Development and validation of a self-report scale measuring mental health self-reliance

by

Lindsay D. H. Berard

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Department of Psychology

University of Manitoba

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Abstract

Background and Objectives: Self-reliance is commonly understood as a rigid belief that individuals will manage challenges independently, without seeking or relying on external support and is a leading reason that people do not seek mental health help. Despite its importance, efforts to mitigate the negative impact of self-reliance on mental health service utilization have been limited, partly due to the poor conceptualization of the construct and the absence of a reliable and valid measurement scale. This dissertation addresses these gaps by proposing a multifaceted conceptualization of self-reliance, which was used to create a validated measure: the mental health self-reliance scale (MHSRS).

Methods: Scale development followed a four-step process. The first conceptualization step involved the development of a conceptual model of self-reliance as consisting of three unique expressions, and the second stop focused on developing an initial item pool based on this conceptual model. The third step involved item selection and revision using an exploratory factor analysis (EFA) with a large online community sample (n = 521). Finally, in the fourth psychometric evaluation step, confirmatory factor analysis (CFA) with a new online community sample (n = 242) validated the factor structure and assessed concurrent validity by examining convergent and discriminant relationships with ancillary measures. Also, in the fourth step the temporal stability of the scale over a three-week period was established with a unique sample (n = 62).

Results: The scale development process resulted in a 12-item scale with three factors corresponding to the hypothesized dimensions of *headstrong, adaptive,* and *other-reliance*. Results from the exploratory and confirmatory factor analyses demonstrated excellent model fit and strong evidence of internal consistency, temporal reliability, and validity.

Conclusions: The MHSRS provides a psychometrically sound tool highlighting the nuanced nature of self-reliance, distinguishing between adaptive (e.g., flexible autonomy) and maladaptive (e.g., inflexible patterns of overdependence or excessive self-sufficiency) expressions. The scale offers a new approach to understanding how self-reliance impacts mental health management and help-seeking behaviours. The MHSRS can be used by clinicians, researchers, and policymakers to address barriers to mental health service utilization and support uptake and effective participation in mental health treatment.

Keywords: self-reliance, mental health, mental health service utilization, help-seeking behaviour, scale development, barriers to care, psychometrics

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Dedication

This dissertation is dedicated to my late father, Ramsay. His self-reliant nature and battle with multiple systems atrophy led me to this clinical and research work. I will carry your passion for helping others with me forever.

And to my three boys, Jacques, Felix, and Henri, who started their lives with me in graduate school, know there are no limits to what you can accomplish.

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"Just because no one else can heal or do your inner work for you doesn't mean you can, should, or need to do it alone." Lisa Olivera

Chapter 1: General Introduction and Articulation of the Construct (Step 1)

Preface

Self-reliance is typically defined in the mental health literature as the desire to manage mental health problems on one's own and is a frequently cited reason why individuals delay or avoid accessing mental health treatment (e.g., Gulliver et al., 2010; Han et al., 2018; Labouliere et al., 2015; Wuthrich & Frei, 2015). This framing tends to emphasize rigid and potentially maladaptive expressions of self-reliance, often overlooking the possibility that certain expressions of self-reliance may be healthy or adaptive.

Despite this negative framing, evidence suggests self-reliance may be more nuanced. Schaumberg and Flynn (2017) found that while the public perceives self-reliant individuals as "not willing to accept help even when they really need it" and "occasionally headstrong" (p. 1861), they also identified benefits to being self-reliant, such as being independent and having strong problem-solving abilities. Interestingly, these views align with research findings that suggest both positive and negative aspects of self-reliance. Kiselica and Englar-Carlson (2020) highlight that having a flexible self-reliant attitude benefits men by fostering resilience, effective problem-solving, and the ability to seek support when needed. Since the literature often overlooks these potential benefits in mental health service research, there is a limited understanding of how different expressions of self-reliance influence help-seeking and mental health management behaviours (Britt et al., 2016; Choo & Marszalek, 2018).

Unlike other mental health constructs that have clear definitions and thorough conceptualizations (e.g., stigma; Pachankis et al., 2017), self-reliance is poorly defined and inconsistently measured. Researchers have often relied on a single item or a brief subscale from a much longer masculinity scale to measure self-reliance (Choo & Marszalek, 2018; Ortega & Alegría, 2002). Because the single items and specific traits focused on within the masculinities scales have been quite varied in terms of the language used, there is limited comparability across studies. Currently, there is no psychometrically sound measure of self-reliance for managing mental health, even though it consistently ranks among the most common reasons people do not seek professional help (Clement et al., 2012; Kessler et al., 2001; Matthews et al., 2013; Pérez-Zepeda et al., 2013; Van Beljouw et al., 2010; Wells et al., 1994; Wuthrich & Frei, 2015).

To address these limitations, this dissertation presents a multidimensional conceptualization of self-reliance for managing mental health, and a validated measure grounded in this conceptualization: the Mental Health Self-Reliance Scale (MHSRS). This framework distinguishes between three unique expressions: (1) a negative, rigid expression of high self-reliance (i.e., *headstrong self-reliance*); (2) a positive, flexible expression of self-reliance (i.e., *adaptive self-reliance*); and (3) a negative, rigid expression of low self-reliance (i.e., *other-reliance)*. In the conceptualization, I have included literature to suggest the development of and lived experience with this expression of self-reliance and its possible manifestation in mental health management.

Scale Development Process

As recommended by best practices in scale development (American Educational Research Association, 2014; Boateng et al., 2018; Clark & Watson, 1995; Clark & Watson, 2019; DeVellis (2012); Furr, 2011, 2020; Furr & Bacharach, 2013; Johnson & Morgan, 2016; Krosnick

& Presser, 2009; Mellenbergh, 2011; Oosterveld et al., 2019; Peterson, 2000; Rossellini & Brown, 2021; Worthington & Whittaker, 2006), I followed four steps when developing the MHSRS. Step 1 focused on construct conceptualization, which is outlined later in this chapter. This section begins with a literature review to explore how individuals manage their mental health. To highlight existing limitations, current definitions and measures of self-reliance are discussed to demonstrate the importance of developing a new scale. Chapter 2 focuses on Step 2, which involved generating an initial pool of potential items. The development of potential items was informed by the multidimensional conceptualization of self-reliance outlined in Chapter 1, drawn from the literature and existing definitions and scales used to measure self-reliance (see Appendix A). The MHSRS was designed to capture the diverse ways individuals manage their mental health, and broad items were created to represent the flexibility in mental health management experiences (e.g., consultation of self-help resources, informal supports, and formal treatment options). I assembled a writing team, which consisted of faculty members and graduate students in clinical psychology. The survey response format was also selected during this step. Chapter 3 presents Step 3, which is a crucial step in the scale development process, collecting preliminary data using the initial item pool. In this chapter I introduce the process of examining the psychometric properties of the scale in an initial sample using exploratory factor analysis. For step 4, I used a subsequent sample to confirm the factor structure of the scale and collect evidence of concurrent validity (Chapter 4). I then used a final sample to test the performance of the scale over a 3-week test-retest period (Chapter 5). Finally, Chapter 6 integrates findings from the four steps and offers a general discussion, including limitations, implications, and future directions for self-reliance in managing mental health.

Step 1: Articulate the Construct and Context

Step 1 began organically. Through my experience working as a mental health practitioner and conducting research in mental health service utilization, clinical and research experience revealed that the journey people take while managing their mental health is important. An individual's experience in navigating this challenging time becomes part of their life narrative and often impacts their view of the world and how they need to navigate within it. Hearing clients' and participants' stories, it became clear that self-reliance is not only expressed in a negative way. This observation became the foundation for Step 1 of this research, an exploration of the current conceptualization, definitions, and measurement strategies of self-reliance. I reviewed self-reliance literature from a variety of perspectives, including research related to attachment, masculinities, mental health service utilization, positive psychology/positive masculinity, self-determination theory, clinical psychology and psychopathology, psychosocial determinants of mental health, and occupational and organizational psychology. Throughout, I found there was evidence to support different expressions of self-reliance- this evidence will be reviewed later in this chapter.

As described in best practices for scale development, I also reviewed the existing measures of self-reliance to determine the need for a new self-report questionnaire (Johnson & Morgan, 2016). No current measurement strategy would allow for a multidimensional view of self-reliance without redefining much of the scale (existing definitions and scales used to measure self-reliance are captured in the next section and summarized in Appendix A). Further, many of the scales also appeared to be either too brief, focused on other areas (e.g., masculinities, occupational and organizational psychology), or had questionable psychometric properties. Therefore, I decided it would be best to outline a multidimensional conceptualization of self-

reliance grounded in literature and considered beyond the narrow experience of the construct as is, to create a new scale (Hoyle et al., 2025).

Considering the utility of the scale, the MHSRS was designed to include items that are inclusive of the entire mental health journey, rather than solely focused on formal treatment-seeking. As this is the first measure to include a multi-dimensional conceptualization of self-reliance, I thought it would be beneficial for the scale to be designed for the general adult population.

Existing Definitions of Self-Reliance

Researchers have viewed self-reliance differently, including as a trait (Bornstein, 1992), a preference primed for situational expression during research trials (Schultz et al., 2017), a stable attitudinal barrier (van Zoonen et al., 2016) and a coping style (Funch & Marshall, 1984). Given that self-reliance is most commonly identified as being rigid and negative, it is not surprising that it is also commonly defined in that way. Much of the literature emphasizes a highly rigid expression of self-reliance- when adopted in the extreme, individuals are unwilling to seek support from others. Some examples of such definitions include a *"*tendency to rely on one's own capabilities in problem-solving and to avoid seeking help from others*"* (Choo & Marszalek, 2018, p. 974), the *"*perception that a person should be able to solve their problems on their own*"* (Labouliere et al., 2015, p. 3742), and "a reluctance to seek help" (Addis & Mahalik, 2003, p. 6).

Definitions more specific to self-reliance in treatment settings include a "belief that people should handle problems without treatment*"* (Mojtabai, 2009, p. 298) and that people "should solve problems individually rather than accepting help from others" (Taylor et al., 2004, p. 360). Tenacious self-reliance, or a "persistent commitment to managing one's health independently" (p. 629) suggests an individual has a desire to actively engage strategies to achieve health goals

(high selective primary control; SPC), with a low desire to use external resources (low compensatory primary control, CPC; Hamm et al., 2017). Some conceptualizations of self-reliance describe individuals as emotionally detached from others. Self-reliance is described as a form of extreme independence (Ryan et al., 2005), where highly self-reliant individuals *"carry independence to the point of an aloof distance from others"* (Snell Jr., 1989, p. 444). These definitions collectively highlight a pervasive and narrow conceptualization of self-reliance, often equating it to avoidance of external support to the point of isolation.

In another line of the literature, some researchers define self-reliance in more flexible ways and use softer language. For example, individuals may have a "desire to help themselves" (Wuthrich & Frei, 2015, p. 2), an "ability to rely on oneself" (Choo & Marszalek, 2018, p. 3), and a "preference to rely on oneself" (Gulliver et al., 2010, p. 5). Definitions more specific to self-reliance in treatment settings include patients *"making their own efforts to cure themselves"* (Twohig & Furnham, 1998, p. 269) and *"[trying] to deal with illness on their own, engaging in a variety of coping practices to alleviate symptoms"* (Pearlin & Aneshensel, 1986, as cited in Pescosolido et al., 2013, p. 514). While these definitions do not explicitly state that others could be involved, the capacity for involvement from others appears to remain open. These more flexible definitions suggest a nuanced understanding of self-reliance, acknowledging individual autonomy while leaving room for the possibility to access support from others.

Existing Measures of Self-Reliance

As may be expected from the inconsistent definitions and conceptualizations detailed above, the ability to measure self-reliance reliably is limited. More than 20 years ago, Ortega and Alegría (2002, p. 133) criticized the fact that self-reliance "has not received extensive empirical consideration in the literature. There is not a single, valid, and standard measure to capture self-

reliance in mental health studies" (p. 133). Other researchers, including Genuchi (2024) and Ishikawa and colleagues (2022), have appropriately echoed this criticism, which remains relevant today. Current measurement tools for self-reliance have included qualitative interview probes, single-item measures, and items or subscales found within larger, broader scales (e.g., masculinity measures such as the Conformity to Masculine Norms Inventory; Mahalik et al., 2003). Many of these measures assess a singular expression of self-reliance, where higher scores reflect a more rigid and inflexible version of self-reliance. Appendix A supplements the following overview by summarizing self-reliance subscale items; superscripts in the text below denote sources included in the Appendix.

Simple Methods

Several studies exploring the help-seeking process provide an open-ended question, qualitative prompt, or simple item for the participant to describe how they feel about seeking support or why they did not access mental health treatment when needed. A study by Wells and colleagues (1994)[1] relies on a commonly used method, using a series of interview questions that evaluate participants' endorsement of specific barriers to seeking help, including self-reliance. Questions start broadly and researchers asked participants *If [they] had ever decided not to seek professional treatment when others or themselves thought they should* (p. 156). As a follow-up, the interviewer asked participants to share the reason(s) why they did not seek help at that time. Finally, the interviewer read aloud a checklist to ensure participants considered all possible barriers; the item representing self-reliance was *You thought it was something you should be strong enough to handle alone* (p. 161). Van Zoonen and colleagues (2015)[2] used a similar approach when interviewers inquired whether participants with subclinical depression had sought care in the last six months. If participants responded negatively, the interviewer briefly described

five preventative treatment options, asking participants if they would have participated in treatment if they had known about the services. If participants responded negatively again, the interviewer read a list of 12 possible reasons to understand why the participant was not interested in treatment, including *feeling one can solve his/her own problems* (p. 107).

Other research has asked participants to respond to general beliefs about managing mental health. Phillips (1965)[3] explored the level of agreement to the statement *people should be expected to handle their own problems* (p. 557). Similarly, Fischer and colleagues (2016)[4] asked veterans accessing services through Veterans Affairs (VA): *Sometimes people think they should be able to handle emotional or mental health issues on their own rather than seek medical care; what do you think about that?* (p. 432).

Dichotomous items and simple questions have also been used to measure self-reliance. For example, in the Mental Health Care among Puerto Ricans study, self-reliance was measured using a dichotomous item asking if participants *preferred to solve their emotional problems on their own* (Ortega & Alegría, 2002, p. 133).[5] Funch and Marshall (1984)[6] used a single question to dichotomize reliance into *self* and *others* to assess whether the breast cancer patient herself or the family would be primarily *responsible for the woman's recovery* (p. 9). Beukema and colleagues (2022) asked adolescents, *If you are not feeling great about yourself and school is not going well, with whom would you like to talk about it*? (p. 3). Another approach involved vignettes to capture participants' opinions on the effects of mental health self-reliance. Gender-matched vignettes described various depressive disorders and then asked participants if it *is it likely to be helpful, harmful or neither if John/Mary tried to deal with his/her problems on his/her own?* (Griffiths et al., 2011, p. 414).

Masculinities Measures

Researchers working in masculinities have developed scales to measure the various facets of masculine gender norms, including self-reliance. Depending on the scale, sampled traits may include toughness, aggression, the pursuit of status, emotional restriction, the primacy of work, and self-reliance. Some scales offer a single or a small number of items related to each masculine trait, while others capture traits as separate subscales. Appendix A includes the items used to measure self-reliance.

Three less frequently used scales in the masculinities literature include the Masculine Behavior Scale (MBS; Snell Jr., 1989)[7], Male Role Norms Scale (MRNS; Thompson & Pleck, 1986)[8], and Traditional Attitudes About Men scale (TAAM; McCreary et al., 2005).[9] The MBS features the exaggerated self-reliance subscale, which consists of five items. Internal consistency and 4-week test-retest for the subscale were unacceptable and fair ($\alpha = .69$ and $r = .48$, respectively; Snell Jr. 1989), based on the standards suggested by Cicchetti (1994). The MRNS includes self-reliance items in the 8-item toughness subscale used to measure emotional and physical toughness, with two items specifically focused on emotional toughness (Thompson & Pleck, 1986). The reliability for the toughness subscale was fair across studies ($\alpha = .79$, Gordon et al., 2013; $\alpha = .76$, Bruch, 2002). Some researchers have noted strengths in the scale's construct and discriminant validity (Thompson Jr. & Bennett, 2015); however, others suggest dropping one item or splitting the subscale into two different factors (Sinn, 1997; Fisher et al., 1998, respectively). In the TAAM, self-reliance is considered part of self-sufficiency. This scale has five items, and only one measures self-reliance. Full scale reliability was fair ($\alpha = .75$; McCreary et al., 2005).

More commonly used masculinity scales include the Male Role Norms Inventory (MRNI; Levant et al., 1992, 2007, 2013)[10-12] and Conformity to Masculinity Norms Inventory (CMNI-94;

Mahalik et al., 2003, 2009, 2020).[13-15] The 58-item MRNI[10] is based on the sex-role strain paradigm and Western male norms. The original self-reliance subscale contained seven items, and reliability was unacceptable during scale development (α = .62, Levant et al., 1992). Several years later, the authors revised the scale (MRNI-R; Levant & Richmond, 2007)[11] to better represent the extreme expression of the self-reliant attitude that authors found to be normative among men. The authors adapted the self-reliance subscale to the extreme self-reliance subscale, adding items related to managing house maintenance and vehicle troubles, and removing items based on judgment and decision-making. Reliability for the extreme self-reliance subscale was fair for male and female genders (α = .75 for men, .78 for women, .78 total sample; Levant & Richmond, 2007). Levant and colleagues (2016) further reconceptualized self-reliance in the short-form of the scale (MRNI-SF; Levant et al., 2013),[12] as self-reliance through mechanical skills. Three items from MRNI-R were retained and included in the updated version, which had a good reliability of α = .89 for the subscale.

The CMNI-94[13] is one of the most widely used measures to assess conformity to traditional Western masculine gender roles. In the original version, the self-reliance subscale included six items and had good subscale reliability (α = .85; Mahalik et al., 2003). Test-retest reliability on the self-reliance subscale over 2-3 weeks was excellent (r = .80). In 2009, Parent and Moradi shared 14 different iterations of shortened versions of this questionnaire. Two popular versions include the CMNI-46 (Parent & Moradi, 2009)[14] and the CMNI-30 (Burns & Mahalik, 2006)[15]. Only one self-reliance item, *Asking for help is a sign of failure,* was removed when shortening the scale to 46 items (CMNI-46). The item *I ask for help when I need it* was dropped from the scale for the 30-item version (CMNI-30). Over time, the scale has demonstrated promising

reliability and validity, with fair internal consistency across several iterations of the self-reliance scale (e.g., $\alpha = .74$, Burns & Mahalik, 2006; $\alpha = .78$, Parent & Moradi, 2009).

Mental Health Service Utilization Measures

Self-reliance often appears as a perceived attitudinal barrier to seeking mental health treatment within the mental health service utilization literature, including in smaller studies exploring mental health prevalence rates in specific populations (i.e., older adults with comorbid anxiety and mood disorders; Wuthrich & Frei, 2015),[16] large epidemiological studies such as the National Comorbidity Study (NCS), the Ontario Health Survey (OHS), and the Netherlands Mental Health Survey and Incidence Study (NMHSIS; Sareen et al., 2007).[17] For example, the attitudinal barrier list used in the NMHSIS had one item related to self-reliance: *I wanted to solve the problem on my own* (p. 361).

Self-reliance also regularly appears in treatment barrier scales, including the Barriers to Adolescents Seeking Help (BASH; Kuhl et al., 1997),[18] Barriers to Access to Care Evaluation (BACE; Clement et al., 2012),[19] RAND Barriers to Mental Health Care Bank (RAND, 2018),[20] and Barriers to Mental Health Services Scale (BHSS; Mansfield et al., 2005).[21] The BASH was designed to assess barriers to adolescent mental health help-seeking. Within the measure, two items from the 37-item scale measure self-sufficiency, however, the items align with definitions of self-reliance (*If I had a problem, I would solve it myself,* and *I think I should work out my own problems,* p. 644). The authors did not report reliability or validity for the self-sufficiency items. The BACE measures the barriers that "delay, stop, or discourage [individuals] from seeking professional help" (Saleheddin et al., 2016, p. e688). Unique subscales assess stigma and non-stigma (attitudinal and instrumental) barriers. Self-reliance was included in the non-stigma barriers subscale with one item: *Wanting to solve the problem on my own,* p. 7). Test-retest

reliability and internal consistency were included for the stigma subscale but not for the non-stigma subscale. The RAND is a bank of barriers and facilitators of seeking help for mental health challenges amongst current and retired service members. A 15-item short-form and an extended 54-item bank feature two items related to self-reliance (e.g., *If I had mental health problems, getting mental health treatment would be a last resort* and *I would see myself as weak if I had mental health problems and could not fix them myself,* p. 71, 75). The authors reported the reliability of the full barrier item bank, which is not specific to self-reliance.

Mansfield and colleagues developed the BHSS[21] to measure the barriers men may experience when dealing with physical or mental health challenges. The authors noted that existing masculine gender role and norm measures assess stable individual preferences; however, with no within-person variability, the findings are limited. Therefore, when developing the BHSS, they designed items to assess how masculinity roles and norms would act as a barrier in context-specific situations, such as *I wouldn't want to look stupid for not knowing how to figure this problem out* (p. 100). Within the 31-item measure, 10 items make up the Need for Control and Self-Reliance factor (see Appendix A). Internal consistency for the original subscale was excellent ($\alpha = .93$).

Some service utilization scales focus on attitudinal barriers to seeking mental health services. A series of studies have adapted the Inventory of Attitudes Toward Seeking Mental Health Services (Mackenzie et al., 2004) to explore the determinants that may influence help-seeking in active-duty and retired soldiers (Britt et al., 2016; Jennings et al., 2015; Zinzow et al., 2015). Three items from this measure are related to self-reliance (Jennings et al., 2015).[22] Similar questionnaires have also been used to determine attitudes toward seeking informal support. Researchers from the Netherlands Study of Depression and Anxiety (NESDA; van Zoonen et al.,

2016)[23] used the Trust in Mental Health Care questionnaire (Friele et al., 2000), which features one item that measures self-reliance: *psychological problems are best kept to one's self* (p. 86).

Occupational and Organizational Self-Reliance Measures

Researchers have used two self-reliance inventories in the occupational and organizational psychology area. Quick and colleagues (1992)[24] created the Self-Reliance Inventory to explore the impact of attachment styles on work-related behaviours. Authors identified two main continua: counterdependence to self-reliance and self-reliance to overdependence. With these two continua in mind, 20-items assess for counterdependence (a rigid version of self-reliance, akin to *headstrong self-reliance*) and overdependence (akin to *other-reliance*). The principal component analysis identified three factors: counterdependence, overdependence, and a third factor, Autonomy at Work. Internal consistency for the three subscales was unacceptable: $\alpha =$ .69 for counterdependence, $\alpha = .58$ for overdependence, and $\alpha = .51$ for autonomous work behaviour (Quick et al., 1992). A two-week test-retest revealed excellent reliability for counterdependence ($r = .80$), and good reliability for overdependence ($r = .67$) and autonomous work behaviour ($r = .73$)

Joplin and colleagues (1999)[25] refined the Self-Reliance Inventory, creating the Self-Reliance Inventory-II to study the impact of interdependence (secure attachment, akin to adaptive self-reliance), counterdependence (avoidant, aligned with headstrong self-reliance), and overdependence (anxious-ambivalent, with similarities to other-reliance) on social support and physical/psychological health in management situations. Internal consistency for the three factors was better than the first iteration of the scale but remained fair: $\alpha = .70$ for counterdependence, $\alpha = .71$ for interdependence, and $\alpha = .72$ for overdependence (Joplin et al., 1999). In early studies, reliabilities ranged across varying participant roles (i.e., leader and group members) from

α = .53 to α = .65 for the overdependence factor to α = .84 for the counterdependence factor (with interdependence at α = .70 to α = .74; Daus & Joplin, 1999). In another study, Drach-Zahavy (2004) found reliability estimates for leaders' self-reliance to be fair to good, with α = .72, α = .78, and α = .82 for overdependence, interdependence, and counterdependence, respectively.

Summary

The lack of strong measurement has hindered research on self-reliance. Many studies characterize individuals as either self-reliant or not, often based on single items or subscales from broad measures that do not exclusively focus on self-reliance (McCreary et al., 2005). In the masculinities and mental health literature, self-reliance subscales have exhibited variable reliability (e.g., Mahalik et al., 2003), low factor loadings (e.g., Clement et al., 2012; Thompson & Pleck, 1986), limited validity evidence (e.g., RAND, 2018; Thompson & Pleck, 1986), and short test-retest timeframes (e.g., Mahalik et al., 2003). Despite being a central feature of hegemonic masculinity, the narrow and negatively framed conceptualization of self-reliance has made it difficult for researchers to compare scores across studies and over time. While scales developed by Quick and colleagues (1992) and Joplin and colleagues (1999) offer a multidimensional perspective, their focus on occupational and organizational contexts limits broader applicability.

Parris et al. (2017) framed self-reliance in terms of confidence, suggesting individuals seek support only when they feel incapable of managing on their own. While this perspective is appealing, it contradicts findings showing that those with rigid adherence to self-reliant attitudes often suffer the most (Choo & Marszalek, 2018) and engage the least in mental health management (Pescosolido et al., 2013). Research in masculinities and mental health service

utilization reinforces this distinction, indicating that self-reliance is often more about the expectation of handling problems independently than an actual belief in one's ability to do so (Phillips, 1965; Saleheddin & Mason, 2016).

The inconsistent definitions of self-reliance in mental health research have led to varied interpretations in research and clinical practice. Simple unidimensional conceptualizations of self-reliance fail to capture the complexity of self-reliance and its implications for mental health management. In the following section I make the case for a more nuanced understanding of self-reliance that includes three expressions of it: *headstrong*, *adaptive*, and *other-reliance*. The rigid, headstrong form associated with extreme focus on traditional masculinity can be detrimental, fostering isolation and a lack of help-seeking. In contrast, adaptive self-reliance represents a healthy, flexible balance between autonomy and support. Other-reliance highlights the risks of excessive dependence on external sources, potentially undermining autonomy. A revised tripartite conceptualization challenges the existing, overly simplistic view of self-reliance by redefining the different ways that individuals manage their mental health. A measure that captures these three expressions has the potential to provide a much-needed research and clinical assessment tool, supporting a deeper understanding of how individuals cope with their mental health challenges and what targeted options may be best received to support their well-being.

A New Conceptualization: Headstrong Self-Reliance

The primary view of self-reliance in the mental health literature is as a strongly held rigid negative expression, represented by the notion that individuals rely too much on themselves (Choo & Marszalek, 2018). Psychoanalyst Karen Horney focused on the development of this problematic and unhealthy version of reliance on the self in the 1930s, theorizing that childhood experiences shape individuals and their personalities (Badillo, n.d.). Horney's work traced back

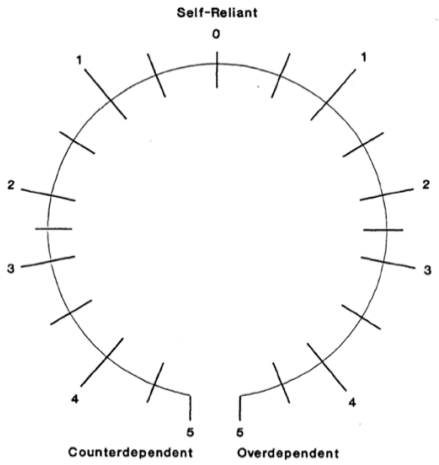
an unhealthy pattern of self-sufficiency as being founded on unmet needs from the parent-child relationship, particularly when parents were dominating, demeaning, unreliable, or unwilling to provide guidance or warmth (Coolidge et al., 2001). According to Horney, to manage this historical experience, individuals adopt a coping mechanism to withdraw or move away from people to protect themselves from future disappointment and abandonment (Badillo, n.d.; Horney, 1939). Horney noted that moving away from people in moderation can be an effective coping strategy as it allows for privacy, independence, and self-sufficiency (Badillo, n.d.). However, this can also represent a maladaptive or unproductive coping strategy if individuals compulsively place emotional distance between themselves and others (Horney, 1950).

Attachment Literature

Persistent instability from parental figures may also lead to an insecure attachment. One such attachment strategy is seen as dismissive and is defined by Quick and colleagues as *counterdependence* (1992; Figure 1). Individuals have an underlying belief that they can only rely on themselves because "no one will be available in situations of distress, thus leaving the individual as an island alone" (Joplin et al., 1999, p. 785). Using the counterdependence strategy, an individual will attempt to create a sense of security by denying the inclusion of others in difficult situations (i.e., by pushing people away, akin to Horney's moving away solution). Quick and colleagues (1992) observed that individuals who consistently engage in counterdependent behaviours are likely to disconnect from others and have few to no close relationships.

Figure 1

Two Continuum Model of Attachment Strategies



Note. Figure first appeared in Quick et al., 1991, p. 157.

Masculinities Literature

Self-reliance has been identified and studied within the masculinities literature within the Western world (e.g., Addis & Mahalik, 2003; Garcia et al., 2011; Levant & Richmond, 2007). Masculinity relates to the stereotypes and societal constructs that define the expected behaviours, attitudes, and thoughts of individuals identifying as male (Connell & Messerschmidt, 2005; Monaghan & Robertson, 2012). Hegemonic norms of masculinity define the dominant and 'ideal' version of masculinity within a society during a specific period (Connell & Messerschmidt, 2005). Such masculine norms include a "stoic endurance of suffering, self-reliance, and unwillingness to seek help" (Latalova et al., 2014, p. 1400). Other norms include traits of invulnerability, toughness, remaining emotionally controlled, heightened risk-taking, dominance, a prioritization of work, and the pursuit of status (Hammer & Good, 2010; Mahalik et al., 2003; Saga-Ouriaghli et al., 2019; Wong et al., 2017). Self-reliance has consistently been considered a primary aspect of hegemonic masculine norms (Addis & Mahalik, 2003; Mahalik et al., 2003; Wong et al., 2017).

Several cultural groups are known to have higher levels of extreme self-reliance, such as active and veteran service members (Jakupcak et al., 2014; Williamson et al., 2019) and those living in rural communities (DeGuzman et al., 2022; Fischer et al., 2016). While men are primarily assumed to abide by masculine norms, women may also subscribe to such standards, including a rigid adoption of self-reliance (Choo & Marszalek, 2018; Eschenwecker et al., 2025; Himmelstein & Sanchez, 2014; Levant & Richmond, 2007; Parent & Smiler, 2013; Snell, 1986; Worthley et al., 2017).

Within most Western societies, gender norms are introduced to children early, and exposure to hegemonic masculinities is pervasive. Ideals are reinforced within various environments throughout the lifespan (e.g., family life, school, sports, media, workplace). Despite this, individuals will vary in their incorporation of the dominant masculine ideals (Inckle, 2014; Mackenzie et al., 2017), impacting how they behave in certain situations. Related to the perception of managing mental health, within a highly masculine environment, children are taught that 'boys don't cry' and that asking for help is 'weak' and 'unmanly' (Inkle, 2014). Toughness and heterosexuality are often prioritized through various types of adolescent experiences, solidifying this stoic influence (Latalova et al., 2014). The impact of these experiences lasts far beyond adolescence, and Hammer and Good (2010) note the significant impact that cultural expectations can have on mental health. For instance, the cultural and societal expectation that men should deal with their problems independently can make men feel they must meet this expectation, even if they do not believe they can manage things alone.

Pleck and Levant (1995; 2011) examined mental health self-reliance relative to masculinities through the Gender Role Strain Paradigm. This theory provides a context to understand the intersectionality of gender norms and mental health management. Gender role

strain emerges when one does not follow the socialization process described by the prominent cultural view (i.e., the expectations and constraints on how one should act). Accessing mental health support includes several threatening tasks that oppose hegemonic male norms, including admitting a need for help, recognizing/labelling emotions, relying on others, and sacrificing power and control to medical professionals (Tannenbaum & Frank, 2011). Because of this, when individuals strongly align with hegemonic male norms, they are more likely to have an unfavourable internalized view of seeking help and believe they will experience reduced self-worth and self-esteem if they were to access support. This perspective of self-stigma of seeking help (Vogel et al., 2011) creates an additional barrier for those prescribing to rigid masculine norms to access help from others. In a study of men's healthcare utilization, Boman and Walker (2010) found that men with higher levels of self-reliance are more likely to point out and promote reasons not to seek help, which aligns with the paradigm's influence on help-seeking. Men who are higher in self-reliance are also more likely to report the belief that few male friends would access care for their mental health if needed (Conley, 2012). These beliefs contribute to a reduced willingness to seek support, especially if a man believes his mental health concerns are different from what his friends may experience (Addis & Mahalik, 2003; Ryan et al., 2005).

Despite the prominence of gender expressions, evidence suggests that those who conform strongly to certain masculine norms, including self-reliance, have lower levels of courage, grit, autonomy, self-esteem, life satisfaction, resilience, and personal control (Hammer & Good, 2010). Within the business literature, forced cooperation (Schultz et al., 2017) has supported these findings, as individuals high in self-reliance may feel more taxed when working with others. Such depletion leads to increased self-control failure, demonstrated by individuals acting dishonestly and quitting jobs prematurely (Schultz et al., 2017). While Schultz and colleagues

work draws on the self-regulation strength model (Baumeister et al., 1998), it is important to note that more recent meta-analyses of depletion studies have raised concerns about the replicability and generalizability of ego depletion effects (e.g., Carter et al., 2015; Hagger et al., 2016). In light of this understanding related to the principle of psychological effort, the idea that interpersonal engagement may be challenging for highly self-reliant individuals and the experience of relying solely on themselves or consulting with others may vary by context.

Mental Health Service Utilization

Researchers have long emphasized self-reliance as an attitudinal barrier due to its significant adverse impact on help-seeking (e.g., Clausen & Yarrow, 1955; Phillips, 1965). One of the most cited reasons for individuals indicating they did not seek mental health treatment when they perceived a need to do so is wanting to handle the problem on their own (Clement et al., 2012; Kessler et al., 2001; Matthews et al., 2013; Pérez-Zepeda et al., 2013; Van Beljouw et al., 2010; Wells et al., 1994; Wuthrich & Frei, 2015). Research has highlighted the link between rigid self-reliance and negative help-seeking attitudes, intentions, and behaviours (Eschenwecker et al., 2025; Ishikawa et al., 2022; Labouliere et al., 2015; Wilson et al., 2011), which aligns with broader stigma research (Stuart, 2006; 2016) , which demonstrates how stigma significantly influences individuals' likelihood of accessing services. Importantly, findings suggest that attitudinal barriers – including self-reliance – may be more impactful in delaying or deterring treatment needs than structural barriers, such as transportation and financial availability (Kovess-Masfety et al., 2007; Vanheusden et al., 2009). For instance, one study found individuals high in self-reliance to be half as likely to access mental health treatment as those lower in self-reliance (Ortega & Alegría, 2002).

