

Helping or Harming? The Impact of Exploring Trauma Within a Men's Residential Addiction
Treatment Program

by

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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

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Abstract

Substance abuse and trauma experiences have a high comorbidity and are more likely to co-occur than not (Farley et al., 2004; Tripp et al., 2019; van Dam et al., 2012). The co-occurrence of trauma and substance use is associated with greater symptom severity for both issues, poorer treatment outcomes, and higher rates of drop out from treatment (V. B. Brown et al., 2013; Roberts et al., 2015; van Dam et al., 2012). Historically, substance abuse and trauma have been addressed separately in treatment through independent (both issues are addressed through independent programs that do not co-ordinate care) or sequential (one issue is prioritized and addressed individually before addressing the other) treatment programs (Hermann et al., 2014). Some practitioners and treatment programs hold the belief that incorporating trauma care within substance abuse treatment can result in triggering relapse, jeopardizing a person's sobriety or recovery, or exacerbating the individual's trauma issues (V. B. Brown et al., 2013; Covington et al., 2008; Lortye et al., 2021) despite support for the effectiveness of integrated treatment wherein both issues are addressed together within a singular program (Blakey & Bowers, 2014; Dass-Brailsford & Myrick, 2010; Tripp et al., 2019; Vujanovic et al., 2018). It is well established within the literature that there are gender differences in experiences of substance abuse and trauma (Cosden et al., 2015), which supports the need for gender-responsive treatment. This research assesses a specific gender-responsive integrated group therapy treatment for men, implemented within a residential addiction treatment program that has not been previously assessed. It focuses on analyzing a specific two-week portion of the overall treatment that explores the role of trauma in a person's substance abuse issues and how it impacts their goals of recovery to determine potential iatrogenic effects of exploring trauma (i.e., worsening symptoms, and increased drop out from treatment). Participants were recruited from Wayside House of

Hamilton and completed a baseline assessment, an assessment before beginning the specific portion of treatment exploring the role of trauma in substance abuse, and an assessment after completing this trauma centered section of treatment. Participant attendance in group sessions throughout the program was also tracked. Paired sample t-tests revealed no significant changes across measures of hope, self-esteem, and sleep disturbance - indicating there was no worsening of symptoms – and a significant decrease in distress caused by trauma symptoms – indicating improvements in trauma symptomology. Analyzing drop outs from treatment revealed no significant differences between the sections of programming during which participants prematurely terminated treatment, indicating there is no evidence to suggest individuals experienced intense distress specific to the trauma module presenting as increased drop out. This research lends support for the use of the Exploring Trauma module for integrated treatment of substance abuse and trauma within a men’s residential program.

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Introduction

Recent reports regarding the use of alcohol, stimulants and opiates substantiate the irrefutable fact that substance related issues have intensified in recent years. A report released by Statistics Canada indicates that deaths related to alcohol use increased by over 20% from 2019 until 2021 - the largest increase in mortality due to alcohol related harms in 20 years (Statistics Canada, 2023a). The Federal, Provincial and Territorial Special Advisory Committee on the Epidemic of Opioid Overdoses (2022) released a report detailing the trends in opioid related overdoses from 2016 until June of 2022 across Canada. According to this report, there was a 90% increase in opioid related overdoses from March 2020 until June 2022. This report also stated that approximately half of the accidental overdoses involved the use of stimulants such as cocaine. In an effort to monitor drug use globally, many cities have been engaging in wastewater monitoring, including municipalities across Canada. The results of the Canadian Wastewater Survey (CWS) were compared with similar data collected globally and found that in comparison to 150 European cities, five Canadian cities ranked in the top 10 highest levels of cocaine detected in wastewater (Statistics Canada, 2023b). Furthermore, the CWS results were compared for methamphetamine use with other countries using similar methodology, revealing that in 2022 the highest levels of methamphetamines were found the United States, Czechia, Australia, Canada, and New Zealand (Statistics Canada, 2023b).

In response to these reports, the Canadian federal government continues to work towards addressing the overdose crisis and general substance use related harms by acknowledging the need for a holistic, integrated approach to this public health emergency (House of Commons Canada, 2016). The Standing Committee on Health devised a report and recommendations for the crisis which was presented to the House of Commons Canada and the approach involved four

interconnected aspects: prevention and education, services and supports for substance use, evidence regarding harms, and policies targeting substance control (Health Canada, 2023). This thesis focuses on assessing a holistic and integrated approach for substance abuse treatment – specifically concentrating on the treatment of comorbid substance abuse and trauma.

Relationship Between Trauma and Substance Use

Substance abuse and trauma experiences have a high comorbidity and are more likely to co-occur than not (Farley et al., 2004; Tripp et al., 2019; van Dam et al., 2012). Multiple researchers have found high prevalence of trauma experiences amongst populations being treated for substance abuse (Giordano et al., 2016; Wu et al., 2010). Wu and colleagues (2010) conducted a study in which they looked at a sample of 402 men and women in a residential treatment program for substance abuse and found that 95% reported experiencing at least one childhood traumatic event and 18% reported experiencing six or more. Similarly, another study by Giordano and colleagues (2016) also found high prevalence (85%) of trauma among individuals in treatment for substance abuse, and of those reporting experiences of trauma, 82% reported more than one occurrence. Trauma within this study referred to traumatic experiences across the lifespan related to criminal events, general disasters and unwanted sexual and physical encounters (Giordano et al., 2016). Furthermore, they found that only 20% of this population reported a post-traumatic stress disorder (PTSD) diagnosis (Giordano et al., 2016).

To understand the relationship between trauma and substance use as well as their co-occurrence two main theories have been proposed. One of the most popular theories used to explain this co-occurrence is the self-medication theory, which posits that individuals with trauma experiences engage in substance use to cope with the distress caused by trauma symptoms (Flanagan et al., 2016; Schumm & Gore, 2016). As the person engages in substance

use, their distress is reduced which can negatively reinforce the behavior making it more likely that they will repeat this process in the future (Schumm & Gore, 2016). When engaging in repeated substance use the individual is also likely to develop a physical or psychological dependence (María-Ríos & Morrow, 2020). Ongoing or increased use would also increase tolerance to the substance, requiring larger or more frequent doses to obtain similar effects, which would cause greater withdrawal symptoms when reducing or ceasing substance use, and reinforce the likelihood of continued use to avoid withdrawal (Khantzian & Albanese, 2008).

The second theory explaining the co-existence of these issues is the risky behavior hypothesis which proposes that when engaging in substance use, an individual is more likely to encounter high risk situations, which can thereby increase their chance of exposure to traumatic experiences (Bountress et al., 2019; P. J. Brown & Wolfe, 1994). These theories are not mutually exclusive, and understanding an individual's unique situation may require a reliance on both theories (Bountress et al., 2019).

The co-occurrence of trauma and substance use is associated with greater symptom severity across both issues, poorer treatment outcomes, and higher rates of drop out from treatment (V. B. Brown et al., 2013; Roberts et al., 2015; van Dam et al., 2012). Furthermore, the high prevalence rates and relationship between trauma and substance use illustrate the importance and relevance of both implementing a trauma informed approach within substance abuse treatments and addressing the trauma in some capacity (i.e., addressing the relationship or role of trauma within one's substance abuse). It is also essential to understand typical approaches to treatment for these issues and to continue to evaluate new treatments as they are created and implemented.

Approaches to Treatment for Substance Abuse and Trauma

Current treatment for substance abuse and trauma generally falls into one of three approaches: a) sequential, whereby one issue is prioritized and addressed individually before addressing the other – i.e., trauma treatment first then substance abuse treatment or vice versa; b) independent, wherein both issues are addressed by independent treatment programs that do not co-ordinate care; or c) integrated, whereby both issues are addressed together within a singular program (Hermann et al., 2014).

Historically, trauma and substance abuse issues have been addressed separately in treatment through independent or sequential treatment programs (Hermann et al., 2014). Typically, when addressing the issues separately the substance abuse is addressed first, with the assumption being that once a person is sober, they are able to address their mental health concerns more effectively (Blakey & Bowers, 2014). This approach fails to account for the interaction between the two issues as explained by the self-medication theory and risky behavior hypothesis described above, potentially leaving the individual more susceptible to relapse due to an inability to cope with emotional distress outside of engaging in substance use.

Furthermore, some practitioners and treatment programs hold the belief that incorporating trauma care within substance abuse treatment can trigger relapse, jeopardize a person's sobriety or recovery, or exacerbate the individual's trauma issues (V. B. Brown et al., 2013; Covington et al., 2008; Lortye et al., 2021). In line with this concern, previous research has found the severity of the psychiatric issue – especially if the issue is trauma related – has been associated with premature termination from substance abuse treatment (Syan et al., 2020), which is concerning because completing treatment (specifically inpatient treatment) has been associated with lower rates of relapse (Andersson et al., 2019). Other reasons programs or practitioners may

support compartmentalized treatment of trauma and substance abuse include the belief that to adequately address trauma, the person must first maintain sobriety or vice versa (Dass-Brailsford & Myrick, 2010). By addressing the issues separately, it is possible the complexity of these interrelated issues may not be adequately addressed (Tripp et al., 2019).

