

David Kealy (Orcid ID: 0000-0002-3679-6085)

Reflective functioning and men's mental health: Associations with resilience and personal growth initiative

Running title: *REFLECTIVE FUNCTIONING AMONG MEN*

David Kealy*¹, Simon M. Rice^{2,3}, Zac E. Seidler^{2,3}, John L. Oliffe^{4,5} & John S. Ogrodniczuk¹

¹ Department of Psychiatry, University of British Columbia

² Orygen, Parkville, Melbourne

³ Centre for Youth Mental Health, University of Melbourne

⁴ School of Nursing, University of British Columbia

⁵ Department of Nursing, University of Melbourne

*Corresponding author information:

David Kealy

#420 – 5950 University Blvd., Vancouver, BC, Canada, V6T 1Z3

Tel: 604-822-5762; Email: david.kealy@ubc.ca

Acknowledgements:

Preparation of this manuscript was supported by a Scholar Award, #18317, awarded to the first author by the Michael Smith Foundation for Health Research.

Conflict of interest statement:

The authors have no conflicts to declare.

Data accessibility statement:

The data that support the findings of this study are available upon reasonable request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

This is the author manuscript accepted for publication and has undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the [Version of Record](#). Please cite this article as [doi: 10.1002/smi.3030](https://doi.org/10.1002/smi.3030).

This article is protected by copyright. All rights reserved.

Abstract

Mentalizing, or reflective functioning, refers to the capacity to reflect on one's own and others' mental states in terms of desires, intentions, and feelings. Reflective functioning in men's mental health is poorly understood, particularly in reference to men's resilience and motivation for personal growth. Using a cross-sectional design, the present study investigated impaired reflective functioning in relation to resilience and personal growth initiative among men with mental health concerns. An online sample of 1,065 men self-reporting mental health concerns completed measures of reflective functioning, psychological distress, resilience, and personal growth initiative. Logistic regression examined reflective functioning in relation to likely serious mental illness, including interaction with age. Subsequent regression analyses controlled for distress severity in examining associations with resilience and personal growth initiative, and in examining the potential mediating role of reflective functioning. Impaired reflective functioning was significantly associated with serious psychological distress irrespective of age and, after controlling for distress severity, with resilience and personal growth initiative. Moreover, impaired reflective functioning was a significant mediator of the relationship between resilience and personal growth initiative. Findings provide preliminary support for reflective functioning as salient to men's resilience and agency for personal change, indicating a potentially important target in men's mental health work.

Keywords: Resilience, personal growth, mentalizing, reflective functioning, men's mental health

INTRODUCTION

Given that men are disproportionately more likely than women to die by suicide (Oliffe et al., 2019), less likely to seek professional mental health care (Addis & Mahalik, 2003), and may evince unique externalizing depressive symptoms (Rice, Oliffe, Kealy, & Ogrodniczuk, 2018), researchers have increasingly focused attention on understanding factors that can impede or facilitate men's treatment engagement, resilience, and recovery (Seidler et al., 2019a). These include structural barriers to accessing care (Rice, Oliffe, Kealy, Seidler, & Ogrodniczuk, 2020; Seidler, Rice, Kealy, Oliffe, & Ogrodniczuk, 2020), attitudes and beliefs about helping practices (Berger, Addis, Green, Mackowiak, & Goldberg, 2013; Rice et al., 2020; Seidler, Rice, Kealy, Ogrodniczuk, & Oliffe, 2019b), and traditional masculinity norms (Levant et al., 2013; Seidler, Dawes, Rice, Oliffe, & Dhillon, 2016) that proscribe vulnerability and emphasize self-reliance and distress concealment (Cox et al., 2020; Sullivan, Camic, & Brown, 2015). Recognition that men differ in personality variables that can influence attitudes about help-seeking, recovery, and motivation for change also points to dispositional features, though one underexamined individual difference in men's mental health is the capacity for mentalizing.

Referred to synonymously as reflective functioning, the concept of mentalizing concerns the capacity to reflect on mental states, particularly those which underlie behaviour, in oneself and in others (Fonagy, Gergely, Jurist, & Target, 2002; Luyten, Campbell, Allison, & Fonagy, 2020). Reflective functioning involves the ability to develop inferences about others'—and one's own—intentions, desires, and feelings (Luyten et al., 2020), with the recognition that these mental states may be complex and potentially discrepant from one's initial assumptions. Thus, reflective functioning shares features with empathy, emotional awareness, mindfulness, and psychological mindedness (Choi-Kain & Gunderson, 2008), in that it requires perspective taking

with regard to others' emotional experience, attunement to one's own states of mind, and conjecture about complex psychological motives underlying behaviour. These related concepts differ from one another with respect to their focus on self (e.g., mindfulness) or others (e.g., empathy) and their implicit (e.g., emotional awareness) or explicit (e.g. psychological mindedness) nature. Reflective functioning traverses such dimensions—encompassing self-other, implicit-explicit and cognitive-affective domains—and may be considered an intersection or convergence of these concepts (Choi-Kain & Gunderson, 2008; Luyten et al., 2020).