Results also indicate that the level of self-reliance matters; as levels of rigid self-reliance increases, the inclination to access mental health treatment decreases, even when controlling for age, education, religion, source of blame for mental health problems, recognition of the problem, attitude towards illness improvement and previous experience with mental health problems (Phillips, 1965; Labouliere et al., 2015; Williamson et al., 2019). Perhaps even more impactful, highly self-reliant individuals are more likely to do nothing to attempt to alter their mental health problems, including not seeking help from informal and professional sources (Ishikawa et al., 2022) or accessing specialized care (Pescosolido et al., 2013).

Extreme levels of self-reliant attitudes may exacerbate an individual's vulnerability to stressors and limit participation in meaningful social interactions. This lack of engagement deprives the exposure to alternative perspectives and the opportunity to learn adaptive coping strategies through modelling or observation (Choo & Marszalek, 2018; Hammer & Good, 2010). When individuals segregate themselves from others during emotional times, they increase their feelings of isolation (Choo & Marszalek, 2018; Hughes, 2019; Rochlen et al., 2010; Ryan et al., 2005), leading to significant implications. Research shows that isolation influences the relationship between self-reliance and well-being in adolescents and young adults (Choo & Marszalek, 2018).

Though self-reliance occurs across the lifespan, researchers have identified higher levels of rigid headstrong self-reliant attitudes as particularly troublesome amongst adolescents and young adults. As a culturally embedded attribute for youth (Reindal, 1999; Schenk et al., 2018), self-reliance levels tend to increase as age increases across adolescence (Stark et al., 1989). Amongst this age-group, self-reliance has also been seen as a primary reason for not seeking help (Beukema et al., 2022; Plaistow et al., 2014), and a contributing factor to heightened risk and

rates of suicide (Choo & Marszalek, 2018; Curtis, 2010; Czyz et al., 2013; Freedenthal & Stiffman, 2007; Gulliver et al., 2010; Labouliere et al., 2015; Rickwood & Thomas, 2012; Salaheddin & Mason, 2016; Wilson et al., 2011). A recent study by Beukema and colleagues (2022) showed that adolescents might not have confidence in 'supportive others.' In this case, choosing to go it alone may be because they do not feel they can trust anyone around them.

At the opposite end of the lifespan, research has also focused on the impact of self-reliance on intentions to seek support, though results are mixed (see Hughes, 2019; Smiler, 2006; van Zoonen et al., 2016). Research by Eschenwecker and colleagues (2025) found that older adults' self-reliant attitudes had less of a negative effect on intentions to seek mental health treatment than that of younger adults. Furthermore, older adults with higher levels of self-reliance held more positive attitudes toward mental health help-seeking than younger adults (Pepin et al., 2015). These findings suggest that the negative impact of self-reliance on attitudes and intentions to seek mental health treatment may be most detrimental in adolescence and young adulthood.

High levels of rigid headstrong self-reliance appear to lead to negative well-being and adverse mental health outcomes. More specifically, these individuals are more likely to have poorer well-being (Choo & Marszalek, 2018; Ryan et al., 2005; Samuels & Pryce, 2008), lower life satisfaction (Hammer & Good, 2010), less social support (Burns & Mahalik, 2006; Smith, 2014), more emotional distress (Sareen et al., 2007), and greater levels of perceived social isolation (Choo & Marszalek, 2018; Hall et al., 2013). Clinically, individuals higher in rigid self-reliance are less likely to experience positive mental health (Wong et al., 2017) and are more likely to experience poorer mental health in the future (Burns & Mahalik, 2006; Wong et al., 2017), including subclinical depression (van Zoonen et al., 2015), severe anxiety, depression, and suicidal ideation (Choo & Marszalek, 2018; Hall et al., 2013; Labouliere et al., 2015), eating

disorders (Fabry et al., 2023) or to die by suicide (Genuchi, 2024; Han et al., 2018; Hom et al., 2015; Labouliere et al., 2015; Rickwood & Thomas, 2012). Inflexible self-reliance can negatively impact an individual's psychological well-being, which in some cases may contribute to a lifetime of suffering (Addis & Mahalik, 2003; Choo & Marszalek, 2018; Samuels & Pryce, 2008; Twohig & Furnham, 1998). Individuals high in rigid self-reliance are more likely to have limited positive coping skills and rely on maladaptive coping strategies (e.g., alcohol dependence, Williamson et al., 2019).

Defining Headstrong Self-Reliance

The attachment, masculinities, and mental health service utilization literature often discuss an extreme version of self-reliance as a negative, rigid, isolating attitude or trait, here conceptualized as *headstrong self-reliance*. *Headstrong self-reliance* reflects *an inflexible, willful, and unwavering persistence to manage mental health problems alone*. Those high in headstrong self-reliance are *likely to express a rigid form of independence and reliance on themselves while managing their mental health. They are unwilling to access informal or formal support because they consider asking for help a sign of weakness. Further, they view having support as a handing over of power and a loss of control and independence; therefore, they will struggle with mental health problems alone*. Individuals with higher levels of headstrong self-reliance are expected to hold negative attitudes towards seeking informal and formal mental health help, regardless of the symptoms they experience. Highly headstrong individuals may be likely to manage their mental health issues through minimization of their symptoms (e.g., controlling emotions, a stoic endurance of suffering). In summary, when struggling mentally or emotionally, those high in headstrong self-reliance will likely go down with the ship themselves rather than involve others.

Adaptive Self-Reliance

While much of the literature on attachment, masculinities, and mental health service utilization has focused on a negative and rigid expression of self-reliance, in other areas, people have viewed self-reliance as a strength that encourages independence as a rite of passage into adulthood. Philosopher Ralph Waldo Emerson (1841) identified self-reliance as an unwavering trust in oneself, whereby personal goals and independent pursuits are prioritized above societal pressure and prescribed roles. In the 1900s, people saw a self-reliant individual as a confident and autonomous person, relying on personal strengths to navigate challenges and rarely asking for support or assistance (Stott, 1938). This view resonated with individuals, and self-reliance became a desirable trait for parents to instill in their children as they moved from dependent and needy infants into young adults ready to "take [their] place in the world as an efficient and responsible adult" (Stott, 1938, p. 101). Youth were encouraged to demonstrate their ability to manage personal concerns, engage in resourceful problem-solving, and participate in social engagements while maintaining a solid sense of self beyond the collective identity of their peer group (Greenberger et al., 1975; Steinberg et al., 1989; Stott, 1938).

Attachment Literature

More recently, attachment theory provided a relationally focused understanding of healthy self-reliance, highlighting the importance of secure attachments, particularly between a child and their primary caregiver during early development (Ainsworth, 1989; Bowlby, 1982). The theory states that while children develop, they maintain two opposing drives: one to seek security and protection and the other to explore and venture into the world alone (Bowlby, 1982). Notably, when children leave their secure homes to interact with the world independently, they need to know that they can return home and reacquire safety. Providing children with the

opportunity to feel secure helps them assimilate self-reliance as part of their personality (Kobak & Shaver, 1987, as cited in Quick et al., 1992). Put differently, youth feel free to interact with and try things in the world alone as they are comforted by the knowledge that they have reliable others who will support them when asked. This view of self-reliance is seemingly "paradoxical because individuals who exhibit self-reliance appear to others as autonomous and independent. However, this appearance is made possible by the host of secure attachments which the self-reliant personality can draw on in time of need" (Quick et al., 1992, p. 42).

Research on attachment strategies (i.e., secure, ambivalent, avoidant) has highlighted there are different ways people develop a self-reliant attitude; healthy self-reliance can be developed through stable, secure interactions, while headstrong self-reliance can be influenced by insecurity and unpredictable interactions during infancy and childhood (e.g., Bifulco & Thomas, 2013; Bowlby, 1973; Mikulincer & Shaver, 2019). The work by Quick (1992) also highlights that healthy self-reliance involves individuals being able to act independently, while also possessing a willingness to pull in assistance or support when needed.

Positive Psychology/Positive Masculinity Framework

The positive psychology/positive masculinity framework (PPPM; Kiselica & Englar-Carlson, 2010) also highlights the willingness of individuals to pull in support in times of need. This framework recognizes self-reliance as a socialized experience where boys and men are encouraged to meet life challenges head-on (Levant & Richmond, 2007). Flexible self-reliance suggests that when coping with difficulties, men should access "advice and assistance of others to address life's challenges" (Englar-Carlson & Kiselica, 2013, p. 405). With a healthy dose of self-reliance, input from others is considered part of the problem-solving process; however, final decisions and actions ultimately remain that of the individual (Kiselica & Englar-Carlson, 2010).

Unlike in the more rigid versions of self-reliance, this view suggests that flexible self-reliance (*adaptive self-reliance*) is beneficial and consultation with others is supportive rather than shameful, insulting, or threatening.

Self-Determination Theory

Self-determination theory (SDT; Ryan & Deci, 2000) provides additional context concerning self-reliance versus reliance on others. Ryan et al. (2005) noted that autonomy and independence have been used interchangeably within the literature, muddying the ability to differentiate between these constructs. As defined within SDT, autonomy is related to the feeling that a behaviour or action is internally endorsed: "volition that can accompany any act whether dependent or independent" (Ryan & Deci, 2000, p. 74) as it includes "the experience of one's actions as self-endorsed" (Ryan et al., 2005, p. 146). Self-determination theory differentiates autonomy from independence, which instead "concerns self-reliance, the ability to care for oneself" (Ryan & Lynch, 1989, p. 340) or "not relying on others for support, help, or supplies" (Chirkov et al., 2003, p. 98). Relatedly, dependence is defined as "relying on another for resources or supports" (Ryan & Lynch, 1989, p. 340). SDT illuminates that some individuals may care for themselves alone (independence) while managing their mental health, while others choose to rely on others (dependence). Both experiences could be considered autonomous if the choice was based on the individual's willingness and personal belief. Importantly, the behaviours would not be considered autonomous if the individual is not open to the alternative- such as if the decision is driven by fear or defensiveness.

Emotional reliance is defined in self-determination theory as "the willingness to turn to others in emotionally salient situations" (Ryan et al., 2005, p. 145). The authors note that while they believe emotional reliance is a healthy trait, it can also be expressed in an extreme, negative

version, characterized by "a complex of thoughts, beliefs, feelings and behaviours revolving around needs to associate closely with valued other people" (Hirschfeld et al., 1977, p. 610). Autonomous individuals may rely on others for support in coping with their mental health. When exercised in moderation, the individual remains in control of their situation and next steps. In contrast, when taken to the extreme, individuals may become overly dependent on others to the extent that they have an unhealthy relationship. Therefore, self-reliance can present in different forms, including the pursuit of autonomy (*adaptive self-reliance*), excessive emotional dependence (*other-reliance*), and a rigid focus on independence (*headstrong self-reliance*).

Clinical Psychology and Psychopathology

Researchers (e.g., Kim et al., 2015) have shown that self-reliance may facilitate managing mental health and act as a protective factor when expressed adaptively and flexibly. Some self-reliant individuals seek support to improve their mental health symptoms when they first appear (Cheung et al., 2012), reducing the likelihood that they will meet the diagnostic criteria for a mental health disorder in the future (van Zoonen et al., 2016). A flexible, self-reliant approach has also been shown to motivate help-seeking due to a strong internal locus of control and a belief that things can change and improve (Schenk et al., 2018). Healthy self-reliance may also support healing from past adversity and adaptation following difficult life experiences (identified as survivalist self-reliance, Samuels & Pryce, 2008). Further, it may contribute to a sense of resilience that encourages recovery-orientated outcomes (Bhagwanjee & Stewart, 1999; Ortega & Alegría, 2002).

Defining Adaptive Self-Reliance

The attachment, positive psychology/positive masculinity framework, self-determination theory, and mental health management literatures clearly demonstrate that not all aspects of self-

reliance are negative. Many people navigate relying on themselves and others while maintaining a steadiness and belief that they can successfully manage the path forward. This flexible personal confidence depicts the proposed expression of *adaptive self-reliance*. Those high in adaptive self-reliance *are likely to manage their mental health autonomously, with a flexible reliance on self and others. Asking for support would be viewed not as a relinquishment of power and control but rather as an opportunity to embrace new possibilities and broaden the range of available options. Regardless of having help or advice from others, individuals maintain responsibility for the decision-making process.*

Those high in adaptive self-reliance are more likely to maintain a willing persistence, with a resilient ability to do what is needed to manage their mental health. These individuals would likely be able to recognize their personal limitations in managing their mental health challenges and choose to pull in resources or support. They will be more open to the involvement of others to benefit their mental health, such as asking a friend for advice or accessing formal treatment. These individuals would likely advocate for their mental health needs and would feel comfortable in their ability to find and engage in new types of support. When accessing support, they will likely aim to maintain responsibility for decisions, such as choosing to incorporate informal suggestions into their life or providing input into the agenda during therapy. While individuals high in adaptive self-reliance may seek the support of others to address mental health challenges, they retain autonomy and direct the course of their decisions and actions.

Other-Reliance

While much of the psychological literature has conceptualized self-reliance in a rigid and negative way (*headstrong self-reliance)* or in an adaptive and healthy way (*adaptive self-reliance*), a third conceptualization of a rigid low reliance on the self has also been suggested. In

addition to proposing that some individuals move away from people following an unfulfilling parent-child relationship, Horney (1950) noted that some individuals will be more likely to excessively rely on others. In this scenario, individuals may move towards people and depend strongly on others, with limited self-assertion or belief in their personal abilities. In the attachment literature, an anxious attachment strategy has been identified (Bowlby, 1982), which Quick (1992) classified as overdependence (Figure 1), where individuals attempt to feel secure by depending too heavily on others. An individual engaging in overdependent behaviours "seeks out and relies upon more supports than are necessary or appropriate for the situation" (Joplin et al., 1999; p. 785) to guarantee that someone will be there to offer support and guidance when needed. By engaging an extensive network of others, the individual relinquishes personal responsibility, autonomy, and control to let this group manage decisions and take over the situation (Quick et al., 1992).

While this pattern can reflect underlying difficulties in self-efficacy or emotional regulation, a desire to connect with others may also emerge from relational learning with strong reinforcement for help-seeking, deference, and connection. Individuals may come to rely on others because this has been historically effective- yielding protection, responsiveness, or relief from distress (Bornstein, 2005). In environments where cultural connectedness is emphasized (Triandis et al., 1986, 1988), turning to others can be a highly functional and prosocial strategy. In this way, other-reliance may reflect a learned strategy for navigating uncertainty successfully within a supportive relationship. Over time, however, this reliance may become overgeneralized, so seeking support is habitual or obligatory, even in situations where personal coping is possible.

Psychosocial Determinants of Mental Health

Psychosocial factors, such as childhood trauma or family dynamics are another potential influence towards an overdependence on others (Bowlby, 1982). As children are developing their internal attachment model of who supports them and when, a traumatic experience can lead to uncertainty and a heightened fear of abandonment or excessive reliance on others (Lyons-Ruth et al., 2006; Shaver & Mikulincer, 2002). Such reliance causes a dependence on external resources for emotion regulation and a deficit in independent adaptive coping strategies (e.g., self-soothing). These features contribute to a dysregulated emotion system (Van der Kolk, 2014).

Children raised by extremely protective parents, including those who shield their children from decision-making or move challenges out of the way (colloquially referred to as helicopter parenting and bulldozer/snow-plow parenting), may experience a deficit in personal coping skills (Schiffrin et al., 2014; Segrin et al., 2013; Spokas & Heimberg, 2009). Those who are raised in autonomy-reduced environments (e.g., permissive parenting) may also have a lack of autonomy (Ryan & Deci, 2000). Additionally, enmeshed family dynamics, where personal boundaries are blurred and independence is discouraged, can lead to dependence in children and low self-efficacy (Barber & Buehler, 1996).

Clinical Psychology and Psychopathology

Anxious attachment is not the only presentation in which individuals may see themselves as incapable to support themselves. Individuals with dependent personality disorder (DPD) express a similar pervasive and excessive need to rely on others for their emotional management and for decision-making (Bornstein, 2011a). As proposed in Bornstein's Dependency Model (1992), individuals with high dependency on others are socialized to seek approval and support from others, which reinforces the feeling of helplessness and diminishes one's personal feeling of resilience.

Individuals with very low levels of self-reliance who rely too heavily on others may also experience adverse effects on their well-being and self-image. These other-reliant individuals may have low self-confidence (Hirschfield et al., 1977) and perceive themselves as helpless (McClintock et al., 2017). Individuals very low in terms of self-reliance are also likely to have trouble managing their emotional experiences and may struggle to regulate their emotions independently (Wei et al., 2005). With limited personal coping strategies, individuals with dependent traits are likely to have limited experience with adaptive coping (e.g., self-soothing, independent problem-solving), which can exacerbate mental health challenges (Horowitz et al., 1997; MacBeth et al., 2014). Due to having minimal trust in oneself and their abilities, individuals may have a heavy reliance on social network members (Pescosolido et al., 2011, 2013) or mental health professional (Geurtzen et al., 2018).

Defining Other-Reliance

While those high in headstrong self-reliance present an unhealthy high version of self-reliance, there is also a related, inflexible unhealthy low view of self-reliance proposed as *other-reliance*. Those high in *other-reliance* would be likely to *rely too intensely on others to make decisions related to managing their mental health. These individuals may have limited belief in their personal coping and require others to step in and make decisions for them. They take a backseat in their own experience, emphasizing what others may think over their own needs or preferences. They are likely to have significant difficulty committing to something without consulting others*. An individual high in other-reliance would have an inflexible approach to managing mental health, with options and plans decided upon and directed by others. They would also have limited initiation and drive to put resources and support into practice

themselves. Individuals may jump from strategy to strategy depending on who is willing to support them at any given time or attempt to balance suggestions to avoid letting others down.

Other-reliance may reflect an attempt to maintain psychological safety, social connection, or emotional regulation, especially when these strategies have been reinforced in the past. Concern and risk emerge when this strategy becomes automatic and rigid, potentially undermining one's development of personal agency and self-directed coping (Bornstein, 2011b).

Summary

A lack of theoretical clarity, inconsistent definitions, and inadequate measurement tools currently impact the conceptualization and measurement of self-reliance. Existing research often frames self-reliance as a rigid, negative trait, failing to acknowledge its more adaptive forms. There has been little consideration that self-reliance may manifest not as a singular trait but as distinct expressions, each representing a different way of approaching autonomy and support-seeking. Further, existing tools used to measure self-reliance are brief, unidimensional, and of questionable reliability and validity, adding to the conceptual confusion and limited comparability across studies.

In response to these gaps, this dissertation presents a novel, multidimensional conceptualization of self-reliance as an attitude that is shaped by historical experiences and enacted through distinct expressions, rather than as a continuum that individuals move along or simultaneously possess. This perspective provides a more precise understanding of how self-reliance influences mental health. Specifically, this work introduces the Mental Health Self-Reliance Scale (MHSRS), designed to capture three unique expressions of self-reliance:

(1) **Headstrong self-reliance:** An inflexible determination to manage mental health problems alone, marked by emotional control, avoidance of help-seeking, perceived stigma and the belief that seeking help signals weakness.

(2) **Adaptive self-reliance:** A relational approach to managing mental health that includes a flexible, non-rigid reliance on oneself marked by autonomy, competence, openness to support and effective coping.

(3) **Other-reliance:** An overdependence on others for support, guidance, and direction in managing mental health problems, marked by low autonomy and limited confidence in one's ability to cope alone.

By distinguishing three unique expressions of self-reliance, rather than degrees of a singular trait, this framework offers greater conceptual clarity and practical applicability. This distinction has significant implications for mental health research and intervention, as it moves beyond the oversimplified view of self-reliance to a model that recognizes how individuals enact self-reliance in response to their circumstances. With a validated measurement tool that differentiates between these self-reliant expressions, this work lays the foundation for future research to explore how separate self-reliance attitudes influence mental health outcomes and can be used to inform targeted strategies to support mental health.

Chapter 2: Assembling the Initial Item Pool (Step 2)

The second step in the scale development process focused on generating a pool of potential items for the scale and deciding on an appropriate response format. The development of potential items was informed by the multidimensional conceptualization of self-reliance outlined in Chapter 1, drawn from the literature and existing definitions and scales used to measure self-reliance (see Appendix A). I wanted the MHSRS to effectively capture the diverse ways individuals manage their mental health, and broad items were created to represent the flexibility in mental health management experiences (e.g., consultation of self-help resources, informal supports, and formal treatment options). To make the scale accessible to the general population, items were written at the elementary reading level.

I assembled a writing team, which consisted of faculty members and graduate students in clinical psychology (Dr. Corey Mackenzie, Dallas Murphy, Li-elle Rapaport, Lily Pankratz, Melissa Krook, and Nicole Del Rosario). The writing team met to review instructions for writing good items. The group created items asynchronously, so I provided them with construct definitions (below) and instructions that focused on suggestions for best practices in item development. I asked each contributor to develop multiple items per construct, using clear, concise statements written in plain language that would be accessible at a 12-year-old reading level. Items were to be framed as declarative statements (not questions) and designed for use on a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Item writers were instructed to write positively keyed items and to avoid ambiguity, qualifiers (e.g., always, usually), jargon, value-laden wording, double-barreled phrasing, and negative constructions (e.g., not, never, or un-), which are associated with lower validity (Holden et al., 1985).

Construct Definitions Provided to the Item Writing Team

Headstrong Self-Reliance (HSR)

Those high in HSR manage mental health challenges with a rigid and unhealthy reliance on themselves. They are not easily thwarted by obstacles and maintain an inflexible and willful persistence to go it alone. They are generally unwilling to access informal or formal supports because they view asking for help as a sign of weakness or failure. They fear losing independence and control and are concerned about 'handing over power' to others. Emotional toughness is valued, and individuals high in HSR are likely to struggle alone and maintain the belief they need to 'go down with the ship' instead of engaging others when they are struggling.

Adaptive Self-Reliance (ASR)

Those high in ASR manage mental health challenges on their own with a flexible and healthy reliance on self and others. Individuals are not easily thwarted by obstacles and are persistent, resilient, and flexible in overcoming them. Asking for advice and support is seen as a sign of strength, and they are willing to accept help when they struggle or sense a limitation in their own coping abilities. These individuals are confident in their ability to find and engage resources and supports. Individuals high in ASR 'steer the ship' and maintain responsibility and decision-making even when others are involved.

Other-Reliance (OR)

Those high in OR manage mental health challenges with a rigid and unhealthy reliance on others. They are easily thwarted and not persistent in overcoming obstacles. They have limited confidence in their own coping abilities and thus depend on others to step in and provide advice and direction. They readily agree with others, are easily persuaded by them, and have difficulty making decisions without them. They may jump from strategy to strategy as they desperately search for solutions and receive different advice from informal and formal sources of support.

They act with others in mind, trying to avoid disappointing or upsetting them. They see these others as "steering the ship" during challenging times.

Item Refinement Process

Once team members completed their items, they submitted them to an online drive for review. A total of 49 items were created for adaptive self-reliance, 47 items were created for headstrong self-reliance, and 47 items were created for other-reliance. From there, I created a master document that collected all items and categorized them across each hypothesized factor to ensure all aspects of the construct definition were included. For adaptive self-reliance, I focused on four main themes: asks for advice and support/willing to accept help from others; persistent, resilient, able to overcome obstacles; confident in ability to find and engage resources and support; and maintain responsibility and decision making even when supported. The four themes I focused on for headstrong self-reliance were: rigid, unhealthy reliance on self, willful persistence/struggle alone; unwilling to access formal/informal supports, asking for help as a sign of weakness; fear losing independence, do not want to hand over power; and emotional toughness valued. For other-reliance, the main four themes were: rigid unhealthy reliance on others, support/guidance from others; not persistent, jumping to different strategies; limited confidence in own coping; and worry disappointing others. Finally, I pulled items from previously published scales, to consider including these in the initial item pool.

Next, a subset of this team (myself, Dallas Murphy, and Dr. Mackenzie) discussed and scrutinized each item for language and inclusion in the item pool. We brought forward and discussed several potential concerns, including the relationship between each hypothesized factor (i.e., is self-reliance really a continuum with headstrong self-reliance and other-reliance on each end), the inclusion of the word confidence and what that means for managing mental health

challenges, and being clear on the differentiation from other constructs (i.e., stigma). We flagged items that were similar or redundant, and those that appeared to be too specific or used advanced language. I also reviewed items on a text scoring website (https://app.readable.com/text/) to assess items for readability grade levels, readability scores, and text density issues. We refined items and debated our preferences over several meetings.

Finally, the item pool was presented to committee members (Drs. Katherine Starzyk, Dan Bailis, and Don Stewart) for feedback on content validity (Rosellini & Brown, 2021). Once all feedback was collected and accounted for, I was left with 48 items in the initial item pool (17 headstrong self-reliant items, 15 adaptive self-reliant items, and 16 other-reliant items; Table 1).

Table 1

Initial Item Pool

Item
HSR_ 1- I don't ask for help
HSR_ 2- I rely on myself no matter what
HSR_ 3- I handle the problem on my own
HSR_ 4- I find a way to manage it alone
HSR_ 5- I stay away from advice from others
HSR_ 6- I refuse assistance from others
HSR_ 7- I reject offers of help
HSR_ 8- I do not take advice from anyone
HSR_ 9- I do not involve others
HSR_ 10- I feel better knowing I don't need help
HSR_ 11- I avoid talking about my problems
HSR_ 12- I would feel weak if I asked for help
HSR_ 13- I hate depending on others
HSR_ 14- I avoid asking for help at all costs
HSR_ 15- I prefer to hide how I'm feeling
HSR_ 16- I hide problems from my family and friends
HSR_17- Asking for help is a sign of weakness
ASR_ 1- I manage with the support of others
ASR_ 2- I don't need to go it alone
ASR_ 3- I ask for help if I cannot solve it on my own
ASR_ 4- I balance relying on myself and others
ASR_ 5- I recognize when I can no longer manage things myself
ASR_ 6- I am confident in my ability to get support

Item
ASR_ 7- I have people to call on if I need help
ASR_ 8- I handle challenges myself and with assistance
ASR_ 9- I accept help if I need it
ASR_ 10- I welcome help, but I am ultimately in control
ASR_ 11- I ask for advice if I need to
ASR_ 12- I admit when I reach my limits
ASR_ 13- I feel comfortable asking for what I need
ASR_ 14- I balance solving problems myself and with supportive others
ASR_ 15- I am not afraid to ask for help if I need it
OR_ 1- I follow the advice of others
OR_ 2- I let others decide what I should do
OR_ 3- I am quick to agree with other people
OR_ 4- I cope by depending on others
OR_ 5- I let others make decisions for me
OR_ 6- I lack the ability to deal with it myself
OR_ 7- I would rather involve others
OR_ 8- I place too much confidence in others
OR_ 9- I cannot rely on myself
OR_ 10- I rely too much on others to guide me
OR_ 11- I cannot make decisions on my own
OR_ 12- I need others to tell me what I should do
OR_ 13- I feel desperate to get help from others
OR_ 14- The first thing I do is ask for help
OR_ 15- My family and friends will know what to do
OR_ 16- I seek help from anyone who can provide advice

Note. Scale items are grouped into three expressions of self-reliance; HSR represents *headstrong self-reliance* items, ASR represents *adaptive self-reliance* items, and OR represents *other-reliance* item.

Regarding the item response scale, best practices suggest that the rating scale should offer enough options for discrimination between categories but not too many to overwhelm respondents (Krebs & Hoffmeyer-Zlotnik, 2010). For the MHSRS, I chose a 5-point scale, allowing the opportunity to demonstrate various levels of agreement. Researchers (i.e., Johnson & Morgan, 2016; Krosnick & Presser, 2009) advocate for using labels to increase clarity among response options. Clear and precise labels were used to reduce confusion regarding what each

point on the scale could be (i.e., *1- strongly disagree*, *2- disagree*, *3- neither disagree nor agree*, *4- agree*, and *5- strongly agree*).

Chapter 3: Item Selection, Item Refinement and Exploratory Factor Analysis (Step 3)

The purpose of Step 3 was for item selection, refinement, and exploratory factor analysis. Administering the item pool in Study 1 provided an opportunity to (a) reveal any challenges with the administration of the scale based on respondent feedback or observation of the scale delivery, and (b) to explore the factor structure of the initial item pool. As previously stated, many existing self-reliance measures are either too specific (i.e., only negative self-reliance) or broad (i.e., focusing on all aspects of masculinity) and are limited in terms of reliability and validity. When considering the development of this scale, it was essential to include all three expressions of self-reliance and create a measure that would be broad and simple to use for researchers and clinicians to administer to the general population. Building on the tripartite conceptualization from Step 1 of the scale development process, I hypothesized that the scale would reveal three distinct factors: *headstrong self-reliance (HSR), adaptive self-reliance (ASR)* and *other-reliance (OR)*.

Method

Procedure

It was important that the study sample be representative of the target group the scale was designed for (Furr, 2011; 2020). As previously outlined, I wanted the MHSRS to be broad in terms of mental health management scope, and available to the general adult population. For this reason, I selected a commonly used recruitment source with a sizable recruitment pool: Amazon Mechanical Turk (MTurk; Amazon Company, 2024).

On MTurk, Requesters create a task which includes a task description with keywords, qualification requirements (eligibility criteria), rate of pay, and the deadline to complete the task. MTurkers (workers) who meet the eligibility criteria can view the task and choose to participate.

After completing the task, MTurkers receive a randomly generated code, which they input in their MTurk account to confirm task completion and to request payment. This method of contact allowed for participant anonymity, which I believed would reduce the likelihood of response bias.

I reviewed the literature on the effectiveness of data collection using crowdsourcing platforms and found that MTurk offers an efficient collection timeline with a large pool of potential workers and higher-quality responses than general online samples (Casler et al., 2013; Hauswer & Schwarz, 2016; Weinberg et al., 2014). However, some concerns were noted, such as a rapid increase in the number of MTurk workers (with musings of people trying to get rich on the platform by having multiple accounts or using artificial intelligence), and concerns regarding data quality, such as non-compliant responding and participant misrepresentation (e.g., Barends & de Vries, 2019; Buhrmester et al., 2018; Chmielewski & Kucker, 2020; Dennis et al., 2019; Hauswer & Schwarz, 2016; MacInnis et al., 2020). Researchers have also noted that in some cases, they have high attrition rates and perceived high rates of inattention when using MTurk (Aguinis et al., 2020; Barends & de Vries, 2019; Sprouse, 2011; Zhou & Fishbach, 2016).

Many researchers have suggested ways to improve response quality to manage these concerns. I opted to collect a larger sample of participants so I could review and remove low quality responses and still have enough participants to run the desired analyses. I also incorporated integrity checks, asking participants to disclose their level of honesty and attention when responding to the survey. I reviewed the participant engagement time captured by Qualtrics to identify participants who were speeding or multi-tasking (i.e., with a long completion time; Dennis et al., 2019). Participants were compensated fairly for their participation (on par with minimum wage) to incentivize more engagement and attention while completing the task

(Buhrmester et al., 2018). Finally, I set MTurk eligibility to only include 'best' MTurkers, including Master Workers, a subset of workers who have been identified for superior performance through high approval rates, total earnings, tenure, and diversity across work types over thousands of tasks (Amazon Web Services, 2025). General recruitment criteria included participants were over 18, fluent in English, and living in Canada.

Once the University of Manitoba Human Research Ethics Board provided research approval, I set up Amazon Mechanical Turk (MTurk; Amazon Company, 2024) to recruit participants (see Appendix B for the recruitment information). Individuals interested in the study provided informed consent (Appendix C). Participants completed a questionnaire, which included sociodemographic questions, questions about current and past mental health symptoms and treatment usage, and the MHSRS item pool (Appendix D features the questionnaire package, Appendix E includes the MHSRS initial item pool). I used Qualtrics Research Core (Qualtrics, 2021) for data collection, which offered some important features related to data collection including capturing the IP address, approximate location of the participant, premature closure of the study, and the time to completion.

Initial recruitment proved slower than expected, leading me to reconsider the eligibility criteria. I reviewed MTurk workers country of residence and found that most workers are in the USA (approximately 90% in 2023). The country with the second largest population was India (approximately 10%; MTurk Tracker, 2023), meaning that a very small percentage of workers lived outside those two countries. It was clear that recruiting from Canada was a limitation due to the small potential pool size. As such, I changed the study eligibility to include individuals living in the United States of America.

As the survey was completed online, I was not able to observe the participants filling out the survey. I received minimal feedback from participants; only two participants emailed me to provide justification for inconsistent responding across scale items, and the situations in which they may or may not want support.

Participants

Many suggestions exist in the psychometric literature related to the number of participants to recruit during scale development (Bryant & Yarnold, 1995; Clark & Watson, 2019; Comrey & Lee, 1992; MacCallum et al., 1999; Floyd & Widaman, 1995; MacCallum et al., 1999; Osborne, 2014; Osborne & Costello, 2004; Pett et al., 2003; Worthington & Whittaker, 2006). I noted the lack of a clear consensus; for example, Clark and Watson (2019) suggested 300 participants, while Bryant and Yarnold (1995) recommended a respondent-to-item ratio of 10:1. I anticipated that some responses may need to be excluded, estimating that 15-30% might be removed based on recommendations from previous MTurk research (Sprouse, 2011). Thus, it was essential to ensure a robust sample so that the remaining participants were sufficient to complete the desired tests. Therefore, I decided to adopt the 10:1 item rule (as this was larger than 300 participants) and chose to add 30% to account for the possibility of poor MTurk data. I aimed to recruit 624 participants. This would increase my likelihood of obtaining stable factor loadings, replicable factors, and reduced measurement errors, as well as enhance the potential for generalizability to the broader population (MacCallum et al., 1999; Osborne & Costello, 2004).

As responses were coming in, I realized I had made an error in the set up. As I had created small batches to trial out the survey, it allowed the same MTurk workers to legitimately complete the survey more than one time. I paid participants for each trial they completed, but only chose to retain the first response and delete subsequent responses from the same participant.