Recognizing the interconnectedness of mental health and substance abuse issues, integrated treatment has been consistently identified as the more effective approach, however individual agency approaches have not consistently reflected this understanding (Blakey & Bowers, 2014). Previous research has found evidence to support the efficacy of integrated treatment of trauma and substance use, such that participants reported ongoing improvements in psychiatric symptoms and substance use at follow-ups of 12 (Moggi et al., 1999, 2002) and 24 months (Farren et al., 2011). Furthermore, there is an emerging consensus regarding the benefits of integrated treatment (Dass-Brailsford & Myrick, 2010; Tripp et al., 2019; Vujanovic et al., 2018). Addressing trauma and substance abuse in an integrated fashion can allow treatment providers to appreciate and respect the role each difficulty plays in the maintenance of the other (V. B. Brown et al., 2013). Other research has found integrated treatment can reduce drop-out from treatment (Syan et al., 2020), improve trauma symptoms, and reduce substance use in comparison to substance abuse treatment alone (Hermann et al., 2014).

Given the conflicting findings regarding drop out, concerns expressed by professionals with field experience, and research findings of the benefits of integrated treatment, it is important to assess the various treatments available. Assessing program efficacy can help determine whether concerns about potential harms and hopes for benefits of integrated treatments are justified. This thesis briefly reviews existing literature assessing integrated treatments for substance abuse and trauma and assesses a program that has not yet been evaluated.

Integrated Treatment Programs for Substance Abuse and Trauma

There are two main types of integrated treatments for substance abuse and trauma – trauma focused integrated treatment, and non-trauma focused/present focussed integrated treatment (Roberts et al., 2015; Schumm & Gore, 2016). Trauma-focused treatment typically uses evidence-based trauma treatment strategies such as prolonged exposure or EMDR, paired with a cognitive behavioral approach to treating substance abuse (Roberts et al., 2015). Trauma-focused treatments are often delivered in an individual format whereby service users can create and execute exposures related to their unique traumas (Roberts et al., 2015). Exposures are an intervention strategy to treat PTSD that utilize memories, emotions and situations to gradually expose an individual to their traumatic experience until their distress decreases to a manageable level (American Psychological Association, 2020). This approach typically allows the individual to process and address their trauma related memories. Alternatively, non-trauma focused treatments ,which are also sometimes referred to as present-focused treatments, typically work towards understanding the relationship between trauma and substance use, provide psychoeducation on both topics and provide a cognitive behavioral based treatment for substance abuse (Giordano et al., 2016). This approach works towards creating new learning and understanding around an individual’s trauma and addiction experiences and challenges without processing or working through trauma memories and can be delivered individually or in a group-based format (Roberts et al., 2015; Schumm & Gore, 2016).

A specific non-trauma focused integrated treatment that has been assessed in a variety of contexts is Seeking Safety (Najavits, 2002; Torchalla et al., 2012). It was developed as an adaptable manualized treatment program for substance abuse and trauma that could be administered in different treatment settings (i.e., individual or group treatment, with men or

women, inpatient or outpatient), with the ability to select the sessions most relevant for the population to which it is being delivered (V. B. Brown et al., 2007). Seeking safety is described as a present-centered treatment, meaning it focuses on psychoeducation about trauma and substance abuse and learning skills to cope with and manage symptoms related to these issues (Schumm & Gore, 2016). As a present-centered treatment, it does not help individuals process and work through their trauma experiences and associated distress. Researchers have found that individuals who received Seeking Safety showed improvements overall, however the improvements were not typically more significant than those demonstrated in the treatment as usual group (substance use disorder [SUD] specific treatment), and did not consistently demonstrate significant improvements in trauma related symptoms (Roberts et al., 2015; Torchalla et al., 2012).

A specific trauma-focused integrated treatment utilized and evaluated within substance abuse and trauma care is the COPE program (concurrent treatment for PTSD and substance use disorder using prolonged exposure) (Back et al., 2014; van Dam et al., 2012). COPE combines the evidence-based cognitive-behavioral therapy approach of prolonged exposure for treating PTSD with a cognitive behavioral approach for treating substance abuse into a unified treatment addressing both issues simultaneously (Back et al., 2014). Through COPE individuals learn about the relationship between PTSD and substance abuse, learn about the impacts of trauma, learn skills to manage and cope with substance abuse issues, understand how PTSD may interact with substance abuse, learn relapse prevention skills, and complete imaginal and in vivo exposures to their trauma related memories and situations (people, places, things) (Back et al., 2014). COPE consists of 12 individual manualized sessions that are to be delivered by someone with graduate training in psychology/psychiatry and formal training in prolonged exposure and

cognitive behavioral therapy. The individuals most appropriate for receiving this treatment include those with a formal PTSD diagnosis, sufficient memory of the event, and a current SUD (Back et al., 2014). Assessment of this treatment revealed a significant improvement in trauma related symptoms but no evidence of significant or lasting changes in substance use (Roberts et al., 2015).

Trauma focused integrated treatments are a good fit for those with a diagnosis of PTSD however, as illustrated through the Giordano and colleagues (2016) paper, despite a high prevalence of reported trauma experiences (85%) only a fraction of the population (20%) reports a diagnosis of PTSD. There are multiple explanations for this discrepancy such as: experiencing a trauma does not mean that a person will develop PTSD (a diagnosis requires that the person report struggling with re-experiencing the event, avoiding trauma related cues, experience intrusive thoughts or memories, and experience changes in mood and cognition; American Psychiatric Association, 2022). Furthermore, receiving a diagnosis of PTSD requires that the individual is assessed by a professional capable of assessing mental health issues and communicating diagnoses. These can be costly services not often offered or easily accessible through publicly funded treatment centers outside of hospitals. For these reasons, though trauma focussed integrated treatments are effective, they are only appropriate for a subset of the population that possesses a PTSD diagnosis, not for all individuals that have had a traumatic experience. As such, focusing on the experience of encountering a traumatic event and its impact on substance abuse may be a more relevant area of focus for the broader substance abuse population.

A systematic review and meta-analysis of integrated treatments for substance abuse and trauma found that there was a pattern of early drop-out from programs regardless of approach,

and that additional research is needed on new integrated treatments as they emerge within the field (Roberts et al., 2015). This thesis is examining a group-based treatment provided at a residential addiction treatment center delivered by social service workers. As such, the focus of this paper will be on evaluating a specific integrated treatment and exploring concerns of iatrogenesis and capacity to provide trauma related symptom relief.

Role of Gender in Experiences of Trauma and Substance Abuse

When discussing substance use issues and trauma it is important to consider the role of gender. Historically, substance abuse research has been conducted using samples of men with results being extrapolated to both genders (McHugh et al., 2018), however recent researchers have consistently found gender differences in experiences of trauma and substance abuse (Cosden et al., 2015; Giordano et al., 2016; Keyser-Marcus et al., 2015; McHugh et al., 2018; White, 2020). When looking at experiences of trauma, women have been found to be more likely to experience interpersonal violence, sudden loss of loved ones, and sexual and physical abuse (Giordano et al., 2016). Furthermore, researchers have found that women are more likely to report experiences of trauma (Giordano et al., 2016). Much of the recent research exploring gender differences in substance abuse, trauma, and effective treatment approaches has been focused on women.

In response to the need for gender-responsive integrated treatments for those with concurrent disorders – specifically those geared towards women – Covington et al., (2008) created the Women’s Integrated Treatment model, which includes two gender-responsive programs that work together to target trauma and substance abuse in an integrated manner. The curricula that comprise the Women’s integrated Treatment model are entitled *Helping Women Recover* and *Beyond Trauma*. Women’s Integrated Treatment is one of the most widely

implemented non-trauma focussed integrated substance abuse and trauma gender-responsive treatments (Voorhis, 2021). Both manualized treatments are delivered within a group therapy format; Helping Women Recover can be delivered as a standalone treatment program or in conjunction with Beyond Trauma to support and strengthen the work initiated within Helping Women Recover (Covington, 2000; Covington et al., 2008). The program is designed to address common issues experienced by those struggling with addiction (i.e., relational challenges, understanding of self). The Women's Integrated Treatment model is evidence-based and designed using theories of addiction, trauma, and an understanding of gender differences – specifically women's psychological development (Covington, 2000; Covington et al., 2008). Covington (2008) focused on relational cultural theory which concentrates on the importance of connection as a primary motivator for women. Covington and colleagues (2008) evaluated the Women's Integrated Treatment model within a women's residential addiction treatment center and found evidence of improvements in trauma symptomology, depression and substance use.

