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Exposure to dysfunctional parenting and trauma events and posttraumatic stress profiles among a treatment sample with coexisting depression and alcohol use problems

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Abstract

Introduction and Aims. *Trauma exposure (including experiencing dysfunctional parenting when a child) and posttraumatic stress disorder (PTSD) frequently coexist with major depressive disorder (MDD) and alcohol use disorders (AUD), with the impact of this comorbidity usually studied as a dual disorder (i.e. PTSD-MDD or PTSD-AUD). This study explores trauma exposure (including to dysfunctional parenting), PTSD symptom severity and PTSD in people seeking treatment for coexisting depressive symptoms and alcohol use problems.* ***Design and Methods.*** *Participants (*n = *221) with current depression and alcohol use problems were recruited. Trauma exposure, PTSD symptoms and PTSD were assessed using the Posttraumatic Stress Diagnostic Scale. The Measure of Parenting Style assessed dysfunctional parenting (neglect/over-control/abuse) experienced as a child.* ***Results.*** *Most participants experienced trauma (71.6%,* n = *159), with more than one-third reaching DSM-IV criteria for current PTSD (38.0%,* n = *84). Unique to this study was that there were no gender differences in rates of trauma exposure, number of traumatic events and PTSD. More severe PTSD symptoms and PTSD were associated with: childhood neglect; earlier depression onset; more severe depression and alcohol problems; and lower general functioning. More severe problems with alcohol were related to Intrusion and Avoidance symptoms, while severe alcohol dependence symptoms were related to hyperarousal.* ***Discussion and Conclusions.*** *PTSD symptoms and PTSD are highly prevalent in those with coexisting depression and alcohol use problems and are associated with a history of childhood neglect and higher levels of comorbidity. Trauma, PTSD symptoms and PTSD should be assessed and addressed among people seeking treatment for coexisting depression and alcohol problems.* [Bailey K, Webster R, Baker AL, Kavanagh DJ. Exposure to dysfunctional parenting and trauma events and posttraumatic stress profiles among a treatment sample with coexisting depression and alcohol use problems. *Drug Alcohol Rev* 2011]

Key words: alcohol dependence, depression, PTSD.

Introduction

Posttraumatic stress prevalence

Following a traumatic event, most people will experience feelings, such as fear, sadness, guilt and anger, with some developing depression, anxiety or substance misuse problems [1]. Specific trauma symptoms are grouped into three categories: re-experiencing the trauma event; avoidance and numbing in response to trauma reminders; and hyperarousal (anxiety) symptoms [2]. The re-experiencing and hyperarousal symptoms are initially the most problematic [3] and if they continue over time, posttraumatic stress disorder (PTSD) can develop [4]. This is particularly so if the avoidance symptoms persist, as this symptom cluster is the best predictor of PTSD development [5].

Exposure to at least one traumatic event across the lifetime is experienced by approximately 83% of men and 75% of women [6]. Men are more likely to report

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a greater number of trauma exposures [7], while women are more likely to meet criteria for PTSD [8,9]. The lifetime prevalence rate for PTSD in Australia is 12.2% (15.8% for women and 8.6% for men) [10] although it is higher (up to 65%) [11] in at-risk populations, such as combat veterans [12] and victims of sexual [13] or physical assault [7].

Posttraumatic stress disorder, depression, alcohol after exposure to dysfunctional parenting

Traumatic events during childhood (physical and sexual abuse) have consistently been associated with psychiatric morbidity in later life [14]. The severity of childhood trauma has been associated with PTSD, major depressive disorder (MDD) [15,16] and alcohol use disorder (AUD) in adults [17,18]. Other research on childhood trauma investigates the effects of parental mental illness [19] or alcohol dependence [17]. However, there has been limited research into the impact of dysfunctional parenting (neglect, affectionless over-control or abuse) and the long-term impact it has on adult trauma exposure, depression and problem drinking. This is due to most studies researching the impact of dysfunctional parenting on infants [20], children [21] and adolescents [22], rather than across adulthood.

Posttraumatic stress disorder and depression

Posttraumatic stress disorder in international and Australian community surveys has routinely been associated with high rates of MDD [1,23] with MDD occurring in approximately 50% of PTSD sufferers [24]. PTSD coexists with MDD more commonly in women, with one study reporting 65% of women had a PTSD-MDD diagnosis at 12 months [25]. In comparison, another study found that 51.6% of men had PTSD-MDD [23].