Because I caught this error early, I chose to extend recruitment to make up for the duplicate responses. A total of 781 participants completed the survey. Each response was screened separately and reviewed for a) ballot stuffing (i.e., one individual intentionally completing the same questionnaire several times), b) incomplete responses, c) variable responding (i.e., identical responses across all items in a scale, such as selecting *4- strongly agree* for each item in the MHSRS) or d) fake responding (i.e., responding to the item *Please state any mental health diagnosis(es) you have received* with an answer of *good*). When participants responded *not at all* or *slightly* to the integrity question *to what extent will you be honest and careful in answering the questions in this survey*? they were removed from the dataset. Participants were also removed for completing the survey too quickly or for taking too long. 521 participants remained after data cleaning. Table 2 outlines the criteria for participant exclusion and the number of participants removed for each reason.

Table 2

Study 1: Participants Excluded from Analyses

Rationale for exclusion	*n* deleted	% total sample	*n* participants remaining
Duplicate participants[a]	90	11.5%	691
Partial completion	31	3.97%	660
Variable responding[b]	19	2.43%	641
Fake responding[c]	69	8.83%	572
Failed integrity check[d]	33	4.23%	539
Speeding (< 3 minutes)	17	2.18%	522
Excessive time spent (> 1hour)	1	0.13%	521

Note. $N = 781$. Average completion time of survey was 8 minutes, 42 seconds. [a] Due to an error in the initial MTurk setup, some participants were able to complete the questionnaire multiple times. This error was identified by detecting duplicate MTurk worker IDs within the dataset. To maintain data integrity, only the first recorded response for each participant was retained. [b] Variable responding represented a participant selecting the same response across all items in an

entire scale (e.g., selecting *2- slightly disagree* for all items, including reverse scored items). [c] Fake responding referred to inaccurate statements (e.g., typing *good* for a mental health diagnosis), which was interpreted as a lack of attention. [d] Participants failed the integrity check by selecting that they would not respond in an honest way.

Measures

Sociodemographic Information. Participants reported their age, gender, province or state, highest level of education, occupational status, household income, marital status, and ethnic group.

Mental Health History. One item developed for this study measured mental health history. Participants summarized their mental health history by selecting from five options: *I've had fairly serious emotional problems most of my life; I've struggled emotionally most of my life, although there have been times when I've felt happy; I've had about an equal number of difficult times and times when I've been happy; I've been happy most of my life, although there are times when I've struggled emotionally;* and *I've felt happy and had good mental health for most of my life*.

Mental Health Concerns and Diagnoses. Participants responded to two open-ended items related to their current mental state and mental health history: *Please state any mental health concern(s) you currently are experiencing* and *Please state any mental health diagnosis(es) you have received*.

Perceived Need. Perceived need for mental health services was measured using an item from the National Comorbidity Survey Replication study (Kessler et al., 2004). Participants responded to the item, *Was there ever a time during the past 12 months when you felt that you*

might need to see a professional because of problems with your emotions or nerves? with response options *yes, no,* or *don't know*.

Mental Health Service Use. Mental health service use was measured using a modified item from the National Comorbidity Survey Replication study (Kessler et al., 2004). Participants responded *yes, no,* or *don't know* to the question, *Did you ever in your lifetime go to see any of the professionals on this list for problems with your emotions, nerves, or your use of alcohol or drugs?* For each professional that participants endorsed seeing (i.e., psychiatrist, general practitioner, nurse), a follow-up question appeared, which asked when they had last seen that professional (i.e., *within the last year, 2-5 years,* or *over 5 years ago*). Participants were able to select as many relevant professionals as needed.

Current Symptomatology. Participants completed the 6-item Kessler Distress Scale to measure their current levels of distress (K6; Kessler et al., 2003). The K6 is a self-report scale where participants rate their feelings of distress over the past 30 days on a 5-point rating scale. Response options range from *0- none of the time* to *4- all of the time*. Scale scores can range from 0-24, with higher scores indicating greater levels of distress. Cut scores of ≥ 5 have been suggested to signal moderate mental distress (Prochaska et al., 2012) and ≥ 13 to indicate severe psychological distress (Kessler et al., 2003). Previous research has shown the K6 to have good internal consistency (α = .89; Kessler et al., 2003); excellent reliability was found in the Study 1 sample (α = .92).

MHSRS Item Pool. Participants responded to items about how they typically respond when struggling emotionally, using the 48-items in the item pool. The following prompt preceded the items: *We are interested to hear how individuals respond when they are struggling emotionally. This questionnaire asks you to consider how you generally respond in these types of*

circumstances. If you feel you have responded differently throughout your life, think of the most recent experience where you were struggling emotionally. For each item, consider When I am struggling emotionally, then indicate your level of agreement. (5-point scale: from 1= strongly disagree to 5= strongly agree).

Statistical Analyses

In the preliminary data analysis phase, it was critical to ensure the data were suitable for factor analysis. To assess the variables' factorability, I reviewed missing data, frequency distributions, central tendency measures, the Shapiro-Wilk Test and covariances, and consulted the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy, Bartlett's Test of Sphericity, and inter-item correlations. I examined the distribution of item-level responses using the Shapiro-Wilk test for normality, which is often used for smaller sample sizes ($n < 2000$; Ghasemi & Zahediasl, 2012). Results were considered in conjunction with skewness values and kurtosis values. A high KMO (ideally 0.80 or above) and significant results from Bartlett's test would confirm that the relationships between items were adequate for factor analysis (Beavers et al., 2013). Related to inter-item correlations, desired correlations were between .30 and .90, which indicates a strong relationship that is not redundant.

Factor Extraction

I chose to investigate the latent structure of the MHSRS item pool with exploratory factor analysis (EFA) and review the internal consistency for further scale refinement (McCoach et al., 2013). Although I hypothesized three distinct self-reliance factors, using the EFA helped to ensure there was openness to uncover the actual underlying factor structure if it was different than hypothesized (Fabrigar & Wegener, 2014). I selected maximum likelihood (ML) as the factor extraction method, as it is appropriate for data that follows a normal distribution and scales

with five or more response categories (Cudeck, 2000; Rosellini & Brown, 2021). Furthermore, ML "permits calculation of model fit indices as well as computation of standard errors, confidence intervals, and significance tests for model parameters" (Fabrigar & Wegener, 2014, p. 507), which are critical to ensure the accuracy and reliability of the proposed model.

Factors Retained for Rotation

Historically, the scree plot- a visual plotting of eigenvalues where the elbow point on the slope of the graph flattens - was used to indicate the number of factors to retain (Rosellini et al., 2021). The Kaiser-Guttman rule, which recommends retaining factors with an eigenvalue greater than 1.0, was also frequently used (Flora & Flake, 2017). Researchers have criticized both methods for inaccurately estimating the appropriate number of factors to retain (e.g., Raiche et al., 2013). More recent recommendations have suggested parallel analysis (PA; Horn, 1965) as a more suitable method (Finch, 2020). In PA, a Monte Carlo Simulation indicates the number of factors to retain; it "involves calculating the eigenvalues that would be expected from a set of random data with the same number of measured variables and same sample size as the real data set" (Fabrigar & Wegener, 2014, p. 507). Eigenvalues from the real data are compared to the simulated data eigenvalues to classify a factor as significant (and therefore to be retained) if the eigenvalue from the observed data is larger than that of the parallel eigenvalue from the simulated data (Ledesma & Mora, 2007). Although PA is generally more reliable than other methods, some studies have shown that it can overestimate the number of factors to retain (Glorfeld, 1995). Therefore, best practices involve reviewing the suggested factor solution for interpretability and theoretical clarity and retaining factor solutions with ± one factor to determine the best solution (Lim & Jahng, 2019; O'Connor, 2000).

Model Fit

The χ^2 statistic is frequently reported as an indicator of model fit (Rosellini & Brown, 2021) with a non-significant value typically indicating a good model fit. However, the χ^2 test is known to be highly sensitivity to sample size (Jackson et al., 2009), so that even well-fitting models often yield statistically significant results when sample sizes are large (e.g., >200; Kenny, 2015). This may misrepresent model adequacy. To address this issue, Hu and Bentler (1999) advocate for using a two-index strategy to supplement the χ^2 statistic. As such, other fit indices were also considered, including the root mean square residual (RMSR), root mean square error of approximation (RMSEA), and the Tucker-Lewis Index (TLI) of factoring reliability. Although suggested cut-off values for these indices vary across the literature, I relied on best practice reviews to select the following parameters: an RMSR value of 0.08 or below (Boateng et al., 2018; Rosellini & Brown, 2021; Russell, 2002), an RMSEA value at or below 0.06 (Hu & Bentler, 1999; Rosellini & Brown, 2021), and a TLI value of 0.95 or above (Hu & Bentler, 1999; Rosellini & Brown, 2021) to indicate good model fit

Model Rotation

Given that it is common in social sciences for constructs to be correlated (DeVellis, 2012; McCrosky & Young, 1979), an oblique (non-orthogonal) rotation was selected (Chandler, 2014; Rosellini & Brown, 2021).

Model Selection

To determine the optimal factor structure of the MHSRS, I independently analyzed each factor structure. I focused specifically on the primary factor loadings of each item, using a threshold of above .50 (preferably ≥ .70) to indicate that an item loaded onto a factor. I also examined cross-loadings, flagging any secondary loading of .20 or above as sizeable and undesirable. Afterward, I compared the factor solutions from each suggested model to determine

how well each factor was aligned with the hypothesized structure and whether the factor structure made sense conceptually.

Results

Participant sociodemographic information, mental health history, lifetime mental health diagnoses, lifetime provider use and perceived need for mental health services from the past 12 months, as well as current mental health concerns and level of distress are outlined in Table 3.

Table 3

Study 1: Participant Sociodemographic Information

Variable	*n*	%
Gender Identity		
Male	288	55.3
Female	228	43.8
Agender	1	0.2
Genderqueer	1	0.2
Non-binary	1	0.2
Education		
Some high school	3	0.6
High school or equivalent	68	13.1
Some college, no diploma	57	10.9
College diploma or trade/technical/vocational training	40	7.7
Some university, no degree	28	5.4
Some university, currently attending	8	1.5
Bachelor's degree	243	46.6
Master's degree	70	13.4
Doctorate degree	4	0.8
Occupation		
Full-time employment	392	75.2
Full time employment, part-time employment/student	3	0.6
Part-time employment	71	13.6
Part-time employment, student	2	0.4
Retired	15	2.9
Student	1	0.2
Unemployed/on disability	37	7.1
Income		
$0 - $4,999	9	1.7
$5,000 - $9,999	16	3.1
$10,000 - $14,999	14	2.7
$15,000 - $19,999	16	3.1

Variable	*n*	%
$20,000 - $24,999	35	6.7
$25,000 - $34,999	61	11.7
$35,000 - $49,999	107	20.5
$50,000 - $74,999	122	23.4
$75,000 - $99,999	76	14.6
$100,000 - $149,999	45	8.6
$150,000 - $199,999	13	2.5
$200,000 - $249,999	6	1.2
$250,000+	0	0
Marital Status		
Single	206	39.5
Dating	39	7.5
Married or Common-law	241	46.3
Widowed	27	1.3
Separated or Divorced	28	5.4
Ethnicity		
Arab	1	0.2
Black	43	8.2
Chinese	17	3.3
Filipino	4	0.8
Indigenous (First Nations, Métis, Inuit)	2	0.4
Japanese	7	1.3
Jewish	5	1.0
Korean	4	0.8
Latin America	18	3.4
South Asian	7	1.3
Southeast Asian	2	0.4
White	405	77.6
Other	7	1.3
Mental Health History		
Fairly serious problems most of life	37	7.1
Struggled most of life, sometimes happy	130	24.9
About equal number of difficult and happy times	106	20.3
Happy most of life, sometimes struggled	163	31.2
Happy and good mental health most of life	85	16.6
Current Mental Health Concerns **some participants endorsed several concerns*		
No concerns	163	31.3
Anxiety-related concerns[a]	106	20.3
Mood-related concerns[b]	86	16.5
Stress[c]	23	4.4
COVID-related concern[d]	17	3.3
Other mental health concern[e]	27	5.2
Anxiety and mood related concerns	94	18
Trauma-related concerns	5	1.0
Mental Health Diagnoses **some participants endorsed several diagnoses*		

Variable	*n*	%
No diagnosis	282	54.1
Depression (PDD, MDD, minor, dysthymia)	156	29.9
Bipolar, hypomania	15	2.9
Anxiety (GAD, not specified)	132	25.3
Social Anxiety	14	2.7
OCD	12	2.3
Panic and Agoraphobia	8	1.5
PTSD, CPTSD and Adjustment	21	4.0
Addiction (Alcohol, substance, sex)	8	1.5
ADHD/ADD	8	1.5
Schizoaffective, paranoia	3	0.6
ASD, Aspergers	5	1.0
Eating Disorder (bulimia, anorexia)	2	0.4
Personality Disorder	3	0.6
ODD	1	0.2
Perceived Need for Mental Health Services in Past 12 Months		
Don't Know	17	3.3
No	256	49.1
Yes	248	47.6
Current level of distress (K6)		
Limited Distress (0-4)	216	41.5
Moderate Distress (5-12)	179	34.3
Severe Distress (13-24)	126	24.2

Lifetime Provider Use for Mental Health Needs

			Last seen (*n*)			
Provider type	*n*	%	Never	>12 mos	2-5 yrs	5+ yrs
Psychiatrist	183	35.1	338	70	52	61
General practitioner	256	49.1	265	158	65	33
Any other medical doctor	77	14.8	444	44	24	9
Psychologist	182	34.9	339	36	67	79
Social worker	101	19.4	420	43	25	34
Counsellor	186	35.7	335	50	48	88
Other mental health	91	17.5	430	42	20	29
Nurse, Occupational therapist, other	87	16.7	434	42	31	14
Religious/spiritual advisor	68	13.1	453	30	15	23

Note. Participants were, on average, 40.56 years of age (*SD* = 10.55, range 21-74). Resident state not included here. Minimal missing data in gender, income, ethnicity, mental health history.

[a]Anxiety-related concerns included generalized anxiety disorder, social anxiety, obsessive-compulsive disorder, panic, and phobias. [b]Mood-related concerns included depression, bipolar and seasonal depressive concerns. [c] Stress-related concerns included income, work-related,

health-related and caregiver stress. [d]COVID-related concerns were related to the government, concern over the world, separation from family, and sadness/hopelessness/loneliness related to COVID. [e]Other mental health concerns included concentration, addiction, schizophrenia, autism, ADHD, adjustment concerns, grief, sleep issues, emotional control, and paranoia.

Preliminary Analyses

SPSS Statistics software (IBM, v. 27) facilitated preliminary data analyses, including a review of missing data, frequency distribution analyses, measures of central tendency and Shapiro-Wilk Test (Appendix E) and covariances (Appendix F). I also evaluated the data's suitability for factor analysis. Results of the Shapiro-Wilk test indicated statistically significant non-normality across all 47 items in the initial item pool ($p < .001$), however the skewness values were less than 2.0 and kurtosis values were less than 7.0, which are within acceptable ranges for ML estimation in factor analysis (Field, 2009).

The Kaiser-Meyer-Olkin (KMO) Measuring of Sampling Adequacy yielded a KMO value of 0.96, and Bartlett's Test of Sphericity yielded a value of $\chi^2 (1128) = 20, 332.78, p < .001$, indicating strong suitability for factor analysis (Carpenter, 2018). I also consulted the correlation matrix to evaluate relationships between items. All inter-items correlations for the adaptive self-reliance (ASR) and headstrong self-reliance (HSR) items fell between the > .30 and <. 90 threshold. Regarding the other-reliance items (OR), six of the inter-item correlations did not meet the > .30 criteria (ranging from .15 to .29). Further analysis revealed that at least one of two items were involved in all six of the lower correlations. Cronbach's alpha was consulted to determine the effect of these items if deleted. Despite contributing to the lower correlations, there was minimal improvement in scale reliability if removed, and thus, all items were retained for the main analyses.

Main Analyses

Factor Extraction. Results from the Shapiro-Wilk test indicated deviations from a normal distribution, however, skewness and kurtosis values suggested that the data was reasonably normal. With skewness values of less than 2.0, and kurtosis values of less than 7.0, maximum likelihood estimation was still considered an acceptable factor extraction method to use (West et al., 1995; Kline, 2015).

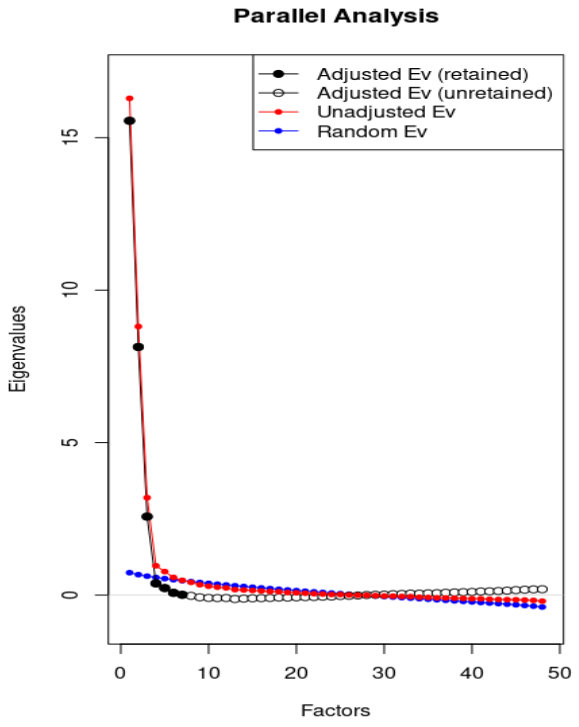
Factors Retained for Rotation. I used Revelle's *psych* package (2021, version 2.1.3) for R Software for all remaining analyses in Study 1. Following best practice recommendations for EFA, I reviewed the parallel analysis (PA), the scree plot and the Kaiser-Guttman rule for evidence of the number of factors to retain. A 90th percentile criterion for eigenvalues in the PA was selected (Ledesma & Mora, 2007), which has been suggested to mitigate the tendency to retain too many factors (Hayton et al., 2004). Results from the PA supported the retention of three factors (Table 4), as the fourth factor's eigenvalue fell below the corresponding simulated eigenvalue. The PA output and plot shown in Figure 2 (displaying both the observed and simulated data) indicated a marked drop in eigenvalues between factors 3 and 4. The scree plot also demonstrated a significant drop-off between factors 3 and 4. The Kaiser-Guttman rule had an upper limit of three factors. In line with best practices (Ledsma & Mora, 2007), I retained the 2-, 3-, and 4-factor solutions for further examination, despite all three decision rules- PA, scree plot, and Kaiser-Guttman rule- indicating a 3-factor solution as the best fit (and thus matching the hypothesized factor structure of the MHSRS). This satisfies the recommendation to explore solutions with ±1 factor of the PA result.

Table 4
Parallel Analysis for Factor Retention

Factor	Adjusted Eigenvalue	Unadjusted Eigenvalue	Estimated Bias
1	15.55	16.29	0.74
2	8.14	8.81	0.67
3	2.57	3.20	0.62
4	0.38	0.96	0.58

Note. Using Horn's parallel analysis, adjusted eigenvalue represents a vector for the estimated eigenvalues that is adjusted for a defined (finite) sample size, while unadjusted eigenvalue represents a vector for observed data eigenvalues from an unrotated principal component analysis. The estimated bias represents the difference between the adjusted and unadjusted eigenvalues.

Figure 2
Study 1: Parallel Analysis Plot



Note. Ev = Eigenvalue. Random Ev represent a matrix of random values with the same *p* variables and *n* samples as observed data. Eigenvalues from data that are greater than the random eigenvalues are retained.

Model Fit. Table 5 compares the fit statistics for 2-, 3- and 4- factor models. The 2-factor model demonstrated the poorest fit across goodness-of-fit indices, including a higher residual value and lower Tucker-Lewis Index. In comparison, both the 3- and 4-factor models demonstrate substantially better fit, with lower RMSEA values, lower root mean square of the residuals, and improved TLI values. Although the 4-factor model had slightly better fit statistics, the 3-factor solution aligned more closely with the hypothesized factor structure of the MHSRS, and thus was retained for further analysis.

Table 5

Factor Model Fit

m	Root Mean Square of the Residuals	Root Mean Square Error of Approximation- Lower Bound		Tucker Lewis Index	Goodness of Fit		
	Point Estimate	Point Estimate	90% CI	Point Estimate	χ^2	*df*	*p*
2	.07	.09	[.09, .09]	.74	5538.09	1033	<.001
3	.03	.07	[.06, .07]	.86	3262.81	987	<.001
4	.03	.06	[.06, .06]	.89	2668.14	942	<.001

Note. *m* refers to number of factors. CI refers to confidence intervals.

Model Rotation. Although the optimal number of factors to retain according to the PA was 3, the model fit indices suggested that the 3- and 4-factor models had the best fits. I applied the oblique rotation to all three solutions. The simple structure criterion was used to group items into factors, aiming to simplify and clarify the latent structure of the MHSRS. Items with a large primary factor loading were grouped (.50; Costello & Osborne; 2005, although ≥ .70 was preferred). I then reviewed items for cross-loadings (a secondary factor loading greater than .20) to ensure a clear differentiation between factors. I also considered each model solution for conceptual clarity, item factor loadings (Table 6), and model fit (Fabrigar & Wegener, 2014).

Model Selection. In the 2-factor model, the first factor (F1) consisted of items from the headstrong and adaptive self-reliance expressions, where headstrong items loaded positively, and adaptive items loaded negatively on the factor. Items from the other-reliance expression comprised the second factor (F2). However, half of the 16 other-reliance items that loaded onto F2 had sizable cross-loadings to F1 (i.e., five of the 16 other-reliance items had cross-loading greater than .30, and three items had cross-loadings between .20- .30). Similarly, when looking at the adaptive and headstrong related items from F1, two had a cross-loading to F2 greater than .30, and ten items had cross-loadings between .20- .30. Given that 20 of the 47 items had a sizable cross-loading and these items were deemed central to the construct, I determined the 2-factor model lacked conceptual clarity.

The 4-factor model also had considerable cross-loadings. The first factor (F1) primarily consisted of items from the adaptive self-reliance expression (15 items). However, three adaptive items that loaded onto F1 had sizable cross-loadings (greater than .20) to F2, F3, or F4. The second factor (F2) was primarily comprised of other-reliant items. However, seven of those 16 other-reliance items had sizable cross-loadings to F1, F3, or F4, with three items greater than > .30 and four items between .20- .30. The third factor (F3) primarily consisted of headstrong self-reliant items, although seven of the 17 headstrong items had a sizable cross-loading to F1, F2, or F4, with five items greater than .30 and an additional two items with cross-loadings between .20- .30. The fourth factor (F4) had only five items that had a loading > .30, however, all of these items had a sizeable cross-loading to F3 (greater than .30). These headstrong items were primarily focused on involving others (e.g., *I refuse assistance from others*), as opposed to other headstrong items that were more self-focused (e.g., *I avoid talking about my problems*). As

all four factors had items with sizable cross-loadings to other factors, I determined the four-factor model was not the best fitting model.

The 3-factor model was conceptually straightforward and had minimal item cross-loadings to secondary factors. The first factor (F1) was made up of 17 headstrong items, and only one had a cross-loading greater than .30 and two items had cross-loadings between .20- .30. The second factor (F2) was made up by 15 adaptive items and did not have any cross-loadings above .20. The third factor (F3) was made up of 16 other-reliant items, four items had cross-loadings greater than .30 and three items between .20- .30. When examining the item language, all items aligned with the hypothesized primary factors as hypothesized. I selected the three-factor model because each factor was unique (with minimal cross-loadings), and the model was conceptually clear.

Table 6

Study 1: Factor Loadings

Item	Two Factor Solution		Three Factor Solution			Four Factor Solution			
	F1	F2	F1	F2	F3	F1	F2	F3	F4
HSR_14- I avoid asking for help at all costs	**.80**	.16	**.78**	-.09	.09	-.13	.09	**.64**	*.22*
HSR_11- I avoid talking about my problems	**.75**	.07	**.76**	-.06	-.01	-.08	.05	**.76**	.02
HSR_4- I find a way to manage it alone	**.62**	-.07	**.76**	.09	-.18	.06	-.13	**.75**	.03
HSR_3- I handle the problem on my own	**.58**	-.18	**.76**	.14	**-.30**	.11	*-.25*	**.76**	.02
HSR_15- I prefer to hide how I'm feeling	**.74**	.13	**.75**	-.06	.06	-.07	.13	**.80**	-.04
HSR_9- I do not involve others	**.77**	-.05	**.74**	-.11	-.12	-13	-.10	**.65**	.14
HSR_2- I rely on myself no matter what	**.59**	-.06	**.74**	.10	-.17	.07	-.13	**.68**	.09
HSR_16- I hide problems from my family and friends	**.76**	.13	**.74**	-.08	.06	-.10	.13	**.78**	-.03

Item	Two Factor Solution		Three Factor Solution			Four Factor Solution			
	F1	F2	F1	F2	F3	F1	F2	F3	F4
HSR_5- I stay away from advice from others	**.73**	*.28*	**.73**	-.06	*.21*	-.08	.13	**.42**	**.50**
HSR_1- I don't ask for help	**.80**	.00	**.72**	-.16	-.06	-.19	-.03	**.65**	.11
HSR_6- I refuse assistance from others	**.76**	*.25*	**.71**	-.11	.19	-.14	.12	**.41**	**.49**
HSR_8- I do not take advice from anyone	**.70**	*.23*	**.71**	-.18	.16	.08	.04	**.33**	**.62**
HSR_13- I hate depending on others	**.63**	-.05	**.71**	.03	.14	.00	-.06	**.78**	-.09
HSR_10- I feel better knowing I don't need help	**.49**	.10	**.69**	.18	-.02	.15	.01	**.62**	.11
HSR_12- I would feel weak if I asked for help	**.67**	*.22*	**.68**	-.04	.15	-.07	.15	**.56**	.18
HSR_17- Asking for help is a sign of weakness	**.65**	**.31**	**.68**	-.02	*.24*	-.05	*.20*	**.46**	**.33**
HSR_7- I reject offers of help	**.77**	*.21*	**.66**	-.05	.17	*-.20*	.08	**.35**	**.50**
ASR_6- I am confident in my ability to get support	**-.61**	.05	.07	**.81**	-.13	**.81**	-.18	-.05	.18
ASR_11- I ask for advice if I need to	**-.68**	.13	-.05	**.77**	-.01	**.77**	.00	-.01	.08
ASR_8- I handle challenges myself and with assistance	**-.63**	*.20*	.01	**.77**	.04	**.76**	.06	.04	-.06
ASR_9- I accept help if I need it	**-.71**	.14	-.10	**.75**	.00	**.75**	.05	.02	*-.20*
ASR_3- I ask for help if I cannot solve it on my own	**-.66**	.13	-.04	**.75**	-.01	**.75**	.01	.01	-.09
ASR_4- I balance relying on myself and others	**-.65**	*.25*	-.03	**.74**	.10	**.74**	.11	-.02	-.05
ASR_14- I balance solving problems myself and with supportive others	**-.67**	*.21*	-.07	**.73**	.07	**.73**	.07	-.07	-.02
ASR_7- I have people to call on if I need help	**-.57**	.07	.04	**.73**	-.08	**.72**	-.09	.00	.04
ASR_10- I welcome help, but I am ultimately in control	**-.55**	.05	.06	**.72**	-.10	**.72**	-.05	.16	-.17
ASR_15- I am not afraid to ask for help if I need it	**-.67**	*.20*	-.08	**.71**	.07	**.71**	.03	-.16	.10
ASR_13- I feel comfortable asking for what I need	**-.66**	*.24*	-.09	**.71**	.11	**.71**	.03	*-.26*	*.26*
ASR_5- I recognize when I can no longer manage things myself	**-.57**	.10	.02	**.70**	-.04	**.70**	-.02	.06	.07

Item	Two Factor Solution		Three Factor Solution			Four Factor Solution			
	F1	F2	F1	F2	F3	F1	F2	F3	F4
ASR_1- I manage with the support of others	**-.66**	**.31**	-.11	**.69**	.19	**.68**	*.21*	-.07	-.08
ASR_12- I admit when I reach my limits	**-.64**	.12	-.09	**.67**	.00	**.67**	.00	-.07	-.04
ASR_2- I don't need to go it alone	**-.60**	.15	-.05	**.66**	.03	**.66**	.03	-.05	-.02
OR_12- I need others to tell me what I should do	.00	**.85**	-.01	.01	**.86**	.01	**.86**	-.03	.01
OR_5- I let others make decisions for me	.03	**.83**	-.02	-.02	**.85**	-.02	**.85**	-.03	.00
OR_10- I rely too much on others to guide me	.07	**.82**	.04	-.01	**.83**	-.01	**.82**	.01	.03
OR_2- I let others decide what I should do	.01	**.84**	.05	.08	**.82**	.07	**.83**	.04	.00
OR_11- I cannot make decisions on my own	*.23*	**.76**	.04	*-.21*	**.81**	*-.21*	**.79**	-.04	.11
OR_4- I cope by depending on others	-.17	**.77**	-.08	.14	**.76**	.14	**.74**	-.12	.04
OR_6- I lack the ability to deal with it myself	*.25*	**.70**	.04	*.23*	**.75**	*-.24*	**.76**	.04	-.01
OR_8- I place too much confidence in others	.09	**.77**	.18	.12	**.73**	.10	**.74**	.16	.02
OR_13- I feel desperate to get help from others	.02	**.73**	.03	.03	**.73**	.02	**.74**	.04	-.03
OR_9- I cannot rely on myself	*.22*	**.70**	.08	-.15	**.73**	-.15	**.75**	.10	-.05
OR_3- I am quick to agree with other people	-.02	**.73**	.04	.09	**.71**	.09	**.71**	.03	.00
OR_14- The first thing I do is ask for help	**-.33**	**.66**	-.11	**.30**	**.62**	*.29*	**.55**	*-.27*	*.23*
OR_7- I would rather involve others	**-.36**	**.65**	-.18	*.25*	**.62**	*.25*	**.60**	*-.23*	.05
OR_16- I seek help from anyone who can provide advice	**-.34**	**.61**	-.10	**.31**	**.56**	**.31**	**.55**	-.12	.01
OR_1- I follow the advice of others	**-.43**	**.55**	-.13	**.39**	**.49**	**.39**	**.55**	.00	*-.22*
OR_15- My family and friends will know what to do	**-.38**	**.48**	-.03	**.43**	**.40**	**.42**	**.40**	-.06	.01

Note. Items are sorted based on their primary factor loadings in the 3-factor solution. Loadings are not re-ordered for the 2- or 4- factor models to maintain consistency across solutions. Factor

loadings > .30 are denoted in bold. Cross-loadings .20 – .30 are denoted in italics. F = Factor. OR represents other-reliant items. ASR represents adaptive self-reliant items. HSR represents headstrong self-reliant items.

Factor intercorrelations for the 3-factor model with 48-items are presented in Table 7. Adaptive self-reliance was negatively correlated with headstrong self-reliance (r = -.58) and had a small positive correlation with other-reliance (r = .20). Other-reliance had a negligible negative correlation with headstrong self-reliance (r = -.01).

Table 7
Study 1: Factor Intercorrelations

Factor	1	2	3
1- Adaptive	-	.20	-.58
2- Other-reliance		-	-.01
3- Headstrong			-

Item Refinement and Selection. After I selected the 3-factor model, I compiled a comprehensive item evaluation table (see Appendix G) to consider items for inclusion in the final scale. Although some initial items were similar in wording, this was intentional to allow empirical testing of item performance within the construct themes. In addition to looking at factor loadings and cross-loadings, I used several criteria to assess items and identify potential issues, including item mean, variance, Cronbach's alpha-if-deleted, squared multiple correlation (SMC), communalities (h^2), and item complexity. Items were flagged based on recommended thresholds. For item mean, items with values significantly deviating from the scale midpoint were noted as potentially problematic. In terms of item variance, items with a variance of less than 0.50 were flagged as potentially problematic. Regarding changes in Cronbach's alpha if an item was deleted, items that resulted in an increase of 0.02 or more were identified as potentially problematic. For squared multiple correlations (SMC) and communalities (h^2), items with SMC

or h^2 below 0.70 were flagged as potentially problematic (Beavers et al., 2013). Regarding item complexity, items with a value over 1.50 were identified as potentially problematic (Furr, 2011).

Finally, all flagged items were reviewed in relation to the original construct definitions, with careful consideration given to item wording and conceptual diversity (to ensure items captured the unique features of each self-reliance expression). I reviewed the number and nature of the flagged concerns per item, weighing statistical concerns against conceptual representation, and prioritized retaining items with less critical concerns that aligned to the underlying factor, with careful attention to nuances in item wording. This analysis allowed me to identify items that were suitable for inclusion in the final scale, as well as items that should be excluded due to poor fit or redundancy.

To promote utility, the MHSRS needed to be short and easy to use for research and clinical purposes. Based on item review, consideration of subscale scores and brevity, I selected six items per subscale to ensure all meaningful aspects of the construct were covered, resulting in an 18-item version of the MHSRS. Since each factor represents a distinct expression of self-reliance, a total score for the scale is irrelevant. Instead, each subscale has a total, with higher scores indicated a higher level of that expression of self-reliance.

Scale Modifications. I recalculated the model fit with the 18-item version of the MHSRS (see Appendix H). Then, I reviewed the shortened scale for inter-item correlations, subscale reliability, and key fit indices, including the Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA). Ideally, results for the CFI and TLI would be near or above 0.95, and RMSEA at or below 0.06 (Rosellini & Brown, 2021).

The initial 18-item scale demonstrated an acceptable but not excellent fit, CFI = 0.92, TLI = 0.91, and RMSEA = 0.08. I examined modification indices from both statistical and

theoretical perspectives to improve model fit. I identified items that negatively impacted model fit and removed these iteratively, starting with the most impactful. After each removal, I recalculated model fit indices. Despite testing several 18-item models with added correlated residuals (e.g., HSR_11 with HSR_15, ASR_6 with ASR_7), only modest improvements were observed in CFI, TFI and RMSEA values. Appendix I summarizes the key covariance relationships that were explored to improve model fit during this iterative process.

