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Chapter 5

CO-OCCURRING ALCOHOL USE AND POSTTRAUMATIC STRESS DISORDER: PREVALENCE, DYNAMICS, AND INTERVENTION STRATEGIES

Sloane R. M. Rickman and Matthew M. Yalch
Department of Psychology,
Palo Alto University, Palo Alto, CA, US

ABSTRACT

Alcohol use disorder (AUD) is a common problem that often co-occurs with other mental health conditions. One condition that frequently co-occurs with AUD is posttraumatic stress disorder (PTSD). In addition to sharing some etiological factors, AUD and PTSD interact dynamically with each other, with one condition worsening the symptoms of the other. The feedback loop between AUD and PTSD symptoms makes treating people with both conditions complicated, requiring special considerations for clinical assessment and intervention. In this chapter, we will describe the diagnostic and phenomenological characteristics of AUD and PTSD, overview research on common risk and resilience factors for the development of both disorders (e.g., gender, personality, and exposure to

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traumatic stressors), explain the dynamics of how AUD and PTSD interact with each other, and provide suggestions for clinical assessment and treatment of co-occurring AUD and PTSD.

Alcohol use disorder (AUD) is a common mental health problem that often coincides with other mental health diagnoses. One diagnosis that co-occurs with AUD especially frequently is posttraumatic stress disorder (PTSD). Co-occurring AUD and PTSD not only lead to more problematic outcomes than either disorder individually (Bowe & Rosenheck, 2015; Brown, Recupero, & Stout, 1995; Ouimette, Brown, & Najavits, 1998), but also complicate the severity and prognosis of each other (Bremner, Southwick, Darnell, & Charney, 1996; Brown et al., 1995; Jacobsen et al., 2001; Driessen et al., 2008; Kreyenbuhl, Nossel, & Dixon, 2009; Smith & Randall, 2012). The complicated clinical presentation of people with co-occurring AUD and PTSD often calls for assessment and intervention strategies that differ from strategies for separate AUD and PTSD presentations.

AUD and PTSD: Prevalence and Co-Occurrence

AUD is one of the most common mental health diagnoses with upwards of 29% having a diagnosis of AUD in their lifetime and 14% within the past twelve months in the U.S. (Grant et al., 2015). PTSD is also a common disorder, with prevalence of 8% lifetime and 7% in the past twelve months (Kessler et al., 2005). In addition to being common individually, AUD and PTSD also commonly co-occur. Research suggests that roughly half of people diagnosed with AUD also have PTSD, and people with PTSD are approximately six times more likely to be diagnosed with AUD than those without PTSD (Breslau, Davis, & Schultz, 2003; Kessler et al., 1995).

There are several factors that may contribute to the co-occurrence of AUD and PTSD. One factor is traumatic stress, which increases the

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likelihood and severity of both AUD and PTSD symptoms. Individual differences in sex and personality may also make people more likely to develop co-occurring AUD and PTSD, especially given exposure to traumatic stress.

Influence of Trauma on AUD and PTSD

One reason why AUD and PTSD often co-occur may be that both are related to traumatic stress. Whereas PTSD is by definition a stress-related disorder, researchers and clinicians have long suggested that AUD (and others forms of disordered substance use) is driven by a need to avoid or otherwise cope not only with traumatic stress itself, but also with symptoms of PTSD and other trauma-related conditions (for theoretical review see Khantzian 1987, 1997, 2007). This is consistent with evidence that PTSD more commonly precedes AUD than vice versa (Mellman, Randolph, Brawman-Mintzer, Flores, & Milanes, 1992; Kessler et al., 1995; Chilcoat & Breslau, 1998). Research further suggests that drinking increases when one is reminded of traumatic events as well as when symptoms of PTSD increase (Cannon et al., 1992; Stewart, Conrod, Samoluk, Pihl, & Dongier, 2000; Nishith, Resick, & Mueser, 2001; Simpson, 2003; Coffey et al., 2010; Debell et al., 2014; Nickerson et al., 2014).

It is also possible that people who drink excessively place themselves at higher risk of experiencing traumatic events and thereby of developing PTSD symptoms (Cottler, Compton, Mager, Sptiznagel, & Janca, 1992). There is some evidence that people with excessive alcohol and other substance use may generally live a lifestyle that is higher in risk (e.g., driving while intoxicated, associating with other people using substances who themselves may be more likely to perpetrate an assault), and this risk may put a person at greater chance of experiencing traumatic events (Hildebrand, Behrendt, & Hoyer, 2015; Smith & Cottler, 2018). It is also possible that people with AUD have deficits in adaptive coping skills which make developing PTSD symptoms more likely after traumatic stress

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(Norman et al., 2012). The association between trauma and alcohol use thus appears to be cyclic, with trauma leading to heavier alcohol use and heavier alcohol use leading to greater likelihood of experiencing trauma.