Researchers have found evidence of gender differences in experiences of substance abuse, severity of use, and in experiences or impact of trauma, supporting the gender-responsive approach of Women's Integrated Treatment (Farley et al., 2004; Gil-Rivas et al., 2009; Giordano et al., 2016). In response to the success demonstrated through the Women's Integrated Treatment, Covington and colleagues (2011) developed a similar gender-responsive program created for men – *Helping Men Recover* and *Exploring Trauma* – which together creates the Men's Integrated Treatment model. Though this program is based on the women's program which has shown success, it has not been evaluated in a men's residential addiction treatment. There is currently a gap in literature assessing effective integrated treatments for men.

The Men’s Integrated Treatment model consists of a total of 24 group-based sessions across five modules focusing on topics of relevance to men healing from their substance abuse and building a balanced and healthy life. Each of the five modules focuses on developing an understanding and conceptualization of the causes, exacerbating factors, and maintaining factors of addiction issues in men, while also exploring areas of growth in recovery. See Table 1 for a list of topics covered under each module. Each topic is presented on a different day and the order in which groups are completed is fixed.

Table 1

Groups Topics for Men’s Integrated Treatment Program (Helping Men Recover and Exploring Trauma)

Helping Men Recover	
Module A: Self	<ul style="list-style-type: none"> Defining Self Men in Recovery Sense of Self Men: Inside and Out Men and Feelings
Module B: Relationships	<ul style="list-style-type: none"> Family of Origin Barriers to Relationships Fathers Mothers Creating Healthy Relationships and Support Systems Effective Communication and Intimacy
Module C: Sexuality	<ul style="list-style-type: none"> Sexuality and Addiction Sexual Identity Barriers to Sexual Health Healthy Sexuality
Module D: Spirituality	<ul style="list-style-type: none"> What is Spirituality Real Men Creating a Vision

Welcome and Introduction to the Subject of Trauma
Exploring Trauma
Thinking, Feeling, and Acting
Beyond Guilt, Shame, and Anger
Healthy Relationships
Love, Endings, and Certificates

This thesis will focus on assessing only the Exploring Trauma module from the overall program which is delivered over a two-week period on alternating days. Specifically, in line with concerns expressed regarding the potential harms of addressing trauma in an integrated fashion while in substance abuse treatment, this research assesses potential iatrogenic effects and impact on trauma symptoms for this two week period in the program.

Assessing Iatrogenesis and Effects on Trauma Symptoms Due to Integrated Treatment

As discussed earlier, one of the critiques presented against integrated treatment is the concern that addressing trauma while in substance abuse treatment may result in early drop out from treatment, worsening of symptoms, or relapse (V. B. Brown et al., 2013; Covington et al., 2008; Lortye et al., 2021). Research has found that in some cases individuals have prematurely terminated treatment when receiving integrated treatment (Roberts et al., 2015). To determine if these concerns are applicable to the Men's Integrated Treatment program, participant drop out will be assessed based on the section of the program in which the treatment termination occurs.

Relapse to problematic substance use is typically assessed through follow up assessments after the completion of treatment or through monitoring substance use through treatment. This latter method of evaluation poses a challenge for an abstinence based residential program as sobriety is a condition of engaging in treatment. Furthermore, following up with individuals after

treatment completion has been a popular method of assessing ongoing changes, however it can prove challenging to conduct follow up assessments. Additionally, it is possible that those with whom follow-up can be achieved may not be representative of the experiences for the entire group of participants (i.e., they may be doing exceptionally well following treatment or exceptionally poorly). Though the residential treatment center also provides continuing care and aftercare services wherein clients are able to continue to seek support through the facility after completing the residential portion of treatment, this research only assesses clients while in residential treatment. Due to this, we are unable to use substance use as a measure of potential harms or success resulting from treatment.

Another conceptualization of success was largely based on the assumption that time in treatment (specifically inpatient treatment) would result in positive behavioral changes such as sobriety (Goodman et al., 2013; McLellan et al., 2005). Though reduction in use and/or sobriety are often a crucial element demonstrating treatment efficacy, they fail to capture the complexity and multidimensionality of addiction (Inanlou et al., 2020; McLellan et al., 2005). Therefore, the narrow focus of success being operationalized primarily as reduction of use may be insufficient, and a more comprehensive approach may be assessing an individual's progress towards a life of "recovery" (Inanlou et al., 2020). Recovery is an all-encompassing term used to refer to the stage following active addiction during which an individual manages their substance use, which subsequently fuels their ability to work towards their personal health (e.g., mental and physical), social (e.g., building and maintaining healthy relationships), and overall well-being goals (Goodman et al., 2013; Inanlou et al., 2020). This shift of focus emphasizes ongoing indicators of progress during treatment, and indicators of progress towards longer-term goals such as improved health and functioning (McLellan et al., 2005). It also recognizes the ongoing nature of

recovery and treatment within the area of mental health and substance abuse (Ciraulo et al., 2003; McLellan et al., 2005; Overington & Ionita, 2012), while appreciating that relapse is a common occurrence for those with substance abuse issues (Andersson et al., 2019; Ciraulo et al., 2003; Syan et al., 2020; Vazquez, 2015), and recovery often entails holistic improvement across numerous areas of functioning (Goodman et al., 2013).

In line with this understanding, some researchers have evaluated treatment more broadly by using predictors to assess outcomes. This is based on the perspective that there are underlying factors which are consistently impacted by substance use, and monitoring these factors contributes to our understanding and evaluation of treatment success (Ciraulo et al., 2003; Goodman et al., 2013). Some of these predictors of positive outcome include quality of sleep, mood, and feelings towards self (Ciraulo et al., 2003). Additionally, research assessing the efficacy of psychotherapy has found hope in treatment to be a predictor of success (Constantino et al., 2011; Lambert, 1992; Milovanov, 2017; Norcross, 2010). Research has found that improvements in these areas are associated with progress in treatment for substance use and concurrent psychopathological issues (e.g., trauma) (Ciraulo et al., 2003; Gil-Rivas et al., 2009; Vazquez, 2015). Within the Men's Integrated Treatment model substance abuse issues are addressed in an ongoing basis over the full course of treatment (8 – 10 weeks), therefore assessing effects of progressing towards recovery are outside of the scope of this paper. Instead this paper will assess for evidence of iatrogenesis (i.e., worsening of addiction) due to the trauma focussed section.

Current Study

Recognizing the complex relationship between substance abuse and trauma and the evidence supporting integrated gender-responsive treatment, this research aims to evaluate one such program which has not yet been assessed – with a focus on the Exploring Trauma module which is part of the Men’s Integrated Treatment model. This research aims to evaluate if there are iatrogenic effects of addressing substance abuse and trauma issues simultaneously through the Men’s Integrated Treatment model, focussing on the Exploring Trauma module which helps men explore and understand the role of trauma within their substance abuse issues. More specifically, we aimed to evaluate if engagement in the Exploring Trauma module resulted in inadvertent harm to participants demonstrated through increased trouble sleeping, experiencing more trauma-related distress, worsening of view of self, or declining hopefulness regarding overall treatment being successful. Additionally, to determine if completion of the Exploring Trauma module is resulting in intolerable distress, premature termination of treatment will be used as an indicator of iatrogenesis. If iatrogenic effects were found we would expect participants to report increased sleep difficulties, increased experience of trauma symptoms, reduced hope, lower self-esteem, or increased rate of drop out during and following the Exploring Trauma module compared to the rest of programming. Finally, recognizing that completing treatment is associated with better treatment outcomes, participant drop out will also be used to determine if people are disproportionately prematurely terminating treatment during or following the Exploring Trauma module in comparison to the rest of the Helping Men Recover programming.

One of the issues identified in previous research assessing present-centered treatment programs (treatment that does not focus on addressing past trauma) is regarding lasting

improvements in trauma symptomology. Programs such as Seeking Safety have not consistently demonstrated significantly reduced or maintained improvements in trauma symptoms (Roberts et al., 2015; Torchalla et al., 2012), while the Women’s Integrated Treatment model has shown evidence of significant reductions (Covington et al., 2008). This research aims to assess if the currently unevaluated Exploring Trauma module from the Men’s Integrated Treatment model (adapted from the Women’s Integrated Treatment model), also demonstrates significant reductions in distress from trauma symptoms.

Data collection was completed at a men’s residential addiction treatment program – Wayside House of Hamilton, and the project was reviewed and received ethics clearance by the Research Ethics Board at the University of Waterloo.

Methodology

Program Design

This research was conducted at a long-term residential addiction treatment agency for men in Hamilton, ON. The treatment program admits individuals on a rolling basis, with an approximate length of stay varying between 10-12 weeks. The program is accredited by the Canadian Centre for Accreditation. Treatment involves group and individual counselling conducted by certified counselors.

This study is one aspect of a larger project analyzing the impact of the Helping Men Recover and Exploring Trauma programs which are gender-responsive, trauma-informed, standardized groups. The Helping Men Recover and Exploring Trauma programs make up the core group programming at Wayside House. Primary objectives within these group therapy sessions include developing an understanding of self and others, the role of families and relationships, sexuality, spirituality and an understanding of the impact of trauma, all within the context of each individual's addiction and recovery. Each of these themes are presented through separate modules titled Self, Relationships, Sexuality, Spirituality, and Exploring Trauma; each module consists of several topics which are presented through group therapy (see Table 1).