Since the 18-item models did not meet the desired model fit thresholds, I shifted refinement strategies and opted to remove the poorest performing item from each factor, resulting in a 15-item scale. I trialed this with two different models, however it only resulted in a slight improvement to the model fit. Subsequently, I removed the two weakest items per factor, and saw an increase in model fit. I trialed several iterations of a 12-item model, ultimately determining Model 13 (see Appendix H) to be the strongest option from both a statistical and theoretical perspective. This model version demonstrated strong fit indices: CFI = 0.96, TLI = 0.94, and RMSEA = 0.07, with a 90% CI of [0.06, 0.08]. Subscale reliabilities were also good (α = .84 for headstrong self-reliance) and excellent (α = .84 for adaptive self-reliance; α = .90 for other-reliance). A review of factor intercorrelations for this shortened scale showed that adaptive self-reliance was negatively correlated with headstrong self-reliance (r = -.55), while other-reliance showed a small positive correlation with adaptive (r = .19) and negligible negative correlation with headstrong self-reliance (r = -.12). Items *I cannot make decisions on my own* (OR_11), *I feel desperate to get help from others* (OR_13), *I recognize when I can no longer manage things myself* (ASR_5), *I have people to call on if I need help* (ASR_7), *I do not take advice from anyone* (HSR_8), *I prefer to hide how I'm feeling* (HSR_15) were removed.

Table 8

MHSRS 12-Item Scale

Items
OR_ 4- I cope by depending on others
OR_ 5- I let others make decisions for me
OR_ 10- I rely too much on others to guide me
OR_ 12- I need others to tell me what I should do
ASR_ 4- I balance relying on myself and others
ASR_ 6- I am confident in my ability to get support
ASR_ 8- I handle problems myself and with help
ASR_ 11- I ask for advice if I need to
HSR_ 2- I rely on myself no matter what
HSR_ 4- I find a way to manage it alone
HSR_ 11- I avoid talking about my problems
HSR_ 14- I avoid asking for help at all costs

Note. OR represents other-reliant items. ASR represents adaptive self-reliant items. HSR represents headstrong self-reliant items. Instructions that appeared for participants were: *We are interested to hear how individuals respond when they are struggling emotionally. This questionnaire asks you to consider how you generally respond in these types of circumstances. If you feel you have responded differently throughout your life, think of the most recent experience where you were struggling emotionally. For each item, consider 'When I am struggling emotionally,' then indicate your level of agreement on a 5-point scale:* from *1= strongly disagree to 5= strongly agree*.

Discussion

The goal of Study 1 was to develop and conduct a preliminary review of a brief self-report measure of mental health self-reliance. To expand beyond the negative and highly rigid conceptualization of self-reliance primarily identified in the masculinity and mental health service utilization literatures, I incorporated research from several bodies of literature. Research focusing on the attachment, masculinities, mental health service utilization, positive psychology/positive masculinities, self-determination theory, clinical psychology and

psychopathology, psychosocial determinants of mental health, and occupational and organizational psychology supplement the current understanding of self-reliance regarding managing mental health. Three unique expressions of self-reliance were defined: (a) *headstrong self-reliance*, an unhealthy rigid insistence on managing problems alone; (b) *adaptive self-reliance*, a healthy, flexible reliance on oneself and others; and (c) *other-reliance*, an over-dependence on others.

I followed best practices in scale development and a three-factor model emerged from the preliminary exploratory factor analysis, representing three unique self-reliance expressions. I conducted a thorough review of items from the initial item pool, focusing on model fit, modification indices and construct domains as I tested multiple 18-item and 15-item models. This process ultimately led to a refined 12-item scale with improved model fit.

The exploratory factor analysis supported the distinction between headstrong self-reliance, adaptive self-reliance, and other-reliance, confirming that the data are best represented by three factors rather than one factor with low versus high self-reliance on a single continuum. These findings challenge the current conceptualization of self-reliance by offering a novel measure that captures three unique expressions of this construct. With a well-defined conceptual framework and a brief scale demonstrating good factor structure and psychometric properties, the goal of Study 2 was to confirm the factor structure and assess the reliability and validity of the MHSRS.

Chapter 4: Psychometric Analysis- Confirmatory Factor Analysis and Validity (Step 4)

Experts in psychometric science emphasize the importance of thoroughly understanding the body of literature that a scale intended to measure, as this foundational knowledge is critical for establishing scale reliability and validity (American Educational Research Association, 2014; Boateng et al., 2018; Cicchetti, 1994; Clark & Watson, 2019; DeVellis, 2012; Furr & Bacharach, 2013; Johnson & Morgan, 2016; Krosnick & Presser, 2009; Mellenbergh, 2011; Peterson, 2000; Rosellini & Brown, 2021; Worthington & Whittaker, 2006). The primary objective of Study 2 was to build on the findings from Study 1 by confirming the factor structure of the Mental Health Self-Reliance Scale (MHSRS). Given that exploratory factor analysis (EFA) identified three factors – headstrong self-reliance, adaptive self-reliance, and other-reliance – confirmatory factor analysis (CFA) was expected to support the same structure. Study 2 was also designed to establish concurrent validity for each subscale. To assess this, correlations between the MHSRS subscales and previously validated measures were examined (Table 9 presents the hypothesized convergent and discriminant relationships).

Table 9

Predicted Relationships Between MHSRS Subscales and Validity Measures

Construct being measured (*scale)*	Relationship to HSR	Relationship to ASR	Relationship to OR
Rigid approach to mental health management			
Rigid self-reliance (*CMNI-SR*)	+	-	-
Emotional control (*CMNI-EC*)	+	-	-
Barriers to help-seeking (*BMHSS-HS*)	+	-	-
Stigma of help-seeking (*BMHSS-S*)	+	-	
Personal strategies for mental health management			
Positive attitude toward mental health services (*IASMHS*)	-	+	
Use of active coping (*COPE-AC*)		+	
Interpersonal support and dependence			
Seeking emotional support (*COPE-ESS*)	-	+	+
Seeking instrumental support (*COPE-ISS*)	-	+	+

Construct being measured (*scale)*	Relationship to HSR	Relationship to ASR	Relationship to OR
Functional dependence on others (*IDI-FD*)	-		+
Emotional dependence on others (*IDI-ED*)	-		+
Psychological well-being and self-efficacy			
Autonomy when managing challenging events (*CPN-A*)	+	+	-
Competence when managing challenging events (*CPN-C*)		+	-
Social connectedness and isolation			
Relatedness when managing events (*CPN-R*)	-	+	+
Feelings of loneliness (*Loneliness Scale*)	+	-	+
Current Symptomatology			
Level of distress (K6)	+	-	+

Note. Light grey boxes with plus signs indicate a hypothesized convergent relationship. Dark grey boxes with minus signs indicate a hypothesized discriminant relationship. White boxes indicate no expected relationship. See measures section for information about scales used to measure each construct referred to in brackets. CMNI-SR = Conformity to Masculine Norms Inventory- Self-Reliance subscale. CMNI-EC = Conformity to Masculine Norms Inventory-Emotional Control subscale. BMHSS-HS = Barriers to Mental Health Services Scale-R- Help-Seeking subscale. BMHSS-S = Barriers to Mental Health Services Scale-R- Stigma subscale. IASMHS = Inventory of Attitudes toward Seeking Mental Health Services. COPE-AC = Coping Orientation to Problems Experienced- Active Coping subscale. COPE-ESS = Coping Orientation to Problems Experienced- Emotional Support subscale. COPE-ISS = Coping Orientation to Problems Experienced- Instrumental Support subscale. IDI-FD = Interpersonal Dependency Inventory- Functional Dependence subscale. IDI-ED = Interpersonal Dependency Inventory-Emotional Dependence subscale. CPN-A = Candidate Psychological Needs- Autonomy subscale. CPN-C = Candidate Psychological Needs- Competence subscale. CPN-R = Candidate Psychological Needs- Relatedness subscale.

Hypothesized Correlations

Headstrong Self-Reliance Subscale Hypothesized Correlations

Individuals with higher levels of headstrong self-reliance were expected to strongly adhere to traditional masculine norms and view accessing formal and informal support negatively. Beyond their preference for relying on themselves, these individuals were also expected to identify barriers to help-seeking and hold a stigmatized view of needing support. Rather than actively seeking out ways to manage their mental health, these individuals were expected to use emotional control as a coping strategy. Ultimately, individuals with higher levels of headstrong self-reliance were expected to have fewer fulfilling relationships and feel lonely, even when surrounded by others.

Adaptive Self-Reliance Subscale Hypothesized Correlations

Individuals with higher levels of adaptive self-reliance were expected to possess greater levels of autonomy and a willingness to seek support from others. They were not expected to adopt a rigid approach to self-reliance (e.g., adhering to masculine norms, needing to control emotions, identifying barriers, or perceiving stigma when seeking services). Instead, these individuals were expected to approach accessing services positively and feel competent in using active coping strategies to manage their mental health. Social relationships were expected to be significant to them, as well as a feeling of being connected to others.

Other-Reliance Subscale Hypothesized Correlations

Individuals with higher levels of other-reliance were hypothesized to desire substantial support and rely excessively on others. While they were expected to seek connection with others, they were also expected to be more likely to perceive these relationships as less fulfilling. These individuals were also expected to have lower levels of autonomy and competence regarding their mental health management and are less likely to rely on themselves or use rigid coping, such as

emotional control. In contrast to those with higher headstrong self-reliance, individuals with higher other-reliance were expected to accept more support and not perceive barriers to help-seeking.

Method

Procedure

Data were collected online in July 2022 by Leger Opinion, a Canadian panel company managing sample recruitment and payment. Community members earn points for completing surveys which are redeemable for gift cards, reward miles or e-transfer payments (Leger Marketing Inc., 2022). Members active in Leger's panels are also eligible to enter monthly prizes to encourage an engaged community with higher levels of participation. I selected this platform to provide a new but similar pool to Amazon MTurk (as used in Study 1). Unlike with MTurk, where I had to manage and directly interact with workers (i.e., review participant numbers and provide compensation), Leger took care of all aspects of the recruitment and participant interaction. I was able to provide recruitment targets for Leger. I requested a similar age range and gender split to Study 1.

The University of Manitoba Human Research Ethics Board approved this research study. Leger invited eligible members from their database to participate, sending the recruitment script (Appendix J) and a link to the study if they opted to participate. Individuals interested in the study provided informed consent (Appendix K). Participants completed a questionnaire that included the same sociodemographic questionnaire used in Study 1, with a few substitutions; participants were now asked about their community size and no longer asked about their current mental health concerns and past diagnoses (Appendix L). Participants also completed the 12-

item MHSRS (Appendix M), and eight other measures described in the measures section. All data were collected using Qualtrics Research Core (Qualtrics, 2021).

Participants

Eligibility for Study 2 was the same as Study 1; participants needed to be 18 or older, fluent in English, and living in the United States of America. As Leger is a platform comparable to Amazon MTurk, I used the same intentional approach from Study 1 to encourage honest and valid data collection. I did this in several ways, including collecting a larger sample size, paying participants well, and using several integrity checks (including two items related to honest and careful responding- one at the beginning of the survey and one partway through). I also reviewed the time to completion to identify participants who responded too quickly (speeders) or took an excessively long time, which may indicate inattentive or noncompliant responding. Furthermore, I conducted a full review of each survey response (looking for inconsistent or identical responses) to increase the likelihood of having higher-quality data.

A total of 330 individuals clicked the link for the survey. Of those, 18 did not consent to participate. After completing data collection, I screened responses one at a time, checking for ballot stuffing, unusual completion time and inconsistent or identical answering (i.e., all items in a scale responded to the same). Participants were also removed when they responded to the integrity question '*To what extent will you be honest and careful in answering the questions in this survey?'* at the beginning of the study (or a similar one halfway through the questionnaire) with *not at all* or *slightly*. Table 10 outlines the criteria used for participant exclusion from data analysis, along with the number of participants removed for each criterion.

Table 10

Study 2: Participants Excluded from Analyses

Rationale for exclusion	*n* deleted	% total sample	*n* participants remaining
Did not complete consent	18	5.45%	312
Partial completion	17	5.15%	295
Living in Canada	15	4.55%	280
Failed integrity check	8	2.42%	272
Variable responding	17	5.15%	255
Speeding (< 4 minutes)	13	3.94%	242
Excessive time spent (> 2 hours)	9	2.73%	233

Note. $N = 330$. Average completion time of survey was 15 minutes, 56 seconds (SD = 15 min, 44 seconds).

Measures

Measures were randomized into two clusters. The MHSRS and four other scales that were presented in random order were included in the first cluster. An integrity item was then presented- *To what extent are you being honest and careful in answering the questions in this survey?* The second cluster of measures contained the remaining scales, which were also randomized. The MHSRS was always included in the first cluster to reduce the impact of participant fatigue. All scales were adjusted so that the response format was consistent across measures to match the 5-point scale used for the MHSRS to reduce cognitive load (the exception is the 3-Item Loneliness Scale, which remained as designed). Response options ranged from *1-Strongly Disagree* to *5-Strongly Agree*. Across all scales, higher scores represent higher levels of the construct.

Sociodemographic Information. Participants reported their age, gender, state, community size, highest level of education, occupational status, household income, marital status, and ethnic group.

Mental Health History. One item developed for Study 1 measured mental health history. Participants summarized their mental health history by selecting from five options: *I've had fairly serious emotional problems most of my life; I've struggled emotionally most of my life, although there have been times when I've felt happy; I've had about an equal number of difficult times and times when I've been happy; I've been happy most of my life, although there are times when I've struggled emotionally;* and *I've felt happy and had good mental health for most of my life*.

Perceived Need. Perceived need for mental health services was measured using an item from the National Comorbidity Survey Replication study (Kessler et al., 2004). Participants responded to the item, *Was there ever a time during the past 12 months when you felt that you might need to see a professional because of problems with your emotions or nerves?* with response options *yes, no,* or *don't know*.

Mental Health Service Use. Mental health service use was measured using a modified item from the National Comorbidity Survey Replication study (Kessler et al., 2004). Participants responded *yes, no,* or *don't know* to the question, *Did you ever in your lifetime go to see any of the professionals on this list for problems with your emotions, nerves, or your use of alcohol or drugs?* For each professional that participants endorsed seeing (i.e., psychiatrist, general practitioner, nurse), a follow-up question appeared, which asked them when they had last seen that professional (i.e., *within the last year, 2-5 years,* or *over 5 years ago*).

Current Symptomatology. Participants completed the 6-item Kessler Distress Scale to measure their current levels of distress (K6; Kessler et al., 2003). The K6 is a self-report scale where participants rate their feelings of distress over the past 30 days on a 5-point rating scale. Response options range from *0- none of the time* to *4- all of the time*. Scale scores can range from 0-24, with higher scores indicating greater levels of distress. Cut scores of ≥ 5 have been suggested to signal moderate mental distress (Prochaska et al., 2012) and ≥ 13 to indicate severe mental illness (Kessler et al., 2003). Previous research has shown the K6 to have good internal consistency (α = .89; Kessler et al., 2003); excellent reliability was found in this sample (α = .94).

Conformity to Masculine Norms Inventory (CMNI-46). Two subscales (self-reliance (SR) and emotional control (EC)) were included from the Conformity to Masculine Norms Inventory (CMNI-46; Parent & Moradi, 2009). Participants responded to the five items from each subscale, including *I hate asking for help* from the self-reliance subscale and *I tend to keep my feelings to myself* from the emotional control subscale. In past research, the reliability of these subscales has been good (α = .84 and .86, respectively; Parent & Moradi, 2009). In this study, scores ranged from 5-25 in each subscale, with higher scores indicating a more positive endorsement of the value. Reliability was good; α = .82 and .85 for self-reliance and emotional control, respectively.

Barriers to Mental Health Services Scale-R (BMHSS-R). The Barriers for Mental Health Services Scale-Revised (Pepin et al., 2015) assesses the barriers that impact an individual seeking mental health services. For this study, the 4-item help-seeking subscale (e.g., *It is hard for me to admit that I need professional help*) and the 5-item stigma subscale (e.g., *I would feel embarrassed or ashamed to see a psychotherapist (counselor)*) were used. Higher scores on both

the help-seeking subscale and stigma subscales indicate that the individual perceives this as more of a barrier. Said another way, a higher score on the help-seeking subscale means the individual is more likely to agree with barriers in help-seeking, and therefore, less likely to engage in help-seeking. In previous research, subscale reliability was found to be unacceptable and good (α = .67 and .87, respectively; Pepin et al., 2015). For Study 2, scores ranged from 4-20 on the help-seeking subscale (α = .72, fair) and 5-25 on the stigma subscale (α = .88, good).

Inventory of Attitudes Toward Seeking Mental Health Service (IASMHS). Participants responded to eight items that comprise the psychological openness subscale from Mackenzie and colleagues (2004) IASMHS scale. Items (e.g., *There is something admirable in the attitude of people who are willing to cope with their conflicts and fears without resorting to professional help*) were totalled and scores ranged from 8-40, with higher scores representing more positive attitudes to seeking mental health services. This scale has been demonstrated to have good internal consistency, with α = .82 (Mackenzie et al., 2004). Reliability was the same in this study, α = .82.

Coping Orientation to Problems Experienced (COPE). The COPE scale (Carver et al., 1989) asked participants to recall when they were coping with a difficult or stressful life event and reflect on how they managed that experience. For this study I used three subscales: active coping (AC), emotional social support (ESS), and instrumental social support (ISS). According to Carver, active coping represents a problem-focused coping approach, where individuals proactively take action to navigate stressors. Emotional social support emphasizes the importance of receiving sympathy or emotional support, while instrumental social support involves actively seeking help, information, and advice on possible solutions (1989).

The reliability of these subscales in past research has been unacceptable to good, with

α = .62 for AC, α = .85 for ESS, and α = .75 for ISS (Carver et al., 1989). In Study 2, the instrumental social support (e.g., *I talk to someone to find out more about the situation*) and emotional social support subscale (e.g., *I discuss my feelings with someone*) both had good reliability of α = .88 and .89, respectively. The active coping subscale (e.g., *I concentrate my efforts on something to do about it*) had fair reliability of α = .76. In this study, scores ranged from 4-20 across all three subscales.

Interpersonal Dependency Inventory-6. The 6-item scale by McClintock and colleagues (2017) measures dependence on others for emotional support and leadership. The two included subscales of emotional dependency (e.g., *I must have one person who is very special to me*) and functional dependency (e.g., *I don't have what it takes to be a good leader*). Each subscale has 3-items. At scale development, the emotional dependency and functional dependency subscales had fair levels of internal consistency (α = .76 and .77, respectively; McClintock et al., 2017). Scores in this study ranged from 3-15, with good reliability in both emotional and functional dependence subscales, α = .88 and .84, respectively.

Candidate Psychological Needs Scale (CPN). Sheldon and colleagues (2001) developed a scale to assess people's feelings during a recent most satisfying event. Participants were primed to recall a specific event and consider the degree to which they felt autonomous (e.g., *Free to do things my own way*), competent (e.g., *That I was taking on and mastering hard challenges*) and related/connected to others (e.g., *A sense of contact with people who care for me, and whom I care for*). For this study, the prompt was adapted so that individuals were asked to recall a recent 'stressful and difficult to manage' event, as I assumed that dealing with their mental health would be more likely to be a challenging experience. In previous research, the internal consistency for Sheldon's scale has been unacceptable, fair, and acceptable (α = .69 for

autonomy, 0.77 for competence and 0.81 for relatedness, respectively; Chen et al., 2014). For Study 2, scores ranged from 3-15 in each subscale, and the three subscales had good reliability (α = .84, 0.86, and 0.86, respectively).

3- Item Loneliness Scale. Participants rated their experience of loneliness with Hughes and colleagues (2004) 3-item scale (e.g., *How often do you feel… isolated from others?*). The 3-point scale was maintained, which ranged from *1-hardly ever* to 3-*often*. Reliability during scale development was fair, (α = .72; Hughes et al., 2004). For Study 2, scale scores ranged from 3-9, and reliability was good, α = .88.

Mental Health Self-Reliance Scale (MHSRS). Participants completed the 12-item MHSRS (Appendix M). Reliability and validity are reported in the results section below.

Results

Participant sociodemographic information, mental health history, lifetime provider use and perceived need for mental health services from the past 12 months, as well as current level of distress are outlined in Table 11. 233 participants remained after data cleaning.

Table 11

Study 2: Participant Sociodemographic Information

Variable	*n*	%
Gender Identity		
Male	96	41.2
Female	134	57.5
Agender	1	0.4
Genderqueer	1	0.4
Non-binary	1	0.4
Urban-Rural Setting		
Hamlet (fewer than 300)	4	1.6
Village (300-999)	7	3.0
Town (1,000-9,999)	43	18.5
Small city (10,000-29,999)	35	15.0
Medium city (30,000-99,999)	55	23.6
Large city (100,000-999,999)	37	15.9

Variable	*n*	%
Metropolitan area (1 million+)	52	23.6
Education		
Some high school	5	2.1
High school or equivalent	47	20.2
Some college, no diploma	38	16.6
College diploma or trade/technical/vocational training	26	11.2
Some university, no degree	12	5.2
Some university, currently attending	7	3.0
Bachelor's degree	64	27.5
Master's degree	28	12.0
Doctorate degree	5	2.1
Occupation		
Full-time employment	107	45.9
Full time employment, part-time student	4	1.7
Part-time employment	30	12.9
Part-time employment, student/on disability	3	1.2
Retired	43	18.4
Student	12	5.2
Unemployed/on disability/student	34	14.6
Income		
$0 - $4,999	8	3.4
$5,000 - $9,999	7	3.0
$10,000 - $14,999	12	5.2
$15,000 - $19,999	7	3.0
$20,000 - $24,999	10	4.3
$25,000 - $34,999	19	8.2
$35,000 - $49,999	35	15.0
$50,000 - $74,999	50	21.5
$75,000 - $99,999	39	16.7
$100,000 - $149,999	25	10.7
$150,000 - $199,999	11	4.7
$200,000 - $249,999	3	1.3
$250,000+	6	2.6
Marital Status		
Single	78	33.5
Dating	12	5.2
Married or Common-law	114	48.9
Widowed	13	5.6
Separated or Divorced	16	6.9
Ethnicity		
Black	26	11.1
Chinese	4	1.7
Filipino	2	0.9
Jewish	8	3.4

Variable	*n*	%
Korean	1	0.4
Latin America	6	2.6
South Asian	1	0.4
Southeast Asian	5	2.1
White	172	73.8
Other	8	3.5
Mental Health History		
Fairly serious problems most of life	18	7.7
Struggled most of life, sometimes happy	35	15.0
About equal number of difficult and happy times	42	18.0
Happy most of life, sometimes struggled	69	29.6
Happy and good mental health most of life	69	29.6
Perceived Need for Mental Health Services in past 12 months		
Don't Know	9	3.9
No	141	60.5
Yes	83	35.6
Current level of distress (K6)		
Limited distress (0-4)	125	53.6
Moderate Distress (5-12)	70	30.0
Severe Distress (13-24)	38	16.3

Lifetime Provider Use for Mental Health Needs

			Last seen (*n*)			
Provider type	*n*	%	Never	>12 mos	2-5 yrs	5+ yrs
Psychiatrist	53	22.7	180	19	13	21
General practitioner	88	37.8	115	60	15	13
Any other medical doctor	36	15.5	197	28	6	2
Psychologist	56	24.0	177	18	20	18
Social worker	34	14.2	200	12	8	13
Counsellor	51	21.9	182	16	11	24
Other mental health	27	11.6	206	11	7	9
Nurse, Occupational Therapist, other	38	16.3	195	20	8	10
Religious/spiritual advisor	31	13.3	202	17	5	9

Note. Participants were, on average, 46 years of age (*SD* = 17.6, range 18-89). Resident state is not included here. Missing data in location (1, 0.4%), education (1, 0.4%), income (1, 0.4%), mental health treatment provider history (2-7 individuals per provider type category).

Preliminary Analyses

Preliminary data analyses were conducted using SPSS Statistics software (IBM, v. 27), including a review of missing data, frequency distribution analyses, measures of central tendency

and Shapiro-Wilk test (included in Appendix M), correlation matrix (Table 12) and covariance matrix (Appendix N). First, the Kaiser-Meyer-Olkin (KMO) Measuring of Sampling Adequacy and Bartlett's Test of Sphericity assessed the suitability of the data for factor analysis. All items demonstrated significant Shapiro-Wilk results ($p < .001$), indicated non-normal distributions. However, inspection of descriptive statistics showed skewness and kurtosis values in acceptable ranges (i.e., skew < 2.0, kurtosis < 7.0), which meant a ML estimation would be appropriate for the CFA. The KMO value was 0.80, and Bartlett's Test of Sphericity was $\chi^2(66) = 1280.75$, $p < .001$, indicating that the data were appropriate for factor analysis.

Inter-item correlations (Table 12) were expected to fall between .30 and .90 to demonstrate adequate relationships between items within each subscale (Hair et al., 2010). The headstrong self-reliance (HSR) items 1-4 ($r = .43$- .63), other-reliance (OR) items 5-8 ($r = .58$-.71), and adaptive self-reliance (ASR) items 9-12 ($r = .46$- .62) and were all within the desired range (> .30 and < .90). Additionally, negative inter-item correlations were observed between the HSR and ASR items, however, not all were significant, including the correlations between HSR items 2, 3, 4 with ASR item 9, and the correlations between HSR item 4 and ASR item 11. Additionally, HSR item 3 also had a significant negative inter-item correlation with OR item 7, and HSR item 4 demonstrated significant negative inter-item correlations with OR items 6 and 7. When looking at the relationships between OR and ASR, only one relationship met significance- OR item 7 was positively correlated to ASR item 10.

A Pearson's correlation analysis was conducted to examine the relationship between subscales. The adaptive self-reliance and headstrong self-reliance subscales were moderately negatively correlated ($r = -.33$, $p < .001$). Other-reliance had a small, non-significant relationship

to headstrong self-reliance ($r = -.05, p = .35$) and a small, non-significant relationship to adaptive self-reliance ($r = -.06, p = .40$).

Table 12

Study 2: Correlation Matrix

Item	2	3	4	5	6	7	8	9	10	11	12
1- I avoid asking for help at all costs	.61**	.56**	.42**	.07	.13	-.02	.11	-.25**	-.41**	-.27**	-.35**
2- I find a way to manage it alone		.56**	.62**	.00	-.02	-.03	-.03	-.06	-.25**	-.14*	-.32**
3- I avoid talking about my problems			.35**	-.09	-.04	-.15*	-.06	-.10	-.33**	-.13*	-.28**
4- I rely on myself no matter what				-.06	-.13*	-.13*	-.12	.04	-.21**	-.11	-.18**
5- I let others make decisions for me					.63**	.55**	.64**	.03	.09	.09	.04
6- I rely too much on others to guide me						.68**	.70**	-.05	.01	-.04	-.08
7- I cope by depending on others							.65**	.06	.13*	.12	.07
8- I need others to tell me what I should do								-.02	.04	.08	.04
9- I handle problems myself and with help									.46**	.48**	.53**
10- I ask for advice if I need to										.54**	.60**
11- I balance relying on myself and others											.61**
12- I am confident in my ability to get support											

Note. ** Correlation is significant at the .01 level. * Correlation is significant at the .05 level. Items 1-4 represent headstrong self-reliance, items 5-8 represent other-reliance, and items 9-12 represent adaptive self-reliance.

Confirmatory Factor Analysis

I used Revelle's *psych* package (2021, version 2.1.3) for R Software for all remaining analyses in Study 2. I tested the factor structure of the MHSRS from Study 1 using confirmatory factor analysis (CFA). Due to its robustness and consistency, particularly in estimating goodness of fit, factor loadings, and correlations (Fabrigar et al., 1999), the maximum likelihood (ML) estimation method was selected.

Based on the sample size (n = 233), I opted to supplement the χ^2 statistic with additional fit indices. I included the Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), Standardized Root Mean Square Residual (SRMR), and calculated Root Mean Square Residual. For Study 2, the χ^2 statistic was significant, $\chi^2 = (51) = 131.43$, $p < .05$, which is common in models with larger sample sizes. The CFI was 0.94 and the TLI was 0.92, both slightly under the desired threshold of 0.95 (Hu & Bentler, 1999; Rosellini & Brown, 2021). The RMSEA was 0.08, with a 90% confidence interval of [0.06, 0.10], which falls slightly above the preferred value of 0.06 or below (Hu & Bentler, 1999; Rosellini & Brown, 2021), but within the range of mediocre fit. The SRMR was 0.07, below the recommended maximum of .08 (Hu & Bentler, 1999; Russell, 2002), and the calculated RMSR was 0.07, also below the threshold of 0.08 (Boateng et al., 2018; Rosellini & Brown, 2021; Russell, 2002). Together, these indices suggest that the three-factor model provided an acceptable, though not perfect, fit to the data.

Factor loadings (Table 13) revealed that MHSRS items 1, 2, 3, and 4 loaded onto factor 1, aligning with the hypothesized headstrong self-reliance factor, with strong primary loadings ranging from 0.65 to 0.86. One item (1) had a sizable cross-loading (-0.22) onto factor 3 (adaptive self-reliance). Items 5, 6, 7, and 8 loaded onto factor 2, with strong primary loadings

ranging from 0.74 to 0.85. These items had no significant cross-loadings and were consistent with the hypothesized other-reliant factor. Lastly, items 9, 10, 11, and 12 loaded onto factor 3, with primary loadings ranging from 0.63 to 0.83 and no sizable cross-loadings. These items reflected the hypothesized adaptive self-reliance factor. The adaptive and headstrong self-reliance subscales were moderately and negatively correlated (r = -.40), whereas other-reliance showed trivial, non-significant associations to both headstrong (r = -.04), and adaptive ((r = .05) self-reliance.

This refined 12-item scale demonstrated greater conceptual clarity and, despite having fewer items, had improved model fit in comparison to the longer scale versions from Study 1. Subscale reliabilities for all three subscales were good (α = .81 for headstrong self-reliance; α = .82 for adaptive self-reliance; α = .88 for other-reliance).

Table 13

Study 2: Factor Loadings

Item	F1	F2	F3
MHSRS_1	**.64**	.14	-.*22*
MHSRS_2	**.91**	.01	.04
MHSRS_3	**.62**	-.05	-.09
MHSRS_4	**.69**	-.11	.08
MHSRS_5	.04	**.74**	.07
MHSRS_6	-.02	**.86**	-.10
MHSRS_7	-.02	**.78**	.10
MHSRS_8	.00	**.83**	.02
MHSRS_9	.13	-.02	**.70**
MHSRS_10	-.11	.04	**.70**
MHSRS_11	.06	.04	**.77**
MHSRS_12	-.11	-.02	**.77**

Note. F = Factor. Items MHSRS_1-4 represent headstrong self-reliance items; MHSRS_5-8 represent items from other-reliance; and items MHSRS_9-12 represent items from adaptive self-reliance.

Concurrent Validity

See Table 14 for the correlations between all MHSRS subscales and other measures.

Table 14

Study 2: Correlations between MHSRS Subscales and Other Constructs

Construct (*scale*)	Headstrong Self-Reliance		Adaptive Self-Reliance		Other-Reliance	
	r	*p*	*r*	*p*	*r*	*p*
Rigid approach to mental health management						
Rigid self-reliance (CMNI-SR)	**.65****	**<.001**	**-.49****	**<.001**	-.02	.81
Emotional control (CMNI-EC)	**.63****	**<.001**	**-.44****	**<.001**	**.21****	**.001**
Construct (*scale*)	Headstrong Self-Reliance		Adaptive Self-Reliance		Other-Reliance	
	r	*p*	*r*	*p*	*r*	*p*
Identifying barriers to help-seeking (BMHSS-HS)	**.63****	**<.001**	*-.15**	*.02*	-.04	.50
Stigma of help-seeking (BMHSS-S)	**.53****	**<.001**	**-.21****	**.001**	**.18****	**.006**
Personal strategies for mental health management						
Positive attitude to mental health services (IASMHS)	**-.43****	**<.001**	-.04	.56	*-.15**	*.02*
Use of active coping (COPE-AC)	-.05	0.40	**.44****	**<.001**	.09	.15
Interpersonal support and dependence						
Seeking emotional support (COPE-ESS)	**-.48****	**<.001**	**-.54****	**<.001**	**.33****	**<.001**
Seeking instrumental support (COPE-ISS)	**-.43****	**<.001**	**-.50****	**<.001**	**.25****	**<.001**
Functional dependence on others (IDI-FD)	.06	0.33	-.04	.51	**.38****	**<.001**
Emotional dependence on others (IDI-ED)	-.02	0.80	.11	.09	**.33****	**<.001**
Psychological well-being and self-efficacy						
Autonomy when managing challenging events (CPN-A)	.05	0.42	**.25****	**<.001**	*-.14**	*.03*
Competence when managing challenging events (CPN-C)	.03	0.60	**.29****	**<.001**	-.12	.06
Social connectedness and isolation						
Relatedness when managing challenging events (CPN-R)	**-.21****	**.001**	**.44****	**<.001**	.09	.19
Feelings of loneliness (LONELY)	**.24****	**<.001**	**-.31****	**<.001**	**.22****	**<.001**
Current Symptomatology~						
Level of distress (K6)	**.27****	**<.001**	**-.28****	**<.001**	**.31****	**<.001**

Note. ** Correlation is significant at the .01 level and bolded for visibility. * Correlation is significant at the .05 level and italicized for visibility. ~A priori hypotheses were not specified. Light green shading represents hypothesized correlations. Light blue shading represents correlations that were hypothesized but did not meet significance. Light salmon shading represents correlations where the relationship was opposite to what was hypothesized. CMNI-SR = Conformity to Masculine Norms Inventory- Self-Reliance subscale. CMNI-EC = Conformity to Masculine Norms Inventory- Emotional Control subscale. BMHSS-HS = Barriers to Mental Health Services Scale-R- Help-Seeking subscale. BMHSS-S = Barriers to Mental Health Services Scale-R- Stigma subscale. IASMHS = Inventory of Attitudes toward Seeking Mental Health Services. COPE-AC = Coping Orientation to Problems Experienced- Active Coping subscale. COPE-ESS = Coping Orientation to Problems Experienced- Emotional Support subscale. COPE-ISS = Coping Orientation to Problems Experienced- Instrumental Support subscale. IDI-FD = Interpersonal Dependency Inventory- Functional Dependence subscale. IDI-ED = Interpersonal Dependency Inventory- Emotional Dependence subscale. CPN-A = Candidate Psychological Needs- Autonomy subscale. CPN-C = Candidate Psychological Needs- Competence subscale. CPN-R = Candidate Psychological Needs- Relatedness subscale.