The ability to mentalize develops in the context of early childhood caregiving relationships, through secure attachment and caregiver responsiveness based on relatively accurate inferences about the child's mental states (Meins et al., 2002). The susceptibility for reflective functioning to falter under certain conditions, such as acute stress, may be universal. However, persistent or pronounced reflective functioning impairment, including increased proneness to misunderstanding mental states, has been linked with disrupted early attachments (Luyten & Fonagy, 2019). Impaired reflective functioning has also been implicated in depression and personality dysfunction, and has been proposed as an underlying mechanism of difficulties with affect- and self-regulation (Fonagy et al., 2002; Luyten et al., 2020). Reflective functioning may therefore be an important factor in men's experience of themselves, social contexts, and mental health concerns (Crockford & Pellegrini, 2019). Indeed, reflective functioning may be especially salient to men's mental health given traditional masculinity norms that discourage men from being attuned to emotions and inner experiences (Levant, Allen, & Lien, 2014). Moreover, compromised reflective functioning could prevent men from understanding externalizing behaviours such as aggression and alcohol use (i.e., male-type depressive symptoms; Rice, Oliffe et al., 2018) in terms of underlying mental states (Crockford

& Pellegrini, 2019). Reduced reflectivity may also inhibit men's critical evaluation of socialized gender norms and roles in relation to their own individual desires and values, potentially conferring susceptibility to gender role strain (Levant & Powell, 2017) and further stress, health risk, and maladjustment (Evans, Frank, Oliffe, & Gregory, 2011).

Having a poor sense of one's own and others' psychological motives may represent a considerable vulnerability to being overwhelmed by the adversity of elevated stress and mental illness (Fonagy, Allison, & Campbell, 2019; Luyten et al., 2020). Impaired reflective functioning often involves susceptibility to 'psychic equivalence'. This mode of thinking eliminates alternative possibilities, such that one's thoughts and feelings are seen as equivalent to concrete reality (Fonagy et al., 2002). A man prone to psychic equivalence who perceives himself as falling short of standards of masculinity—feeling he is 'less of a man'—may experience this as an essential truth rather than an emotional state emergent from potentially complex antecedents. Recognition of underlying psychological states and processes—including conflicting intentions and motives—could instead help him to move through this experience and consider adaptive coping and change processes. Impaired reflective functioning in the form of extreme uncertainty about others' intentions and feelings can also reduce trust in potentially supportive persons (Fonagy et al., 2019), which may undermine one's confidence in managing and overcoming life challenges. Thus, when faced with an adversity such as depression, impaired reflective functioning may compromise a man's sense of resilience.

Resilience is a broad construct referring to adaptive functioning in the face of hardship. Definitions of resilience converge on its reflection of positive adaptation in the context of significant adversity, allowing for individuals to navigate risks and challenges in ways that sustain wellbeing and positive development (Harms, Brady, Wood, & Silard, 2018; Rutten et al.,

2013; Stainton et al., 2019). Resilience is multifaceted, involving trait, neurobiological, and psychosocial factors (Malhi, Das, Bell, Mattingly, & Mannie, 2019), and may represent a dynamic process where protective factors and mechanisms can fluctuate within individuals and across contexts (Stainton et al., 2019). Nevertheless, resilience involves individual capacities for adaptiveness to adversity and is commonly studied as a trait-like construct—one's ability to 'bounce back' from life challenges—that reflects attitudes based on prior experience (Harms et al., 2018). For men with mental health challenges, resilience can buffer distress and impairment in the face of adversity (Meng, Fleury, Xiang, Li, & D'Arcy, 2018), protecting against negative outcomes such as suicidality (Sher, 2019), and supporting normative development (Malhi et al., 2019; Stainton et al., 2019). Thus, enhancing resilience can be an important objective in clinical work with help-seeking men. Resilience may allow such men to restore or maintain adaptive functioning throughout or following their encounters with mental health challenges. While resilience may be compatible with some aspects of masculinity, lower levels of resilience have been found among men who endorse more emotional restriction (Hammer & Good, 2010), raising the possibility of impaired reflective functioning in enforcing rigid adherence to traditional masculine norms and reducing men's resilience.

Another factor that can figure prominently in men's recovery efforts, and which may be affected by mentalizing difficulties, is personal growth initiative. Personal growth initiative is conceptualized as the agentic striving toward and enacting of positive changes in one's personal development (Robitschek, 1998). Although associated with positive future outlook (Kealy, Cox, & Rice, 2020; Shorey, Little, Snyder, Kluck, & Robitschek, 2007) and a sense of meaning in life (Ivtzan, Chan, Gardner, & Prashar, 2013), personal growth initiative is distinct in encompassing a sense of taking charge, goal-setting, and planful action regarding changes that are relevant to

the individual (Shorey et al., 2007). Given findings from longitudinal studies that higher personal growth initiative predicts reduced psychological distress (Shigemoto & Robitschek, 2020; Weigold et al., 2018) as well as improved depression treatment engagement and outcome (Robitschek et al., 2019), understanding its relation to mentalizing among men can have implications for men advancing and maintaining their mental health. Impaired reflective functioning could have a deleterious impact on men's capacity for instigating meaningful personal changes. Being unable to understand one's own inner desires, intentions, and motives may present considerable challenges for formulating and enacting personally relevant goals. This may be particularly so in the context of considering major changes in men's social worlds, such as leaving or initiating relationships and changing careers, that often accompany psychological distress and men's efforts to resolve it. Research to date has yet to examine the relationship between reflective functioning and personal growth initiative. Indeed, while personal growth initiative may reflect attitudes consistent with resilience, it is unclear whether reflective functioning plays a role in the emergence of agentic change motivation from men's resilience attitudes. Men who struggle to feel resilient to life's challenges may be further impeded in developing an action-oriented approach to personal change in part because of difficulties understanding complex mental states.

Research is scarce regarding reflective functioning in connection with men's attitudes about personal resilience and change motivation. The present study was developed to examine reflective functioning among men with self-identified mental health concerns, with a focus on resilience and personal growth initiative. First, in a preliminary analysis, we evaluated whether diminished reflective functioning would be associated with likelihood of serious mental illness among men, and whether this would differ according to men's age. Age was investigated due to

Author Manuscript

previous research showing younger distressed men to report more externalizing depression symptoms—which may be subject to less mentalizing—than older men (Rice, Kealy, Oliffe, & Ogrodniczuk, 2019), raising the possibility that reflective functioning could interact with age in relation to men’s mental illness. Next, we examined associations between reflective functioning and two variables salient to mental health recovery: resilience and personal growth initiative. We predicted that impaired reflective functioning would be associated with lower levels of resilience and personal growth initiative, even after accounting for the severity of psychological distress. Finally, in an exploratory analysis, we examined whether reflective functioning would mediate the relation between resilience and personal growth initiative. This would inform whether reflective functioning may account for the connection between men’s resilience attitudes and their agentic initiative for enacting personally relevant changes.