This high comorbidity rate may be due to depressive symptoms being considered a reaction to a traumatic event [26]. These symptoms (such as despair, dysphoria and withdrawal) are typically present within minutes to hours following exposure to a trauma event [3]. Initial depressive symptoms may be an important mediator in the development of chronic PTSD [27]. MDD can also develop as a secondary disorder, in response to chronic and severe PTSD, and when these disorders co-occur their interaction amplifies dysfunction [28].

Posttraumatic stress disorder and alcohol

Alcohol is the most commonly used substance among people with PTSD (24.1%), and people with PTSD are 5.2 times more likely to have an AUD [29] than the rest of the population. Men with PTSD are particularly likely to have a 12 month diagnosis of AUD (37.6%, compared with 12.4% of women) [23]. Three main causal pathways are proposed to explain this co-occurrence [30]. The first is that alcohol abuse develops as alcohol is used to manage or reduce PTSD symptomatology (self-medication) [31]. The second is that alcohol abuse was present prior to the development of PTSD, and that it maintains PTSD by inhibiting psychological processing of the trauma event (thus preventing desensitisation) [30]. The third potential pathway involves at-risk drinking increasing the chance of experiencing or witnessing traumatic events, such as serious accidents or physical or sexual assaults [32].

Posttraumatic stress disorder and multiple comorbidity

Posttraumatic stress disorder has predominantly been studied as a single disorder [18] or in terms of its co-occurrence with another disorder (e.g. PTSD-MDD [25] or PTSD-AUD [33]). Few studies have examined comorbidities involving PTSD-MDD-AUD. Exceptions are some large-scale population surveys (e.g. [34]) which necessarily use abbreviated assessments, and studies of high-risk groups, such as war journalists [35] and terrorism survivors [36]. The present study appears to be the first to report on rates of trauma exposure, PTSD symptoms and PTSD among an otherwise unselected sample of people seeking treatment for coexisting depression and alcohol use problems. This study assessed trauma exposure (including experiencing dysfunctional parenting), PTSD symptoms and PTSD among participants recruited into the Depression and Alcohol Integrated and Single focused Interventions (DAISI) project [37]. The relationships between trauma exposure (including exposure to dysfunctional parenting), PTSD symptoms and PTSD occurrence with the severity of depressive and alcohol problems were then examined. We predicted that in participants with coexisting depressive and alcohol problems, those with more severe PTSD stress symptoms and/or PTSD would report: (i) higher levels of dysfunctional parenting during childhood, and (ii) more severe depressive symptoms and alcohol issues (greater alcohol consumption, more severe problems and dependence) and poorer functioning.

Methods

Participants

Participants ($n = 278$) were recruited in Newcastle and Brisbane (Australia) through a range of treatment agencies and via media advertisements to the DAISI project. The DAISI project assessed participants before provid-

ing them with treatment (either brief intervention or cognitive behaviour therapy) for depression and/or alcohol use. Inclusion criteria were: (i) ≥16 years of age; (ii) current depressive symptoms [score ≥ 17 on the Beck Depression Inventory (BDI-II)]; and (iii) consuming alcohol at harmful levels as determined by the Australian National Health and Medical Research Council's (2001) drinking guidelines. Potential participants were excluded if they: (i) were currently diagnosed with a psychotic disorder; (ii) reported a history of traumatic brain injury (due to DAISI being a cognitive behaviour therapy study); (iii) lacked fluency in English; or (iv) lived too far away to attend sessions.

Procedure

As previously described [37], two 1 h assessment appointments (1 week apart) were made due to the length of time required to complete the assessment battery. Self-report assessments and appointments for initial treatment session were made at the second assessment session. Participants received up to AUD$20 as reimbursement for travel costs.