Headstrong Self-Reliance. The hypothesis that individuals with higher levels of headstrong self-reliance would strongly adhere to traditional masculine norms of self-reliance and hold stigmatizing, negative attitudes towards seeking mental health services was supported. These individuals were also expected to perceive more barriers to accessing support, prefer to control their emotions, and maintain limited relationships, relying primarily on themselves. As predicted, headstrong self-reliance scores positively correlated with masculine self-reliance, emotional control, loneliness, perceived barriers to help-seeking and stigma (see Table 14 for all

relationships). While the relationship between headstrong self-reliance and autonomy was in the expected direction, it did not reach significance.

As hypothesized, headstrong self-reliance scores were negatively correlated with positive attitudes towards seeking mental health services, coping using emotional support or instrumental support from others, and relatedness. However, contrary to expectations, the negative relationships between headstrong self-reliance scores and dependency (measured through emotional dependency and functional dependency on others) were not significant. Scores in headstrong self-reliance were not associated with active coping or feelings of competence in managing mental health challenges.

There was a significant, positive relationship between scores in headstrong self-reliance and current symptomatology (scores on the K6). Among the strongest correlations observed, headstrong self-reliance scores demonstrated the highest positive relationships with traditional masculine norms of self-reliance and emotional control, and with the identification of help-seeking and stigma as a barrier to accessing mental health help. In contrast, the strongest negative correlations observed were between headstrong self-reliance and emotional support, instrumental support, and positive attitudes toward seeking mental health services.

Adaptive Self-Reliance. The hypotheses that individuals with higher levels of adaptive self-reliance would exhibit greater levels of autonomy and be more likely to actively manage difficult situations were supported. As predicted, scores on the adaptive self-reliance subscale were positively correlated with relatedness, active coping, autonomy, and competence. However, the relationship between adaptive self-reliance and positive attitudes towards help-seeking was not significant. Additionally, adaptive self-reliance scores were found to be negatively correlated to instrumental support and emotional support, which was the opposite of what was expected.

As hypothesized, adaptive self-reliance was negatively correlated with rigid self-reliance, emotional control, and loneliness. Barriers to mental health services (including help-seeking and stigma), also showed significant negative correlations with adaptive self-reliance, as predicted. Scores in adaptive self-reliance were not associated with dependency on others (as measured by emotional and functional dependence subscales).

There was a significant, negative relationship between scores in adaptive self-reliance and current symptomatology (scores on the K6). Among the strongest correlations observed, adaptive self-reliance scores demonstrated the highest positive relationships with active coping and relatedness. In contrast, the strongest negative correlations were observed with emotional support, instrumental support, rigid self-reliance, and emotional control.

Other-Reliance. The hypothesis that individuals with higher levels of other-reliance were more likely to seek support from others and exhibit a greater dependence and reliance on relationships was supported. Despite their desire for support, these individuals were also expected to perceive their relationships as less fulfilling, and as expected, individuals high in other-reliance also had higher levels of loneliness. Individuals high in other-reliance were more likely to access support from others, with significant positive correlations to emotional and instrumental support, functional dependence, and emotional dependence on others.

Contrary to expectations, the relationship between other-reliance and relatedness was positive, but not significant. While emotional control was hypothesized to have a negative correlation to other-reliance, a significant positive correlation was found. Though not hypothesized, other-reliant scores were positively correlated to stigma.

As hypothesized, other-reliant scores were negatively correlated with autonomy. However, other predicted negative relationships were not statistically significant, including those between

other-reliance scores and competence in navigating stressful situations, traditional male norms of self-reliance, and help-seeking barriers for accessing mental health services. A small negative correlation between other-reliance and attitudes towards seeking mental health services was found, though this was not predicted. Finally, other-reliance was not associated with active coping.

There was a significant, negative relationship between scores in other-reliance and current symptomatology (scores on the K6). Among the strongest correlations observed, other-reliance demonstrated significant positive relationships with functional and emotional dependence on others and using emotional support to cope. In contrast, the only significant negative correlations were with positive attitudes towards seeking mental health services and a desire for autonomy.

Discussion

The goals of this study were to a) verify the factor structure of the MHSRS as identified in Study 1 and b) explore convergent and discriminant validity evidence for the three expressions of self-reliance for managing mental health. In Study 1, I determined that a three-factor structure had the best model fit, with the factors aligning with the hypothesized self-reliance conceptualization: *headstrong self-reliance, adaptive self-reliance, and other-reliance*.

In this study, I used the shortened 12-item version of the scale to assess the appropriateness of the three-factor model. Compared to Study 1, the fit across various model fit indices was strong, proving that the 12-item scale effectively captured the three unique expressions of self-reliance, with four items per subscale. As in Study 1, the items aligned with their hypothesized factors, with minimal cross-loading onto other factors. Related to the subscales, there was a medium negative correlation between adaptive self-reliant and headstrong self-reliant subscale scores. There was no significant correlation between other-reliance and either adaptive or

headstrong self-reliance. Conceptually, this supports my hypothesis that the three expressions of self-reliance are unique. Further evidence was provided for three distinct expressions of self-reliance by exploring concurrent relationships for each subscale.

Headstrong Self-Reliance

I expected individuals scoring high in headstrong self-reliance to manage their mental health independently, demonstrating a rigid reliance on themselves. This expression of self-reliance reflects extreme adherence to traditional masculine norms, where seeking help- whether formal or informal- is viewed as a sign of weakness (e.g., Addis & Mahalik, 2003; Choo & Marszaelek, 2018; Mahalik et al., 2003). Thus, I had predicted that individuals high in headstrong self-reliance would avoid accessing support, perceiving it as a threat to their identity. Further, these individuals were expected to become fixated on perceived barriers to mental health help-seeking, reinforcing their reluctance to access care (e.g., Boman & Walker, 2010; Pleck & Levant, 1995; 2011). The findings of this study confirmed these hypotheses. There was a positive relationship between headstrong self-reliance and help-seeking barriers and stigma. There was also a strong negative relationship with positive attitudes towards seeking mental health services. Concerningly, this expression of self-reliance also had negative associations with mental health constructs that are important well before people consider seeking professional help. For example, the observed relationship between headstrong self-reliance and ineffective coping strategies (as measured by reliance on emotional control and a negative relationship with active coping) also aligns with prior research. As seen in past studies, individuals high in this type of self-reliance typically choose not to engage in mental health support and cope with emotional problems in psychologically unhealthy ways (Ishikawa et al., 2022; Pescosolido et al., 2013).

Another prominent theme in headstrong self-reliance research is the tendency towards minimal engagement with others, which the current study supported. Individuals high in headstrong self-reliance were unlikely to use emotional and instrumental social support. They also reported feeling lonely despite placing less value on having close relationships or being cared for by others, another finding that is consistent with previous literature (Burns & Mahalik, 2006; Choo & Marszalek, 2018; Hall et al., 2013; Hughes, 2019; Rochlen et al., 2010; Ryan et al., 2005; Smith, 2014). These results suggest that while individuals high in headstrong self-reliance may believe they are maintaining strength by relying solely on themselves, they also may unintentionally reinforce emotional isolation, reducing opportunities for effective coping.

It is essential to emphasize the nuance of this expression of headstrong self-reliance. While autonomy is often associated with self-reliance in the masculinities literature, the relationship between headstrong self-reliance and scores on the autonomy subscale of the Candidate Psychological Needs (CPN-A) scale was not significant. A closer look at the language of the items on the CPN-A reflects an authentic form of autonomy, where choices align with personal interests and values. In contrast, a tension has been identified in traditional masculine literature between self-reliance and the perceived obligation to manage mental health independently, even when it conflicts with personal beliefs (Hammer & Good, 2010). These findings support this tension; individuals high in headstrong self-reliance may feel pressured to handle challenges alone, even if they do not truly want to.

Among the three expressions of self-reliance, headstrong self-reliance most closely aligns with the extreme version of the traditional conceptualizations from the literature. The strong correlations between the items in this subscale and previously validated measures of self-reliance supports the construct's convergent validity, reaffirming that individuals with high levels of

headstrong self-reliance are more likely to get stuck in their mental health challenges (Burns & Mahalik, 2006; Wong et al., 2017). In this sample, as scores in headstrong self-reliance increased, so too did scores in clinical symptomology. These individuals are at a concerning risk for severe mental health problems and suicide. Not only are they more likely to cope with emotional difficulties in ineffective ways, but when these symptoms do increase to the point of crisis, they are also unlikely to access help from any source.

Adaptive Self-Reliance

I expected individuals scoring high in adaptive self-reliance to manage their mental health with a non-rigid reliance on themselves and a willingness to pull in support from others. I hypothesized that these individuals would be likely to persist in the face of adversity, perceive themselves capable of coping effectively, and be willing to do so. These expectations were supported- as adaptive self-reliance scores increased, so did scores of autonomy, competence, and active coping. These findings align with Emerson's (1841) early conceptualization of self-reliance and subsequent research that underscores the importance of self-reliance as a source of personal strength in coping (Stott, 1938).

Individuals high in adaptive self-reliance were less likely to endorse traditional self-reliant views (i.e., headstrong self-reliance) or feel the need to control their emotions. Moreover, these individuals were less likely to perceive barriers (such as help-seeking behaviours and stigma) as obstacles to accessing mental health services. The inverse relationship between adaptive self-reliance and stigma was strongest, indicating that while some adaptive self-reliant individuals may not actively seek mental health services, they are less likely to experience feelings of stigma if they do choose to seek services. However, within this sample, there was not a strong intention to access formal treatment, perhaps because members of this group felt

confident in their ability to manage their mental health by themselves and had less of a need to do so (as supported by lower scores on the K6).

While those high in adaptive self-reliance express an openness to engage with others, the nature of support matters. These individuals expressed a desire for social support in terms of relatedness and having others who care for them and for whom they care for in return. However, this group was not as likely to rely on instrumental or emotional support. This distinction may stem from the certainty in item language in measures such as the Coping Orientation to Problems Experienced (COPE) scale (*I talk to someone about how I feel*) and the Interpersonal Dependency Inventory (*I would be completely lost if I didn't have someone special*). The phrasing choices may not resonate with individuals high in adaptive self-reliance, as being open to support does not necessarily mean they will take it. It may also be that because this group is doing better overall, with lower scores on psychological distress and more effective active coping strategies, they may not need the help.

Altogether, individuals high in adaptive self-reliance tend to feel confident and capable of managing their mental health challenges. They value social connection and relatedness but tend to rely on their well-developed coping strategies as opposed to relying on emotional or instrumental support.

Other-Reliance

I expected individuals scoring high in other-reliance to manage their mental health by relying excessively on those around them. As hypothesized, those with higher levels of other-reliance had lower levels of autonomy and showed a preference for active involvement from others, supporting previous literature (Horney, 1950; Joplin et al., 1999; Pescosolido et al., 2011,

2013; Quick, 1992). Specifically, these individuals rated emotional, instrumental, and functional support, as well as emotional dependence, highly.

Notably, for those with high levels of other-reliance, the desire to access support from others extends beyond mere connection (relatedness). These individuals appear to seek more than close relationships; they prefer others to take an active role in decision-making, giving advice, and assuming a leadership role to direct their path forward. When these expectations are unmet, they may experience loneliness and perceive their relationships as unfulfilling. Despite their strong need for others to be involved in their mental health journey, individuals high in other-reliance reported high levels of loneliness. Interestingly, these scores were nearly as high as those with headstrong self-reliance, who, in contrast, actively push others away.

In addition to the desire for others to take the lead, other-reliant individuals appear to engage minimally in active coping and show lower perceived competence in managing their mental health challenges. These findings align with previous literature, where individuals with other-reliant type traits have been found to perceive themselves as helpless (McClintock et al., 2017) and have lower levels of self-confidence (Hirschfield et al., 1977). Interestingly, although barriers to help-seeking were perceived as low, so too were positive attitudes to seek formal mental health help. This may indicate a preference for informal support, which may feel more intimate and accommodating than the structure that may come from formal treatment.

Summary

Findings from Study 2 provided support for the proposed factor structure and reliability of the MHSRS. It also provided additional evidence related to concurrent validity to advance the understanding of these three unique expressions of self-reliance by elaborating on how an individual may experience their mental health journey. I found that those high in adaptive self-

reliance were likely to feel competent in managing their mental health (whereas those in headstrong self-reliance did not). This provides evidence for specificity of the type of self-reliance, related to findings from Parris and colleagues (2017), who suggested that autonomy and competence were foundational in self-reliance.

Additionally, I found that only those high in adaptive self-reliance were willing to take direct action when managing a challenging mental health experience. These findings expand on the work by Pescosolido and colleagues (2013), where individuals with high levels of headstrong self-reliance (and those with high levels of other-reliance) are unwilling to do anything to manage their mental health. With a lack of direct action and an unwillingness to seek support for mental health challenges, these findings underscore the significant concern for the well-being of individuals with high levels of headstrong and other-reliance.

Findings related to accessing support (including the type of support desired) are nuanced. Those high in adaptive self-reliance maintained a flexible, self-sufficient approach while still valuing connection. Those high in headstrong self-reliance rejected support entirely, while those high in other-reliance placed heavy expectations on external sources. I found similar feelings of loneliness across headstrong self-reliance and other-reliance, which aligns with Horney's theory related to maladaptive coping (1950) and Bowlby's insecure attachment theory (1982). These findings show that either extreme- rigid independence or excessive dependence- may contribute to a lack of fulfilling social support.

Adaptive self-reliance stood apart as the most psychologically resilient form of self-reliance, with a balance of independence and openness. Both headstrong and other-reliant expressions reflect a rigidity in their approach to managing mental health, a lack of personal agency, and an external-based focus on how others view them. Despite having different levels of

involvement of others and different underlying rationales, both expressions indicate stigma as a significant barrier.

The findings from the concurrent validity measures expand our understanding of these three unique expressions of self-reliance for managing mental health. These findings provide a clearer picture for how individuals high in headstrong self-reliance, adaptive self-reliance, and other-reliance manage their mental health. To continue building the nuanced understanding of self-reliance for managing mental health, Study 3 provides evidence of reliability in scores over time.

Chapter 5: Psychometric Analysis- Test-Retest Reliability (Step 4)

Study 3 was designed to further evaluate the psychometric properties of the MHSRS, specifically reliability over time, as suggested in Step 4 in the scale development process (Furr, 2011; 2020). This study examined the 3-week test-retest reliability of scores on the MHSRS, a psychometric property poorly represented across current self-reliance measures. Limited test-retest scores reported on headstrong self-reliance in the literature impact the ability to evaluate the stability of self-reliance over time. It was also important to evaluate the stability of the two newly described expressions of self-reliance: adaptive self-reliance and other-reliance. Based on the historical foundations of self-reliance (Horney, 1939; Quick et al., 1992) and the impact of culture (e.g., gender roles, Pleck & Levant, 1995, 2011), I hypothesized that scores on the MHSRS would remain relatively stable over time.

Method

Procedure

This study had two time points: an initial data collection (Time 1) and a second data collection taken three weeks later (Time 2). The University of Manitoba Human Research Ethics Board granted study approval, and I collected data online in April and May 2023. I recruited the sample online using Amazon MTurk and used the same setup from Study 1 (refer to Study 1 procedure section for instructions). Recruitment details can be found in Appendix O. Participants provided consent to participate in Time 1 of the study (Appendix P), and those interested provided separate consent to be contacted for Time 2. After approximately three weeks, I sent a message via Amazon MTurk to invite those who had provided consent with instructions on how to participate in Time 2 (Appendix O). For both parts of the study, participants provided their MTurk number (an unidentifiable alphanumeric 12–14-digit ID, such as A3OI39DNDLIIX),

which allowed me to match the data between the two time points anonymously. All data were collected using Qualtrics Research Core (Qualtrics, 2021).

The questionnaire package in Time 1 (Appendix Q) included the same integrity item used in Studies 1 and 2 (*We care about the quality of our survey data, so it is important to use that you thoughtfully provide your best answer to each question in the survey. Do you commit to providing your thoughtful and honest answers to the questions in this survey?*). Participants responded to sociodemographic questions and provided information on their mental health history and current level of distress. They also completed the 12-item MHSRS. In Time 2 of the study, participants only responded to the integrity item, their current level of distress (K6), and the 12-item MHSRS.

Participants

Eligibility criteria required that participants be 18 or older, fluent in English, and living in the United States of America. I used the same intentional approach from Study 1 to encourage honest and valid data collection. I did this in several ways, including using the 'best' MTurkers, collecting a larger sample size, paying participants well, and using integrity checks. I also used the same integrity item as used in Studies 1 and 2 and reviewed the time to completion to identify participants who responded too quickly (speeders) or took an excessively long time. Furthermore, I conducted a full review of each survey response (looking for inconsistent or identical responses) to increase the likelihood of having higher-quality data. I removed individuals who did not include their MTurk numbers, as I could not match their responses.

A total of 114 participants completed Time 1 of the study. Once I had screened participants, 101 participants remained (Table 15). Notably, no participants failed the effort integrity check.

Of the 101 participants from Time 1, 62 participants completed Time 2 of the study and 57 were retained for study analyses after data cleaning (See Table 16 for sociodemographic information for the sample). Again, no participants failed the effort integrity check.

Table 16

Study 3: Participants Excluded from Analyses

Rationale for exclusion	*n* deleted	% total sample	*n* participants remaining
Time 1, *n* = 114			
Partial completion	7	6.1%	107
Speeding (< 90 seconds)	3	2.6%	104
Excessive time spent (> 30 min)	1	0.9%	103
MTurk ID Missing	2	1.8%	101
Did not complete Time 2	39	34.2%	62
Time 2, *n* = 62			
Speeding (< 60 seconds)	4	6.5%	58
MTurk ID Missing	1	1.6%	57

Note. Average completion time of Time 1 survey was 2 minutes, 54 seconds (*SD* = 1 min, 7 seconds). Average completion time of Time 2 survey was 2 minutes, 5 seconds (*SD* = 1 min, 30 seconds).

Measures

Sociodemographic Information. Participants reported their age, gender, state, community size, highest level of education, occupational status, household income, marital status, and ethnic group.

Mental Health History. As in Studies 1 and 2, one question measured mental health history. Participants were asked to summarize their mental health history by selecting from five options: *I've had fairly serious emotional problems most of my life; I've struggled emotionally most of my life, although there have been times when I've felt happy; I've had about an equal*

number of difficult times and times when I've been happy; I've been happy most of my life, although there are times when I've struggled emotionally; and *I've felt happy and had good mental health for most of my life*.

Current Symptomatology. As in Studies 1 and 2, participants completed the 6-item Kessler Distress Scale to measure their levels of distress over the past 30 days (K6; Kessler et al., 2003). Previous research has shown the K6 to have good internal consistency (α = .89; Kessler et al., 2003). Excellent reliability was found in the Study 3 sample in Time 1 (α = .92) and Time 2 (α = .91). Test-retest scores were also excellent (r = .95).

Mental Health Self-Reliance Scale (MHSRS). Participants completed the MHSRS as in Study 2 (Appendix M).

Results

Participant sociodemographic information, mental health history and current level of distress are outlined in Table 15. After data cleaning, 57 participants who had completed Time 1 and Time 2 remained.

Table 15

Study 3: Participant Sociodemographic Information

Variable	*n*	%
Gender Identity		
Male	31	54.4
Female	26	45.6
Education		
Some high school	0	0.0
High school or equivalent	8	14.0
Some college, no diploma	5	8.8
College diploma or trade/technical/vocational training	8	14.0
Some university, no degree	5	8.8
Bachelor's degree	25	43.9
Master's degree	5	8.8
Doctorate degree	1	1.8
Occupation		

Variable	*n*	%
Part-time employment	9	15.8
Retired	2	3.5
Unemployed/on disability	5	8.8
Income		
$0 - $4,999	1	1.8
$5,000 - $9,999	2	3.5
$10,000 - $14,999	2	3.5
$15,000 - $19,999	3	5.3
$20,000 - $24,999	5	8.8
$25,000 - $34,999	5	8.8
$35,000 - $49,999	10	17.5
$50,000 - $74,999	12	21.1
$75,000 - $99,999	11	19.3
$100,000 - $149,999	4	7.0
$150,000 - $199,999	1	1.8
$200,000 - $249,999	0	0.0
$250,000+	1	1.8
Marital Status		
Single	29	50.9
Dating	4	7.0
Married or Common-law	18	31.6
Widowed	3	5.3
Separated or Divorced	3	5.3
Ethnicity		
Black	5	8.8
Chinese	1	1.8
Filipino	1	1.8
Korean	1	1.8
Latin American	1	1.8
White	48	84.2
Mental Health History		
Fairly serious problems most of life	4	7.0
Struggled most of life, sometimes happy	17	29.8
About equal number of difficult and happy times	9	15.8
Happy most of life, sometimes struggled	20	35.1
Happy and good mental health most of life	7	12.3
Current level of distress (K6): Time point A		
Limited distress (0-4)	31	54.4
Moderate distress (5-12)	16	28.1
Severe distress (13-24)	10	17.5
Current level of distress (K6): Time point B		
Limited distress (0-4)	32	56.1
Moderate distress (5-12)	16	28.1
Severe distress (13-24)	9	15.8

Note. Participants were, on average, 45.33 years of age (*SD* = 9.64, range 25-69). Resident state is not included here.

Preliminary Analyses

Preliminary data analyses were conducted using SPSS Statistics (IBM, V. 29), including a review of missing data, frequency distribution analyses, and measures of central tendency (included in Appendix R). As I planned on using Pearson's correlation to assess the temporal consistency of MHSRS subscale scores, I reviewed the data to ensure it met the three assumptions, specifically: a) variables are continuous, b) there are no extreme outliers, and c) data follows a normal distribution (Laerd Statistics, 2018).

The MHSRS uses a continuous scale from 1– *strongly disagree* to 5- *strongly agree*. Upon review, most items demonstrated a full range of responses (scores ranging from 1-5) across parts A and B. Two other-reliant items, MHSRS_5 (*I let others make decisions for me*) and MHSRS_6 (*I rely too much on others to guide me*), had a slightly reduced range (1-4) in both data collection time points Time 1 and Time 2; MHSRS_8 (also an other-reliant item) *I need others to tell me what I should do* had a reduced range (1-4) in Time 2 only.

I also reviewed the boxplots and histograms of each item to explore the range of responses. In Time 1, 12 individuals gave responses that fell outside the typical range observed by other participants in 20 specific cases. In Time 2, 14 individuals gave responses that fell outside the typical range observed by other participants in 19 specific cases. Upon closer inspection, these responses appeared genuine and theoretically consistent, unlike careless responding. As such, I retained all responses to maintain variability. Most outliers were from the other-reliant scale; positive responses to these items were rare (i.e., *4= agree or 5= strongly agree*). Outlier responses in the headstrong and adaptive self-reliance subscales were consistent

with high scores on one subscale and low scores on the other subscale (e.g., very high in adaptive self-reliance, very low in headstrong self-reliance).

I also reviewed skewness and kurtosis statistics. In Time 1, skewness fell between 0.09 and 1.0 for most items, except for three other-reliant items 6-8, which ranged from 1.01 to 1.38. In Time 2, the skewness of most items fell between 0.1 and 1.0. One item from the headstrong subscale (MHSRS_2) and all four from the other-reliant subscale (MHSRS_5, 6, 7, 8) had a statistic between 1.05 and 1.35. Altogether, these statistics suggest that the data is relatively normal and, therefore, appropriate for running analyses related to temporal consistency.

Main Analyses

MHSRS total subscale scores were compared across Time 1 and Time 2 using Pearson's correlation (see Table 17).

Table 17
Study 3: MHSRS Subscale Descriptive Statistics with Test-Retest Correlations

Subscale Scores	*M*	*SD*	*n*	Pearson Correlation [CI]
HSR Time 1	13.32	3.96	57	
HSR Time 2	13.97	3.95	57	
HSR test-retest				**.69** [.52, .81]**
OR Time 1	7.40	2.96	57	
OR Time 2	6.84	2.74	57	
OR test-retest				**.70** [.54, .82]**
ASR Time 1	13.60	3.85	57	
ASR Time 2	14.23	3.94	57	
ASR test-retest				**.78** [.65, .86]**

Note. ** Correlation significant at the 0.01 level. *M* = mean. *SD* = standard deviation. HSR represents headstrong self-reliance. OR represents other-reliance. ASR represents adaptive self-reliance.

The analyses revealed high reliability for headstrong self-reliance, $r = .69$ ($df = 55$, $p < .001$, 95% CI [.52, .81]), other-reliance, $r = .70$ ($df = 55$, $p < .001$, 95% CI [.54, .82]), and

adaptive self-reliance, $r = .78$ ($df = 55$, $p < .001$, 95% CI [.65, .86]). These correlation coefficients suggest that participants' scores were highly stable over time.

Subscale internal reliabilities were good across all subscales in both timepoints: Time 1 ($\alpha = .87$ for headstrong self-reliance; $\alpha = .86$ for adaptive self-reliance; $\alpha = .84$ for other-reliance) and Time 2 ($\alpha = .85$ for headstrong self-reliance; $\alpha = .88$ for adaptive self-reliance; $\alpha = .83$ for other-reliance).

Discussion

This study provided evidence of high temporal reliability over three weeks for headstrong self-reliance, adaptive self-reliance, and other-reliance. Specifically, the headstrong self-reliance subscale demonstrated similar results to past measures, compared to the 4-week test-retest reliability reported for the Masculine Behavior Scale ($r = .48$, MBS; Snell Jr., 1989), and 2-week reliability observed in the Conformity to Masculinity Norms Inventory-94 ($r = .80$, CMNI-94; Mahalik et al., 2003). In comparison to the occupational and organizational self-reliance literature, scores were similar to the 2-week test-retest scores of counterdependence (aligned to headstrong self-reliance) and over-dependence (aligned to other-reliance) were reported as $r = .80$ and .67, respectively (Quick et al., 1992).

Given that the MHSRS was designed to capture relatively stable but context-sensitive tendencies in how individuals manage their mental health, moderate-to-high test-retest reliability over this short time frame is both appropriate and expected. Psychometric literature suggests that shorter intervals generally yield higher temporal reliability (Furr, 2020), however the goal of temporal reliability is not perfect stability, but instead consistency that aligns with the theoretical nature of the construct. These findings support the hypothesis that self-reliance is stable over

short durations, which is expected and necessary in the current conceptualization, due to the ingrained nature of self-reliance beliefs, which develop early and get reinforced over time.

Chapter 6: General Discussion

Concern about self-reliance as a significant barrier to mental health treatment in the existing literature is warranted, not only due to the frequency with which this barrier is cited (e.g., Kessler et al., 2001; Wuthrich & Frei, 2015) but also due to the negative influence it has on individuals' mental health and well-being (e.g., Mathews et al., 2013; Rickwood et al., 2022; Wuthrich & Frei, 2015). Unfortunately, the singular expression of self-reliance referenced in the literature, the inconsistent ways self-reliance is defined, and the limited understanding of how self-reliance relates to mental health is problematic. With a simplistic conceptualization and "[no] single, valid, and standard measure to capture self-reliance in mental health studies" (Ortega & Alegría, 2002, p. 133), an extensive literature review was required to provide a more nuanced understanding of self-reliance to consider both the good and bad qualities associated with this attitude.

The goal in developing the Mental Health Self-Reliance Scale (MHSRS) was to provide a psychometrically sound tool for researchers and clinicians to assess self-reliance more accurately. With the ability to capture both adaptive and maladaptive expressions in a single, accessible tool, this scale moves beyond the simplistic classification of self-reliance, and provides a clearer understanding of how self-reliance manifests in mental health management.

Psychometric Rigor

Across three studies, I developed and validated a brief measure of mental health self-reliance, the MHSRS. Following the four-step process for scale development (Furr, 2011; 2020), I first reviewed the historical relevance of self-reliance across multiple bodies of literature, including attachment, masculinities, mental health service utilization, positive psychology/positive masculinity, self-determination theory, clinical psychology and

psychopathology, psychosocial determinants of mental health, and occupational and organizational psychology areas. I conceptualized self-reliance as a multidimensional construct and defined three unique expressions of the attitude. *Headstrong self-reliance* refers to a rigid reluctance, where individuals with high levels of this expression tend to manage their mental health by disconnecting from those around them as they resist seeking help and instead engage in ineffective coping strategies. *Adaptive self-reliance* reflects a more balanced approach, where individuals with high levels of this expression tend to manage their mental health by valuing deep connection and unconditional support while using active coping strategies. *Other-reliance* describes another rigid approach, where individuals with high levels of this expression manage their mental health with a strong dependence on others- drawing on active support, guidance, and leadership from others. These definitions guided the item writing process.

I envisioned this scale as beneficial for research and clinical practice; therefore, it made sense to keep it broad (as in, not specific to informal or formal help-seeking) and applicable to the general population. I selected an item response format and created items for the initial item pool during Step 2. With the support of an item writing team comprised of faculty members and graduate students in clinical psychology, I created an initial item pool of 48 items (17 items related to headstrong self-reliance, 15 items related to adaptive self-reliance and 16 items related to other-reliant items). I selected a 5-point scale for participants to rate their level of agreement to provide enough options to discriminate between categories but not too many to overwhelm the participants (Krebs & Hoffmeyer-Zlotnik, 2010). I also included labels for clarity (Johnson & Morgan, 2016; Krosnick & Presser, 2009). Possible responses ranged from *1-strongly disagree* to *5- strongly agree*.

Previous self-reliance measures demonstrate limited empirical support for reliability, validity, and test-retest stability (with a few exceptions, such as the CMNI; Mahalik et al., 2003), making it critical for Studies 1, 2, and 3 to support the development of a psychometrically robust measure. Step 3 of the scale development process involved collecting data, while the purpose of Step 4 was to analyze this data and evaluate the scale's psychometric properties (Furr, 2011; 2020). In Study 1, participants responded to the initial item pool. I analyzed the data and reviewed the two-, three-, and four-factor models to explore whether self-reliance operates as a continuum (i.e., two factors) or three or more distinct factors. The exploratory factor analysis indicated that the three-factor model had the best fit, and these factors were conceptually clear. Considering the goals of a psychometrically strong yet brief scale, I reduced the scale to 12 items (with four items used to measure each unique expression of self-reliance). Headstrong self-reliance items captured the avoidance of help, a need to rely on oneself, a determination to manage challenges alone, and an avoidance of sharing problems with others. Adaptive self-reliance items reflected a balance of relying on self and others, asking for support if needed, and feeling confident to ask for support when navigating mental health challenges. Other-reliance items focused on a dependence on others, including a reliance on others to direct decision-making and to support coping with mental health challenges.

The confirmatory factor analysis results in Study 2 further supported the hypothesized factor structure, with good to excellent reliability across the three subscales. Evidence of construct validity was also captured in Study 2, providing critical information regarding each expression of self-reliance. I included measures related to mental health management, interpersonal support and dependence, psychological well-being and self-efficacy, and social connection and isolation. I found that individuals high in headstrong self-reliance were likely to

manage their mental health independently, and despite reporting feeling lonely, they had a rigid reliance on themselves and disinterest in accessing support from others. These individuals were also more likely to identify stigma and barriers to help-seeking and rely on maladaptive coping strategies (like emotional control) to manage their mental health. Further, they expressed a negative attitude toward help-seeking. I found that individuals high in adaptive self-reliance were likely to manage their mental health with a non-rigid reliance on themselves and an openness to bring in support from others. These individuals were autonomous and had competence in managing their mental health with effective coping strategies. They expressed low levels of stigma and cared most about relating to others (as opposed to having structured support from others). I found that individuals high in other-reliance were likely to have low levels of autonomy and a heavy reliance on others, particularly for support, guidance, and leadership. They expressed minimal willingness to do anything to manage their mental health themselves and identified barriers and stigma related to help-seeking. While these individuals were likely to engage others in their mental health management, they also were likely to feel lonely. Findings from Study 2 emphasize the unique features of each expression of self-reliance, broadening the focus of self-reliance beyond a simple attitude.

The temporal stability of the MHSRS was assessed in Study 3. All subscales had good internal reliability and good test-retest reliability. Altogether, results from this project suggest a positive move towards a reliable and valid measure of self-reliance within the context of mental health. The three studies provide evidence for three distinct expressions of self-reliance for managing mental health.

Implications

The development of the MHSRS now allows for the simultaneous capture of both positive and negative features of self-reliance, which will offer a deeper understanding of how an individual may respond when their mental health is challenged. The MHSRS offers several advantages over current self-reliance measurement strategies. First, it focuses specifically on self-reliance for managing mental health, distinguishing it from masculinities scales (e.g., CMNI-94; Mahalik et al., 2003) which in some cases describe a very specific presentation of self-reliance (i.e., the self-reliance through mechanical skills subscale in MRNI-R, Levant et al., 2013).

Second, the MHSRS assess three expressions of the self-reliance attitude together. No measure has been developed within the masculinities and mental health service utilization literature to assess both positive and negative aspects of self-reliance simultaneously. Two scales from the occupational and organizational psychology literature (the Self-Reliance Inventory; Quick et al., 1992) have considered two self-reliance expressions- a negative low (overdependence) and a negative high (counterdependence) expression. The revised version of this scale, the Self-Reliance Inventory-II (Joplin et al., 1999), did include three expressions (adding interdependence, which is a positive, flexible expression), however, items are work-focused and not applicable to mental health contexts (e.g., *I can perform high quality work with little support from others*.)

A third advantage of the MHSRS is the strong initial reliability and validity findings. Each subscale demonstrated good to excellent reliability (ranging from $\alpha = .81$ to .90) across four data collection points and high temporal reliability (ranging from $r = .69$ to .78). These findings are comparable or superior to that of existing measures in the masculinities and occupational and organizational psychology literatures. Future research is needed to build more evidence for the

multidimensional conceptualization of self-reliance and these three unique expressions of self-reliance. Having a clear distinction between headstrong, adaptive, and other reliance, the MHSRS can provide insights into the quality and flexibility of self-reliance, which can support policymakers and clinicians as they aim to create more targeted strategies for managing mental health.

For Policy Makers

The MHSRS offers a more precise instrument to explore the relationships between self-reliance, mental health, and service utilization. By differentiating between the three expressions of self-reliance, this scale moves beyond the traditional binary view of individuals as simply 'self-reliant' or 'not.' This distinction is critical for policymakers and mental health practitioners, as it supports targeted interventions.