Types of Trauma

Some traumatic events are more likely to lead to co-occurring AUD and PTSD than others. In general, research suggests that traumatic events that are perpetrated by another person (e.g., physical or sexual assault) are more closely associated with substance use in individuals with PTSD than non-interpersonal traumas like natural disasters (e.g., Delker & Freyd, 2014; Testa, Livingston, & Leonard, 2003; for theoretical review see Freyd, 1996; Herman, 1992). For example, people who have experienced child abuse, particularly childhood sexual abuse, exhibit high rates of co-occurring AUD and PTSD (Müller et al., 2015). Intimate partner violence is another example of interpersonal trauma that has been linked to co-occurring AUD and PTSD (Testa et al., 2003). Although child abuse and IPV are two prime examples of interpersonal traumas, research on other types of interpersonal traumas that contribute to co-occurring AUD and PTSD is an active area of ongoing study.

Sex

Another factor that may influence the co-occurrence of AUD and PTSD is sex. There is evidence of this in differential rates of diagnosis of AUD, PTSD, and co-occurring AUD and PTSD. Rates of AUD vary by sex, with AUD being twice as common for men than women (Erol & Karpyak, 2015). Men also have an earlier onset and more severe presentations of AUD than women (Sonne et al., 2003). Sex differences in PTSD are the inverse of that of AUD, with women diagnosed with PTSD at twice the rate of men (Kessler et al., 1995). The co-occurrence of AUD and PTSD also differs by sex: the majority of men with PTSD also had AUD compared to less than a third of women (Kessler et al., 1995).

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Personality

A final factor that may influence the degree to which a person might exhibit AUD and PTSD symptoms in the aftermath of trauma is personality, which is typically operationalized in terms of specific traits. Personality traits influence symptoms of AUD and PTSD in three different ways: direct effects, moderating effects, and pathoplastic effects. With respect to direct effects, the trait most closely associated with both AUD and PTSD is Neuroticism (Kotov, Gamez, Schmidt, & Watson, 2010; see also Barlow, Sauer-Zavala, Carl, Bullis, & Ellard, 2014; Lahey, 2009), briefly defined as the tendency to experience aversive affect, especially in response to stress (Widiger, 2009). Other traits also have direct effects on AUD and PTSD symptoms, including Extraversion (the experience of positive emotion, especially in response to interactions with other people) and Conscientiousness (the ability to inhibit impulses), both of which have negative associations with AUD and PTSD (for meta-analytic review, see Kotov et al., 2010).

In addition to having a strong direct influence on AUD and PTSD symptoms, Neuroticism also moderates the effect of traumatic stress on both AUD and PTSD symptoms (Miller, 2003). Specifically, a number of studies suggest that higher levels of Neuroticism exacerbate the influence of interpersonal traumas (e. g., intimate partner violence) on symptoms of both AUD (Yalch & Levendosky, 2018) and PTSD (Yalch, Levendosky, Bernard, & Bogat, 2017). Other personality traits have more specific moderating influences. For example, research suggests that higher levels of aspects of Extraversion exacerbate the effect of trauma on AUD symptoms (Positive Emotionality; see Yalch & Levendosky, 2018) and buffer the effect of trauma on PTSD symptoms (Dominance; see Bernard, Yalch, Lannert, & Levendosky, 2019).

The influence of personality traits on co-occurring AUD and PTSD may be most apparent when traits are considered in combination. Here the effects of personality traits are pathoplastic, affecting the way symptoms manifest rather than just their severity. Research suggests that personality traits tend to cohere into three patterns among people who have

experienced traumatic stress: internalizing (high Neuroticism, low Extraversion, and moderate Conscientiousness), externalizing (high Neuroticism, moderate Extraversion, and low Conscientiousness), and resilient (low Neuroticism, high Extraversion, and high Conscientiousness). People with externalizing personality profiles have greater PTSD symptom severity than people with resilient profiles, and greater AUD symptom severity than people in both the resilient and internalizing profiles (e.g., Hawn et al., 2018; Miller, Greif, & Smith, 2003; Miller, Kaloupek, Dillon, & Keane, 2004). In these ways, personality traits affect co-occurring AUD and PTSD directly, by exacerbating of buffering the effects of trauma, and in combination.

Assessment and Treatment

The co-occurrence of AUD and PTSD symptoms is complex, in terms of the symptoms themselves, of the traumatogenic origins of these symptoms, and of the personality profiles of those who experience it. This complexity in turn calls for approaches to the assessment and treatment of people with co-occurring AUD and PTSD that are more nuanced than approaches to the assessment and treatment of people with either AUD or PTSD alone.

Assessment

Assessment of co-occurring AUD and PTSD can be complex and should not be limited to the diagnostic criteria of either disorder. With respect to AUD, not only is the severity of AUD symptoms important, but so are a number of other factors related to alcohol use. For example, understanding a person's motivation(s) for drinking and what they expect to get from drinking may yield insight not only into that person's rationale for drinking in general, but also into how that person's drinking relates to any potential traumatic experience (Carey & Carey, 1995; Kayen et al.,

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2007; Kuntsche & Labhart, 2013). Similarly, there is emerging research on the degree to which a person blacks out from drinking affects their risk of falling victim to potentially traumatic experiences (Haas, Barthel, & Taylor, 2017). Also relevant is the degree to which a person sees their drinking as problem, which affects how much they may be willing to change their behavior, both with respect to their alcohol use and problems that accompany it like PTSD (Miller & Rollnick, 2013; Yusko, Drapkin, & Yeh, 2015).