METHOD

Participants and procedures

An online sample of 1065 men with mental health concerns were recruited through the *HeadsUpGuys* website, an online resource that provides male-specific psychoeducation and information for management of depression and suicide risk (Ogrodniczuk, Oliffe, & Beharry, 2018). Individuals were eligible to participate in the study if they; (a) were an adult male aged 18 years or older, (b) self-reported a mental health concern, (c) were able to read and understand English, and (d) had an internet connection to complete the survey. Men who visited the site were invited to participate in the study, which consisted of the completion of questions regarding demographic information and the study measures described below. Ethics approval was obtained from the university Behavioural Research Ethics Board.

Measures

Author Manuscript

Reflective Functioning. The Uncertainty scale of the Reflective Functioning Questionnaire (RFQ-U; Fonagy et al., 2016) was used to assess patients' difficulties with reflective functioning—also referred to as impaired mentalizing capacity. The RFQ-U is comprised of six items referring to difficulties in understanding oneself or others in terms of underlying, intentional states of mind such as feelings or wishes (sample item: “sometimes I do things without really knowing why”). Items are scaled from strongly disagree (1) to strongly agree (7), and scores are recoded so that extreme high scores refer to extreme uncertainty about mental states (see Fonagy et al., 2016). Thus, higher scores indicate greater difficulty in reflective functioning. The Reflective Functioning Questionnaire also contains a scale measuring certainty of one's inferences regarding mental states (RFQ-C), which shares item content with the RFQ-U (i.e., opposite-scored RFQ-U items comprise four of the six RFQ-C items). While the RFQ-C scale has shown mixed associations with other constructs, the RFQ-U scale has been more clearly associated with other measures of impaired mentalizing and personality pathology (De Meulemeester, Lowyck, Vermote, Verhaest, & Luyten, 2017). Hence, for the present study we employed the RFQ-U as a measure of impaired reflective functioning.

Psychological distress. General psychological distress was assessed using the Kessler Psychological Distress Scale (K6; Kessler et al., 2003), a six-item measure of depressive and anxiety symptoms experienced over the past month, scored from *none of the time* (0) to *all of the time* (4). A cut-point of 13 on the K6 has been found to indicate serious mental illness, and to predict increased mortality (Pratt, 2009). The K6 has been shown to have a unidimensional factor structure, sound psychometric properties, and to perform well as an indicator of serious mental illness across 14 countries (Kessler et al., 2010).

Resilience. Resilience was assessed using the Brief Resilience Scale (BRS; Smith et al., 2008), a 6-item self-report measure that refers to general tendencies in dealing with stress or adversity. Items are scored using a 5-point scale anchored by “strongly disagree” (1) and “strongly agree” (5). The sum of item scores provides a total score whereby higher values denote a more robust appraisal of one’s capacity to handle adversity (sample item: “I usually come through difficult times with little trouble”).

Personal Growth Initiative. Individual differences in agency for engaging in personal development activities was assessed using the Personal Growth Initiative Scale (PGIS; Robitschek, 1998). The PGIS is a unidimensional self-report measure of an individual’s overall agency for making personally relevant life changes, including the motivation to engage in personal growth activities. The PGIS contains nine items scored from “definitely disagree” (1) to “definitely agree” (6); higher scores indicate greater personal growth initiative (sample item: “If I want to change something in my life, I initiate the transition process”).

Analytic approach

Analyses were undertaken using SPSS 25 including the PROCESS macro 3.0 (Hayes, 2018). Descriptive statistics were used to characterize the sample. Likelihood of representing a case of serious mental illness, in terms of clinically significant psychological distress, was determined using the K6 cut-off score (≥ 13). A binary logistic regression analysis was conducted to evaluate impaired reflective functioning, age, and their interaction (i.e., conditional effects of age) in predicting likely caseness. Next, zero-order correlations and linear regression analyses were used to examine associations between impaired reflective functioning and resilience and personal growth initiative, with K6 scores included as a covariate in regression models. Finally, regression analyses facilitated with PROCESS were conducted to examine

reflective functioning as a mediator between resilience and personal growth initiative. In this simple mediation model, resilience was the independent variable (X), impaired reflective functioning was the mediator (M), and personal growth initiative was the dependent variable (Y), with general distress included as a covariate in paths $X \rightarrow M$ and $M \rightarrow Y$. The indirect effect of resilience through reflective function was evaluated conservatively using a bootstrapped 99% confidence interval (CI), sampled 10,000 times to mitigate concerns regarding normality assumptions in the product of path coefficients. Statistical significance of mediation was indicated by the absence of zero within the lower and upper bounds of the 99% CI testing the point estimate of the indirect effect.

RESULTS

Examination of Cronbach's alpha coefficients indicated acceptable internal consistency of all study measures (Table 1). Men were aged between 18 and 100 years old, with the mean age being 37.33 years ($SD = 13.75$). The majority, 44.7% ($n = 476$) were from Canada, with 16.5% ($n = 176$) from the United Kingdom, 16.4% ($n = 175$), from the United States, and 5% ($n = 53$) from Australia. The remaining 17.4% ($n = 185$) were from various other countries including India, Ireland, and South Africa. The majority, 74.2% ($n = 790$) identified as Caucasian, 9.5% ($n = 101$) identified as Asian, 4.7% ($n = 50$) identified as multiple ethnicities; other ethnic identities including African, Aboriginal, and Hispanic represented the remaining 11.6% ($n = 124$). More than three quarters of respondents, 83.8% ($n = 892$) identified as heterosexual, with 8.4% ($n = 89$) and 6.6% ($n = 70$) identifying as gay and bisexual, respectively; 1.3% ($n = 14$) listed sexual orientation as 'other'.