Findings from this research can inform the design of mental health literacy programs, community services, and self-directed care options that align with the specific needs of individuals based on their scores on each of the three self-reliance subscales. For instance, targeted mental health campaigns can address specific attitudes toward help-seeking: reducing stigma and promoting structured coping strategies for those high in headstrong self-reliance, encouraging skill-building and gradual self-sufficiency for those high in other-reliance, and reinforcing existing strengths and community connections for those who are high in adaptive self-reliance. These findings build on and are strengthened by broader efforts to improve willingness to access mental health care. As Stuart (2006) emphasizes, stigma is another critical barrier that influences an individual's willingness to access care. By providing greater clarity on the unique expressions of self-reliance, the MHSRS offers a practical tool to identify how stigma and self-reliance attitudes intersect for supporting or hindering help-seeking.

Preventative options like early psychoeducation and skills in emotion regulation, coping, and resilience could improve mental health outcomes. Children with avoidant coping styles often continue these patterns into adulthood (Compas et al., 2017), and teaching emotional communication, empathy, and self-regulation at a young age has been linked to better mental health in adulthood (Durlak et al., 2011; Greenberg et al., 2003). Even men with tough exteriors have been shown to lack core skills like resilience, self-esteem, and autonomy (Hammer & Good, 2010), so providing school-based programming that offers these adaptive coping skills may support the uptake of these strategies. Findings from Study 3 underscore the challenge of supporting those high in headstrong self-reliance: the rigid nature of this attitude makes it more likely that no one will be consulted for help. This reluctance to engage in informal support is particularly significant, given its role in facilitating formal help-seeking. According to Pescosolido's network episode model (NEM; 1998), informal support networks often bridge to formal treatment by encouraging individuals to seek professional help. If those high in headstrong self-reliance avoid informal sources of support, not only do they miss out on emotional and instrumental assistance, but they also reduce the likelihood of receiving guidance or encouragement to pursue professional support.

The revised conceptualization of self-reliance and the MHSRS provide additional evidence that there is no one-size-fits-all approach to self-reliance in managing mental health. Self-reliance presents in different ways, and the ability to distinguish between these three expressions allows for a more nuanced understanding of how individuals engage with mental health support. Findings from concurrent validity measures reinforce how individuals might navigate their mental health management- both personally and in their interactions with others. The MHSRS can be used within service utilization research to assess the different self-reliance expressions

across various populations, offering updated insights into how individuals approach mental health challenges.

Assessment Processes and Clinical Interventions

Though not all individuals who struggle with their mental health access treatment, some do. Whether they enter formal mental health treatment on their own, through the support of others or by coercion, a brief, reliable and multidimensional measure of self-reliance can inform assessments and support tailored approaches. If integrated into an assessment or intake, the MHSRS would offer insights into the clients' attitudes toward support and coping mechanisms they may rely on, helping clinicians make targeted recommendations. This information could also enable clinicians to identify patterns that may support or hinder the therapeutic process.

If used during the intake or assessment process, by an intake team (e.g., general practitioners, psychologists) the MHSRS could support the triage process to help providers connect individuals to a mental health management strategy that would appeal to them. For instance, those high in adaptive self-reliance might benefit from journaling or community reconnection. In contrast, those high in headstrong self-reliance may respond well to non-emotional interventions, such as exercise, behavioural experiments, and lifestyle changes to support emotional regulation. Individuals high in this type of self-reliance may also be at higher risk for treatment non-adherence and dropout, which clinicians can be aware of.

In addition to directing individuals to appropriate mental health management strategies, MHSRS subscale scores can be used to help clinicians tailor treatment. An important empirical question for future research is determining which clinical skills and interventions are most effective for individuals based on their scores on each subscale. For example, individuals who scored lower on the adaptive subscale may benefit from strength-based approaches that reinforce

the client's existing coping skills, with the opportunity to enhance resilience. Individuals who score high on the headstrong subscale may benefit from a slower-paced approach, so the client feels more in control of the process before addressing deeper goals. Individuals who score high on the other-reliance scale may benefit from interventions that focus on processing historical experiences and emphasize autonomy and mastery, supporting a gradual shift towards self-directed coping. Given the increasing focus on personalized and tailored interventions in mental health treatment (e.g., Levinson et al., 2022; Moskow et al., 2023), future research should explore how specific therapeutic techniques align with the different expressions of self-reliance.

Flexible self-reliance has also been encouraged as a practical component of mental health treatment. Depending on the mental health clinicians theoretical orientation, they may encourage clients to exercise self-reliant behaviours throughout the therapeutic process. This may include a client helping to create the therapy session agenda or practicing self-awareness and coping skills independently to reduce the need for future treatment (e.g., Potter & Settle, 1994). Ortega and Alegría (2002) note that a benefit of self-reliance is that it is remarkably malleable, making it a feasible target in mental health treatment when coupled with psychoeducation to protect against a rigid adoption of the attitude. Aligning treatment goals and strategies to one's needs is particularly important to encourage client retention and symptom improvement. Due to the brevity of the MHSRS, clinicians could administer this scale over time (e.g., yearly) to track changes in self-reliance, providing additional insights into client progress.

Limitations and Future Directions

The three-dimensional framework of mental health self-reliance offers a novel contribution to the literature. However, there are limitations in this research which can be used as future directions for further psychometric validation and construct clarity.

Additional Psychometric Validation

Measurement Invariance. With this reliable and valid measure, future research should explore the presence of these three unique expressions of self-reliance across other populations and across different time points (Maassen et al., 2023). The data collected in Studies 1-3 included primarily White individuals from the United States of America, an individualistic culture that emphasizes independence. This sociodemographic sample limits the study's generalizability across cultures and ethnicities where self-reliance is not emphasized as strongly. Research suggests that individualistic cultures prioritize autonomy and self-expression, while collectivist cultures value group harmony and interdependence (Triandis et al., 1986, 1988). These differences affect how self-reliance is perceived, with collectivist samples often using self-reliance to avoid burdening others, contrasting the individualistic view of self-reliance as a demonstration of personal strength (Triandis et al., 1988). Therefore, the expressions and implications of self-reliance observed in these studies may not fully translate across cultural contexts. Future research can explore how different expressions of self-reliance vary across cultural contexts.

Since the MHSRS was designed for general use, I did not use the sample to target groups where a particular self-reliance expression would be expected. Research suggests that headstrong self-reliance tends to be more pronounced in adolescents and young adults, military personnel, rural community members and men, however these groups were not focused on. Studies 1-3 did not include adolescents (eligibility was restricted to individuals aged 18 and older), and while participants under 25 were represented, the average age of participants ranged from 40-45 years old. Military status was not recorded in the sociodemographic questionnaire, and only Study 2 included data on community size, with 23% of participants living in a rural area. Gender

distribution was relatively balanced across Studies 1 and 3, while Study 2 had a slightly higher proportion of female participants. Future research can explore the presence of each self-reliance expression across these and other population groups. The nuanced conceptualization now offered through use of the MHSRS also offers an opportunity to re-examine previous associations to determine whether rigid self-reliance remains particularly prevalent in these groups (i.e., adolescents and young adults, military personnel, rural community members and men) or if a more nuanced distribution emerges when accounting for adaptive and other-reliance expressions.

Timing of Data Collection. The timing of scale administration relative to an individual's mental health status could yield valuable insights. Studies 1, 2, and 3 included participants with varying levels of distress and mental health histories but did not examine how an individual may feel as they are actively navigating their mental health challenge and either coping autonomously or engaging in support from others. Data collection as individuals are navigating a challenging period for their mental health and following up to better understand their progress and the types of support they accessed (if any), would be important research. The stability of these self-reliant factors over time also warrants further investigation, and diverse samples should be collected (i.e., varying cultures across the lifespan) for these longitudinal studies to enhance understanding. Exploring self-reliance during transitions, such as a shift from self-reliance to seeking social support, could guide strategies to support individuals as they manage their mental health. While Study 3 collected test-retest data over a short three-week timeframe, a more extended period would better capture potential changes in self-reliance during mental health challenges and various life experiences.

Scale Validation and Model Fit Evaluation. Ensuring a balance between brevity and psychometric rigor is a key challenge in scale development. Brief scales are often shown to have

lower reliability than longer scales (e.g., Credé et al., 2012; Furr, 2020; John, 2014; McGrath, 2005; Smith et al., 2000; Stanton et al., 2002). In this study, reliability scores slightly decreased when the scale was reduced from 18 to 12-items. Specifically, headstrong and adaptive self-reliance went from $\alpha = .88$ to 84, and other-reliance went from $\alpha = .91$ to .90. Although reliability was marginally higher with the 18-item version, model fit indices suggested that the 12-item version (with four items per subscale) provided the best overall fit.

Another common concern with shorter scales is that fewer items may not fully capture the complexity of a construct (e.g., Credé et al., 2012; Smith et al., 2000). However, each MHSRS subscale includes items that focus on the reliance on self, willingness to engage others, and ways that individuals may manage their mental health (e.g., avoid talking about it, having others direct the path, actively cope). While each mental health journey is unique, the MHSRS items offer a starting point to understand how individuals may manage their mental health. Where further context is required (such as in clinical settings), follow-up questions allow a psychologist to explore aspects of support for an other-reliant client, self-directed tools for a headstrong client, or specific areas where adaptive self-reliant clients may need a bolstering of skills.

While overall model fit for the three-factor structure of the MHSRS was good (with TLI of 0.92 and RMSR of 0.07), the RMSEA value of 0.08 was higher than expected. This discrepancy may be due to RMSEA's tendency to penalize models with lower degrees of freedom, as well as the sensitivity to sample size (Kenny et al., 2015). Given that Study 2 had a smaller sample size (n = 233 after data cleaning), RMSEA inflation is a possibility (Xia & Yang, 2019). Future studies should focus on larger sample sizes, to see if there is an influence on the RMSEA. If larger samples do not provide a change in the RMSEA, specific items and subscale relationships should be explored for increased model stability (Xia & Yang, 2019).

Future directions may also aim to expand the validity evidence of the MHSRS. One such area could be the use of an attachment scale (e.g., Adult Attachment Scale; Hazen & Shaver, 1987), which could provide additional support to the hypothesized attachment foundations for each self-reliance expression. Other areas of validity that may be useful include other forms of help-seeking (e.g., including informal sources of support), relationship satisfaction and various coping strategies (e.g., identifying which strategies are used). Future studies could also include a multitrait-multimethod approach, comparing self-reports to observer ratings to reduce potential bias and personal influence (e.g., Hoyle et al., 2025) and to determine whether these expressions represent both internal states and observable behaviours. Collecting collateral information through observer ratings will also provide context to determine whether an individual truly understands their experience and if it matches how others perceive them.

Considerations for Self and Others

Findings from Study 2 focused on the relationship between self-reliance and social influences. Related to seeking support, individuals higher in headstrong self-reliance reported higher levels of public and self-stigma and identified help-seeking barriers. These relationships were not found in those high in adaptive self-reliance Further, there were also large negative relationships between scores on the headstrong self-reliance and a willingness to share with others- this was shown by a negative relationship to scores on the use of emotional social support subscale (COPE-ESS, Carver et al., 1989) and a positive relationship to the emotional control subscale (CMNI-SR, Mahalik et al., 2003). This fits with previous research on gender norms, where highly headstrong individuals are expected to experience self-stigma and a belief that seeking help is a sign of weakness, which gets in the way of them accessing support (Addis & Mahalik, 2003; Choo & Marszaelek, 2018; Mahalik et al., 2003). This may partly explain the

prevalence of headstrong self-reliance in previous literature among adolescents and individuals in masculinity-influenced roles like the military, where peer influence and concerns over social image contribute to their resistance to seeking help (Brown et al., 2008; Gulliver et al., 2010; Hammer & Good, 2010). Future research may focus on the impact of how others perceive individuals high in headstrong self-reliance.

Despite a strong desire to avoid talking about ones problems, individuals high in headstrong self-reliance were also more likely to report feeling lonely. This finding aligns with previous research indicating that rigidly self-reliant individuals experience lower levels of social support (Burns & Mahalik, 2006; Smith, 2014) and greater social isolation (Choo & Marszalek, 2018; Hall et al., 2013). This discrepancy suggests an interesting contradiction; that individuals high in headstrong self-reliance appear to yearn for connection, while at the same time avoid discussion about personal and meaningful emotional struggles. Such feelings of isolation would lead to them feel less connected to others, perhaps exacerbating feelings of loneliness (activating their historical experience as described by Horney, 1950 and Quick, 1992). A potential lack of ability to engage vulnerably in relationships reinforces a cycle where individuals believe they must navigate their struggles alone yet lack the necessary skills and understanding to do so effectively. Future research could explore the impact psychosocial and interpersonal histories has on the development of this expression of self-reliance.

Conclusion

Mental health management is complex, and the Mental Health Self-Reliance Scale (MHSRS) addresses a critical gap in measuring self-reliance. The goal in developing the MHSRS was to provide a psychometrically sound tool for researchers and clinicians to assess self-reliance confidently. With the ability to capture both adaptive and maladaptive expressions

using a single, accessible tool, this scale moves beyond labelling self-reliance as simply 'helpful or harmful' and towards a clearer understanding of how self-reliance impacts well-being. Findings from Studies 1-3 provide compelling evidence that each expression of self-reliance reflects a distinct way of managing mental health, coping, and engaging in social connection. This work offers a promising foundation for a more nuanced understanding of self-reliance related to mental health management.

Capturing these nuances, the MHSRS offers clinicians and policymakers an opportunity to explore how the unique expressions of self-reliance impact mental health and help-seeking behaviours. Rather than a binary assessment of self-reliance as a barrier, the MHSRS identifies the underlying factors that contribute to help-seeking avoidance, offering deeper insights into the psychological mechanisms at play. Future research can build on these findings to further clarify the complexities of self-reliance, ultimately informing strategies to improve mental health management and support individuals on their path to well-being.

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Appendix A
Items Measuring Self-Reliance Currently Used in the Literature

Study Authors	Items Measuring Self-Reliance	Administration Method or Scale Title	Subscale
Wells et al., 1994[1]	*You thought it was something you should be strong enough to handle alone*	Qualitative	N/A
van Zoonen et al., (2015)[2]	*Feeling one should solve his/her own problems*	Qualitative	N/A
Phillips, 1965[3]	*People should be expected to handle their own problems*	Qualitative	N/A
Fischer et al., 2016[4]	*"Sometimes people think they should be able to handle emotional or mental health issues on their own rather than seek medical care; what do you think about that?"*	Qualitative	N/A
Ortega & Alegría, 2002[5]	*Preferred to solve their emotional problems on their own*	Dichotomous item	N/A
Funch & Marshall, 1984[6]	"*Who is responsible for the woman's recovery"* (self or family)	Dichotomous item	N/A
Snell Jr., 1989[7]	*I try to be in control of everything in my life* *I make sure that I "call all the shots" in my life* *I don't take orders (or advice) from anybody* *I don't let others tell me what to do with my life* *I don't allow others to have control over my life*	Scale- Masculine Behavior Scale (MBS)	Exaggerated self-reliance & control
Thompson & Pleck, 1986[8]	*A good motto for a man would be, 'when the going gets tough, the tough get going'* *Nobody respects a man very much who frequently talks about his worries, fears, and problems*	Scale- Male Role Norms Scale (MRNS)	Toughness norms
McCreary et al., 2005[9]	*As a man, how important is it for you to be self-sufficient and always to try to handle problems on your own?*	Scale- Traditional Attitudes About Men (TAAM)	Self-reliance
Levant et al., 1992[10]	*A man should never count on someone else to get the job done*	Scale- Male Role Norms Inventory-58 (MRNI)	Self-reliance

Study Authors	Items Measuring Self-Reliance	Administration Method or Scale Title	Subscale
Levant et al., 1992[10]	*A man should think things out logically and have good reasons for what he does* *Men should always be realistic* *A man should be level-headed* *A man should never doubt his own judgment* *A man must be able to make his own way in the world* *A man who takes a long time and has difficulty making decisions will usually not be respected*	Scale- Male Role Norms Inventory-58 (MRNI)	Self-reliance
Levant et al., 2007[11] Levant et al., 2013[12]*	*A man should be able to perform his job even if he is physically ill or hurt* *Men should not borrow money from friends or family members* *A man must be able to make his own way in the world* *A man should never count on someone else to get the job done*	MRNI- R	Extreme self-reliance
	*Men should have home improvement skills**	MRNI- SF *	Self-reliance through mechanical skills*
	*Men should be able to fix most things around the house** *A man should know how to repair his car if it should break down**		
Mahalik et al., 2003[13] Parent & Moradi, 2009[14] ◊ Levant et al., 2020[15] ∴	*I hate asking for help* ◊ *I ask for help when I need it* ◊ *Asking for help is a sign of failure* *I never ask for help* ◊ ∴ *I am not ashamed to ask for help* ◊ ∴ *It bothers me when I have to ask for help* ◊ ∴	Scale- Conformity to Masculine norms Inventory; CMNI-94 CMNI-46 ◊ CMNI-30 ∴	Self-reliance
Wuthrich & Frei, 2005[16]	*I wanted to help myself in my own way* *I was worried I would lose my independence*	Barriers to Treatment Checklist	N/A
Sareen et al., 2007[17]	*I wanted to solve the problem on my own*	Single item in checklist	N/A

Study Authors	Items Measuring Self-Reliance	Administration Method or Scale Title	Subscale
Kuhl et al., 1997[18]	*If I had a problem I would solve it by myself* *I think I should work out my own problems*	Scale- Barriers to Adolescents Seeking Help (BASH)	Self-Sufficiency
Clement et al., 2012[19]	*Wanting to solve the problem on my own.*	Scale- Barriers to Access to Care Evaluation (BACE)	
RAND Corporation (2018)[20]	*If I were suffering from mental health problems, I would feel responsible for my problems* *If I had mental health problems, I would be reluctant to seek professional help* *I would not be respected if I talked about my worries, fears, and problems* *I would see myself as weak if I had mental health problems and could not fix them myself* *If I sought mental health treatment, I would be seen as weak* *If I had mental health problems, getting mental health treatment would be a last resort* *If I had mental health problems and asked for professional help, I would be admitting that my coping skills were inadequate*	Barriers to Mental Health Care Bank	N/A
Mansfield et al., (2005)[21]	*I would think less of myself for needing help* *I don't like other people telling me what to do* *Nobody knows more about my problems than I do* *I'd feel better about myself knowing I didn't need help from others* *I don't like feeling controlled by other people* *It would seem weak to ask for help* *I like to make my own decisions and not be too influenced by others* *I like to be in charge of everything in my life* *Asking for help is like surrendering authority over my life* *I do not want to appear weaker than my peers*	Scale- Barriers to Help Seeking Scale (BHSS)	Need for Control and Self-Reliance

Study Authors	Items Measuring Self-Reliance	Administration Method or Scale Title	Subscale
Jennings et al., (2015)[22] (Items confirmed by K. Black, personal communication, March 24, 2021).	*I deal with problems by talking with friends and family as opposed to seeking mental health treatment* *Psychological problems tend to work themselves out without help* *Strong people can get over psychological problems by themselves*	Scale- Adapted from Inventory of Attitudes Toward Seeking Mental Health Services (Mackenzie et al., 2004)	N/A
Van Zoonen et al., (2016)[23]	*Psychological problems are best kept to one's self*	Scale- Trust in Mental Health Care (Friele et al., 2000)	N/A
Quick et al. (1992)[24]	*I make a strong effort to work alone and in a solitary fashion* *It is difficult for me to delegate work to others* *I regularly and easily spend time with other people during the work day (reverse)* *Developing close relationships at work will backfire on you* *I trust at least two other people to have my best interests at heart (reverse)* *I think I am the only one who can do a job right* *I avoid depending on other people because I feel crowded by close relationships* *I am frequently suspicious of other people's motives and intentions* *Asking for help makes me feel needy, and I do not like that* *I have a healthy, happy home life (reverse)* *I need to have colleagues or subordinates close in order to feel secure about my work* *People will always be there when I need them (reverse)* *I become very concerned when I have conflict with family members at home*	Scale- Self-Reliance Inventory	Counter-dependence Over-dependence

Study Authors	Items Measuring Self-Reliance	Administration Method or Scale Title	Subscale
Quick et al. (1992)[24]	*I have little difficulty leaving an old job and friends for a new job (reverse)* *I am comfortable working alone for extended periods of time (reverse)* *I get upset and disturbed if I have conflicts in relationship(s) at work* *On some tasks I can work effectively without other people (reverse)* *I prefer frequent feedback from my boss to know I am performing well* *I always consult others when I make decisions* *It is always difficult for me to leave home or work to go to the other*	Scale- Self-Reliance Inventory	Counter-dependence
Joplin et al. (1999)[25]	*Difficult situations can be overcome* *I feel secure in my ability to meet life's challenges* *On some tasks I can work effectively without other people* *I can perform high quality work with little support from others* *I am successful at what I do* *The actions I take are usually right* *Friends are a waste of time because in the end they will desert you* *Needing someone is a sign of weakness* *There is no one who can understand things in my life* *I put myself at risk if I ever let anyone know I need them* *I don't like it when people try to find out too much about me* *People will always reject you when they find out what you are really like* *Life would be much easier if I didn't have to deal with other people*	Scale- Self-Reliance Inventory-II	Inter-dependence Counter-dependence

Study Authors	Items Measuring Self-Reliance	Administration Method or Scale Title	Subscale
	It is difficult for me to delegate work to others *It is difficult to make a decision without consulting others* *I'm more comfortable being a follower than a leader*		Over-dependence

Appendix B
Study 1 Recruitment Statement:
Managing Mental Health Survey

Thank you for your interest in this survey. The consent form that follows describes what the survey is about and how long we expect it to take to complete. At the end of the consent form you will be asked whether you want to participate. Briefly, we are interested in finding out about how you manage your mental health and will therefore be asking you a number of questions about: (a) psychological symptoms and past mental health support, (b) self-reliance for managing your mental health, (c) your attitudes towards seeking mental health services, (d) social and treatment supports you may use, (e) general coping strategies and (f) how you met your personal needs during a specific moment when you were managing your mental health.

Appendix C
Study 1 Consent

Research Project Title: Managing Mental Health Survey

Principle Investigator: Ms. Lindsay Berard, Clinical Psychology Doctoral Candidate
Department of Psychology, University of Manitoba
Email: umhuska@umanitoba.ca

Supervising Investigator: Dr. Corey Mackenzie, Ph.D., C. Psych. Department of Psychology, University of Manitoba
Email: corey.mackenzie@umanitoba.ca

This consent form, which should be printed if you wish to have a copy for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

Study Purpose and Procedure: The purpose of this study is to better understand how Canadian and American adults manage mental health challenges. If you agree to participate, the survey will include questions about: (a) psychological symptoms and past mental health support, (b) self-reliance for managing mental health, (c) your attitudes towards seeking mental health services, (d) social and treatment supports you may use, (e) general coping strategies and (f) how you met your personal needs during a specific moment when you were managing your mental health. There are also some questions about your demographic information (e.g., age, education, etc.). We expect that the average person will complete this survey in 10-15 minutes.

Potential Risks and Benefits: This study contains questions about your mental health. Although we do not expect participants to experience any negative feelings, some participants may feel uncomfortable or upset answering these questions. If this should happen, we provide coping resources at the end of the study. Otherwise, there are no known risks to participating. Benefits include the compensation you receive for taking part in this survey.

Anonymity and Confidentiality: All of the information you provide will be anonymous. That is, your individual responses cannot be linked with your name or identifying information. The data are stored on the Qualtrics Website in a password-protected file. We will also download the data and keep it in this way. Only authorized personnel (the principal investigator, or affiliated researchers and research assistants involved in the research) will have access to the data. Information will be stored for at least 2 years, and possibly indefinitely. Qualtrics will also store data. As a company from the United States, the information Qualtrics keeps will be subject to laws in the United States. The risks associated with this site are minimal and are comparable to risks associated with using social media sites.

Compensation: You will be compensated $2.50 USD for your participation in the study.

Withdrawal: You may end your participation in the study at any time, and this can be done by closing your internet browser. There are no consequences to withdrawing your participation, however a completed survey is required for compensation. Because your personal information is not collected during the study, we cannot identify which response is yours. Therefore, you will not be able to withdraw your participation from the study after you submit your survey.

Debriefing after the study: At the end of the study, we will provide you with contact information for the principal investigator should you have any questions about this survey. We will also provide a link to mental health resources where you live should you or anyone you know need them.

Research dissemination: The results from this study will be used as part of the principal investigator's Doctoral Dissertation research. Additionally, results will be shared in research articles and conference presentations. Across all dissemination types, all participant data will be examined collectively, no individual responses will be included.

Consent: By selecting the "I agree" button below indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

The University of Manitoba may look at your research records to see that the research is being done in a safe and proper way.

This research has been approved by the Research Ethics Board at the University of Manitoba, Fort Garry campus. If you have any concerns or complaints about this project, you may contact any of the above-named persons or the Human Ethics Officer at (204) 474-7122 or humanethics@umanitoba.ca. You should print a copy of this consent form to keep for your records and reference.

Please select "I agree" if you would like to participate.
If you would not like to participate, please select "I disagree" to be brought to the end of the survey
__ I agree
__ I disagree

Appendix D
Study 1 Questionnaire

Integrity Item

We care about the quality of our survey data and hope to receive the most accurate measures of your opinions, so it is important to us that you thoughtfully provide your best answer to each question in the survey.

To what extent will you be honest and careful in answering the questions in this survey?
__ Not at all honest and careful
__ Slightly honest and careful
__ Mostly honest and careful
__ Completely honest and careful

Sociodemographic Information

Please answer the following questions about you:
What is your age (*drop down)*
I identify my gender as: (please specify)
Which province, territory or state do you live in? (*drop down*)
What is the highest level of education you have achieved? (*drop down)*

Some high school
High school or equivalent
Some college, no diploma
College diploma or trade/technical/vocational training
Some university, no degree
Some university, currently attending
Bachelor's degree
Master's degree
Doctorate degree

What is your current occupational status?
__ Full-time
__ Part-time
__ Retired
__ Unemployed/on Disability
__ Student

Approximately what was your current household income before taxes in previous year? If you are unsure, please provide your best guess. (*drop down)*

$0 - $4,999
$5,000 - $9,999
$10,000 - $14,999
$15,000 - $19,999
$20,000 - $24,999
$25,000 - $34,999
$35,000 - $49,999

$50,000 - $74,999
$75,000 - $99,999
$100,000 - $149,999
$150,000 - $199,999
$200,000 - $249,999
$250,000+

What is your marital status? (*drop down)*
Single
Dating
Married or Common-law
Widowed
Separated or Divorced

Please select one population group from the following options that best fits you:
__ Arab
__ Black
__ Chinese
__ Filipino
__ Indigenous (First Nations, Métis, Inuit)
__ Japanese
__ Jewish
__ Korean
__ Latin American
__ South Asian (e.g., East Indian, Pakistani, Sri Lankan, etc.)
__ Southeast Asian (e.g., Vietnamese, Cambodian, Malaysian, Laotian, etc.)
__ West Asian (e.g., Iranian, Afghan, etc.)
__ White
__ Other – Please specify: _____

We would now like to ask you some questions about your current mental health concerns and mental health treatment.

<u>Mental Health History</u>
When thinking about your mental health throughout your life, from the time you were a young child until today, which statement most accurately describes you
__ I've had fairly serious emotional problems for most of my life.
__ I've struggled emotionally most of my life, although there have been times when I've felt happy
__ I've had about an equal number of difficult times and times when I've been happy
__ I've been happy most of my life, although there are times when I've struggled emotionally
__I've felt happy and had good mental health for most of my life

Please state any mental health concern(s) you currently are experiencing:
Please state any mental health diagnosis(es) you have received:

Was there ever a time during the past 12 months when you felt that you might need to see a professional because of problems with your emotions or nerves?

-Yes
-No
-Don't know

Did you ever in your lifetime go to see any of the professionals on this list for problems with your emotions, nerves, or your use of alcohol or drugs?

(*Yes, No,* or *Don't know* for each)
- Psychiatrist
- General practitioner or family doctor
- Any other medical doctor, like a cardiologist
- Psychologist
- Social worker
- Counsellor
- Any other mental health professional, such as a psychotherapist or mental health nurse
- A nurse, occupational therapist, or other health professional
- A religious or spiritual advisor like a minister, priest, or rabbi

The following question is only presented to individuals who responded YES to any of the professionals from the last question (respond to each professional selected):

When was the last time you saw this professional?
-in the past 12 months
- approximately 2 to 5 years ago
- more than 5 years ago

6-item Kessler Distress Scale (K6; Kessler et al., 2003)

MHSRS Item Pool

We are interested to hear how individuals respond when they are struggling emotionally. This questionnaire asks you to consider how you generally respond in these types of circumstances. If you feel you have responded differently throughout your life, think of the most recent experience where you were struggling emotionally.

For each item, consider "When I am struggling emotionally," then indicate your level of agreement. (*5-point scale: from 1= strongly disagree to 5= strongly agree)*

Items found in Appendix E

Appendix E
Study 1 MHSRS Item Pool with Descriptive Statistics

Item	*M*	SD	Skew (SE)	Kurtosis (SE)	Shapiro-Wilk		
					Statistic	*df*	Sig.
OR_ 1- I follow the advice of others	3.04	1.02	-0.29 (0.11)	-0.37 (0.21)	.90	521	< .001
OR_ 2- I let others decide what I should do	2.13	1.15	0.91 (0.11)	-0.04 (0.21)	.83	521	< .001
OR_ 3- I am quick to agree with other people	2.53	1.14	0.36 (0.11)	-0.77 (0.21)	.90	521	< .001
OR_ 4- I cope by depending on others	2.40	1.17	0.48 (0.11)	-0.77 (0.21)	.88	521	< .001
OR_ 5- I let others make decisions for me	2.16	1.16	0.85 (0.11)	-0.20 (0.21)	.84	521	< .001
OR_ 6- I lack the ability to deal with it myself	2.28	1.74	0.69 (0.11)	-0.53 (0.21)	.86	521	< .001
OR_ 7- I would rather involve others	2.46	1.22	0.41 (0.11)	-0.90 (0.21)	.89	521	< .001
OR_ 8- I place too much confidence in others	2.18	1.11	0.89 (0.11)	0.08 (0.21)	.84	521	< .001
OR_ 9- I cannot rely on myself	2.20	1.12	0.73 (0.11)	-0.32 (0.21)	.86	521	< .001
OR_ 10- I rely too much on others to guide me	2.11	1.15	0.97 (0.11)	0.08 (0.21)	.82	521	< .001
OR_ 11- I cannot make decisions on my own	2.12	1.18	0.91 (0.11)	-0.18 (0.21)	.82	521	< .001
OR_ 12- I need others to tell me what I should do	2.21	1.17	0.74 (0.11)	-0.44 (0.21)	.85	521	< .001
OR_ 13- I feel desperate to get help from others	2.31	1.18	0.68 (0.11)	-0.52 (0.21)	.86	521	< .001
OR_ 14- The first thing I do is ask for help	2.38	1.22	0.63 (0.11)	-0.63 (0.21)	.87	521	< .001
OR_ 15- My family and friends will know what to do	2.87	1.14	-0.07 (0.11)	-0.84 (0.21)	.91	521	< .001
OR_ 16- I seek help from anyone who can provide advice	2.65	1.25	0.26 (0.11)	-1.10 (0.21)	.89	521	< .001
ASR_ 1- I manage with the support of others	3.42	1.12	-0.52 (0.11)	-0.48 (0.21)	.89	521	< .001
ASR_ 2- I don't need to go it alone	3.44	1.14	-0.36 (0.11)	-0.76 (0.21)	.90	521	< .001
ASR_ 3- I ask for help if I cannot solve it on my own	3.55	1.14	-0.58 (0.11)	-0.57 (0.21)	.88	521	< .001
ASR_ 4- I balance relying on myself and others	3.43	1.15	-0.48 (0.11)	-0.66 (0.21)	.89	521	< .001
ASR_ 5- I recognize when I can no longer manage things myself	3.69	1.05	-0.69 (0.11)	-0.13 (0.21)	.87	521	< .001
ASR_ 6- I am confident in my ability to get support	3.56	1.12	-0.47 (0.11)	-0.61 (0.21)	.89	521	< .001
ASR_ 7- I have people to call on if I need help	3.78	1.13	-0.83 (0.11)	-0.07 (0.21)	.85	521	< .001
ASR_ 8- I handle challenges myself and with assistance	3.59	1.06	-0.67 (0.11)	-0.04 (0.21)	.87	521	< .001
ASR_ 9- I accept help if I need it	3.77	1.03	-0.89 (0.11)	0.44 (0.21)	.85	521	< .001
ASR_ 10- I welcome help, but I am ultimately in control	3.76	1.03	-0.76 (0.11)	0.15 (0.21)	.86	521	< .001

Item	*M*	SD	Skew (SE)	Kurtosis (SE)	Shapiro-Wilk		
					Statistic	*df*	Sig.
ASR_ 11- I ask for advice if I need to	3.64	1.14	-0.74 (0.11)	-0.28 (0.21)	.86	521	< .001
ASR_ 12- I admit when I reach my limits	3.60	1.10	-0.69 (0.11)	-0.28 (0.21)	.87	521	< .001
ASR_ 13- I feel comfortable asking for what I need	3.15	1.27	-0.14 (0.11)	-1.12 (0.21)	.90	521	< .001
ASR_ 14- I balance solving problems myself and with supportive others	3.48	1.14	-0.50 (0.11)	-0.60 (0.21)	.89	521	< .001
ASR_ 15- I am not afraid to ask for help if I need it	3.36	1.20	-0.40 (0.11)	-0.82 (0.21)	.90	521	< .001
HSR_ 1- I don't ask for help	3.11	1.30	-0.13 (0.11)	-1.67 (0.21)	.90	521	< .001
HSR_ 2- I rely on myself no matter what	3.38	1.18	-0.38 (0.11)	-0.83 (0.21)	.89	521	< .001
HSR_ 3- I handle the problem on my own	3.60	1.06	-0.63 (0.11)	-0.19 (0.21)	.88	521	< .001
HSR_ 4- I find a way to manage it alone	3.54	1.10	-0.59 (0.11)	-0.35 (0.21)	.88	521	< .001
HSR_ 5- I stay away from advice from others	2.56	1.19	0.48 (0.11)	-0.75 (0.21)	.89	521	< .001
HSR_ 6- I refuse assistance from others	2.54	1.17	0.42 (0.11)	-0.75 (0.21)	.90	521	< .001
HSR_ 7- I reject offers of help	2.47	1.19	0.59 (0.11)	-0.53 (0.21)	.88	521	< .001
HSR_ 8- I do not take advice from anyone	2.35	1.18	0.75 (0.11)	-0.30 (0.21)	.86	521	< .001
HSR_ 9- I do not involve others	3.06	1.24	-0.10 (0.11)	-1.08 (0.21)	.90	521	< .001
HSR_ 10- I feel better knowing I don't need help	3.07	1.23	-0.12 (0.11)	-0.97 (0.21)	.91	521	< .001
HSR_ 11- I avoid talking about my problems	3.21	1.30	-0.16 (0.11)	-1.20 (0.21)	.89	521	< .001
HSR_ 12- I would feel weak if I asked for help	2.63	1.31	0.29 (0.11)	-1.11 (0.21)	.89	521	< .001
HSR_ 13- I hate depending on others	3.56	1.23	-0.53 (0.11)	-0.74 (0.21)	.88	521	< .001
HSR_ 14- I avoid asking for help at all costs	2.73	1.32	0.23 (0.11)	-1.11 (0.21)	.90	521	< .001
HSR_ 15- I prefer to hide how I'm feeling	3.19	1.28	-0.28 (0.11)	-1.06 (0.21)	.89	521	< .001
HSR_ 16- I hide problems from my family and friends	3.12	1.29	-0.13 (0.11)	-1.13 (0.21)	.90	521	< .001
HSR_ 17- Asking for help is a sign of weakness	2.31	1.27	0.67 (0.11)	-0.69 (0.21)	.85	521	< .001

Note. M = Mean, SD = Standard Deviation; SE = Standard Error. Related to the Shapiro-Wilk test, a significant p-value ($p < .05$) indicates a significant deviation from normal distribution. Scale items are grouped into three expressions of self-reliance; OR represent *other-reliance* item, ASR represent *adaptive self-reliance* items, and HSR represent *headstrong self-reliance* items.