Measures

Trauma exposure, PTSD symptom severity and PTSD were measured by the Posttraumatic Diagnostic Scale (PDS) [38]. The Measure of Parenting Style [39] assesses experiences of dysfunctional parenting during childhood, with separate scales of 'Indifference' (neglect), 'Over-control' (affectionless control) and 'Abuse' from both parents. Each scale was scored by summing the corresponding scale items (items were individually scored between 0, not true to 3, very true). There are no normative mean scores, although anxious and depressed groups have higher scale scores compared to non-clinical samples [39]. Parental mental health or alcohol or other drug use was not collected during this assessment. Depression symptoms were measured using the BDI-II [40]. The Structured Clinical Interview for DSM-IV-TR [41] was administered to diagnose lifetime and current MDD and AUD. Alcohol problems were measured using the Alcohol Use Disorders Identification Test [42] and severity of alcohol dependence was measured using the Severity of Alcohol Dependence Questionnaire [43]. Alcohol consumption (both weekly and binge drinking) was assessed by a Timeline Follow Back focusing on the previous 2 weeks [44]. General level of functioning was determined by the Global Assessment of Functioning [45].

Statistical analysis

The Newcastle and Brisbane datasets were compared with each other to identify any differences. A significantly higher proportion of Newcastle participants experienced a natural disaster [31.8% vs. 12.2%; χ^2 (1, $n = 159$) = 8.7, $P = 0.003$] which was due to Newcastle participants experiencing an earthquake in 1989.

Preliminary analysis on the merged datasets showed that 57/278 (20.5%) of the sample did not complete the entire trauma assessment. Compared to completers, non-completers had significantly lower BDI-II (28.4 vs. 32.4; $t = 3.3$, d.f. = 209, $P = 0.001$) and alcohol consumption (7.6 vs. 10.8 drinks; $t = 3.4$, d.f. = 209, $P = 0.001$) scores. The most likely explanation for this effect was that non-completers tended to nominate events that they did not consider traumatic (such as car accidents and the Newcastle earthquake) and thus declined to continue the trauma assessment. Participants with and without trauma experience were compared on the following variables: experiencing dysfunctional parenting, gender, age of depression onset, depressive symptom severity, age of alcohol initiation, and levels of alcohol consumption, dependence and general functioning. Correlations were conducted on PTSD symptom severity and PTSD symptom clusters (combined no PTSD and PTSD groups). Enter, backward and stepwise regressions were then conducted on the strongest correlation results, with the final model confirmed by all three regressions. Planned comparisons and chi squares were used on the three study groups. Family-wise Bonferroni corrections were applied to the first two tests to control for the number of analyses. Rates of PTSD and trauma exposure are reported as percentages. Analyses were conducted using SPSS for Windows (version 17.0) [46].

Results

Sample description

The DAISI trial had 278 participants at baseline [37]. Two hundred and twenty-one participants completed assessments of trauma, with participants allocated to the three study groups of: (i) no trauma, (ii) trauma, no PTSD (referred to as no PTSD) and (iii) PTSD (see Figure 1).

Participants ranged from 20 to 73 years, with an average age of 45.2 years (SD 11.0). There were 113 men and 108 women. Over one-quarter of the sample were single (27.6%, $n = 61$), married (24.9%, $n = 55$) or divorced (23.5%, $n = 52$).The remaining quarter were widowed, separated or in a de facto relationship. Most participants were taking prescribed medication (61.2%, $n = 134$), most commonly antidepressants (52.1%, $n = 14$), anxiolytics (16.9%, $n = 37$), anticraving medications (7.3%, $n = 6$), antipsychotics (5.5%, $n = 12$) and mood stabilisers (2.3%). Over half had not completed high school (53.0%, $n = 116$), and