With regard to likelihood of serious mental illness, indicated by K6 scores ≥ 13 , two-thirds of respondents, 67.7% ($n = 721$), scored above the cut-off. Logistic regression predicting

likelihood of serious mental illness was conducted with RFQ-U scores, age, and their interaction term (the product of RFQ-U \times age) entered as predictors. The overall model was significant, predicting 93.6% of cases correctly, $\chi^2(3) = 100.08, p < .001$, Nagelkerke $R^2 = .13$. However, only impaired reflective functioning was significant, $b = 1.12, SE = .31, p < .001$, with an odds ratio of 3.08 in predicting likely serious mental illness. Thus, age did not moderate whether impaired reflective functioning would be associated with men scoring in the serious mental illness range.

Zero-order correlations, along with descriptive statistics for study variables, are provided in Table 1. As expected, given the previous finding regarding RFQ-U scores predicting distress, impaired reflective functioning was significantly associated with general psychological distress when considered continuously. Also as expected, impaired reflective functioning and distress were both significantly negatively associated with resilience and personal growth initiative. Linear regression models entered K6 scores in the first step and RFQ-U scores in the second step to examine the unique variance in resilience and personal growth initiative accounted for by impaired reflective functioning. The final models were significant for both resilience, $F(2, 1062) = 117.20, R^2 = .18, p < .001$, and personal growth initiative, $F(2, 1062) = 140.79, R^2 = .21, p < .001$. Coefficients are presented in Table 2, indicating reflective functioning as a significant predictor in each model, accounting for 6% of the variance in resilience and 3% of the variance in personal growth initiative, after controlling for severity of general psychological distress.¹

Our exploratory mediation analysis included psychological distress as a control variable in all paths, providing a conservative estimate of the potential role of reflective functioning in

¹ Further regression models adding the RFQ-C scale indicated that less than 1% of the variance was accounted for by the RFQ-C. Given the substantial item overlap between scales, and the minimal variance accounted for by the RFQ-C, we retained the original models testing the RFQ-U.

Accounting for the association between resilience and personal growth initiative. The overall model was significant, $F(3, 1061) = 122.23$, $R^2 = .26$, $p < .001$. Coefficients for the model are presented in Figure 1. As indicated by the absence of zero with bootstrapped CI limits, a significant indirect effect of resilience through reflective functioning was observed, with a point estimate of .42, $SE = .11$, 99% CI [.16, .72]. Thus, reflective functioning was found to significantly mediate the relationship between resilience and personal growth initiative.

DISCUSSION

Findings from the present study provide preliminary support for reflective functioning as salient to men's mental health, particularly with regard to resilience attitudes and change motivation. First, impaired reflective functioning was associated with likelihood of serious mental illness, irrespective of men's age. Second, impaired reflective functioning was associated with lower levels of resilience and personal growth initiative, accounting for unique variance in these variables after controlling for severity of distress. Finally, reflective functioning was a significant mediator of the link between resilience and personal growth initiative, which suggests the involvement of reflective functioning in the transition from attitudes about weathering adversity to the motivation to make personally meaningful life changes.

Having difficulty thinking about behaviours in terms of underlying mental states may make it harder to reappraise negative emotional states and challenging social situations (Fonagy et al., 2019). Men with diminished reflective functioning may find it difficult to sustain attentional focus on negative feelings in the service of understanding their relevance, origins, and potential re-interpretations of their meaning. Indeed, negative emotional experience may rather be seen as requiring suppression or discharge through urgent action—or construed as personal failure or flaw—rather than modulated through reflection, reappraisal, and social support

(Luyten et al., 2020). Reduced reflective functioning would likely also compromise one's ability to evaluate intentions and behaviours in terms of being either adaptive or maladaptive. The 'knowing oneself' that accompanies robust mentalizing (Fonagy et al., 2002), while flexible enough to encompass some uncertainty and humility, is likely of considerable utility in determining whether a planned course of action represents a 'true' or value-consistent goal, as opposed to one that would largely serve defensive purposes. Thus, extreme uncertainty about mental states could contribute to men feeling stuck and immobilized in the face of stressors, which may reduce confidence in managing adversity and imagining alternative responses. In this context, it may be exceedingly difficult to formulate and implement an appropriate plan of action, especially one that implies significant social role changes.

Diminished reflective functioning and lower resilience may share origins in exposure to childhood adversity (Fonagy et al., 2002; Luyten & Fonagy, 2019; Malhi et al., 2019). Chronic absence of childhood emotional support, as well as outright maltreatment, may deprive boys of both the relational security needed to foster mentalizing capacity and interpersonal models of resilience that may be identified with and internalized. Such adversity, particularly if opportunities for mentalizing remain thwarted, may arrest the further unfolding of reflective and resilience capacities that would normally occur in social contexts during adolescent development (Fonagy et al., 2002; Malhi et al., 2019). The link between childhood adversity and men's risk of depression and suicidality (Rice, Kealy, Oliffe, Seidler, & Ogradniczuk, 2018) underscores the consequences of stalled mentalizing development in this context. Yet if reflective functioning and resilience can be preserved—perhaps aided by the reflective functioning performed by other support persons—these factors may mitigate the development of trauma related disorders (Meng et al., 2018), and potentially contribute to further initiative for personal

growth. Unfortunately, the potential exists for a vicious circle wherein impaired reflective functioning reduces recognition of social support needs and heightens mistrust of socially-obtained information (Fonagy et al., 2019), with the ensuing reduction of social support reinforcing extreme uncertainty about mental states. Moreover, an inability to empathize with, reflect upon, and learn from others' mental states could limit the actual quality of interpersonal connections, further perpetuating a cycle of impaired mentalizing and reduced resilience and personal growth initiative. The degree to which adherence to traditional masculinity norms could figure in these dynamics would be an interesting target for future research.