Appendix F
Study 1 Covariance Matrix

	OR1	OR2	OR3	OR4	OR5	OR6	OR7	OR8	OR9	OR 10	OR 11	OR 12	OR 13	OR 14	OR 15	OR 16
OR1	1.04	0.61	0.58	0.67	0.54	0.34	0.64	0.50	0.33	0.56	0.36	0.60	0.51	0.64	0.71	0.76
OR2	0.61	1.32	0.82	0.85	1.09	0.74	0.77	0.79	0.71	0.92	0.84	1.01	0.82	0.79	0.58	0.72
OR3	0.58	0.82	1.30	0.75	0.84	0.65	0.72	0.77	0.60	0.80	0.69	0.83	0.70	0.67	0.52	0.67
OR4	0.67	0.85	0.75	1.37	0.83	0.73	0.90	0.75	0.69	0.86	0.75	0.96	0.82	0.91	0.65	0.83
OR5	0.54	1.09	0.84	0.83	1.34	0.76	0.76	0.78	0.73	0.95	0.87	1.05	0.82	0.75	0.58	0.67
OR6	0.34	0.74	0.65	0.73	0.76	1.38	0.53	0.65	0.91	0.75	0.94	0.80	0.78	0.48	0.20	0.46
OR7	0.64	0.77	0.72	0.90	0.76	0.53	1.48	0.66	0.50	0.71	0.58	0.86	0.76	1.02	0.68	0.96
OR8	0.50	0.79	0.77	0.75	0.78	0.65	0.66	1.23	0.61	0.86	0.74	0.81	0.72	0.68	0.50	0.70
OR9	0.33	0.71	0.60	0.69	0.73	0.91	0.50	0.61	1.26	0.72	0.90	0.75	0.76	0.47	0.23	0.49
OR10	0.56	0.92	0.80	0.86	0.95	0.75	0.71	0.86	0.72	1.33	0.91	0.97	0.81	0.73	0.51	0.68
OR11	0.36	0.84	0.69	0.75	0.87	0.94	0.58	0.74	0.90	0.91	1.40	0.91	0.76	0.59	0.34	0.57
OR12	0.60	1.01	0.83	0.96	1.05	0.80	0.86	0.81	0.75	0.97	0.91	1.38	0.83	0.83	0.57	0.78
OR13	0.51	0.82	0.70	0.82	0.82	0.78	0.76	0.72	0.76	0.81	0.76	0.83	1.40	0.77	0.39	0.77
OR14	0.64	0.79	0.67	0.91	0.75	0.48	1.02	0.68	0.47	0.73	0.59	0.83	0.77	1.49	0.72	1.01
OR15	0.71	0.58	0.52	0.65	0.58	0.20	0.68	0.50	0.23	0.51	0.34	0.57	0.39	0.72	1.29	0.72
OR16	0.76	0.72	0.67	0.83	0.67	0.46	0.96	0.70	0.49	0.68	0.57	0.78	0.77	1.01	0.72	1.55
AR1	0.63	0.35	0.41	0.54	0.36	0.10	0.62	0.29	0.13	0.30	0.11	0.38	0.36	0.65	0.63	0.64
AR2	0.46	0.21	0.19	0.38	0.14	-0.01	0.51	0.10	0.03	0.11	-0.02	0.19	0.14	0.47	0.46	0.43
AR3	0.51	0.18	0.17	0.35	0.14	-0.09	0.53	0.11	-0.03	0.10	-0.05	0.19	0.16	0.45	0.46	0.53
AR4	0.59	0.33	0.29	0.47	0.25	0.00	0.61	0.22	0.08	0.25	0.02	0.31	0.23	0.57	0.58	0.61
AR5	0.36	0.16	0.04	0.25	0.09	-0.04	0.38	0.09	0.03	0.03	-0.06	0.11	0.14	0.35	0.36	0.40
AR6	0.36	0.11	0.12	0.19	0.05	-0.30	0.38	-0.01	-0.23	0.02	-0.17	0.07	-0.01	0.43	0.53	0.39
AR7	0.37	0.13	0.14	0.23	0.11	-0.17	0.34	0.08	-0.14	0.04	-0.10	0.10	0.06	0.36	0.53	0.36
AR8	0.49	0.23	0.25	0.35	0.21	-0.03	0.49	0.18	0.04	0.15	-0.01	0.24	0.18	0.46	0.50	0.45
AR9	0.48	0.20	0.19	0.33	0.16	-0.12	0.46	0.15	-0.01	0.13	-0.08	0.18	0.17	0.44	0.43	0.48
AR10	0.35	0.10	0.10	0.14	0.06	-0.14	0.33	0.06	-0.10	0.04	-0.16	0.08	0.06	0.30	0.38	0.31
AR11	0.54	0.18	0.16	0.34	0.13	-0.10	0.49	0.15	-0.06	0.12	-0.10	0.17	0.21	0.51	0.52	0.56
AR12	0.44	0.16	0.16	0.26	0.13	-0.07	0.45	0.12	-0.01	0.12	-0.07	0.17	0.15	0.47	0.38	0.50
AR13	0.55	0.32	0.32	0.51	0.30	-0.08	0.68	0.24	-0.05	0.27	0.05	0.34	0.23	0.82	0.66	0.72
AR14	0.56	0.26	0.27	0.42	0.20	-0.01	0.56	0.22	0.03	0.20	-0.02	0.25	0.24	0.62	0.55	0.54

	OR1	OR2	OR3	OR4	OR5	OR6	OR7	OR8	OR9	OR 10	OR 11	OR 12	OR 13	OR 14	OR 15	OR 16
AR15	0.56	0.29	0.25	0.42	0.19	-0.09	0.63	0.20	0.04	0.22	0.02	0.28	0.17	0.64	0.53	0.59
HR1	-0.45	-0.11	-0.13	-0.32	-0.13	0.20	-0.58	0.03	0.12	-0.07	0.12	-0.14	-0.14	-0.57	-0.48	-0.53
HR2	-0.35	-0.14	-0.12	-0.29	-0.17	-0.09	-0.37	-0.02	-0.12	-0.12	-0.09	-0.16	-0.15	-0.37	-0.28	-0.31
HR3	-0.33	-0.24	-0.18	-0.40	-0.25	-0.19	-0.50	-0.15	-0.13	-0.23	-0.19	-0.32	-0.25	-0.49	-0.30	-0.40
HR4	-0.30	-0.13	-0.09	-0.34	-0.19	-0.02	-0.41	-0.04	-0.02	-0.14	-0.03	-0.20	-0.16	-0.42	-0.32	-0.34
HR5	-0.28	0.21	0.13	0.03	0.21	0.35	-0.18	0.26	0.32	0.23	0.37	0.20	0.23	-0.02	-0.22	-0.15
HR6	-0.31	0.16	0.10	-0.04	0.15	0.33	-0.26	0.25	0.32	0.23	0.38	0.15	0.15	-0.10	-0.18	-0.23
HR7	-0.37	0.11	0.08	-0.05	0.12	0.34	-0.24	0.16	0.34	0.14	0.37	0.09	0.11	-0.16	-0.32	-0.27
HR8	-0.34	0.15	0.09	0.01	0.13	0.34	-0.18	0.20	0.21	0.19	0.36	0.09	0.11	-0.09	-0.22	-0.21
HR9	-0.46	-0.16	-0.24	-0.39	-0.17	0.14	-0.61	-0.09	0.08	-0.13	0.08	-0.19	-0.17	-0.52	-0.44	-0.55
HR10	-0.23	0.03	0.04	-0.04	-0.01	0.07	-0.22	0.15	0.09	0.07	0.10	0.03	-0.02	-0.28	-0.13	-0.21
HR11	-0.37	0.00	-0.07	-0.23	-0.06	0.21	-0.49	0.13	0.21	0.01	0.12	-0.07	0.02	-0.42	-0.38	-0.47
HR12	-0.24	0.13	0.18	-0.05	0.14	0.36	-0.24	0.30	0.32	0.23	0.30	0.11	0.17	-0.21	-0.22	-0.26
HR13	-0.39	-0.14	-0.19	-0.34	-0.17	0.06	-0.50	0.03	0.03	-0.14	-0.03	-0.19	-0.06	-0.48	-0.36	-0.34
HR14	-0.37	0.06	0.04	-0.17	0.03	0.29	-0.41	0.23	0.26	0.13	0.33	0.04	0.05	-0.33	-0.31	-0.31
HR15	-0.32	0.06	0.01	-0.17	0.07	0.26	-0.38	0.14	0.25	0.12	0.20	0.05	0.10	-0.38	-0.37	-0.37
HR16	-0.36	0.04	-0.02	-0.17	0.02	0.29	-0.36	0.12	0.31	0.09	0.24	0.01	0.10	-0.37	-0.36	-0.35
HR17	-0.18	0.22	0.24	0.11	0.21	0.38	-0.11	0.40	0.35	0.34	0.41	0.24	0.23	-0.01	-0.12	-0.05

	AR1	AR2	AR3	AR4	AR5	AR6	AR7	AR8	AR9	AR 10	AR 11	AR 12	AR 13	AR 14	AR 15	AR 16
OR1	0.63	0.46	0.51	0.59	0.36	0.36	0.37	0.49	0.48	0.35	0.54	0.44	0.55	0.56	0.56	0.48
OR2	0.35	0.21	0.18	0.33	0.16	0.11	0.13	0.23	0.20	0.10	0.18	0.16	0.32	0.26	0.29	0.20
OR3	0.41	0.19	0.17	0.29	0.04	0.12	0.14	0.25	0.19	0.10	0.16	0.16	0.32	0.27	0.25	0.19
OR4	0.54	0.38	0.35	0.47	0.25	0.19	0.23	0.35	0.33	0.14	0.34	0.26	0.51	0.42	0.42	0.33
OR5	0.36	0.14	0.14	0.25	0.09	0.05	0.11	0.21	0.16	0.06	0.13	0.13	0.30	0.20	0.19	0.16
OR6	0.10	-0.01	-0.09	0.00	-0.04	-0.30	-0.17	-0.03	-0.12	-0.14	-0.10	-0.07	-0.08	-0.01	-0.09	-0.12
OR7	0.62	0.51	0.53	0.61	0.38	0.38	0.34	0.49	0.46	0.33	0.49	0.45	0.68	0.56	0.63	0.46
OR8	0.29	0.10	0.11	0.22	0.09	-0.01	0.08	0.18	0.15	0.06	0.15	0.12	0.24	0.22	0.20	0.15
OR9	0.13	0.03	-0.03	0.08	0.03	-0.23	-0.14	0.04	-0.01	-0.10	-0.06	-0.01	-0.05	0.03	0.04	-0.01
OR10	0.30	0.11	0.10	0.25	0.03	0.02	0.04	0.15	0.13	0.04	0.12	0.12	0.27	0.20	0.22	0.13
OR11	0.11	-0.02	-0.05	0.02	-0.06	-0.17	-0.10	-0.01	-0.08	-0.16	-0.10	-0.07	0.05	-0.02	0.02	-0.08
OR12	0.38	0.19	0.19	0.31	0.11	0.07	0.10	0.24	0.18	0.08	0.17	0.17	0.34	0.25	0.28	0.18
OR13	0.36	0.14	0.16	0.23	0.14	-0.01	0.06	0.18	0.17	0.06	0.21	0.15	0.23	0.24	0.17	0.17
OR14	0.65	0.47	0.45	0.57	0.35	0.43	0.36	0.46	0.44	0.30	0.51	0.47	0.82	0.62	0.64	0.44
OR15	0.63	0.46	0.46	0.58	0.36	0.53	0.53	0.50	0.43	0.38	0.52	0.38	0.66	0.55	0.53	0.43
OR16	0.64	0.43	0.53	0.61	0.40	0.39	0.36	0.45	0.48	0.31	0.56	0.50	0.72	0.54	0.59	0.48
AR1	1.24	0.74	0.77	0.89	0.59	0.71	0.70	0.77	0.71	0.58	0.78	0.65	0.84	0.86	0.78	0.71
AR2	0.74	1.29	0.78	0.72	0.61	0.68	0.68	0.65	0.65	0.49	0.72	0.61	0.72	0.69	0.79	0.65
AR3	0.77	0.78	1.31	0.76	0.72	0.77	0.68	0.68	0.77	0.61	0.86	0.67	0.84	0.77	0.86	0.77
AR4	0.89	0.72	0.76	1.32	0.68	0.66	0.66	0.78	0.74	0.58	0.78	0.74	0.90	0.93	0.82	0.74
AR5	0.59	0.61	0.72	0.68	1.11	0.55	0.54	0.58	0.63	0.52	0.66	0.69	0.66	0.59	0.72	0.63
AR6	0.71	0.68	0.77	0.66	0.55	1.25	0.83	0.67	0.63	0.57	0.72	0.64	0.92	0.72	0.77	0.63
AR7	0.70	0.68	0.68	0.66	0.54	0.83	1.27	0.62	0.63	0.54	0.70	0.56	0.75	0.69	0.64	0.63
AR8	0.77	0.65	0.68	0.78	0.58	0.67	0.62	1.12	0.66	0.62	0.69	0.67	0.81	0.80	0.75	0.66
AR9	0.71	0.65	0.77	0.74	0.63	0.63	0.63	0.66	1.05	0.57	0.82	0.70	0.79	0.72	0.80	1.05
AR10	0.58	0.49	0.61	0.58	0.52	0.57	0.54	0.62	0.57	1.06	0.58	0.55	0.66	0.59	0.61	0.57
AR11	0.78	0.72	0.86	0.78	0.66	0.72	0.70	0.69	0.82	0.58	1.30	0.75	0.90	0.78	0.88	0.82
AR12	0.65	0.61	0.67	0.74	0.69	0.64	0.56	0.67	0.70	0.55	0.75	1.22	0.81	0.70	0.76	0.70
AR13	0.84	0.72	0.84	0.90	0.66	0.92	0.75	0.81	0.79	0.66	0.90	0.81	1.62	0.88	1.07	0.79
AR14	0.86	0.69	0.77	0.93	0.59	0.72	0.69	0.80	0.72	0.59	0.78	0.70	0.88	1.29	0.77	0.72
AR15	0.78	0.79	0.86	0.82	0.72	0.77	0.64	0.75	0.80	0.61	0.88	0.76	1.07	0.77	1.44	0.80

	AR1	AR2	AR3	AR4	AR5	AR6	AR7	AR8	AR9	AR 10	AR 11	AR 12	AR 13	AR 14	AR 15	AR 16
HR1	-0.73	-0.61	-0.70	-0.71	-0.50	-0.60	-0.54	-0.62	-0.68	-0.47	-0.74	-0.66	-0.90	-0.75	-0.78	-0.68
HR2	-0.53	-0.46	-0.42	-0.43	-0.30	-0.31	-0.25	-0.34	-0.38	-0.25	-0.44	-0.35	-0.48	-0.41	-0.53	-0.38
HR3	-0.46	-0.37	-0.40	-0.39	-0.29	-0.28	-0.29	-0.32	-0.36	-0.16	-0.36	-0.36	-0.49	-0.40	-0.43	-0.36
HR4	-0.50	-0.45	-0.41	-0.46	-0.28	-0.33	-0.27	-0.36	-0.38	-0.17	-0.41	-0.40	-0.53	-0.44	-0.49	-0.38
HR5	-0.45	-0.41	-0.53	-0.49	-0.38	-0.37	-0.43	-0.43	-0.52	-0.39	-0.52	-0.46	-0.38	-0.46	-0.48	-0.52
HR6	-0.48	-0.48	-0.59	-0.48	-0.42	-0.41	-0.42	-0.45	-0.60	-0.47	-0.53	-0.49	-0.52	-0.52	-0.50	-0.60
HR7	-0.55	-0.48	-0.56	-0.54	-0.46	-0.48	-0.42	-0.46	-0.62	-0.47	-0.61	-0.57	-0.58	-0.55	-0.54	-0.62
HR8	-0.49	-0.39	-0.48	-0.43	-0.34	-0.32	-0.35	-0.43	-0.55	-0.43	-0.51	-0.43	-0.37	-0.45	-0.43	-0.55
HR9	-0.72	-0.58	-0.63	-0.66	-0.47	-0.51	-0.54	-0.54	-0.59	-0.37	-0.67	-0.60	-0.73	-0.68	-0.65	-0.59
HR10	-0.28	-0.34	-0.23	-0.23	-0.28	-0.12	-0.20	-0.24	-0.28	-0.12	-0.28	-0.32	-0.33	-0.32	-0.36	-0.28
HR11	-0.63	-0.43	-0.61	-0.61	-0.46	-0.53	-0.48	-0.54	-0.57	-0.40	-0.62	-0.57	-0.78	-0.59	-0.69	-0.57
HR12	-0.44	-0.45	-0.48	-0.48	-0.38	-0.44	-0.39	-0.40	-0.50	-0.41	-0.47	-0.54	-0.57	-0.45	-0.59	-0.50
HR13	-0.51	-0.43	-0.47	-0.48	-0.28	-0.45	-0.38	-0.38	-0.46	-0.25	-0.45	-0.44	-0.69	-0.53	-0.62	-0.46
HR14	-0.62	-0.61	-0.63	-0.61	-0.48	-0.59	-0.59	-0.49	-0.63	-0.45	-0.69	-0.61	-0.75	-0.64	-0.69	-0.63
HR15	-0.55	-0.51	-0.53	-0.52	-0.44	-0.48	-0.52	-0.47	-0.53	-0.42	-0.57	-0.56	-0.71	-0.59	-0.61	-0.53
HR16	-0.55	-0.51	-0.53	-0.57	-0.44	-0.59	-0.51	-0.52	-0.58	-0.38	-0.60	-0.58	-0.76	-0.62	-0.69	-0.58
HR17	-0.42	-0.38	-0.46	-0.39	-0.40	-0.38	-0.38	-0.36	-0.45	-0.36	-0.45	-0.46	-0.39	-0.43	-0.44	-0.45

	HR1	HR2	HR3	HR4	HR5	HR6	HR7	HR8	HR9	HR 10	HR 11	HR 12	HR 13	HR 14	HR 15	HR 16
OR1	-0.45	-0.35	-0.33	-0.30	-0.28	-0.31	-0.37	-0.34	-0.46	-0.23	-0.37	-0.24	-0.39	-0.37	-0.32	-0.36
OR2	-0.11	-0.14	-0.24	-0.13	0.21	0.16	0.11	0.15	-0.16	0.03	0.00	0.13	-0.14	0.06	0.06	0.04
OR3	-0.13	-0.12	-0.18	-0.09	0.13	0.10	0.08	0.09	-0.24	0.04	-0.07	0.18	-0.19	0.04	0.01	-0.02
OR4	-0.32	-0.29	-0.40	-0.34	0.03	-0.04	-0.05	0.01	-0.39	-0.04	-0.23	-0.05	-0.34	-0.17	-0.17	-0.17
OR5	-0.13	-0.17	-0.25	-0.19	0.21	0.15	0.12	0.13	-0.17	-0.01	-0.06	0.14	-0.17	0.03	0.07	0.02
OR6	0.20	-0.09	-0.19	-0.02	0.35	0.33	0.34	0.34	0.14	0.07	0.21	0.36	0.06	0.29	0.26	0.29
OR7	-0.58	-0.37	-0.50	-0.41	-0.18	-0.26	-0.24	-0.18	-0.61	-0.22	-0.49	-0.24	-0.50	-0.41	-0.38	-0.36
OR8	0.03	-0.02	-0.15	-0.04	0.26	0.25	0.16	0.20	-0.09	0.15	0.13	0.30	0.03	0.23	0.14	0.12
OR9	0.12	-0.12	-0.13	-0.02	0.32	0.32	0.34	0.21	0.08	0.09	0.21	0.32	0.03	0.26	0.25	0.31
OR10	-0.07	-0.12	-0.23	-0.14	0.23	0.23	0.14	0.19	-0.13	0.07	0.01	0.23	-0.14	0.13	0.12	0.09
OR11	0.12	-0.09	-0.19	-0.03	0.37	0.38	0.37	0.36	0.08	0.10	0.12	0.30	-0.03	0.33	0.20	0.24
OR12	-0.14	-0.16	-0.32	-0.20	0.20	0.15	0.09	0.09	-0.19	0.03	-0.07	0.11	-0.19	0.04	0.05	0.01
OR13	-0.14	-0.15	-0.25	-0.16	0.23	0.15	0.11	0.11	-0.17	-0.02	0.02	0.17	-0.06	0.05	0.10	0.10
OR14	-0.57	-0.37	-0.49	-0.42	-0.02	-0.10	-0.16	-0.09	-0.52	-0.28	-0.42	-0.21	-0.48	-0.33	-0.38	-0.37
OR15	-0.48	-0.28	-0.30	-0.32	-0.22	-0.18	-0.32	-0.22	-0.44	-0.13	-0.38	-0.22	-0.36	-0.31	-0.37	-0.36
OR16	-0.53	-0.31	-0.40	-0.34	-0.15	-0.23	-0.27	-0.21	-0.55	-0.21	-0.47	-0.26	-0.34	-0.31	-0.37	-0.35
AR1	-0.73	-0.53	-0.46	-0.50	-0.45	-0.48	-0.55	-0.49	-0.72	-0.28	-0.63	-0.44	-0.51	-0.62	-0.55	-0.55
AR2	-0.61	-0.46	-0.37	-0.45	-0.41	-0.48	-0.48	-0.39	-0.58	-0.34	-0.43	-0.45	-0.43	-0.61	-0.51	-0.51
AR3	-0.70	-0.42	-0.40	-0.41	-0.53	-0.59	-0.56	-0.48	-0.63	-0.23	-0.61	-0.48	-0.47	-0.63	-0.53	-0.53
AR4	-0.71	-0.43	-0.39	-0.46	-0.49	-0.48	-0.54	-0.43	-0.66	-0.23	-0.61	-0.48	-0.48	-0.61	-0.52	-0.57
AR5	-0.50	-0.30	-0.29	-0.28	-0.38	-0.42	-0.46	-0.34	-0.47	-0.28	-0.46	-0.38	-0.28	-0.48	-0.44	-0.44
AR6	-0.60	-0.31	-0.28	-0.33	-0.37	-0.41	-0.48	-0.32	-0.51	-0.12	-0.53	-0.44	-0.45	-0.59	-0.48	-0.59
AR7	-0.54	-0.25	-0.29	-0.27	-0.43	-0.42	-0.42	-0.35	-0.54	-0.20	-0.48	-0.39	-0.38	-0.59	-0.52	-0.51
AR8	-0.62	-0.34	-0.32	-0.36	-0.43	-0.45	-0.46	-0.43	-0.54	-0.24	-0.54	-0.40	-0.38	-0.49	-0.47	-0.52
AR9	-0.68	-0.38	-0.36	-0.38	-0.52	-0.60	-0.62	-0.55	-0.59	-0.28	-0.57	-0.50	-0.46	-0.63	-0.53	-0.58
AR10	-0.47	-0.25	-0.16	-0.17	-0.39	-0.47	-0.47	-0.43	-0.37	-0.12	-0.40	-0.41	-0.25	-0.45	-0.42	-0.38
AR11	-0.74	-0.44	-0.36	-0.41	-0.52	-0.53	-0.61	-0.51	-0.67	-0.28	-0.62	-0.47	-0.45	-0.69	-0.57	-0.60
AR12	-0.66	-0.35	-0.36	-0.40	-0.46	-0.49	-0.57	-0.43	-0.60	-0.32	-0.57	-0.54	-0.44	-0.61	-0.56	-0.58
AR13	-0.90	-0.48	-0.49	-0.53	-0.38	-0.52	-0.58	-0.37	-0.73	-0.33	-0.78	-0.57	-0.69	-0.75	-0.71	-0.76
AR14	-0.75	-0.41	-0.40	-0.44	-0.46	-0.52	-0.55	-0.45	-0.68	-0.32	-0.59	-0.45	-0.53	-0.64	-0.59	-0.62
AR15	-0.78	-0.53	-0.43	-0.49	-0.48	-0.50	-0.54	-0.43	-0.65	-0.36	-0.69	-0.59	-0.62	-0.69	-0.61	-0.69
HR1	1.68	0.84	0.80	0.87	0.89	0.91	0.96	0.90	1.19	0.77	1.09	0.90	0.91	1.22	1.04	1.02
HR2	0.84	1.39	0.79	0.80	0.65	0.64	0.60	059	0.79	0.62	0.78	0.68	0.75	0.89	0.72	0.78

	HR1	HR2	HR3	HR4	HR5	HR6	HR7	HR8	HR9	HR 10	HR 11	HR 12	HR 13	HR 14	HR 15	HR 16
HR3	0.80	0.79	1.12	0.78	0.53	0.56	0.52	0.52	0.78	0.55	0.76	0.54	0.73	0.72	0.70	0.68
HR4	0.87	0.80	0.78	1.21	0.59	0.61	0.57	0.63	0.85	0.68	0.76	0.62	0.77	0.79	0.73	0.77
HR5	0.89	0.65	0.53	0.59	1.42	0.99	0.97	1.03	0.86	0.58	0.89	0.86	0.66	1.02	0.87	0.91
HR6	0.91	0.64	0.56	0.61	0.99	1.38	1.07	0.96	0.85	0.59	0.90	0.85	0.67	1.06	0.84	0.91
HR7	0.96	0.60	0.52	0.57	0.97	1.07	1.41	0.99	0.87	0.59	0.88	0.87	0.63	0.98	0.84	0.91
HR8	0.90	0.59	0.52	0.63	1.03	0.96	0.99	1.38	0.85	0.59	0.81	0.78	0.58	0.98	0.76	0.74
HR9	1.19	0.79	0.78	0.85	0.86	0.85	0.87	0.85	1.53	0.65	1.08	0.73	0.83	1.05	1.01	0.99
HR10	0.77	0.62	0.55	0.68	0.58	0.59	0.59	0.59	0.65	1.52	0.68	0.81	0.63	0.76	0.71	0.68
HR11	1.09	0.78	0.76	0.76	0.89	0.90	0.88	0.81	1.08	0.68	1.69	0.92	0.89	1.04	1.22	1.24
HR12	0.90	0.68	0.54	0.62	0.86	0.85	0.87	0.78	0.73	0.81	0.92	1.71	0.79	1.08	0.93	0.92
HR13	0.91	0.75	0.73	0.77	0.66	0.67	0.63	0.58	0.83	0.63	0.89	0.79	1.50	1.02	0.93	0.94
HR14	1.22	0.89	0.72	0.79	1.02	1.06	0.98	0.98	1.05	0.76	1.04	1.08	1.02	1.73	1.03	1.08
HR15	1.04	0.72	0.70	0.73	0.87	0.84	0.84	0.76	1.01	0.71	1.22	0.93	0.93	1.03	1.63	1.32
HR16	1.02	0.78	0.68	0.77	0.91	0.91	0.91	0.74	0.99	0.68	1.24	0.92	0.94	1.08	1.32	1.66
HR17	0.82	0.65	0.48	0.60	0.89	0.87	0.90	0.85	0.75	0.79	0.83	1.29	0.64	1.03	0.77	0.81

Note. For this table, OR represents *other-reliance*, AR represents *adaptive self-reliance* items, and HR represents *headstrong self-reliance*. The number following OR/AR/HR indicates the item number.

Appendix G
Study 1 Item Evaluation Matrix

Item Number	Item	Factor Loadings						Additional Considerations						
		Factor 1	Factor 2	Factor 3	LL	CL	MCL	IM	IV	AL	SMC	h^2	IC	Construct Themes
OR_1X	I follow all of the advice of others	-.13	.39	.49	yes	yes		3.04	1.03	0.02	0.55	0.55	2.10	Worry
OR_2	I let others decide what I should do			.83				2.13	1.32	0.06	0.74	0.71	1	Worry
OR_3	I am quick to agree with other people			.71				2.53	1.30	0.04	0.54	0.53	1	Worry
OR_5*	I let others make decisions for me			.85				2.16	1.34	0.06	0.76	0.71	1	Others
OR_15X	My family and friends will know what to do		.43	.40	yes	yes		2.87	1.30	0.00	0.48	0.43	2	Others
OR_8	I place too much confidence in others	.18	.12	.73			yes	2.18	1.23	0.04	0.56	0.58	1.2	Others
OR_10*	I rely too much on others to guide me			.83				2.11	1.33	0.05	0.68	0.68	1	Others
OR_9	I cannot rely on myself		-.15	.73				2.2	1.26	0.02	0.59	0.52	1.1	Lack
OR_6	I lack the ability to deal with it myself		-.23	.75				2.28	1.38	0.02	0.60	0.56	1.2	Lack
OR_11	I cannot make decisions on my own		-.21	.81				2.12	1.40	0.03	0.65	0.64	1.1	Lack
OR_12*	I need others to tell me what I should do			.86				2.21	1.38	0.06	0.73	0.74	1	Lack
OR_4*	I cope by depending on others		.14	.76				2.4	1.37	0.05	0.65	0.66	1.1	Need
OR_13	I feel desperate to get help from others			.73				2.31	1.39	0.04	0.55	0.54	1	Need

Item Number	Item	Factor Loadings						Additional Considerations						
		Factor 1	Factor 2	Factor 3	LL	CL	MCL	IM	IV	AL	SMC	h^2	IC	Construct Themes
OR_7X	I would rather involve others	-.19	.25	.62	yes		yes	2.46	1.48	0.03	0.59	0.60	1.5	Need
OR_16X	I seek help from anyone who can provide advice		.31	.56	yes	yes		2.65	1.55	0.03	0.59	0.53	1.6	Need
ASR_12	I admit when I reach my limits		.67		yes			3.6	1.22	0.02	0.54	0.52	1	Asks
ASR_3	I ask for help if I cannot solve it on my own		.75					3.55	1.31	0.04	0.61	0.60	1	Asks
ASR_9X	I accept help if I need it		.75					3.77	1.05	0.04	0.65	0.65	1	Asks
ASR_11*	I ask for advice if I need to		.77					3.64	1.30	0.04	0.63	0.63	1	Asks
ASR_5	I recognize when I can no longer manage things myself		.70					3.69	1.11	0.02	0.52	0.47	1	Asks
ASR_15	I am not afraid to ask for help if I need it		.71					3.36	1.44	0.04	0.63	0.61	1	Confident
ASR_2	I don’t need to go it alone		.66		yes			3.44	1.29	0.02	0.51	0.49	1	Confident
ASR_13	I feel comfortable asking for what I need		.71	.11				3.15	1.62	0.03	0.63	0.62	1.1	Confident
ASR_6*	I am confident in my ability to get support		.81	-.13				3.56	1.25	0.03	0.60	0.58	1.1	Confident
ASR_7	I have people to call on if I need help		.73					3.78	1.27	0.02	0.53	0.48	1	Maintain

Item Number	Item	Factor Loadings			Additional Considerations								
		Factor 1	Factor 2	Factor 3	LL	CL	MCL	IM	IV	AL	SMC	h^2	IC	Construct Themes
ASR_4*	I balance relying on myself and others		.74	.11				3.43	1.32	0.04	0.65	0.63	1	Maintain
ASR_1	I manage with the support of others	-.11	.69	.19	yes			3.42	1.24	0.04	0.63	0.66	1.2	Maintain
ASR_10X	I welcome help, but I am ultimately in control		.72	-.10				3.76	1.06	0.01	0.43	0.46	1.1	Maintain
ASR_8*	I handle challenges myself and with assistance		.77					3.59	1.12	0.03	0.61	0.60	1	Maintain
ASR_14	I balance solving problems myself and with supportive others		.73					3.48	1.29	0.04	0.64	0.62	1	Maintain
HSR_7	I reject offers of help	.66	-.18	.17	yes		yes	2.47	1.41	0.03	0.70	0.61	1.3	Unwilling
HSR_6	I refuse assistance from others	.71	-.11	.19			yes	2.54	1.38	0.04	0.70	0.64	1.2	Unwilling
HSR_5	I stay away from the advice of others	.73		.21				2.56	1.42	0.03	0.66	0.62	1.2	Unwilling
HSR_8	I do not take advice from anyone	.71		.16				2.35	1.38	0.03	0.66	0.56	1.1	Unwilling
HSR_14*	I avoid asking for help at all costs	.78						2.73	1.73	0.05	0.71	0.70	1.1	Unwilling
HSR_1	I don’t ask for help	.72	-.16					3.11	1.68	0.04	0.69	0.69	1.1	Unwilling
HSR_9	I do not involve others	.74	-.11	-.12				3.06	1.53	0.04	0.67	0.66	1.1	Unwilling
HSR_2*	I rely on myself no matter what	.74	.10	-.17				3.38	1.39	0.02	0.53	0.49	1.1	Rigid
HSR_3X	I handle the problem on my own	.76	.14	-.3		yes	yes	3.6	1.12	0.02	0.58	0.56	1.4	Rigid

Item Number	Item	Factor Loadings			Additional Considerations								
		Factor 1	Factor 2	Factor 3	LL	CL	MCL	IM	IV	AL	SMC	h^2	IC	Construct Themes
HSR_4*	I find a way to manage it alone	.76		-.18				3.54	1.21	0.02	0.61	0.54	1.1	Rigid
HSR_10X	I feel better knowing I don't need help	.69	.18		yes			3.07	1.52	0.00	0.39	0.37	1.1	Rigid
HSR_13X	I hate depending on others	.72		-.14				3.56	1.50	0.02	0.55	0.51	1.1	Rigid
HSR_16	I hide problems from my family and friends	.74						3.12	1.66	0.04	0.73	0.63	1	Weakness
HSR_15	I prefer to hide how I'm feeling	.75						3.19	1.63	0.04	0.72	0.61	1	Weakness
HSR_11*	I avoid talking about my problems	.76						3.21	1.69	0.04	0.67	0.63	1	Weakness
HSR_12	I would feel weak if I asked for help	.68		.15	yes			2.63	1.71	0.03	0.68	0.51	1.1	Weakness
HSR_17	Asking for help is a sign of weakness	.68		.24	yes			2.31	1.62	0.02	0.68	0.53	1.2	Weakness

Note. Items were evaluated holistically, considering the number and nature of flagged indicators alongside theoretical representation within the construct. Cause for concern was raised for LL: factor loading less than 0.70; CL: cross-loading larger than 0.30; MCL: multiple cross-loadings larger than 0.30; IM: Item mean flagged if drastic deviation from scale midpoint; IV: Item variance reviewed in conjunction with item mean; AL: Alpha-if-item-deleted flagged if deletion increased scale Cronbach's alpha by ≥ .02; SMC: Squared Multiple Correlation flagged if less than 0.70; h^2: Communality flagged if less than 0.70; IC: Item Complexity flagged if ≥ 1.50. Construct themes were defined as: Worry- worry about others (OR); Others- others driving decisions (OR); Lack- lack of confidence (OR); Need- need to have others support/advice (OR); Asks- asks for advice/willingness to accept help from others (ASR);

Confident- confidence in ability to find/engage resources (ASR); Maintain- maintain responsibility when supported (ASR); Unwilling- unwillingness to access help or support (formal/informal; HSR); Rigid- rigid unhealthy reliance on self (HSR); Weakness- asking for help is a sign of weakness/emotional toughness is valued (HSR). * represents item that was retained, while X represents item that was flagged for deletion. Non-marked items were considered and included for future steps in the scale refinement process.