For the purposes of this study, we looked at the Exploring Trauma module, which consists of 6 group therapy sessions – each to be completed on a separate day. Generally, these group therapy sessions are presented on alternating days for approximately two weeks. Although admission to the program is on a rolling basis, attendance for each module is closed. In other words, once a module has started, no new individuals are permitted to attend. Furthermore, because the program operates on a rolling basis, individuals attending group therapy may be at

different stages of their treatment (i.e. some may be in week one of treatment while others are week 8, or 10).

Study Design

Participation in the study entailed completing a battery of assessment tools throughout the program. If clients consented to participate, they were asked to complete an initial assessment package prior to beginning the core program. Participants also completed self-report questionnaires at the beginning and end of each module (self, relationships, sexuality, spirituality, and Exploring Trauma) to assess changes particular to that specific set of groups. Finally, once participants completed all group therapy sessions from the core programming (Helping Men Recover and Exploring Trauma) they completed an endpoint assessment that included many of the same self-report measures from the initial assessment package. On average, one complete cycle of core group therapy programming took between 8 – 10 weeks. The specific measures analyzed as part of this study are listed below.

Study Sample

Clients were asked if they wished to participate in the research study shortly after being admitted to the residential program and prior to starting the main group programming (Helping Men Recover and Exploring Trauma). Clients were informed that participation in the research was entirely voluntary and would have no bearing on their treatment. This project was reviewed and received ethics clearance through a University of Waterloo Research Ethics Board. Exclusion criteria for the study included: not being able to read or write in English, having completed the Helping Men Recover groups before, and clients identified by staff as inappropriate for the study (i.e. if it was determined that participation would negatively impact their treatment).

This report includes participants admitted to treatment between February 2020 and February of 2023. The intent-to-treat sample required that the participant complete at least the initial assessment package ($N = 103$). A total of 38 participants completed programming, which required that they complete the post treatment tools. This study focused on only those participants who attended the Exploring Trauma module (which includes participants who prematurely terminated treatment and those who completed only the pre Exploring Trauma surveys or only the post Exploring Trauma surveys; $n = 61$).

Measures

Measures Administered at Baseline Assessment

See Appendix A for the measures administered at baseline.

Assessment of Substance Use. The 10-item self-report Alcohol Use Disorder Identification Test (AUDIT; Saunders et al., 1993) was administered to participants to obtain information specific to their alcohol consumption behaviors prior to seeking treatment at Wayside House. It is widely used (Kimerling et al., 2004), has demonstrated high internal consistency (Cronbach's $\alpha = .80$), and has high specificity and sensitivity for detecting problematic alcohol use (de Meneses-Gaya et al., 2009). Although it was originally designed for use in primary care settings it has since been validated in numerous other contexts such as community care and has been translated into multiple languages while maintaining high psychometric properties (de Meneses-Gaya et al., 2009).

To assess drug use behaviors prior to seeking treatment at Wayside house, the 11-item self-report Drug Use Disorder Identification Test (DUDIT; Berman et al., 2003) was administered. A literature review of articles assessing the psychometric properties of the DUDIT

found excellent internal consistency (Cronbach's $\alpha > .90$) in addition to high specificity and sensitivity (Hildebrand, 2015).

Assessment of Depression. Participants completed the Personal Health Questionnaire – 9 (PHQ-9; Kroenke et al., 2001), to screen for depression. The PHQ-9 is a 9-item self-report questionnaire used to screen for depression, which has demonstrated high internal consistency (Cronbach's $\alpha = .89$), as well as sensitivity and specificity (Kroenke et al., 2001).

Assessment of Anxiety. Participants completed the PROMIS – Emotional Distress – Anxiety Short Form questionnaire to screen for anxiety (Pilkonis et al., 2011). The PROMIS – Emotional Distress – Anxiety Short Form questionnaire is a 7-item self report scale designed to screen for anxiety by asking how often a person is bothered by feeling fearful, anxious, worried or tense over the past week (Pilkonis et al., 2011). It has demonstrated excellent reliability which was assessed through computerized adaptive testing (CAT) and is comparable to the full-bank PROMIS items (Pilkonis et al., 2011).

Prevalence of Trauma. The Brief Trauma Questionnaire (BTQ; Schnurr et al., 1999) is a widely used tool designed to detect if an individual has experienced an event which aligns with those listed in the Diagnostic and Statistical Manual-V (DSM-V) Criterion A for post-traumatic stress disorder (PTSD; Norris & Hamblen, 2004). It demonstrates high interrater reliability ($\kappa > .70$; Norris & Hamblen, 2004).

Measures Administered Before and After Exploring Trauma Module

Four tools that assessed constructs associated with distress caused by trauma were administered at the beginning of the first group from the Exploring Trauma module, and after the end of the last group from the Exploring Trauma module. See Appendix B for the measures administered before and after the Exploring Trauma module.

Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1979). The RSE scale is a 10-item measure designed to measure a person's self-esteem on a 4-point Likert scale with a bifactorial structure of positively and negatively worded items (Quilty et al., 2006). Higher scores indicate greater self-esteem (Rosenberg, 1979). The scale has shown excellent internal consistency and high test-retest reliability (Rosenberg, 1979). Overall scale reliability is .87 (Alessandri et al., 2015), and confirmatory factor analyses have revealed high reliability ($\omega = 0.89$) for the general self-esteem factor (Salerno et al., 2017).

Hope Scale. The Hope Scale is an 8-item measure adapted from a scale developed at the University of Waterloo to assess how hopeful an individual is about their treatment. The scale has demonstrated good internal consistency ($.79 < \alpha < .83$) and is scored on a Likert scale ranging from 1 (not at all) to 5 (very much), with higher scores indicating greater hope (Milovanov, 2017). This scale was originally developed as a 4 factor model capturing constructs of confidence in treatment, seeing possibilities (pathways), motivation and excitement, and practitioner confidence in treatment (Bartholomew et al., 2015; Milovanov, 2017). The adapted scale used for this study eliminated the fourth factor of practitioner confidence in treatment since groups were administered by multiple clinicians and not clinician specific rendering those items irrelevant.

PCL-5. The PCL-5 is a widely used 20-item self-report measure designed to assess trauma symptoms by asking the individual to report how much they were bothered by things like repeated disturbing and unwanted memories of the stressful experience, repeated disturbing dreams of the experience, and similar experiences (Blevins et al., 2015; Najavits, 2004). The scale is scored on a Likert scale from 0 (not at all) to 4 (extremely) with higher scores indicating

a greater level of distress due to that symptom over the past month. The PCL-5 has demonstrated excellent internal consistency ($\alpha = .95$; Blevins et al., 2015).

Sleep Disturbance Scale (Yu et al., 2012). The Sleep Disturbance (SD) scale is an 8-item self-report scale that assesses a person's sleep related issues over the past week (Yu et al., 2012). The scale has demonstrated strong reliability of .90 and above. It is scored on a Likert scale from 1 (not at all) to 5 (very much) with higher scores indicating greater disturbance in sleep over the past week (Yu et al., 2012).

Demographics

Table 2 details the number of participants which completed each part of the research. Participants ranged between 20 – 67 years of age ($M = 37.43$, $SD = 11.44$, $n = 5$ did not respond). All participants identified as men. Participants were asked to provide information regarding their substance of choice, number of years they feel the substance use has been problematic, treatment history, mental health, and relationship status.

Based on participant responses, nearly two thirds of the sample reported being single (62.3%, $n = 38$), nearly one fifth reported being married or in a common law relationship (18.0%, $n = 11$), and the remainder of the sample were either separated, divorced, or did not respond. When looking at the population sample's reported substance use, alcohol was most commonly identified as at least one of their substances of choice (40.98%, $n = 25$), followed by cocaine (24.59%, $n = 15$), and opiates (22.95%, $n = 14$). On average, participants endorsed using problematically for 16.82 years ($SD = 9.31$). The average participant had attended 1.98 previous inpatient treatment programs ($SD = 1.64$), and 2.82 total treatments (i.e. inpatient and outpatient/community treatment; $SD = 2.19$). Furthermore, more than half of the population

endorsed having previously received a mental health diagnosis by a mental health professional (52.5%, $n = 32$). See Table 3 for additional sample characteristics.

Table 2

Number of Participants that Completed Measures Across Study

	Initial Assessment	Exploring Trauma ($n = 61$)			Post Treatment Assessment
		Pre	Post	Pre & Post	
N	103	57	51	45	38

Note. Some participants completed only either pre Exploring Trauma surveys or post Exploring Trauma surveys due to illness or absence from a single group.