Limitations and future research directions

Although situated in a large sample of men, the present study did not investigate masculine norms and values in the associations between impaired reflective functioning and distress, resilience, and personal growth initiative. The masculinities that our respondents identified with were thus unknown, thereby precluding empirically-based inferences regarding any relationship between reflective functioning and masculinity. An important next step would be to investigate whether reflective functioning may attenuate inflexible adherence to traditional masculinity norms (Addis & Mahalik, 2003), and whether strengths-based masculine values (Oliffe et al., 2018) might incorporate mentalizing and align with health-related attitudes. Given that impaired mentalizing may underlie externalizing symptoms, future studies should consider assessment of male-specific distress symptoms (e.g., the Male Depression Risk Scale; Rice et al., 2013), along with adherence to masculine norms and values (e.g., the Conformity to Masculine Norms Inventory; Mahalik et al., 2003) to provide a more nuanced understanding of mentalizing in men's mental health. Thus, future research could help to understand the effects of reflective functioning on alignment with traditional masculinity norms, and in potentially moderating

relations between masculine values such as self-reliance and mental health risks such as suicidal ideation (Pirkis, Spittal, Keogh, Mousaferiadis, & Currier, 2017).

The present study was also limited by the exclusive use of self-report assessment, particularly regarding impaired mentalizing, in that one arguably needs to have at least some reflective ability in order to recognize deficits in this capacity. Our use of the BRS to measure resilience did not allow investigation of resilience in terms of multiple dimensions and processes. Future research could employ more comprehensive, observer-rated or multidimensional assessment methods (e.g., the Reflective Functioning Rating Scale; Meehan, Levy, Reynoso, Hill, & Clarkin, 2009), though this may not be feasible in large community samples. Future studies could also expand the assessment of personal growth initiative, since measurement is available for multiple components, including readiness for change, planfulness, using resources, and intentional behaviour (Robitschek et al., 2012). Another limitation of our study was the cross-sectional design, which raises the possibility of shared method variance and precludes inferences about causality. Subsequent research could help to establish the sequential relations among these and other salient variables in men's mental health by using prospective and experience-sampling designs. Nevertheless, the large sample size and conservative analytic approach—controlling for distress severity and adopting a bootstrap 99% CI to test mediation—may increase confidence in our findings as an initial contribution.

Practical implications

In light of the aforementioned limitations, potential implications of the present findings should be considered somewhat tentatively. Nevertheless, these preliminary findings point to some practical implications for men's mental health. First, contemporary revisioning of masculinity in terms of strengths that contribute to men's resilience may benefit from

Author Manuscript

incorporating reflective functioning as a positive aspect of male identity (Hammer & Good, 2010). In this light, reflective functioning may be seen as enabling men's ability to protect and care for others and to solve problems through reflection and collaboration. Relatedly, an emphasis on self-reflection could potentially be integrated into men's health promotion and masculinities-focused psychoeducation (Seidler, Rice, River, Oliffe, & Dhillon, 2018), in that understanding one's own mind may be endorsed as an aspect of resilience and personal agency that can be advanced through social support and professional help. Mentalization-based resilience education programming has been developed for an online format (Bak, Midgley, Zhu, Wistoft, & Obel, 2015), and could potentially be tailored as a preventive or early intervention option for specific male populations. Clinicians may also be encouraged to incorporate a focus on reflective functioning, promoting exploration of feelings and motives, in their work with men who are aiming for greater resilience and personal development. Helping men to enhance their reflective functioning may support their clarification and connection with personal values, the enactment of which may strengthen resilience (Ceary, Donahue, & Shaffer, 2019). While specific mentalization-based therapies have been supported by randomized clinical trials, reflective functioning may be an inherent aspect of any exploratory therapy (Luyten et al., 2020). Contrary to assumptions that men are disinclined to explore their inner world, contemporary research suggests that help-seeking men prefer psychotherapy and want a therapist who will help them explore difficult feelings and understand patterns in their behaviour (Kealy et al., 2020). Although the present findings require replication and extension in clinical and prospective or experimental studies, it may nevertheless be reasonable for clinicians to consider that helping men foster reflectivity may be one way to help shape men's resilience attitudes and personal growth strivings.

References

- Addis, M. E., & Mahalik, J. R. (2003). Men, masculinity, and the contexts of help seeking. *American Psychologist, 58*, 5–14. <http://dx.doi.org/10.1037/0003-066X.58.1.5>
- Bak, P. L., Midgley, N., Zhu, J. L., Wistoft, K., & Obel, C. (2015). The Resilience Program: Preliminary evaluation of a mentalization-based education program. *Frontiers in Psychology, 6*, Article 753. <https://doi.org/10.3389/fpsyg.2015.00753>
- Bateman, A., & Fonagy, P. (2008). 8-year follow-up of patients treated for borderline personality disorder: mentalization-based treatment versus treatment as usual. *American Journal of Psychiatry, 165*, 631-638. <http://dx.doi.org/10.1176/appi.ajp.2007.07040636>
- Berger, J. L., Addis, M. E., Green, J. D., Mackowiak, C., & Goldberg, V. (2013). Men's reactions to mental health labels, forms of help-seeking, and sources of help-seeking advice. *Psychology of Men & Masculinity, 14*, 433-443. <http://dx.doi.org/10.1037/a0030175>
- Cearry, C. D., Donahue, J. J., & Shaffer, K. (2019). The strength of pursuing your values: Valued living as a path to resilience among college students. *Stress and Health, 35*, 532-541. <https://doi.org/10.1002/smi.2886>
- Choi-Kain, L. W., & Gunderson, J. G. (2008). Mentalization: Ontogeny, assessment, and application in the treatment of borderline personality disorder. *American Journal of Psychiatry, 165*, 1127-1135. <http://dx.doi.org/10.1176/appi.ajp.2008.07081360>
- Cox, D. W., Ogradniczuk, J. S., Oliffe, J. L., Kealy, D., Rice, S. M., & Kahn, J. H. (2020). Distress concealment and depression symptoms in a national sample of Canadian men: Feeling understood and loneliness as sequential mediators. *Journal of Nervous and Mental Disease, 208*, 510-513. <http://dx.doi.org/10.1097/NMD.0000000000001153>