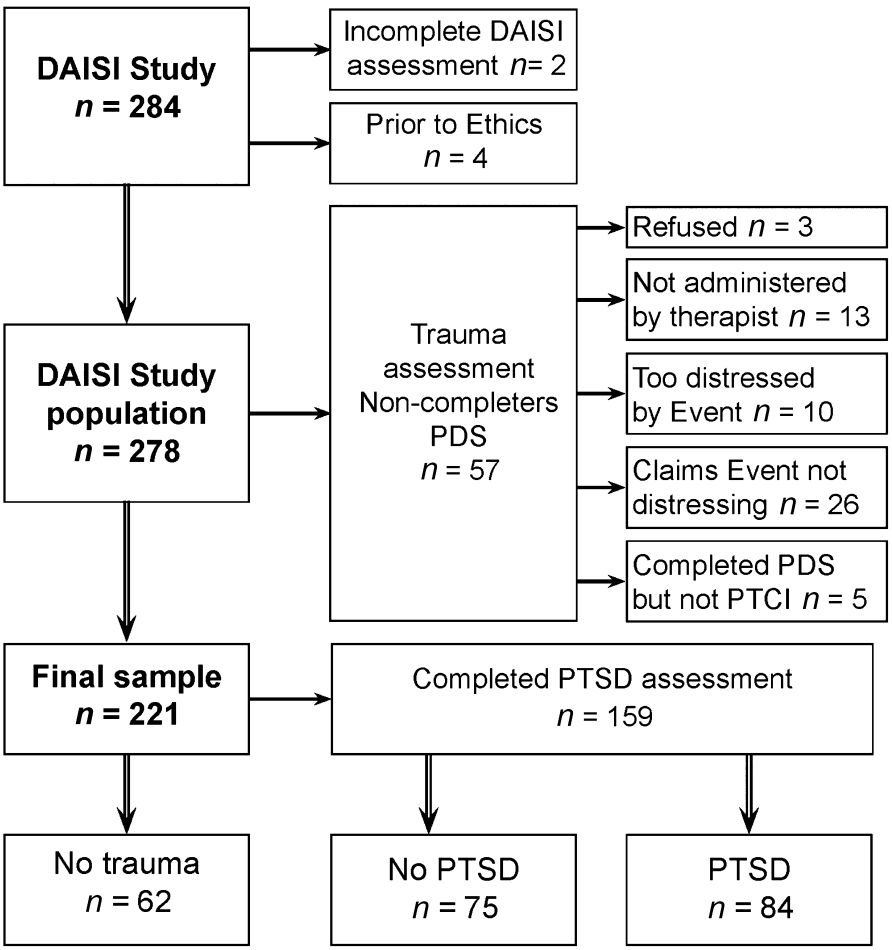

Figure 1. *Flow chart of participant assessment and classification process. DAISI, Depression and Alcohol Integrated and Single focused Interventions; PDS, Posttraumatic Diagnostic Scale; PTCI, Posttraumatic Cognitions Inventory; PTSD, posttraumatic stress disorder.*

81.7% ($n = 179$) left school by the age of 17 years. Following school 53.2% ($n = 137$) continued their education with nearly one-quarter (24.1%, $n = 52$) obtaining a certificate, a further 15.7% ($n = 4$) obtaining a trade certificate, and 13.4% ($n = 29$) a bachelor degree. Over half worked part- or full-time (54.7%, $n = 120$) and 46.6% ($n = 102$) received welfare payments. Of those receiving welfare, 78.4% ($n = 80$) reported trauma exposure.

Most participants in this study had experienced a traumatic event (71.6% $n = 159/221$), with more than one-third of the sample fulfilling DSM-IV criteria for current PTSD (38.0%, $n = 84/221$). There were no gender differences in rates of trauma exposure, number of traumatic events, number of trauma symptoms and PTSD. For the PTSD group, women had significantly more severe Intrusion symptoms than men [$t(84) = 2.9$, $P = 0.005$] (Table 1). Women were more likely to have experienced sexual assaults [68.4% vs. 23.8%; χ^2 (1, $n = 159$) = 31.9, $P < 0.001$] while a higher percentage of men experienced military or imprisonment-related trauma [25.0% vs. 3.8%; χ^2 (1159) = 14.4, $P < 0.001$] (see Table 1).

Relationships with parental dysfunction

Participants with PTSD had significantly higher maternal and paternal neglect scores than the no PTSD group [maternal $F(1214) = 10.9$, $P < 0.01$; paternal $F(1214) = 14.7$, $P < 0.001$] and the no trauma group [maternal $F(1214) = 17.2$, $P < 0.001$; paternal $F(1214) = 20.10$, $P < 0.001$].

Table 2 displays the significant associations between parental dysfunction scores and other variables. As shown in the table, the strongest associations (i.e. ≥ 0.30) were between PTSD symptoms (specifically, avoidance and hyperarousal) and severity of alcohol dependence with paternal neglect. Depression severity was most strongly associated with paternal over-control, while general functioning was most strongly associated with maternal abuse. Many other coefficients were 0.20 or above.