Table 3

Sample Characteristics

	% (n)	M (SD)
<i>Relationship status</i>		
Single	62.30 (38)	
Married/common law	18.03 (11)	
Separated/Divorced	6.56 (4)	
Did not respond	13.11 (8)	
<i>Substance of choice^a</i>		
Alcohol	40.98 (25)	
Cocaine	24.59 (15)	
Opiates	22.95 (14)	
Stimulants	16.93 (10)	
Crack cocaine	16.93 (10)	
Cannabis	4.92 (3)	
Did not respond	8.19 (5)	
Years of problematic use		16.82 (9.31)
	% (n)	M (SD)

Treatment history		
Inpatient Treatment		1.98 (1.64)
0	18.03 (11)	
1	26.23 (16)	
2	13.11 (8)	
3	22.95 (14)	
4	8.20 (5)	
5	0 (0)	
6+	4.92 (3)	
Did not respond	6.56 (4)	
Total treatment		2.82 (2.19)
0	9.84 (6)	
1	22.95 (14)	
2	9.84 (6)	
3	26.23 (16)	
4-5	11.48 (7)	
6+	13.11 (8)	
Did not respond	6.56 (4)	
Mental Health Diagnosis		
Yes	52.46 (32)	
No	36.07 (22)	
Did not respond	11.48 (7)	

Note.^a Some participants identified multiple substances as their substance of choice.

Data Analysis

Mean baseline scores for the AUDIT, DUDIT, PHQ-9, and Promis-anxiety scales were analyzed using cut-off scores identified by the developers of the instruments. Participant substance use was categorized as low risk, risky or high risk for alcohol and drug use based on cut-offs identified by the developers of the AUDIT and DUDIT. The BTQ was analyzed based on endorsement of exposure to trauma experiences as both a dichotomous and continuous

variable (i.e., if participants endorsed having experienced trauma experiences, and how many experiences they endorsed on the scale).

Measures completed during the Exploring Trauma module were analyzed through paired sample t-tests to compare changes in participant scores over time. Mean scores were compared to clinical cutoff recommendations for interpretation on the PCL-5 and SD scales. Individual change was analyzed for the two measures most indicative of iatrogenic effects for integrated treatment of substance abuse and trauma: sleep disturbance and distress caused by trauma symptoms. Each measure was analyzed to determine the number of people that improved, worsened, or stayed the same over the course of the Exploring Trauma module (see the results section below for explanation of how individual changes in sleep and trauma symptoms were detected)

Post hoc linear regression analyses were conducted to assess if there was a relationship between (1) alcohol or drug use at baseline and disturbances in sleep at Exploring Trauma post, (2) distress caused by trauma symptoms at the beginning and end of the Exploring Trauma module to sleep disturbance scores pre and post Exploring Trauma, (3) changes in hope as predicted by trauma symptoms, and (4) changes in self-esteem as predicted by trauma symptoms. Finally, Chi-square analyses were conducted to determine if participant drop out was higher during or immediately following the Exploring Trauma module compared with the rest of the programming.

Results

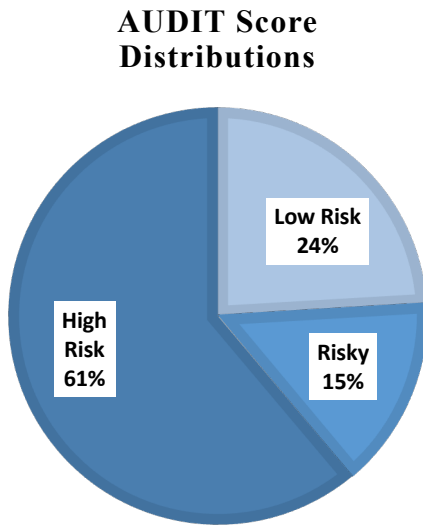
Baseline Analyses

Table 4 contains participant mean baseline scores on measures assessing substance use, and mood.

When looking at substance use prior to entering treatment, the average score for alcohol use was 21.83 ($SD = 14.95$) with a score of 15 or higher indicating problematic use. The average score for drug use was 28.94 ($SD = 14.83$) with a score of 25 and higher indicating problematic use. See Figures 1 and 2 for further classification of participants' severity of substance use as reported on the AUDIT and DUDIT. The average score on the PHQ-9 screener was 13.31 ($SD = 7.78$) with a clinical cut off of 10 or more indicating potential issues with depressed mood; 65% of the participant scores were above the clinical cut-off ($n = 39$). The average score across the anxiety screener was 61.99 ($SD = 11.17$) on which a clinical cut off of 60 or higher suggests potential issues with anxiety; approximately 57% of participants scored above the clinical cut-off ($n = 34$). Finally, 95% of the sample endorsed experiencing at least one traumatic event over their lives. Of those that endorsed at least one traumatic event, 7.5% reported experiencing one traumatic event, 11.3% endorsed two events, 18.9% endorsed three events, 15.1% endorsed four events, 13.2% endorsed five events, and 34% endorsed six or more events.

Figure 1

Self-Reported Alcohol Use Classifications

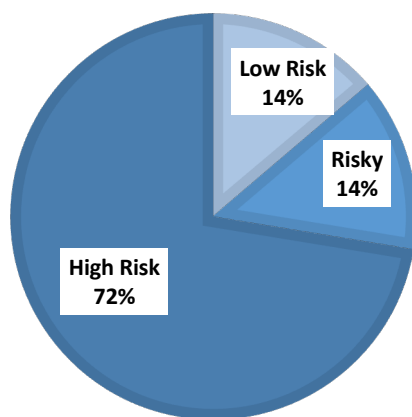


Note. AUDIT scores ranged from 0 – 40; participants were classified as engaging in low-risk alcohol use with scores from 0-7, risky from 8-15, and high risk at 16 and above.

Figure 2

Self-Reported Drug Use Classifications

DUDIT Score Distributions



Note. DUDIT scores ranged from 0 – 44; participants were classified as engaging in low-risk drug use with scores 0-5, risky from 6-24, and high risk at 25 and above.

Table 4*Baseline Scores at Initial Assessment*

	Descriptive Statistics			Cronbach's α
	<i>n</i>	<i>M</i>	<i>SD</i>	
AUDIT	54	21.98	14.69	.968
DUDIT	59	28.82	15.07	.965
PHQ-9	60	13.31	7.76	.902
PROMIS Emotional Distress	60	62.16	11.41	.948

Note. AUDIT = Alcohol Use Disorder Identification Test; DUDIT = Drug Use Disorder Identification Test; PHQ-9 = Patient Health Questionnaire – 9

Average Changes Across Exploring Trauma Module

Paired sample t-tests compared participant scores on measures assessing disruptions in sleep, distress caused by trauma symptoms, self-esteem, and hope in treatment success before starting the trauma module (pre Exploring Trauma) and at the end of the last group from the trauma module (post Exploring Trauma). These analyses revealed participants experienced significantly less distress related to their trauma symptoms post Exploring Trauma ($M = 30.26$, $SD = 15.22$) than pre Exploring Trauma ($M = 34.72$, $SD = 14.97$); $t(43) = 2.819$, $p = .007$. Mean scores across all other measures (e.g., SD, RSE, and HS) did not significantly change. See Table 5 for details.

Table 5*Paired Sample T-Tests*

Measure	Pre		Post		Hedges' correction	t(df)	p-value	Cronbach's α
	Exploring Trauma		Exploring Trauma					
	M	SD	M	SD				
Hope Scale	34.23	4.72	34.62	5.20	-.082	-.540(41)	.592	.876
Rosenberg Self-Esteem Scale	17.70	6.17	18.16	5.96	-.110	-.752(44)	.456	.902
Sleep Disturbance	53.95	8.45	52.21	8.40	.208	1.407(43)	.167	.907
PCL-5	34.72	14.97	30.26	15.22	.417	2.819(43)	.007	.928

Note. PCL-5 = PTSD Checklist for DSM-5

Changes Within Individuals

Individual changes in distress caused by trauma symptoms and sleep disturbance were analyzed to assess meaningful changes within participants that could potentially be masked by solely examining group means. PCL-5 scores were interpreted in terms of significant change (i.e., statistical significance) and clinical change (i.e., clinically meaningful statistical significance). When looking at significant change (a total score change of 5-9 points as defined by Blevins and colleagues [2015]) we found 5 people's symptoms worsened, 20 participants experienced no significant change, and 19 participants' symptoms significantly improved. When looking at clinical change (a total score change of 10 or more points as defined by Blevins and

colleagues [2015]) we found 4 individuals' symptoms meaningfully worsened, 28 showed no meaningful change, and 12 participant's symptoms meaningfully improved.

Individual changes in sleep disturbance were analyzed based on changes from pre to post using the standard error of estimate ($SEE = 3.397$) because clinical and significant change scores were not defined by scale developers. This analysis revealed that 3 individuals reported an increase in sleep disturbance by the end of the Exploring Trauma module, 29 participants reported no change, and 11 participants reported improved sleep.

Participant Drop Out from Programming

Chi-square analyses were conducted to determine if participation in the Exploring Trauma module was related to higher drop out amongst participants. Analyses were conducted for all participants that dropped out during the study ($n = 64$).

Chi-square analyses on all participant drop outs revealed no association between module and participant drop out from programming ($\chi^2(5) = 8.935, p > .05$). See Table 6 for observed drop out during each module for those that participated in the Exploring Trauma groups and for all dropouts across modules.

