should have emotional strength	35.7%	46.8%	13.3%	3.3%	0.8%
	A man should have physical strength	34.0%	41.0%	20.5%	3.7%	0.8%
Autonomy	A man should be self-sufficient	41.8%	40.7%	14.3%	2.3%	0.8%
	A man should make his own decisions	39.3%	43.7%	13.0%	3.3%	0.7%
	A man should be independent	36.7%	40.8%	17.5%	4.0%	1.0%

Table 4

Descriptive Statistics and Factor Loadings (with Direct Oblimin Rotation) for the Intensions Health-Related Masculine Values Scale

Scale item	Descriptive							Component	
	Mean	SD	Skewness	Kurtosis	Median	Mode		1 Open & Selfless	2 Healthy & Autonomous
A man should be open to new experiences	4.29	0.73	-1.027	1.644	4	4		**0.653**	0.186
A man should be open to new ideas	4.34	0.74	-0.999	1.091	4	5		**0.666**	0.164
A man should be open to new people	4.14	0.81	-0.861	0.725	4	4		**0.839**	-0.104
A man should care about other people	4.08	0.89	-0.852	0.509	4	4		**0.854**	-0.084
A man should help other people	4.18	0.83	-0.975	0.971	4	4		**0.778**	0.058
A man should give back to his community	4.20	0.83	-0.991	1.019	4	5		**0.785**	-0.049
A man should be independent	4.04	0.88	-0.700	0.203	4	4		-0.077	**0.812**
A man should make his own decisions	4.31	0.76	-1.021	1.242	4	5		-0.129	**0.763**
A man should be self-sufficient	4.13	0.83	-0.963	1.141	4	4		0.083	**0.702**
A man should have physical strength	4.41	0.76	-1.331	1.967	5	5		-0.028	**0.767**
A man should be fit and healthy	4.40	0.75	-1.416	2.733	5	5		0.257	**0.596**
A man should stay in good shape	4.13	0.83	-0.773	0.496	4	4		0.216	**0.636**
A man should have intellectual strength#	4.29	0.76	-0.956	0.890	4	5		0.437	0.431
A man should have emotional strength#	4.22	0.77	-0.999	1.480	4	4		0.303	0.497
A man should take care of his appearance#	4.25	0.77	-0.924	1.024	4	4		0.448	0.308

Note. # denotes item omitted following rotation

Appendix 1

Interview Guide

Section 1: Health related values

- Please start by telling me a little bit about yourself? What's happening in your life at the moment?
- Walk me through a typical day in your life? How do you like to live from day-to-day?
- What are some of the social activities that you like to be involved in? (Probe for sports**,** volunteering, socializing)
- What sort of impact do these social activities have on your life? How do they make you feel?
- What are the priorities in your life? What is important to you? What are your core values? What do you value in terms of lifestyle?
- What sort of life would you like to have in the future? What are some of your goals?
- What comprises success for you?

Section 2: Masculinity

- What comes into your mind when you think about being a man?
- What are some of the benefits and challenges of being a man?
- What are some of the important experiences or milestones that have made you the man you are today?
- Describe each experience or milestone? What happened? Who was involved?
- What do you remember thinking at the time? How did it make you feel?
- What did you learn from this experience? How did this experience influence your life?
- Have you noticed any trends or changes that have impacted men over the last few years?
- Projective Exercise**:** *Imagine a 'typical man,' what comes into your mind…*
    - What does this man look like; how do they act?
    - What is the background of this man?
    - What is important to them?
    - What will happen to this man in the future?

Section 3: Lifestyle

- What comes into your mind when you first think about strength?
- Thinking about the big picture: What is essential for maintaining a strong body? What does the body need? What do you value in terms of nutrition?
- What first comes into your mind when you think about sports / exercise?
- How would you describe your approach to exercise? How has this changed over time?
- Thinking back to the last time you exercised: What happened? Take me through the process.
- We've been talking about your life, being a man, health-related values exercise, and lifestyle for 60 minutes, have you noticed any changes in your thinking or feeling after our discussion today?

- Any final thoughts or comments?