Appendix H
Model Fit Indices Across Iterative Model Refinement

Model Version (# of items)	Items included	X^2 (*df*)	CFI	TLI	RMSEA [90% CI]	Comments
Initial Item pool (48)	All	3262.81 (987)	0.88	0.86	0.07 [0.06, 0.07]	Initial Model; no correlated residuals. Not in ideal range for fit indices.
Model 1- Shortened scale (18)	OR_4, 5, 10, 11, 12, 13 ASR: 4, 5, 6, 7, 8, 11 HSR: 2, 4, 8, 11, 14, 15	573.05 (132)	0.92	0.91	0.08 [0.07, 0.08]	Reduced scale based on item selection chart; retained items that performed well only; no correlated residuals
Model 2 (18)	Same as Model 1	508.14 (131)	0.93	0.92	0.07 [0.07, 0.08]	Added: HSR_11~~HSR_15
Model 3 (18)	Same as Model 1	449.41 (130)	0.94	0.93	0.07 [0.06, 0.08]	Added: ASR_6~~ASR_7
Model 4 (18)	Same as Model 1	401.88 (129)	0.95	0.94	0.06 [0.06, 0.07]	Added: HSR_2~~HSR_4
Model 5 (15)	OR 4, 5, 10, 11, 12 AR 4, 5, 6, 8, 11 HSR 2, 4, 11, 14, 15	372.67 (87)	0.94	0.92	0.08 [0.07, 0.09]	Scale modifications complicated scale- can we find strong fit indices with a simpler model? Removed poorest performing item from each subscale from 18-item model.
Model 6 (15)	OR 12, 5, 10, 11, 4 AR 6, 7, 8, 4, 11 HSR 2, 4, 11, 15, 14	435.20 (87)	0.92	0.91	0.09 [0.08, 0.10]	Attempted another version of a 15-item model to see if this improved fit indices.
Model 7 (12)	OR: 4, 5, 10, 12 AR: 4, 6, 7, 11 HSR: 2, 4, 14, 15	249.78 (51)	0.94	0.92	0.09 [0.08, 0.10]	After consultation with Dr. Mackenzie, reduced items to 12. Opted to attempt to improve fit by exploring various item combinations, based on theoretical themes and by reviewing fit indices of each model
Model 8 (12)	OR 5, 10, 12, 13 AR 4, 5, 8, 11 HSR 2, 4, 14, 15	145.6 (51)	0.97	0.96	0.06 [0.05, 0.07]	OR13 felt like too strong of an item, questioned whether to put in

Model Version (# of items)	Items included	X^2 (*df*)	CFI	TLI	RMSEA [90% CI]	Comments
Model 9 (12)	OR 5, 10, 12, 13 AR 4, 6, 8, 11 HSR 2, 4, 14, 15	160.91(51)	0.96	0.95	0.06 [0.05, 0.08]	OR13 felt too strong of an item, questioned whether to put in
Model 10 (12)	OR 4, 11, 10, 12 AR 4, 5, 6, 8 HSR 2, 4, 14, 15	268.9 (51)	0.93	0.91	0.09 [0.08, 0.10]	Fit indices could be improved (TLI/CFI too low, RMSEA too high)
Model 11 (12)	OR 4, 5, 10, 12 AR 4, 5, 6, 11 HSR 2, 4, 11, 14	185.03 (51)	0.96	0.94	0.07 [0.06, 0.80]	Fit indices in or close to ideal range (RMSEA too high)
Model 12 (12)	OR 4, 5, 10, 12 AR 4, 5, 8, 11 HSR 2, 4, 11, 15	211.74 (51)	0.95	0.94	0.08 [0.07, 0.09]	Fit indices in or close to ideal range (RMSEA too high)
Model 13 (12)* Selected Model	OR 4, 5, 10, 12 AR 4, 6, 8, 11 HSR 2, 4, 11, 14	191.33 (51)	0.96	0.94	0.07 [0.06, 0.08]	Fit indices in ideal range.
Model 14 (12)	OR 4, 5, 10, 12 AR 4, 6, 8, 11 HSR 2, 4, 11, 15	218.30 (51)	0.95	0.93	0.08 [0.07, 0.09]	Fit indices in or close to ideal range (CFI and TLI slightly lower than model 13, RMSEA slightly higher)
Model 15 (12)	OR 12, 5, 10, 11 AR 6, 7, 8, 4 HSR 2, 4, 11, 15	273.86 (51)	0.93	0.91	0.09 [0.08, 0.10]	Fit indices in or close to ideal range (CFI and TLI slightly lower than model 13, RMSEA slightly higher)

Note. X^2 (*df*) = Chi-square (degrees of freedom). CFI = Comparative Fit Index. TLI= Tucker-Lewis Index. RMSEA [90% CI] = Root Mean Square Error of Approximation [90% Confidence Intervals]. In relation to 'ideal' scores for fit indices, I wanted CFI and TLI to see a value of 0.95 or above for TLI and CFI and an RMSEA value at or below 0.06 (Hu & Bentler, 1999; Rosellini & Brown, 2021).

Appendix I
Study 2 Modification Indices Considered During Model Refinement

Lhs	Op	Rhs	MI	EPC	SEPC.all
HSR_11	~~	HSR_15	71.68	0.32	0.53
ASR_6	~~	ASR_7	61.20	0.25	0.41
HSR_2	~~	HSR_4	49.07	0.25	0.37

Note. LHS= left-hand side variable. OP = operation. RHS = right-hand side variable. MI= modification index. EPC= expected parameter change. SEPC.all = standardized expected parameter change for all variables.

Appendix J
Study 2 Recruitment

Title: Answer a survey about Managing Mental Health

Description: Respond to multiple choice questions about how you handle managing mental health challenges and emotional concerns, your attitudes towards seeking mental health services, past mental health service use, and supports you may use.

Keywords: survey, American, mental health, academic research, 15 minutes

Appendix K
Study 2 Consent

Research Project Title: Managing Mental Health Survey- Study 2

Principle Investigator:
Ms. Lindsay Berard, Clinical Psychology Doctoral Candidate
Department of Psychology, University of Manitoba
Email: umhuska@umanitoba.ca

Supervising Investigator:
Dr. Corey Mackenzie, Ph.D., C. Psych.
Department of Psychology, University of Manitoba
Email: corey.mackenzie@umanitoba.ca

This consent form, a copy of which will be available for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

Study Purpose and Procedure: The purpose of this study is to better understand how Canadian adults manage mental health challenges. If you agree to participate, the survey will include questions about: (a) psychological symptoms and past mental health support, (b) self-reliance for managing mental health, (c) your attitudes towards seeking mental health services, (d) social and treatment supports you may use, (e) general coping strategies and (f) how you met your personal needs during a specific moment when you were managing your mental health. There are also some questions about your demographic information (e.g., age, education, etc.). We expect that the average person will complete this survey in 10-15 minutes.

Potential Risks and Benefits: This study contains questions about your mental health. Although we do not expect participants to experience any negative feelings, some participants may feel uncomfortable or upset answering these questions. If this should happen, we provide coping resources at the end of the study. Otherwise, there are no known risks to participating. Benefits include the compensation you receive for taking part in this survey.

Anonymity and Confidentiality: All of the information you provide will be anonymous. That is, your individual responses cannot be linked with your name or identifying information. The data are stored on the Qualtrics Website in a password-protected file. We will also download the data and keep it in this way. Only authorized personnel (Ms. Berard, or affiliated researchers and research assistants involved in the research) will have access to the data. Information will be stored for at least 2 years, and possibly indefinitely. Qualtrics will also store data. As a company from the United States, the information Qualtrics keeps will be subject to laws in the United States. The risks associated with this site are minimal and are comparable to risks associated with using social media sites.

Compensation: You will be compensated in the way that was specified by Leger Panels when they recruited you to participate in this study. You will be compensated the amount you agreed upon before you entered into this survey.

Withdrawal: You may end your participation in the study at any time, and this can be done by closing your internet browser. There are no consequences to withdrawing your participation, however a completed survey is required for compensation. Because your personal information is not collected during the study, we cannot identify which response is yours. Therefore, you will not be able to withdraw your participation from the study after you submit your survey.

Debriefing after the study: At the end of the study, we will provide you with contact information for Ms. Berard should you have any questions about this survey. We will also provide a link to mental health resources where you live should you or anyone you know need them.

Research dissemination: The results from this study will be used as part of Ms. Berard's Doctoral Dissertation research. Additionally, results will be shared in research articles and conference presentations. Across all dissemination types, all participant data will be examined collectively, no individual responses will be included.

Consent: By selecting the "I agree" button below indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

The University of Manitoba may look at your research records to see that the research is being done in a safe and proper way.

This research has been approved by the Research Ethics Board at the University of Manitoba, Fort Garry campus. If you have any concerns or complaints about this project, you may contact any of the above-named persons or the Human Ethics Officer at (204) 474-7122 or humanethics@umanitoba.ca. You should print a copy of this consent form to keep for your records and reference.

Please select "I agree" if you would like to participate.
If you would not like to participate, please select "I disagree" to be brought to the end of the survey.

( ) I agree
( ) I disagree

Appendix L
Study 2 Questionnaires

Integrity Item

We care about the quality of our survey data, so it is important to use that you thoughtfully provide your best answer to each question in the survey.

Do you commit to providing your thoughtful and honest answers to the questions in this survey?

__I WILL provide my best answers
__I will NOT provide my best answers
__I can't say either way

Sociodemographic Information

Please answer the following questions about you:

What is your age (*drop down)*
I identify my gender as: (please specify)
Which province, territory or state do you live in? (*drop down*)

How large is the place you live (approx. population size?)

Metropolitan area (1 million +)
Large city (100, 000 – 999, 999)
Medium city (30, 000 – 99, 999)
Small city (10, 000 – 29, 999)
Town (1, 000 – 9,999)
Village (300- 999)
Hamlet (fewer than 300)
Other (please specify)

What is the highest level of education you have achieved? (*drop down)*

Some high school
High school or equivalent
Some college, no diploma
College diploma or trade/technical/vocational training
Some university, no degree
Some university, currently attending
Bachelor's degree
Master's degree
Doctorate degree

What is your current occupational status?

__ Full-time
__ Part-time
__ Retired

__ Unemployed/on Disability
__ Student

Approximately what was your current household income before taxes in previous year? If you are unsure, please provide your best guess. (*drop down)*

$0 - $4,999
$5,000 - $9,999
$10,000 - $14,999
$15,000 - $19,999
$20,000 - $24,999
$25,000 - $34,999
$35,000 - $49,999
$50,000 - $74,999
$75,000 - $99,999
$100,000 - $149,999
$150,000 - $199,999
$200,000 - $249,999
$250,000+

What is your marital status? (*drop down)*

Single
Dating
Married or Common-law
Widowed
Separated or Divorced

Please select one population group from the following options that best fits you:

__ Arab
__ Black
__ Chinese
__ Filipino
__ Indigenous (First Nations, Métis, Inuit)
__ Japanese
__ Jewish
__ Korean
__ Latin American
__ South Asian (e.g., East Indian, Pakistani, Sri Lankan, etc.)
__ Southeast Asian (e.g., Vietnamese, Cambodian, Malaysian, Laotian, etc.)
__ West Asian (e.g., Iranian, Afghan, etc.)
__ White
__ Other – Please specify: _____

<u>Mental Health History</u>

We would now like to ask you some questions about your current mental health concerns and mental health treatment.

When thinking about your mental health throughout your life, from the time you were a young child until today, which statement most accurately describes you

__ I've had fairly serious emotional problems for most of my life
__ I've struggled emotionally most of my life, although there have been times when I've felt happy
__ I've had about an equal number of difficult times and times when I've been happy
__ I've been happy most of my life, although there are times when I've struggled emotionally
__I've felt happy and had good mental health for most of my life

Was there ever a time during the past 12 months when you felt that you might need to see a professional because of problems with your emotions or nerves?

-Yes -No -Don't know

Did you ever in your lifetime go to see any of the professionals on this list for problems with your emotions, nerves, or your use of alcohol or drugs?

(*Yes, No,* or *Don't know* for each)

- Psychiatrist
- General practitioner or family doctor
- Any other medical doctor, like a cardiologist
- Psychologist
- Social worker
- Counsellor
- Any other mental health professional, such as a psychotherapist or mental health nurse
- A nurse, occupational therapist, or other health professional
- A religious or spiritual advisor like a minister, priest, or rabbi

The following question is only presented to individuals who responded YES to any of the professionals from the last question (respond to each professional selected):

When was the last time you saw this professional?
-in the past 12 months
- approximately 2 to 5 years ago
- more than 5 years ago

6-item Kessler Distress Scale (K6; Kessler et al., 2003)

MHSRS

We are interested to hear **how individuals respond when they are struggling emotionally**. This questionnaire asks you to **consider how you generally respond in these types of circumstances**. If you feel you have responded differently throughout your life, **think of the most recent experience** where you were struggling emotionally.

For each item, consider "When I am struggling emotionally" then indicate your level of agreement. (*5-point scale: from 1= strongly disagree to 5= strongly agree)*

See Appendix M for MHSRS Items

Randomized presentation of 2 clusters of the following measures. The MHSRS and four other measures were presented in the first cluster, followed by an integrity question, followed by the remaining cluster of measure.

- Conformity to Masculine Norms Inventory (CMNI-46; Parent & Moradi, 2009)
    - Self-reliance subscale
    - Emotional Control subscale
- Barriers to Mental Health Services Scale-R (BMHSS-R; Pepin et al., 2015)
    - Help-seeking subscale
    - Stigma subscale
- Inventory of Attitudes Toward Seeking Mental Health Service (IASMHS; Mackenzie et al., 2004)
- Coping Orientation to Problems Experienced (COPE; Carver et al., 1989)
    - Active Coping
    - Emotional Social Support
    - Instrumental Social Support
- Interpersonal Dependency Inventory-6 (IDI; McClintock et al., 2017)
    - Emotional Dependency
    - Functional Dependency
- Candidate Psychological Needs Scale (CPN; Sheldon et al., 2001)
    - Autonomy
    - Competence
    - Relatedness
- 3-Item Loneliness Scale (Hughes et al., 2004)

Appendix M
Study 2 MHSRS with Descriptive Statistics

Item	*M*	SD	Skew (SE)	Kurtosis (SE)	Shapiro-Wilk		
					Statistic	*df*	Sig.
HSR							
MHSRS_1- I avoid asking for help at all costs	2.62	1.26	0.45 (0.16)	-0.84 (0.31)	.89	231	< .001
MHSRS_2- I find a way to manage it alone	3.45	1.14	-0.50 (0.16)	-0.47 (0.31)	.89	231	< .001
MHSRS_3- I avoid talking about my problems	2.88	1.20	0.08 (0.16)	-0.97 (0.31)	.91	231	< .001
MHSRS_4- I rely on myself no matter what	3.55	1.18	-0.52 (0.16)	-0.56 (0.31)	.88	231	< .001
OR							
MHSRS_5- I let others make decisions for me	2.05	1.18	0.89 (0.16)	-0.06 (0.31)	.83	231	< .001
MHSRS_6- I rely too much on others to guide me	2.10	1.10	0.95 (0.16)	0.09 (0.31)	.82	231	< .001
MHSRS_7- I cope by depending on others	2.25	1.15	0.61 (0.16)	-0.52 (0.31)	.86	231	< .001
MHSRS_8- I need others to tell me what I should do	2.12	1.15	0.83 (0.16)	-0.39 (0.31)	.83	231	< .001
ASR							
MHSRS_9- I handle problems myself and with help	3.76	0.88	-0.76 (0.16)	0.81 (0.31)	.85	231	< .001
MHSRS_10- I ask for advice if I need to	3.75	1.03	-1.04 (0.16)	0.77 (0.31)	.82	231	< .001
MHSRS_11- I balance relying on myself and others	3.51	1.04	-0.53 (0.16)	-0.25 (0.31)	.89	231	< .001
MHSRS_12- I am confident in my ability to get support	3.64	1.08	-0.70 (0.16)	0.01 (0.31)	.88	231	< .001

Note. M = Mean, SD = Standard Deviation; SE =Standard Error. Related to the Shapiro-Wilk test, a significant p-value ($p < .05$) indicates a significant deviation from normal distribution. HSR represents headstrong self-reliance. OR represents other-reliance. ASR represents adaptive self-reliance. Item MHSRS_9 language was subtly changed from the initial item pool, based on a desire to be more precise.

Appendix N
Study 2 Covariance Matrix

	1	2	3	4	5	6	7	8	9	10	11	12
1- I avoid asking for help at all costs	1.58	0.87	0.85	0.62	0.10	0.18	-0.03	0.16	-0.27	-0.53	-0.35	-0.48
2- I find a way to manage it alone	0.87	1.29	0.77	0.83	-0.00	-0.03	-0.04	-0.05	-0.06	-0.29	-0.16	-0.38
3- I avoid talking about my problems	0.85	0.77	1.43	0.50	-0.11	-0.06	-0.21	-0.08	-0.11	-0.41	-0.17	-0.36
4- I rely on myself no matter what	0.62	0.83	0.50	1.39	-0.83	-0.18	-0.18	-0.18	0.04	-0.26	-0.13	-0.23
5- I let others make decisions for me	1.00	-0.00	-0.11	-0.08	1.21	0.80	0.70	0.85	0.03	0.10	0.10	0.05
6- I rely too much on others to guide me	0.18	-0.03	-0.06	-0.18	0.80	1.32	0.91	0.96	-0.05	0.01	-0.04	-0.10
7- I cope by depending on others	-0.03	-0.04	-0.21	-0.18	0.70	0.91	1.33	0.90	0.06	0.16	0.14	0.09
8- I need others to tell me what I should do	0.16	-0.05	-0.08	-0.18	0.85	0.96	0.90	1.45	-0.02	0.04	0.10	0.05
9- I handle problems myself and with help	-0.27	-0.06	-0.11	0.04	0.03	-0.05	0.06	-0.02	0.77	0.41	0.44	0.50
10- I ask for advice if I need to	-0.53	-0.29	-0.41	-0.26	0.10	0.01	0.16	0.04	0.41	1.06	0.58	0.67
11- I balance relying on myself and others	-0.35	-0.16	-0.17	-0.13	0.10	-0.04	0.14	0.10	0.44	0.58	1.07	0.68
12- I am confident in my ability to get support	-0.48	-0.39	-0.36	-0.23	0.05	-0.10	0.09	0.05	0.50	0.67	0.68	1.16

Note. Items 1-4 represent headstrong self-reliance. Items 5-8 represent other-reliance. Items 9-12 represent adaptive self-reliance.

Appendix O
Study 3A Recruitment

Title: Managing Mental Health Study

Description: We are interested in finding out about how you manage your mental health in this short survey. Option to be recontacted in 3 weeks for follow-up.

Keywords: survey, mental health, wellbeing, health

Thank you for your interest in this survey. The consent form that follows describes what the survey is about and how long we expect it to take to complete. At the end of the consent form you will be asked whether you want to participate. Briefly, we are interested in finding out about how you manage your mental health. This is one part of the study- we are interested in hearing from people again in approximately 3 weeks. You will be asked in the consent form if you are willing to be contacted through MTurk again in 3 weeks.

Study 3B Recruitment

Title: Managing Mental Health Study Pt 2

Description: We are interested in finding out about how you manage your mental health in this short survey. This study is part 2 to a study you completed approximately 3 weeks ago.

Keywords: survey, mental health, wellbeing, health
**emailed through MTurk to participants who consented to be contacted in 3 weeks during Part A*

Hello,

Approximately 3 weeks ago you participated in a brief survey related to managing mental health. At that time, you consented to be contacted through MTurk email to participate in a follow-up version of the study.

Part B of the study is currently available for you to participate in. You will be asked once again to input your Worker ID. Participants who complete this brief subsection of the original survey will be compensated $2 USD.

You may also choose not to participate in Part B. It will not affect your participation or compensation from Part A.

Thank you for your consideration.

Lindsay Berard, M.A., C. Psych Candidate, PhD Candidate
Primary Investigator
Email: umhuska@umanitoba.ca

Appendix P
Study 3 Consent

Research Project Title: Managing Mental Health Survey- Study 3

Principle Investigator:
Lindsay Berard, M.A., C. Psych Candidate, PhD Candidate
Department of Psychology, University of Manitoba
Email: umhuska@umanitoba.ca

Supervising Investigator:
Dr. Corey Mackenzie, Ph.D., C. Psych., Professor
Department of Psychology, University of Manitoba
Email: corey.mackenzie@umanitoba.ca

This consent form, which should be printed if you wish to have a copy for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

Study Purpose and Procedure: The purpose of this study is to better understand how adults manage mental health challenges. There are also some questions about your demographic information (e.g., age, education, etc.). If you agree to participate, you will be invited to complete a set of questions at two time periods. Part A you may complete now, and an invitation to participate in Part B will be sent in 3 weeks through MTurk. You may choose not to participate in the second set. The questions will ask you about self-reliance for managing mental health. We expect that the average person will complete this survey in under 5 minutes.

Potential Risks and Benefits: This study contains questions about your mental health. Although we do not expect participants to experience any negative feelings, some participants may feel uncomfortable or upset answering these questions. If this should happen, we provide coping resources at the end of the study. Otherwise, there are no known risks to participating. Benefits include the compensation you receive for taking part in this survey.

Anonymity and Confidentiality: All of the information you provide will be anonymous. That is, your individual responses cannot be linked with your name or identifying information. The data are stored on the Qualtrics Website in a password-protected file. We will also download the data and keep it in this way. Only authorized personnel (the principal investigator, or affiliated researchers and research assistants involved in the research) will have access to the data. Information will be stored for at least 2 years, and possibly indefinitely. Qualtrics will also store data. As a company from the United States, the information Qualtrics keeps will be subject to laws in the United States. The risks associated with this site are minimal and are comparable to risks associated with using social media sites.

Compensation: You will be compensated $1.20 CDN for your participation in part A of this study. You will be compensated an additional $2.00 CDN for your participation in part B, which you will be invited to participate in, in approximately 3 weeks.

Withdrawal: You may end your participation in the study at any time, and this can be done by closing your internet browser. There are no consequences to withdrawing your participation, however a completed survey is required for compensation. You may also choose not to participate in part B of this study, and that will not impact your compensation for part A.

Debriefing after the study: At the end of the study, we will provide you with contact information for the principal investigator should you have any questions about this survey. We will also provide a link to mental health resources where you live should you or anyone you know need them.

Research dissemination: The results from this study will be used as part of the principal investigator's Doctoral Dissertation research. Additionally, results will be shared in research articles and conference presentations. Across all dissemination types, all participant data will be examined collectively, no individual responses will be included.

Consent: By selecting the "I agree" button below indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

The University of Manitoba may look at your research records to see that the research is being done in a safe and proper way.

This research has been approved by the Research Ethics Board at the University of Manitoba, Fort Garry campus. If you have any concerns or complaints about this project, you may contact any of the above-named persons or the Human Ethics Officer at (204) 474-7122 or humanethics@umanitoba.ca. You should print a copy of this consent form to keep for your records and reference.

Please select "I agree" if you would like to participate in this study.
If you would not like to participate, please select "I disagree" to be brought to the end of the survey.

( ) I agree
( ) I disagree

Would you be willing to be invited through MTurk to participate in a subsection of this questionnaire again in approximately 3 weeks?

Please select “I agree” if you would like to participate.
I understand that I can change my mind and choose not to participate at that time.

( ) I agree
( ) I disagree

By selecting “I disagree” you will still be eligible to participate in the current survey.

Appendix Q
Study 3A Questionnaire

Integrity Item

We care about the quality of our survey data, so it is important to use that you thoughtfully provide your best answer to each question in the survey.

Do you commit to providing your thoughtful and honest answers to the questions in this survey?

__I WILL provide my best answers
__I will NOT provide my best answers
__I can't say either way

Sociodemographic Information

Please answer the following questions about you:

What is your age (*drop down)*
I identify my gender as: (please specify)
Which province, territory or state do you live in? (*drop down*)

How large is the place you live (approx. population size?)

Metropolitan area (1 million +)
Large city (100, 000 – 999, 999)
Medium city (30, 000 – 99, 999)
Small city (10, 000 – 29, 999)
Town (1, 000 – 9,999)
Village (300- 999)
Hamlet (fewer than 300)
Other (please specify)

What is the highest level of education you have achieved? (*drop down)*

Some high school
High school or equivalent
Some college, no diploma
College diploma or trade/technical/vocational training
Some university, no degree
Some university, currently attending
Bachelor's degree
Master's degree
Doctorate degree

What is your current occupational status?

__ Full-time
__ Part-time
__ Retired

__ Unemployed/on Disability
__ Student

Approximately what was your current household income before taxes in previous year? If you are unsure, please provide your best guess. (*drop down)*

$0 - $4,999
$5,000 - $9,999
$10,000 - $14,999
$15,000 - $19,999
$20,000 - $24,999
$25,000 - $34,999
$35,000 - $49,999
$50,000 - $74,999
$75,000 - $99,999
$100,000 - $149,999
$150,000 - $199,999
$200,000 - $249,999
$250,000+

What is your marital status? (*drop down)*

Single
Dating
Married or Common-law
Widowed
Separated or Divorced

Please select one population group from the following options that best fits you:

__ Arab
__ Black
__ Chinese
__ Filipino
__ Indigenous (First Nations, Métis, Inuit)
__ Japanese
__ Jewish
__ Korean
__ Latin American
__ South Asian (e.g., East Indian, Pakistani, Sri Lankan, etc.)
__ Southeast Asian (e.g., Vietnamese, Cambodian, Malaysian, Laotian, etc.)
__ West Asian (e.g., Iranian, Afghan, etc.)
__ White
__ Other – Please specify: _____

<u>Mental Health History</u>

We would now like to ask you some questions about your current mental health concerns and mental health treatment.

When thinking about your mental health throughout your life, from the time you were a young child until today, which statement most accurately describes you
__ I've had fairly serious emotional problems for most of my life
__ I've struggled emotionally most of my life, although there have been times when I've felt happy
__ I've had about an equal number of difficult times and times when I've been happy
__ I've been happy most of my life, although there are times when I've struggled emotionally
__I've felt happy and had good mental health for most of my life

6-item Kessler Distress Scale (K6; Kessler et al., 2003)

MHSRS
We are interested to hear **how individuals respond when they are struggling emotionally**. This questionnaire asks you to **consider how you generally respond in these types of circumstances**. If you feel you have responded differently throughout your life, **think of the most recent experience** where you were struggling emotionally.
For each item, consider "When I am struggling emotionally" then indicate your level of agreement. (*5-point scale: from 1= strongly disagree to 5= strongly agree)*

See Appendix R for MHSRS Items

Study 3B Questionnaire

Integrity Item
We care about the quality of our survey data, so it is important to use that you thoughtfully provide your best answer to each question in the survey.

Do you commit to providing your thoughtful and honest answers to the questions in this survey?

__I WILL provide my best answers
__I will NOT provide my best answers
__I can't say either way

6-item Kessler Distress Scale (K6; Kessler et al., 2003)

MHSRS
We are interested to hear **how individuals respond when they are struggling emotionally**. This questionnaire asks you to **consider how you generally respond in these types of circumstances**. If you feel you have responded differently throughout your life, **think of the most recent experience** where you were struggling emotionally.
For each item, consider "When I am struggling emotionally" then indicate your level of agreement. (*5-point scale: from 1= strongly disagree to 5= strongly agree)*

See Appendix R for MHSRS Items

Appendix R
Study 3A & 3B MHSRS with Descriptive Statistics

Study 3A Item	*M*	*SD*	Skew (SE)	Kurtosis (SE)
HSR				
MHSRS_1- I avoid asking for help at all costs	2.88	1.35	0.10 (0.32)	-1.21 (0.62)
MHSRS_2- I find a way to manage it alone	3.68	1.12	-0.84 (0.32)	0.02 (0.62)
MHSRS_3- I avoid talking about my problems	3.16	1.23	-0.54 (0.32)	-1.10 (0.62)
MHSRS_4- I rely on myself no matter what	3.60	1.07	-0.67 (0.32)	-0.25 (0.62)
OR				
MHSRS_5- I let others make decisions for me	1.88	0.85	0.97 (0.32)	0.74 (0.62)
MHSRS_6- I rely too much on others to guide me	1.67	0.74	1.12 (0.32)	1.75 (0.62)
MHSRS_7- I cope by depending on others	2.07	1.10	1.01 (0.32)	0.67 (0.62)
MHSRS_8- I need others to tell me what I should do	1.79	0.94	1.38 (0.32)	1.89 (0.62)
ASR				
MHSRS_9- I handle problems myself and with help	3.61	0.96	-0.90 (0.32)	0.64 (0.62)
MHSRS_10- I ask for advice if I need to	3.42	1.21	-0.50 (0.32)	-0.83 (0.62)
MHSRS_11- I balance relying on myself and others	3.30	1.25	-0.54 (0.32)	-0.80 (0.62)
MHSRS_12- I am confident in my ability to get support	3.26	1.16	-0.54 (0.32)	-0.52 (0.62)

Study 3B Item	*M*	*SD*	Skew (SE)	Kurtosis (SE)
HSR				
MHSRS_1- I avoid asking for help at all costs	2.96	1.27	-0.15 (0.32)	-1.20 (0.62)
MHSRS_2- I find a way to manage it alone	3.93	1.07	-1.05 (0.32)	0.62 (0.62)
MHSRS_3- I avoid talking about my problems	3.46	1.28	-0.61 (0.32)	-0.75 (0.62)
MHSRS_4- I rely on myself no matter what	3.61	1.19	-0.58 (0.32)	-0.62 (0.62)
OR				
MHSRS_5- I let others make decisions for me	1.77	0.82	1.05 (0.32)	0.88 (0.62)
MHSRS_6- I rely too much on others to guide me	1.56	0.66	1.15 (0.32)	1.98 (0.62)
MHSRS_7- I cope by depending on others	1.91	1.06	1.31 (0.32)	1.31 (0.62)
MHSRS_8- I need others to tell me what I should do	1.60	0.75	1.35 (0.32)	1.96 (0.62)
ASR				
MHSRS_9- I handle problems myself and with help	3.82	1.05	-0.87 (0.32)	0.34 (0.62)
MHSRS_10- I ask for advice if I need to	3.46	1.18	-0.43 (0.32)	-0.84 (0.62)
MHSRS_11- I balance relying on myself and others	3.39	1.26	-0.39 (0.32)	-0.94 (0.62)
MHSRS_12- I am confident in my ability to get support	3.56	1.13	-0.50 (0.32)	-0.42 (0.62)

Note. HSR represents headstrong self-reliance. OR represents other-reliance. ASR represents adaptive self-reliance.

Appendix S
Debriefing

Thank you for your participation!

Again, the University of Manitoba Research Ethics Board has reviewed and approved this research. If you have any questions or concerns about this project, you may contact Mrs. Berard at umhuska@myumanitoba.ca or the Human Ethics Secretariat by phone at (204) 474-7122 or by e-mail at humanethics@umanitoba.ca.

We apologize if you experienced any negative feelings associated with some of the questions. We do not expect these feelings to persist. If the feelings do persist, please contact a mental health professional in your area. You can find a professional by going to your provincial psychological association and using their referral services. Find your provincial psychological association here: http://www.cpa.ca/public/whatisapsychologist/PTassociations/ .You may also contact the Canadian Mental Health Association in your area by finding your area here: http://www.cmha.ca/get-involved/find-your-cmha/

Thank you for completing this survey!