Post hoc independent samples t-tests were conducted to determine if there was a significant difference between those that dropped out and those that completed programming in the amount of trauma experiences reported, and distress reported by trauma symptoms. No significant differences were found for amount of trauma experiences between those that prematurely terminated treatment ($M = 4.35, SD = 2.15$) and those that completed treatment ($M = 3.96, SD = 2.34$), $t(54) = 0.657, p = .514$ (two-tailed). No significant differences were found in reported distress caused by trauma symptoms at the beginning of the Exploring Trauma module for those that prematurely terminated treatment ($M = 33.75, SD = 17.22$) and those that

completed treatment ($M = 37.24, SD = 15.24$), $t(54) = -0.793, p = .431$. Finally, no significant differences were found in reported distress caused by trauma symptoms at the end of the Exploring Trauma module for those that prematurely terminated treatment ($M = 28.07, SD = 15.99$), and those that completed treatment ($M = 31.96, SD = 13.66$), $t(47) = -0.864, p = .392$.

For those individuals that endorsed increased sleep disturbance ($n = 3$), one participant prematurely terminated treatment at the end of the Exploring Trauma module. For the individuals that endorsed significant increases in distress from trauma symptoms ($n = 5$), one participant prematurely terminated treatment (at the end of the relationship module). As such there was no relationship between those that prematurely terminated treatment and those that reported worsened symptoms.

Table 6

Participant Drop-Outs by Module

	Helping Men Recover - Self	<i>Helping Men Recover - Relationships</i>	Helping Men Recover - Sexuality	<i>Helping Men Recover - Spirituality</i>	Exploring Trauma
Drop out across participants	8	8	12	16	15

Note. Of all 103 participants across the study, 64 dropped out of treatment prematurely and 39 completed treatment.

Influences Across Measures

Multiple linear regressions revealed there was no relationship between substance use or mood at baseline and sleep disturbance after completing the Exploring Trauma module (see Table 7). The PCL-5 scale includes two items (item 2 and 20 – see Appendix B for full scale) that measure sleep disturbance as an indicator of distress from trauma symptoms. To avoid

inflation of R^2 values, these two items were removed before the residualized change scores were calculated for the PCL-5 to determine if sleep disturbance at the end of the Exploring Trauma module was predicted by change in distress caused by trauma symptoms. Regression analyses indicated sleep disturbance at the end of the Exploring Trauma module was significantly predicted by PCL-5 scores (distress caused by trauma symptoms) at the end of the Exploring Trauma module, even after controlling for sleep disturbance before starting the Exploring Trauma module, $R^2 = .41$, $F(2, 38) = 8.74$, $p < .001$. Finally, regression analyses did not find evidence that sleep disturbance at the end of the Exploring Trauma module was predicted by PCL-5 scores before beginning the Exploring Trauma module, self-esteem scores at the beginning or end of the Exploring Trauma module, or hope at the beginning or end of the Exploring Trauma module.

Table 7

Regression Results for Sleep Disturbance

Variable	<i>B</i>	<i>SE B</i>	β	R^2	ΔR^2	p-value
Step 1				.30	.30	.029
Constant	25.66	13.66				.069
SD Exploring Trauma pre	.547	.152	.553			.001
AUDIT	-.070	.106	-.114			.513
DUDIT	-.023	.102	-.039			.820
PHQ-9	-.034	.302	-.028			.912
Anxiety screener	-.007	.214	-.008			.976
Step 2				.47	.17	.003
Constant	34.474	12.430				.009

Variable	<i>B</i>	<i>SE B</i>	β	<i>R</i> ²	ΔR^2	p-value
SD Exploring Trauma pre	.510	.135	.516			<.001
AUDIT	-.120	.095	-.195			.216
DUDIT	-.122	.096	-.202			.210
PHQ-9	.054	.270	.045			.841
Anxiety Screener	-.073	.191	-.085			.703
Unstandardized Residual PCL-5 ^a	.385	.122	.437			.003

Note. SD = Sleep Disturbance Scale; AUDIT = Alcohol Use Disorder Identification Test; DUDIT = Drug Use Disorder Identification Test; PHQ-9 = Patient Health Questionnaire - 9; PCL-5 = PTSD Checklist for DSM-5

^aremoved items 2 and 20 from PCL due to overlap with SD items

Discussion

Previous literature has described a high prevalence of trauma experiences within substance abusing populations such that Wu and colleagues (2010) found 95% of the population reported experiencing a traumatic event, and Giordano and colleagues (2016) found 85% of the population reported experiencing a traumatic event. This finding was also reflected in this current sample such that 95% endorsed experiencing at least one traumatic event. This illustrates the need for integrated treatment within this population and the importance of determining effective treatment options.

Despite support for integrated treatment in research, practitioners and programs have expressed concern that integrated treatment can trigger relapse, exacerbate issues and increase drop out from treatment (V. B. Brown et al., 2013; Covington et al., 2008; Lortye et al., 2021). Furthermore, meta-analysis have revealed some integrated treatments may not significantly improve both substance abuse (Roberts et al., 2015) and trauma (Roberts et al., 2015; Torchalla et al., 2012) issues, or be associated with increased drop out from treatment (Syan et al., 2020). To assess if the Exploring Trauma module from the Men's Integrated Treatment model (Covington et al., 2011) was an effective integrated treatment for substance abuse and trauma, it was analyzed for the potential iatrogenic effects described above.

Iatrogenesis was operationalized as increases in distress due to trauma symptoms, increased disturbance in sleep, lower self-esteem, lower levels of hope regarding the success of treatment and higher drop out from programming immediately following the Exploring Trauma module (indicating it may be related to changes experienced across the Exploring Trauma module) and/or in the succeeding module (Helping Men Recover – Self). We found that, on average, participants demonstrated no significant change in their self-reported self-esteem, hope

regarding treatment, or in the amount of disturbance they experienced with their sleep. This lack of significant change can be interpreted as evidence that the Exploring Trauma module did not worsen symptoms. There was, however, evidence of improvement in the distress caused by their trauma symptoms, whereby participants reported being less bothered by trauma related symptoms following completion of the module. This is a particularly interesting finding given that 95% of participants reported having experienced a traumatic event over their lifetime, illustrating the relevance and significance of this improvement. This reduction in distress also lends support for the use of the Exploring Trauma module, however more research is needed to understand how this distress varies across treatment outside of the trauma module and if these changes are maintained long-term.

Individual changes across the two measures understood to be most indicative of iatrogenesis – PCL-5 and Sleep Disturbance – were also assessed to evaluate individual impact in addition to group average change. Results revealed that most participants showed either no change, or improvements on both measures (91% [$n = 40$] of participants for the PCL-5; 93% [$n = 40$] of participants for sleep disturbance), however a few participants did demonstrate a worsening of scores (9% [$n = 4$] of participants for the PCL-5; 7% [$n = 3$] of participants for sleep disturbance). Upon further analysis of those that endorsed worsened symptoms, two participants prematurely terminated treatment and there was no evidence to indicate disproportionate termination based on module. In other words, participants that reported worsened symptoms did not disproportionately drop out of treatment during or immediately following the trauma module, indicating drop out may not have been associated with worsened symptoms. Further investigation is needed to better understand the cause of the variation in response to the Exploring Trauma module. This may also provide a point of intervention for

program administrators whereby they can use these self-report measures to identify those with worsening symptoms and explore what may be contributing to this decline on an individual basis.

When evaluating iatrogenesis based on drop out from programming, results revealed that there was no differential drop out during and immediately following the trauma module when analyzing drop out data for all participants (including those that did not complete the Exploring Trauma module). Furthermore, no significant differences found in the reported distress from trauma symptoms throughout the Exploring Trauma module for those that dropped out of treatment prematurely or those that completed treatment. In other words, there was no evidence to indicate those that prematurely terminated treatment were experiencing significantly more distress. This finding lends additional support for the trauma module not retraumatizing individuals.

Since quality of sleep is a key indicator of iatrogenesis we wished to explore if disturbance in sleep could be predicted by severity of substance use, mood, or distress caused by trauma symptoms. We found that only distress caused by trauma symptoms was a significant predictor of the disturbance in sleep reported at the end of the trauma module such that as sleep disturbance changed, so did distress caused by trauma symptoms. In other words, for those that reported worsened sleep at the end of the trauma module they were also more likely to report worsened distress from their trauma symptoms, and for those that reported improvements in sleep they were more likely to report improvements in their distress from trauma symptoms. Most individuals however, reported either no significant change in their distress and sleep, or improvements in both, while a minority of participants reported a decline in symptoms. Overall, in line with our hypotheses, participants showed no evidence of iatrogenesis after completion of

the Exploring Trauma module. Instead, however, participant scores generally trended in the direction of improvement across scores for self-esteem, sleep disturbance, distress from trauma symptoms and hope. Though further research is needed, this may indicate that the integrated treatment is beneficial, and that individuals may be moving towards general areas indicating progress towards recovery.