Table 1. *Trauma events, PTSD and symptoms scores in a sample with coexisting depression and alcohol use problems* (n = *221)*

	Study *n* 221	% of men 113	% of women 108	Study sample %	Significant gender differences	
Experienced trauma event	159	70.2	73.1	71.6		
PTSD	84	36.3	39.8	38.0		
Trauma, no PTSD	75	34.5	33.3	33.9		
No trauma	62	29.2	26.9	28.1		
Trauma type		% of men	% of women	Study sample %	Men	Women
Other traumatic event		21.3	46.8	50.9		
Serious accident		50.0	45.6	47.8		
Family non-sexual assault		30.0	41.8	35.8		
Sexual contact when <18 years with someone who is 5+ years older than them		21.3	46.8	34.0		$\chi^2 = 19.3$***
Stranger non-sexual assault		37.5	22.8	30.2	$\chi^2 = 4.1$*	
Life-threatening illness		23.8	30.4	27.0		
Family sexual assault		10.0	40.5	25.2		$\chi^2 = 19.7$***
Natural disaster		22.5	22.8	22.6		
Stranger sexual assault		11.3	30.4	20.8		$\chi^2 = 8.8$**
Imprisonment		18.8	2.5	10.7	$\chi^2 = 11.0$***	
Military combat		8.8	1.3	5.0	$\chi^2 = 4.7$*	
Torture		6.3	2.5	4.4		
Most bothersome		Other (21.2)	Other (27.8)	Other (31.4)		
Mean no. trauma events (SD)		2.9 (2.0)	3.4 (1.8)	3.2 (1.9)		
PTSD criteria	159					
Criterion A		66.4	69.4	67.9		
Criterion B		80.5	84.3	82.4		
Criterion C		64.6	71.1	67.9		
Criterion D		79.3	75.9	77.6		
Criterion E		85.4	86.7	86.1		
Criterion F		72.0	78.0	75.0		
Trauma assessments	159	Mean (SD)	Mean (SD)	Mean (SD)	Men with PTSD	Women with PTSD
PDS						
No. of symptoms		9.4 (5.4)	11.0 (4.3)	10.3 (5.0)		
Symptom severity		17.7 (12.7)	22.8 (12.4)	20.5 (12.6)		$t = 17.1$***
Intrusion symptoms		4.7 (4.1)	6.6 (4.4)	5.4 (4.2)		$t = 8.2$***
Avoidance symptoms		5.7 (5.0)	7.3 (4.9)	6.8 (5.0)		$t = 10.2$***
Hyperarousal symptoms		6.1 (4.5)	7.3 (4.4)	6.6 (4.5)		$t = 9.3$***

*$P < 0.05$; **$P < 0.01$; ***$P < 0.001$. Trauma events are ordered from highest to lowest frequencies experienced by the whole study sample. Criterion A: person witnessed or experienced an event that involved threatened death or serious injury, in which the person felt intense fear, helplessness or horror. Criterion B: the event is persistently re-experienced through recollections, images, thoughts, dreams and feelings. Criterion C: persistent avoidance of reminders of the trauma event and numbing of general responses. Criterion D: persistent symptoms of increased arousal (such as anxiety, irritability and trouble sleeping). Criterion E: symptoms last longer than 1 month. Criterion F: symptoms causing clinically significant impairment or distress in general functioning. PDS, Posttraumatic Diagnostic Scale; PTSD, posttraumatic stress disorder.

Table 2. *Spearman's Rho correlations for parental dysfunction with PTSD, depression, general functioning and alcohol variables in a sample of coexisting depression and alcohol use problems* (n = 221)

	Maternal neglect ($n = 173$)	Maternal over-control ($n = 173$)	Maternal abuse ($n = 174$)	Paternal neglect ($n = 170$)	Paternal over-control ($n = 171$)	Paternal abuse ($n = 167$)
PTSD symptoms	0.26**	0.24**	0.25**	0.31***	0.22*	0.24**
Intrusion	0.20*		0.18*	0.20*	0.18*	
Avoidance	0.27**	0.27**	0.25**	0.32***	0.18*	0.23**
Hyperarousal	0.27**	0.27**	0.27**	0.30**	0.18*	0.24**
Depression onset	−0.28***	0.28***	0.29***	0.27***	−0.20**	−0.18*
Depression severity	0.20**	0.25**	0.25**	0.27***	0.30***	0.23**
General functioning	−0.21**	−0.25**	−0.30***	−0.27***	−0.23**	−0.23**
Weekly drinking		−0.19*				
Binge drinking				0.24**		0.20*
Problems with alcohol				0.26**	0.15*	0.25**
Alcohol dependence severity			0.22**	0.37***	0.24**	0.25**

*$P < 0.05$; **$P < 0.01$; ***$P < 0.001$. PTSD, posttraumatic stress disorder.