- Crockford, H. & Pellegrini, M. (2019). Mentalizing and men's mental health: helping men to keep mind in mind in clinical settings. In (J.A. Barry, R. Kinglerlee, M. Seager, & L. Sullivan (2019). *The Palgrave handbook of male psychology and mental health*. Cham, Switzerland: Springer International Publishing. http://dx.doi.org/10.1007/978-3-030-04384-1_27
- De Meulemeester, C., Lowyck, B., Vermote, R., Verhaest, Y., & Luyten, P. (2017). Mentalizing and interpersonal problems in borderline personality disorder: The mediating role of identity diffusion. *Psychiatry Research*, 258, 141-144.
<http://dx.doi.org/10.1016/j.psychres.2017.09.061>
- Evans, J., Frank, B., Oliffe, J. L., & Gregory, D. (2011). Health, illness, men and masculinities (HIMM): A theoretical framework for understanding men and their health. *Journal of Men's Health*, 8, 7–15. <https://doi.org/10.1016/j.jomh.2010.09.227>
- Fonagy, P., Allison, E., & Campbell, C. (2019). Mentalizing, resilience, and epistemic trust. In Bateman & Fonagy (Eds.) *Handbook of mentalizing in mental health practice, 2nd edition*, pp. 79–99. Washington, DC: American Psychiatric Publishing.
<https://doi.org/10.4324/9781351010818-3>
- Fonagy, P., Gergely, G., Jurist, E. L., & Target, M. (2002). *Affect regulation, mentalization, and the development of the self*. Other Press. <http://dx.doi.org/10.4324/9780429471643>
- Fonagy, P., Luyten, P., Moulton-Perkins, A., Lee, Y. W., Warren, F., et al. (2016). Development and validation of a self-report measure of mentalizing: the Reflective Functioning Questionnaire. *PLOS ONE*, 11, e0158678 <http://dx.doi.org/10.1371/journal.pone.0158678>
- Hammer, J. H., & Good, G. E. (2010). Positive psychology: An empirical examination of beneficial aspects of endorsement of masculine norms. *Psychology of Men & Masculinity*, 11, 303–318.
<http://dx.doi.org/10.1037/a0019056>

- Harms, P. D., Brady, L., Wood, D., & Silard, A. (2018). Resilience and well-being. In E. Diener, S. Oishi, & L. Tay (Eds.), *Handbook of well-being*. Salt Lake City, UT: DEF Publishers.
DOI:nobascholar.com
- Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis, 2nd edition*. New York, NY: Guilford Press.
- Ivtzan, I., Chan, C. P. L., Gardner, H. E., & Prashar, K. (2013). Linking religion and spirituality with psychological well-being: Examining self-actualisation, meaning in life, and personal growth initiative. *Journal of Religion and Health, 52*, 915–929.
<http://dx.doi.org/10.1007/s10943-011-9540-2>
- Kealy, D., Cox, D. W., & Rice, S. M. (2020). Borderline personality features and impeded personal growth initiative: The importance of dispositional optimism. *International Journal of Mental Health and Addiction*. <http://dx.doi.org/10.1007/s11469-020-00255-7>
- Kealy, D., Seidler, Z. E., Rice, S. M., Oliffe, J. L., Ogrodniczuk, J. S., & Kim, D. (2020). Challenging assumptions about what men want: Examining preferences for psychotherapy among men attending outpatient mental health clinics. *Professional Psychology: Research and Practice*. <http://dx.doi.org/10.1037/pro0000321>
- Kessler, R. C., Barker, P. R., Colpe, L. J., Epstein, J. F., Gfroerer, J. C., Hiripi, E., Howes, M. J., Normand, S. T., Manderscheid, R. W., Walters, E. E., & Zaslavsky, A. M. (2003). Screening for serious mental illness in the general population. *Archives of General Psychiatry, 60*, 184–189. <http://dx.doi.org/10.1001/archpsyc.60.2.184>
- Kessler, R. C., Green, J. G., Gruber, M. J., Sampson, N. A., Bromet, E., Cuitan, M., Furukawa, T. A., Gureje, O., Hinkov, H., Hu, C. Y. and Lara, C. (2010). Screening for serious mental illness in the general population with the K6 screening scale: results from the WHO World

Mental Health (WMH) survey initiative. *International Journal of Methods in Psychiatric Research*, 19, 4-22. <https://doi.org/10.1002/mpr.333>

Levant, R. F., Allen, P. A., & Lien, M.-C. (2014). Alexithymia in men: How and when do emotional processing deficiencies occur? *Psychology of Men & Masculinity*, 15, 324-334. <https://doi:10.1037/a0033860>

Levant, R. F., & Powell, W. A. (2017). *The gender role strain paradigm*. In R. F. Levant & Y. J. Wong (Eds.), *The psychology of men and masculinities* (p. 15–43). Washington, DC: American Psychological Association. <https://doi.org/10.1037/0000023-002>

Levant, R. F., Stefanov, D. G., Rankin, T. J., Halter, M. J., Mellinger, C., & Williams, C. M. (2013). Moderated path analysis of the relationships between masculinity and men's attitudes toward seeking psychological help. *Journal of Counseling Psychology*, 60, 392–406. <http://dx.doi.org/10.1037/a0033014>

Luyten, P., Campbell, C., Allison, E., & Fonagy, P. (2020). The mentalizing approach to psychopathology: State of the art and future directions. *Annual Review of Clinical Psychology*, 16, 297-325. <http://dx.doi.org/10.1037/a0033014>

Luyten, P., Fonagy, P. (2019). Mentalizing and trauma. In Bateman & Fonagy (Eds.) *Handbook of mentalizing in mental health practice, 2nd edition*, pp. 79–99. Washington, DC: American Psychiatric Publishing.