Limitations

One of the main limitations of this research is the small sample size. Much of the data collection occurred after the COVID-19 related shut downs took effect in March 2020. Residential treatments were required to reduce their program capacity to allow for required social distancing within the facility. As such Wayside House was required to reduce total capacity from 22 to a maximum of 13. During this time, the agency was also required to shut down programming during outbreaks within the facility. These unexpected circumstances resulted in higher than expected dropouts from the study due to program interruption. Another limitation of this study is the lack of clarity regarding gender identity of individuals. As the treatment facility serves “men,” gender was not further explored, however, in future research it may be beneficial to inquire about a person’s gender identity and gender history to create a more fulsome understanding of how this part of their identity may have shaped the person’s unique experiences and challenges. Furthermore, when the study was created, it was designed to assess changes in the constructs most relevant to the topics of discussion. For this reason, there is limited opportunity to compare constructs such as sleep disturbance across modules though this would be a useful indicator of potential improvements/declines though treatment. This also limits our ability to determine if changes in the assessed constructs were the result of the specific module or due to passage of time. Since participants completed self-report measures it is possible

that participants may have misunderstood items or been subject to response bias (answered similar to their previous answers as opposed to their true experience). When asked to complete a self-report questionnaire with a rating scale, such as the questionnaires included in this study, participants may also be inclined to respond using extreme or middle responses instead of true ratings for their experience. Finally, this research does not include a follow up with participants as the focus was on evaluating the program while in treatment. In future research it would be beneficial to follow up with participants after treatment completion to determine if changes are maintained.

Conclusions

The controversy over integrated or sequential treatment for substance abuse and trauma is spurred on by the concern that integrated treatment can result in iatrogenic effects that impede the success of the substance use treatment. This research found no support for iatrogenic effects of the Men's Integrated Treatment model – with a particular focus on the trauma section of the program. Previously evaluated present-centered treatment (e.g., Seeking Safety) found that there was insufficient evidence to indicate that the integrated treatment provided benefits above treatment as usual (SUD treatment) due to a lack of evidence for improvements in trauma symptoms. The Women's Integrated Treatment model that the Men's Integrated Treatment model was based on did demonstrate improvements in both substance abuse and trauma symptoms however the Men's Integrated Treatment model was not evaluated until now. This thesis provides evidence of improvements in trauma related symptoms lending additional support for the efficacy of this integrated treatment. Since the focus of this thesis was on the trauma section of the program conclusions about overall progress towards recovery could not be made,

however future research would benefit from an assessment of changes from baseline to the end of programming.

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Appendix A: Baseline Measures

AUDIT Scale



Australian Government
Department of Veterans' Affairs

Alcohol Screen (AUDIT)



Full Strength Beer 285ml 4.8% Alcohol	Low Strength Beer 425ml 2.7% Alcohol	Pre-mix Spirits 275ml 5% Alcohol	Wine 100ml 13.5% Alcohol	Spirits 30ml 40% Alcohol	Full Strength Beer Can or Stubbie 375ml 4.8% Alcohol

This guide contains examples of **one standard drink**.

A full strength can or stubbie contains **one and a half standard drinks**.

Introduction

Because alcohol use can affect health and interfere with certain medications and treatments, it is important that we ask you some questions about your use of alcohol. Your answers will remain confidential, so please be as accurate as possible. Try to answer the questions in terms of **'standard drinks'**. Please ask for clarification if required.

AUDIT Questions Please tick the response that best fits your drinking.

	Never	Monthly or less	2 - 4 times a month	2 - 3 times a week	4 or more times a week	Score	Sub totals
1. How often do you have a drink containing alcohol?	<input type="checkbox"/> <small>Go to Qs 9 & 10</small>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<small>1 or 2</small>	<small>3 or 4</small>	<small>5 or 6</small>	<small>7 to 9</small>	<small>10 or more</small>		
2. How many standard drinks do you have on a typical day when you are drinking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<small>Never</small>	<small>Less than monthly</small>	<small>Monthly</small>	<small>Weekly</small>	<small>Daily or almost daily</small>		
3. How often do you have six or more standard drinks on one occasion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4. How often during the last year have you found that you were not able to stop drinking once you had started?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
5. How often during the last year have you failed to do what was normally expected of you because of drinking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
7. How often during the last year have you had a feeling of guilt or remorse after drinking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<small>No</small>	<small>Yes, but not in the last year</small>	<small>Yes, during the last year</small>				
9. Have you or someone else been injured because of your drinking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
10. Has a relative, friend, doctor, or other health care worker been concerned about your drinking or suggested you cut down?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Supplementary Questions							
	<small>No</small>	<small>Probably Not</small>	<small>Unsure</small>	<small>Possibly</small>	<small>Definitely</small>		
Do you think you presently have a problem with drinking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<small>Very easy</small>	<small>Fairly easy</small>	<small>Neither difficult nor easy</small>	<small>Fairly difficult</small>	<small>Very difficult</small>		
In the next 3 months, how difficult would you find it to cut down or stop drinking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
						TOTAL	

DUDIT Scale

Id. nr.

DUDIT Drug Use Disorders Identification Test

Here are a few questions about drugs. Please answer as correctly and honestly as possible by indicating which answer is right for you.

	<input type="checkbox"/> Man	<input type="checkbox"/> Woman	Age			
1. How often do you use drugs other than alcohol? (See list of drugs on back side.)	Never <input type="checkbox"/>	Once a month or less often <input type="checkbox"/>	2-4 times a month <input type="checkbox"/>	2-3 times a week <input type="checkbox"/>	4 times a week or more often <input type="checkbox"/>	
2. Do you use more than one type of drug on the same occasion?	Never <input type="checkbox"/>	Once a month or less often <input type="checkbox"/>	2-4 times a month <input type="checkbox"/>	2-3 times a week <input type="checkbox"/>	4 times a week or more often <input type="checkbox"/>	
3. How many times do you take drugs on a typical day when you use drugs?	0 <input type="checkbox"/>	1-2 <input type="checkbox"/>	3-4 <input type="checkbox"/>	5-6 <input type="checkbox"/>	7 or more <input type="checkbox"/>	
4. How often are you influenced heavily by drugs?	Never <input type="checkbox"/>	Less often than once a month <input type="checkbox"/>	Every month <input type="checkbox"/>	Every week <input type="checkbox"/>	Daily or almost every day <input type="checkbox"/>	
5. Over the past year, have you felt that your longing for drugs was so strong that you could not resist it?	Never <input type="checkbox"/>	Less often than once a month <input type="checkbox"/>	Every month <input type="checkbox"/>	Every week <input type="checkbox"/>	Daily or almost every day <input type="checkbox"/>	
6. Has it happened, over the past year, that you have not been able to stop taking drugs once you started?	Never <input type="checkbox"/>	Less often than once a month <input type="checkbox"/>	Every month <input type="checkbox"/>	Every week <input type="checkbox"/>	Daily or almost every day <input type="checkbox"/>	
7. How often over the past year have you taken drugs and then neglected to do something you should have done?	Never <input type="checkbox"/>	Less often than once a month <input type="checkbox"/>	Every month <input type="checkbox"/>	Every week <input type="checkbox"/>	Daily or almost every day <input type="checkbox"/>	
8. How often over the past year have you needed to take a drug the morning after heavy drug use the day before?	Never <input type="checkbox"/>	Less often than once a month <input type="checkbox"/>	Every month <input type="checkbox"/>	Every week <input type="checkbox"/>	Daily or almost every day <input type="checkbox"/>	
9. How often over the past year have you had guilt feelings or a bad conscience because you used drugs?	Never <input type="checkbox"/>	Less often than once a month <input type="checkbox"/>	Every month <input type="checkbox"/>	Every week <input type="checkbox"/>	Daily or almost every day <input type="checkbox"/>	
10. Have you or anyone else been hurt (mentally or physically) because you used drugs?	No <input type="checkbox"/>	Yes, but not over the past year <input type="checkbox"/>		Yes, over the past year <input type="checkbox"/>		
11. Has a relative or a friend, a doctor or a nurse, or anyone else, been worried about your drug use or said to you that you should stop using drugs?	No <input type="checkbox"/>	Yes, but not over the past year <input type="checkbox"/>		Yes, over the past year <input type="checkbox"/>		

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Turn the page to see the list of drugs

PHQ-9 Scale

Severity Measure for Depression—Adult*

*Adapted from the Patient Health Questionnaire—9 (PHQ-9)

Name: _____ Age: _____ Sex: Male Female Date: _____

Instructions: Over the last 7 days, how often have you been bothered by any of the following problems? (Use “✓” to indicate your answer)

						Clinician Use
						Item score
		Not at all	Several days	More than half the days	Nearly every day	
1.	Little interest or pleasure in doing things	0	1	2	3	
2.	Feeling down, depressed, or hopeless	0	1	2	3	
3.	Trouble falling or staying asleep, or sleeping too much	0	1	2	3	
4.	Feeling tired or having little energy	0	1	2	3	
5.	Poor appetite or overeating	0	1	2	3	
6.	Feeling bad about yourself—or that you are a failure or have let yourself or your family down	0	1	2	3	
7.	Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3	
8.	Moving or speaking so slowly that other people could have noticed? Or the opposite—being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3	
9.	Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3	
Total/Partial Raw Score:						
Prorated Total Raw Score: (if 1-2 items left unanswered)						

Adapted from Patient Health Questionnaire—9 (PHQ-9) for research and evaluation purposes.