Regression analysis showed that maternal neglect predicted more severe avoidance symptom severity [$R^2 = 0.07$, $\Delta R^2 = 0.06$, $F(1128) = 9.47$, $P = 0.003$]. Paternal neglect predicted more severe avoidance and alcohol dependence symptoms [$R^2 = 0.15$, $\Delta R^2 = 0.13$, $F(2111) = 9.59$, $P < 0.001$]. Maternal over-control predicted an earlier onset of depression, lower general functioning and drinking (on average) less across the week [$R^2 = 0.18$, $\Delta R^2 = 0.16$, $F(3122) = 8.79$, $P < 0.001$]. Paternal over-control predicted having more severe depression symptoms [$R^2 = 0.35$, $\Delta R^2 = 0.12$, $F(1116) = 16.53$, $P < 0.001$]. Maternal abuse was related to an earlier onset of depression and lower general functioning [$R^2 = 0.12$, $\Delta R^2 = 0.10$, $F(3129) = 5.74$, $P = 0.001$] while paternal abuse was related to lower general functioning [$R^2 = 0.09$, $\Delta R^2 = 0.08$, $F(1109) = 10.34$, $P = 0.002$].

Relationships with PTSD and PTSD symptom clusters

Participants with PTSD had an earlier depression onset [$F(1214) = 6.5$, $P < 0.05$], poorer general functioning [$F(1214) = 17.0$, $P < 0.001$] and more severe alcohol problems [$F(1214) = 20.8$, $P < 0.001$] than those with no trauma. The PTSD group also had more severe depressive symptoms and alcohol dependence than either the no PTSD [respectively, $F(1214) = 6.7$, $P < 0.05$; $F(1214) = 6.1$, $P < 0.001$] and no trauma groups [respectively, $F(1214) = 9.8$, $P < 0.01$; $F(1214) = 13.2$, $P < 0.01$].

The avoidance and hyperarousal clusters had Spearman Rho coefficients of 0.30 or more with depression severity and general functioning, as did hyperarousal with severity of alcohol dependence. The strongest associations for depressive symptoms were with the avoidance cluster and included pessimism, punishment, indecision, concentration and tiredness (with Spearman Rho coefficients ≥ 0.25, $P \geq 0.003$).

Stepwise regression for PTSD symptom clusters found that intrusive and avoidance symptoms were related to depression severity and problems with alcohol (intrusions) [$R^2 = 0.09$, $\Delta R^2 = 0.08$, $F(2152) = 7.70$, $P = 0.001$] and (avoidance) [$R^2 = 0.13$, $\Delta R^2 = 0.12$, $F(2151) = 10.96$, $P < 0.001$]. The hyperarousal cluster was related to depression severity and alcohol dependence severity [$R^2 = 0.18$, $\Delta R^2 = 0.17$, $F(2142) = 15.83$, $P < 0.001$].

Discussion

This is the first study to show a high rate of trauma exposure and PTSD in a treatment seeking sample with coexisting depressive symptoms and alcohol use problems. Almost three-quarters of participants (71.6%) reported a traumatic event, one-third (33.9%) experi-

enced current trauma symptoms (no PTSD) and more than one-third met diagnostic criteria for PTSD (38.0%). Of those who had experienced a traumatic event, 52.8% developed PTSD. This finding is important as it suggests that trauma exposure, PTSD symptoms and PTSD need to be screened for in people who present for treatment of coexisting depression and alcohol use problems.

The prediction that individuals with more severe PTSD symptoms and PTSD would report higher levels of dysfunctional parenting in childhood was confirmed. Unique to the current study was the finding of the life-lasting detrimental contribution that experiencing dysfunctional parenting (specifically the effect of parental neglect) had on developing PTSD, depression and problems with alcohol in later adulthood. In particular, this finding suggests that neglected children (acts of omission) may not be taught important life skills, such as affect regulation, self control or progress through and achieve the goals identified in the first five or six stages of Erikson's (developmental) Stages [47]. These are skills typically taught to children by their parents and perhaps the lack of these skills in combination with feelings of abandonment and rejection (resulting from the neglect) [48] impact on adult self-concepts (such as 'I am unlovable' and 'I am worthless'). This may then result in a vulnerability to developing chronic/severe PTSD, depression and subsequent alcohol problems across adulthood.