Mahalik, J. R., Locke, B. D., Ludlow, L. H., Diemer, M. A., Scott, R. P. J., Gottfried, M., & Freitas, G. (2003). Development of the Conformity to Masculine Norms Inventory. *Psychology of Men & Masculinity*, 4, 3–25. <http://dx.doi.org/10.1037/1524-9220.4.1.3>

- Malhi, G. S., Das, P., Bell, E., Mattingly, G., & Mannie, Z. (2019). Modelling resilience in adolescence and adversity: a novel framework to inform research and practice. *Translational Psychiatry*, 9, 1-16. <http://dx.doi.org/10.1038/s41398-019-0651-y>
- Meehan, K. B., Levy, K. N., Reynoso, J. S., Hill, L. L., & Clarkin, J. F. (2009). Measuring reflective function with a multidimensional rating scale: comparison with scoring reflective function on the AAI. *Journal of the American Psychoanalytic Association*, 57, 208-213. <http://dx.doi.org/10.1177/00030651090570011008>
- Meins, E., Fernyhough, C., Wainwright, R., Das Gupta, M., Fradley, E., & Tuckey, M. (2002). Maternal mind-mindedness and attachment security as predictors of theory of mind understanding. *Child Development*, 73, 1715-1726. <http://dx.doi.org/10.1111/1467-8624.00501>
- Meng, X., Fleury, M.-J., Xiang, Y.-T., Li, M., & D'Arcy, C. (2018). Resilience and protective factors among people with a history of child maltreatment: A systematic review. *Social Psychiatry and Psychiatric Epidemiology*, 53, 453–475. <http://dx.doi.org/10.1007/s00127-018-1485-2>
- Ogrodniczuk, J. S., Oliffe, J. L., & Beharry, J. (2018). HeadsUpGuys: Canadian online resource for men with depression. *Canadian Family Physician*, 64, 93-94.
- Oliffe, J. L., Rice, S., Kelly, M. T., Ogrodniczuk, J. S., Broom, A., Robertson, S., & Black, N. (2018). A mixed-methods study of the health-related masculine values among young Canadian men. *Psychology of Men & Masculinity*. <http://dx.doi.org/10.1037/men0000157>
- Oliffe, J. L., Rossnagel, E., Seidler, Z. E., Kealy, D., Ogrodniczuk, J. S., & Rice, S. M. (2019). Men's depression and suicide. *Current Psychiatry Reports*, 21:103. <https://doi.org/10.1007/s11920-019-1088-y>

- Pirkis, J., Spittal, M. J., Keogh, L., Mousaferiadis, T., & Currier, D. (2017). Masculinity and suicidal thinking. *Social Psychiatry and Psychiatric Epidemiology*, *52*, 319–327.
- Pratt, L. A. (2009). Serious psychological distress, as measured by the K6, and mortality. *Annals of Epidemiology*, *19*, 202-209. <http://dx.doi.org/10.1007/s00127-016-1324-2>
- Rice, S. M., Fallon, B. J., Aucote, H. M., & Möller-Leimkühler, A. M. (2013). Development and preliminary validation of the male depression risk scale: Furthering the assessment of depression in men. *Journal of Affective Disorders*, *151*, 950-958.
<http://dx.doi.org/10.1016/j.jad.2013.08.013>
- Rice, S. M., Kealy, D., Oliffe, J. L., & Ogrodniczuk, J. S. (2019). Externalizing depression symptoms among Canadian males with recent suicidal ideation: A focus on young men. *Early Intervention in Psychiatry*, *13*, 308–313. <https://doi.org/10.1111/eip.12667>
- Rice, S. M., Kealy, D., Oliffe, J. L., Seidler, Z. E., & Ogrodniczuk, J. S. (2018). Childhood maltreatment and age effects on depression and suicide risk among Canadian men. *Psychiatry Research*, *270*, 887–889. <http://dx.doi.org/10.1016/j.psychres.2018.11.011>
- Rice, S. M., Oliffe, J. L., Kealy, D., & Ogrodniczuk, J. S. (2018). Male depression subtypes and suicidality: Latent profile analysis of internalising and externalising symptoms in a representative Canadian sample. *Journal of Nervous and Mental Disease*, *206*, 169-172.
<http://dx.doi.org/10.1097/NMD.0000000000000739>
- Rice, S. M., Oliffe, J. L., Kealy, D., Seidler, Z. E., & Ogrodniczuk, J. S. (2020). Men’s help-seeking for depression: Attitudinal and structural barriers in symptomatic men. *Journal of Primary Care and Community Health*, *11*, 1-6. <https://doi.org/10.1177/2150132720921686>

Robitschek, C. (1998). Personal growth initiative: The construct and its measure. *Measurement and Evaluation in Counseling and Development*, 30, 183-198.