PROMIS – Anxiety Scale

LEVEL 2—Anxiety—Adult*

*PROMIS Emotional Distress—Anxiety—Short Form

Name: _____ Age: _____ Sex: Male Female Date: _____

If the measure is being completed by an informant, what is your relationship with the individual? _____

In a typical week, approximately how much time do you spend with the individual? _____ hours/week

Instructions to patient: On the DSM-5 Level 1 cross-cutting questionnaire that you just completed, you indicated that *during the past 2 weeks* you (individual receiving care) have been bothered by “feeling nervous, anxious, frightened, worried, or on edge”, “feeling panic or being frightened”, and/or “avoiding situations that make you anxious” at a mild or greater level of severity. The questions below ask about these feelings in more detail and especially how often you (individual receiving care) have been bothered by a list of symptoms **during the past 7 days**. Please respond to each item by marking (✓ or x) one box per row.

							Clinician Use
In the past SEVEN (7) DAYS....							Item Score
		Never	Rarely	Sometimes	Often	Always	
1.	I felt fearful.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	
2.	I felt anxious.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	
3.	I felt worried.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	
4.	I found it hard to focus on anything other than my anxiety.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	
5.	I felt nervous.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	
6.	I felt uneasy.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	
7.	I felt tense.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	
Total/Partial Raw Score:							
Prorated Total Raw Score:							
T-Score:							

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Brief Trauma Questionnaire

Brief Trauma Questionnaire

The following questions ask about events that may be extraordinarily stressful or disturbing for almost everyone. Please circle “Yes” or “No” to report what has happened to you.

If you answer “Yes” for an event, please answer any additional questions that are listed on the right side of the page to report: (1) whether you thought your life was in danger or you might be seriously injured; and (2) whether you were seriously injured.

If you answer “No” for an event, go on to the next event.

Event	Has this ever happened to you?	If the event happened, did you think your life was in danger or you might be seriously injured?	If the event happened, were you seriously injured?
1. Have you ever served in a war zone, or have you ever served in a noncombat job that exposed you to war-related casualties (for example, as a medic or on graves registration duty?)	No Yes	No Yes	No Yes
2. Have you ever been in a serious car accident, or a serious accident at work or somewhere else?	No Yes	No Yes	No Yes
3. Have you ever been in a major natural or technological disaster, such as a fire, tornado, hurricane, flood, earthquake, or chemical spill?	No Yes	No Yes	No Yes
4. Have you ever had a life-threatening illness such as cancer, a heart attack, leukemia, AIDS, multiple sclerosis, etc.?	No Yes	No Yes	N/A
5. Before age 18, were you ever physically punished or beaten by a parent, caretaker, or teacher so that: you were very frightened; or you thought you would be injured; or you received bruises, cuts, welts, lumps or other injuries?	No Yes	No Yes	No Yes
6. Not including any punishments or beatings you already reported in Question 5, have you ever been attacked, beaten, or mugged by anyone, including friends, family members or strangers?	No Yes	No Yes	No Yes
7. Has anyone ever made or pressured you into having some type of unwanted sexual contact? <i>Note:</i> By sexual contact we mean any contact between someone else and your private parts or between you and some else's private parts	No Yes	No Yes	No Yes
8. Have you ever been in any other situation in which you were seriously injured, or have you ever been in any other situation in which you feared you might be seriously injured or killed?	No Yes	N/A	No Yes
9. Has a close family member or friend died violently, for example, in a serious car crash, mugging, or attack?	No Yes	N/A	No Yes
10. Have you ever witnessed a situation in which someone was seriously injured or killed, or have you ever witnessed a situation in which you feared someone would be seriously injured or killed? <i>Note:</i> Do not answer “yes” for any event you already reported in Questions 1-9	No Yes	N/A	N/A

Appendix B: Exploring Trauma Measures

Self Esteem Scale

Rosenberg Self-Esteem Scale (RSE)

Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement.

	Strongly Agree	Agree	Disagree	Strongly Disagree
1. On the whole, I am satisfied with myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. At times I think I am no good at all.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I feel that I have a number of good qualities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I am able to do things as well as most other people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I feel I do not have much to be proud of.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I certainly feel useless at times.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I feel that I'm a person of worth, at least on an equal plane with others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I wish I could have more respect for myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. All in all, I am inclined to feel that I am a failure.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I take a positive attitude toward myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Hope Scale

Hope Scale

The following questions will be asking about how hopeful you are feeling in a variety of contexts. Please respond with the degree to which you agree with each statement.

	Not at all	A little bit	Moderately	Quite a Bit	Very Much
1. I am confident that treatment can help me get better.	1	2	3	4	5
2. Even when my problems feel significant, I know that Wayside House's treatment can help.	1	2	3	4	5
3. Thinking about the changes I can make in my life due to treatment is exciting.	1	2	3	4	5
4. I can identify many ways to make improvement with Wayside House's help.	1	2	3	4	5
5. I do not think that Wayside House's treatment will help me much.	1	2	3	4	5
6. I am confident that Wayside House can help me with the issues for which I am seeking treatment.	1	2	3	4	5
7. I am not sure that the treatment will enable me to make the necessary changes in my life to deal with the problems for which I seek treatment.	1	2	3	4	5
8. Participating in my treatment helps me see that there are lots of ways to solve my problems.	1	2	3	4	5

PCL-5 Scale

PCL-5

Instructions: Below is a list of problems that people sometimes have in response to a very stressful experience. Please read each problem carefully and then circle one of the numbers to the right to indicate how much you have been bothered by that problem in the past month.

In the past month, how much were you bothered by:	Not at all	A little bit	Moderately	Quite a bit	Extremely
1. Repeated, disturbing, and unwanted memories of the stressful experience?	0	1	2	3	4
2. Repeated, disturbing dreams of the stressful experience?	0	1	2	3	4
3. Suddenly feeling or acting as if the stressful experience were actually happening again (as if you were actually back there reliving it)?	0	1	2	3	4
4. Feeling very upset when something reminded you of the stressful experience?	0	1	2	3	4
5. Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)?	0	1	2	3	4
6. Avoiding memories, thoughts, or feelings related to the stressful experience?	0	1	2	3	4
7. Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)?	0	1	2	3	4
8. Trouble remembering important parts of the stressful experience?	0	1	2	3	4
9. Having strong negative beliefs about yourself, other people, or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?	0	1	2	3	4
10. Blaming yourself or someone else for the stressful experience or what happened after it?	0	1	2	3	4
11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?	0	1	2	3	4
12. Loss of interest in activities that you used to enjoy?	0	1	2	3	4
13. Feeling distant or cut off from other people?	0	1	2	3	4
14. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?	0	1	2	3	4
15. Irritable behavior, angry outbursts, or acting aggressively?	0	1	2	3	4
16. Taking too many risks or doing things that could cause you harm?	0	1	2	3	4
17. Being "superalert" or watchful or on guard?	0	1	2	3	4
18. Feeling jumpy or easily startled?	0	1	2	3	4
19. Having difficulty concentrating?	0	1	2	3	4
20. Trouble falling or staying asleep?	0	1	2	3	4

Sleep Disturbance Scale

LEVEL 2—Sleep Disturbance—Adult*

*PROMIS—Sleep Disturbance—Short Form

Name: _____ Age: _____ Sex: Male Female Date: _____

If the measure is being completed by an informant, what is your relationship with the individual receiving care? _____

In a typical week, approximately how much time do you spend with the individual receiving care? _____ hours/week

Instructions to patient: On the DSM-5 Level 1 cross-cutting questionnaire that you just completed, you indicated that *during the past 2 weeks* you (the individual receiving care) have been bothered by “problems with sleep that affected your sleep quality over all” at a mild or greater level of severity. The questions below ask about these feelings in more detail and especially how often you (the individual receiving care) have been bothered by a list of symptoms **during the past 7 days**. Please respond to each item by marking (✓ or x) **one box per row**.

						Clinician Use
In the past SEVEN (7) DAYS....						
	Not at all	A little bit	Somewhat	Quite a bit	Very much	
1. My sleep was restless.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	
2. I was satisfied with my sleep.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	
3. My sleep was refreshing.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	
4. I had difficulty falling asleep.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	
In the past SEVEN (7) DAYS....						
	Never	Rarely	Sometimes	Often	Always	
5. I had trouble staying asleep.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	
6. I had trouble sleeping.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	
7. I got enough sleep.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	
In the past SEVEN (7) DAYS....						
	Very Poor	Poor	Fair	Good	Very good	
8. My sleep quality was...	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	
Total/Partial Raw Score:						
Prorated Total Raw Score:						
T-Score:						

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