The impact on depression is also important to note as those with the dysfunctional parenting experiences had an earlier onset of depression, especially so for those who also had PTSD. The earlier onset and more severe depression for this subgroup may make them more vulnerable to long-term problems with depression. This includes a longer duration of depression, more frequent depressive episodes, shorter duration of remission times and a greater chance of depressive episodes as this tends to be the outcome for earlier onset depression [45].

These findings highlight the importance of good parenting practices being taught to parents who are in 'at-risk' groups (such as those with AUD and/or mental health issues). More practical support provided to these families (such as in-home support and visits from outreach services) combined with treatment of any parental psychopathology may also be beneficial. Further research into the identification of evidence-based treatments for neglectful parents is also needed. Research into the impact of neglectful parenting also needs to consider inter-generational parenting influences and the effects of substance use, mental health and trauma event exposure.

One of the limitations of this study was that participants with trauma exposure were not asked how old they were when the event occurred. This prevented further investigations into the relationship between onset of PTSD with depressive symptoms and alcohol use problems, or between trauma exposure and these disorders. For these reasons, future studies need to investigate the temporal relationship between trauma events, PTSD, depression and alcohol use problems.

Our prediction that PTSD and/or more severe PTSD symptoms would be associated with more severe depressive symptoms and alcohol problems was also confirmed. This finding is consistent with research on PTSD with depression [5,26,49] and PTSD with alcohol use [50–52]. This study also showed that participants with PTSD also had an earlier onset of depression. Further analysis found that more severe depressive symptoms were related to all three PTSD symptom groups. More severe problems with alcohol were related to more intrusion and avoidance symptoms, while more severe alcohol dependence symptoms were related to hyperarousal. This suggests that alcohol may be used to manage the symptoms of PTSD and that it may be the hyperarousal (anxiety) symptoms that contribute to severity of alcohol dependence.

Limited research has investigated the overlap of PTSD and depressive disorders and found that they are separate and distinct disorders [5,28,53]. Most have looked at this overlap through either the diagnosis of the two disorders [28] or, as depression symptoms as a predictor for PTSD [27]. We found that there is a moderate overlap of the avoidance cluster with some depressive symptoms. This analysis may indicate that it is the combination of these specific depressive and avoidance symptoms that may contribute to PTSD and depression comorbidity.

These findings suggest that depressed treatment seekers who drink may have a trauma history (including parental dysfunction) which makes them vulnerable to depression (secondary) or, alternatively, that they had a milder depression and a subsequent trauma event. Alcohol may then have been used to manage these chronic and comorbid symptoms. Another possibility is that problem drinking occurs first and, when intoxicated, the drinker may be at risk of assault. Following the assault, they may then be vulnerable to depression and PTSD symptoms. Alcohol use may further increase in an attempt to manage these symptoms. Regardless of the primary and secondary position, it is clear that the symptoms of these two disorders detrimentally interact with each other, resulting in significantly lower general functioning in a client population who already has impaired general functioning.

Unique to this study was that there were no gender differences in PTSD or severity of depression and alcohol dependence. This finding may suggest that comorbidity affects men and women similarly, or that

men with this three-way comorbidity are more willing to attend treatment, so that gender effects are minimal. Alternatively, women with PTSD may have higher rates of alcohol dependence. It also suggests that having this three-way comorbidity results in more severe psychiatric comorbidity and drinking may be used in an attempt to help manage this [31] (particularly the Hyperarousal symptoms) and is an avoidance coping strategy [54]. Therefore, addressing the role of drinking in treating this three-way comorbidity may improve coping.

Conclusions

Overall, the current study shows that PTSD, depressive symptoms and alcohol use problems commonly coexist in a treatment population and that trauma exposure (including exposure to dysfunctional parenting) plays a role in the vulnerability and development of more chronic and severe depression symptoms and alcohol problems. The interrelationship between symptoms of PTSD and depression appears to reduce any gender differences in problems with alcohol and dependence. It also appears that the impact of neglect (acts of omission) on adult psychiatric functioning is much longer lasting than what is currently researched [17,20,21]. Therefore, further research and clinical attention needs to be directed to neglected children, using a more formal assessment method to confirm reports of parental dysfunction. This multiple comorbidity also needs to be assessed and addressed if services are to be maximally effective in meeting the needs of this complex group.

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