<http://dx.doi.org/10.1080/07481756.1998.12068941>

Robitschek, C., Ashton, M. W., Spring, C. C., Geiger, N., Byers, D., Schotts, G. C., & Thoen, M. (2012). Development and psychometric properties of the Personal Growth Initiative Scale – II. *Journal of Counseling Psychology*, 59, 274-287. <https://doi.org/10.1037/a0027310>

Robitschek, C., Yang, A., Villalba II, R., & Shigemoto, Y. (2019). Personal growth initiative: A robust and malleable predictor of treatment outcome for depressed partial hospital patients. *Journal of Affective Disorders*, 246, 548-555. <http://dx.doi.org/10.1016/j.jad.2018.12.121>

Rutten, B. P. F., Hammels, C., Geschwind, N., Menne-Lothmann, C., Pishva, E., Schruers, K., van den Hove, D., Kenis, G., van Os, J., & Wichers, M. (2013). Resilience in mental health: Linking psychological and neurobiological perspectives. *Acta Psychiatrica Scandinavica*, 128, 3–20. <https://doi.org/10.1111/acps.12095>

Seidler, Z. E., Dawes, A. J., Rice, S. M., Oliffe, J. L., & Dhillon, H. M. (2016). The role of masculinity in men's help-seeking for depression: A systematic review. *Clinical Psychology Review*, 49, 106-118. <http://dx.doi.org/10.1016/j.cpr.2016.09.002>

Seidler, Z. E., Rice, S. M., Kealy, D., Ogrodniczuk, J. S., & Oliffe, J. L. (2019b). Getting them through the door: A survey of men's facilitators for seeking mental health treatment. *International Journal of Mental Health and Addiction*. <https://doi.org/10.1007/s11469-019-00147-5>

Seidler, Z. E., Rice, S. M., Kealy, D., Oliffe, J. L., & Ogrodniczuk, J. S. (2020). What gets in the way? Men's perspectives of barriers to mental health services. *International Journal of Social Psychiatry*, 66, 105-110. <http://dx.doi.org/10.1177/0020764019886336>

- Seidler, Z. E., Rice, S. M., Ogradniczuk, J. S., Kealy, D., Dhillon, H. M. & Oliffe, J. L. (2019a). Considerations in men's mental health promotion and treatment. In D. Griffith, M. A. Bruce, R. J. Thorpe (Eds.). *Men's Health Equity: A Handbook*. pp. 275-287. New York, NY: Routledge. <http://dx.doi.org/10.4324/9781315167428-17>
- Seidler, Z. E., Rice, S. M., River, J., Oliffe, J. L., & Dhillon, H. M. (2018). Men's mental health services: The case for a masculinities model. *The Journal of Men's Studies*, 26, 92-104. <http://dx.doi.org/10.1177/1060826517729406>
- Sher, L. (2019). Resilience as a focus of suicide research and prevention. *Acta Psychiatrica Scandinavica*, 140, 169-180. <http://dx.doi.org/10.1111/acps.13059>
- Shigemoto, Y., & Robitschek, C. (2020). Personal growth initiative and posttraumatic stress among survivors of transportation accidents: Mixture modeling indicating changes in group membership over time. *Stress and Health*, 36, 365-375. <https://doi.org/10.1002/smi.2935>
- Shorey, H. S., Little, T. D., Snyder, C. R., Kluck, B., & Robitschek, C. (2007). Hope and personal growth initiative: A comparison of positive, future-oriented constructs. *Personality and Individual Differences*, 43, 1917-1926. <http://dx.doi.org/10.1016/j.paid.2007.06.011>
- Smith, B. W., Dalen, J., Wiggins, K., Tooley, E., Christopher, P., & Bernard, J. (2008). The brief resilience scale: assessing the ability to bounce back. *International Journal of Behavioral Medicine*, 15, 194-200. <http://dx.doi.org/10.1080/10705500802222972>
- Stainton, A., Chisholm, K., Kaiser, N., Rosen, M., Upthegrove, R., Ruhrmann, S., & Wood, S. J. (2019). Resilience as a multimodal dynamic process. *Early Intervention in Psychiatry*, 13, 725-732. <https://doi.org/10.1111/eip.12726>

Sullivan, L., Camic, P. M., & Brown, J. S. L. (2015). Masculinity, alexithymia, and fear of intimacy as predictors of UK men's attitudes towards seeking professional psychological help. *British Journal of Health Psychology, 20*, 194–211. <http://dx.doi.org/10.1111/bjhp.12089>

Weigold, I. K., Boyle, R. A., Weigold, A., Antonucci, S. Z., Mitchell, H. B., & Martin-Wagar, C. A. (2018). Personal growth initiative in the therapeutic process: An exploratory study. *The Counseling Psychologist, 46*, 481-504.<http://dx.doi.org/10.1177/0011000018774541>

Table 1. *Descriptive statistics, internal consistency coefficients, and zero-order correlations for primary study variables; N = 1065.*

	<i>M (SD)</i>	α	1	2	3
1. Impaired reflective functioning (RFQ-8)	1.17 (.73)	.74	—		
2. General psychological distress (K6)	14.43 (4.58)	.81	.37**	—	
3. Resilience (BRS)	2.47 (.75)	.81	-.35**	-.35**	—
4. Personal growth initiative (PGIS)	28.04 (8.94)	.89	.33**	-.42**	.39**

* $p < .01$; ** $p < .001$

Table 2. *Final regression models examining associations between reflective functioning and resilience and personal growth initiative, controlling for general psychological distress.*

	<i>b</i>	SE	β	<i>t</i>	<i>p</i>
<i>Predicting resilience</i>					
General psychological distress	-.04	.01	-.26	-8.59	< .001
Impaired reflective functioning	-.26	.03	-.26	-8.66	< .001
<i>Predicting personal growth initiative</i>					
General psychological distress	-.68	.06	-.35	-11.82	< .001
Impaired reflective functioning	-2.39	.35	-.20	-6.78	< .001

Figure 1 caption:

Figure 1. *Unstandardized coefficients (with standard errors) from analysis of reflective functioning as a mediator between resilience and personal growth initiative among men with mental health concerns.*

Note: Bold confidence interval indicates statistical significance.