With respect to PTSD, the number and type of traumatic events endured and the severity of symptoms experienced in the aftermath of these events are among the targets of assessment that may be most immediately relevant (for theoretical and applied review see Briere, 2004). In cases in which the trauma history is especially complex, examination of trauma-related symptoms in addition to those of PTSD (e.g., anxious, depressive, and/or dissociative symptoms) may further inform the picture of posttraumatic distress (Briere, 2004; Courtois, 2008). In addition to stressors and symptoms, assessment of the sense a person makes of the event(s) they experienced, as well as themselves and their symptoms in the aftermath of the event(s) may also be targets of assessment. Research suggests that appraisals trauma survivors make of themselves, of their affective and interpersonal experience, and of the world influence and may mediate the association between traumatic events and PTSD symptoms (DePrince, Chu, & Pineda, 2011; Foa, Ehlers, Clark, Tolin, & Orsillo, 1999) and thus may also be targets of therapeutic intervention (e.g., see Zalta et al., 2014).

It may also be useful to assess factors that are related less directly to AUD and PTSD. Of those factors we have thus far reviewed, sex may be more obvious, but personality style may not be. Empirically minded clinicians have long acknowledged the role personality assessment can play in clinical intervention (e.g., in selecting a treatment protocol that maximally aligned with a given psychotherapy client's personality characteristics; Harkness & Lilienfeld, 1997). As implied by the research on personality and AUD and PTSD, assessment of personality traits can provide information about the manner in which AUD, PTSD, and

associated symptoms may manifest in aftermath of traumatic experience, which, if these symptoms are not already apparent, could provide rationale for their assessment. For example, results of a personality assessment indicating low levels of Conscientiousness for a client seeking treatment for symptoms of PTSD might cue the clinician to assess for alcohol and other substance use. Given research suggesting that personality traits are associated with appraisals of traumatic events (Yalch & Levendosky, 2016; Yalch, Rickman, Good, & Levendosky, in press), results of personality assessment also might generate hypotheses about specific cognitive intervention strategies to attempt in treatment. Regardless of the results of the personality assessment, the process of assessment itself can be empowering to the client, and discussion of the results of personality assessment may help the client regain a sense of coherence that it often lost in AUD, PTSD, and its potential traumatic origins (for theoretical review see Finn, 2007). Indeed, there is emerging evidence that collaborative, therapeutically oriented assessment of personality may lead to a reduction of PTSD and other trauma-related symptoms (Finn, 2011; Overton, 2012; Tarocchi, Aschieri, Fantini, & Smith, 2013), although research on its utility in affecting alcohol use has been limited.

Treatment

Speaking of therapeutic intervention more directly, treating co-occurring AUD and PTSD is complicated because of how the symptoms of one condition reinforce those of the other. One effect of this is that co-occurring AUD and PTSD tend to be treatment resistant, as indicated by high (e.g., upwards of 60%) rates of treatment attrition for clients with both diagnoses (Mills et al., 2012; Torchalla, Nosen, Rostam, & Allen, 2012; Sannibale et al., 2013). Another problem is that treating one condition in isolation may exacerbate the symptoms of the other. For example, an oft cited concern is that it is difficult to treat PTSD symptoms among people with AUD because their drinking interferes with PTSD treatment (which often includes exposure to memories and other reminders of trauma that

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are typically avoided); conversely, it is difficult to treat AUD among people with PTSD because drinking is often a primary means to avoid thinking about the event(s) that caused their PTSD (Abueg & Fairbank, 1992; Brown, Stout, & Gannon-Rowley, 1998).

For these and other reasons, contemporary approaches to treating co-occurring AUD and PTSD emphasize an integrated phase-based approach to treating AUD and PTSD simultaneously. Evolving from phase-based approaches proposed for treating alcohol use (e.g., Banys, 2002) and complex PTSD (e.g., Herman, 1992) separately, this approach typically proceeds in three stages (for review see Landes, Garovoy, & Burkman, 2013). In the first phase the primary target of treatment is stability, and emphasizes skills in coping with distress and cravings, relapse prevention, and distress tolerance. Having developed a stable base from which a client may engage in more substantive clinical work, in the second phase the goal is to target directly those factors that may be driving AUD and PTSD symptoms. Work at this phase includes those evidence-based treatments that have been well established for the treatment of PTSD (but not necessarily for co-occurring AUD and PTSD; e.g., Prolonged Exposure therapy [PE; Foa, Hembree, & Rothbaum, 2007] and Cognitive Processing Therapy [CPT; Resick, Monson, & Chard, 2017]). AUD and PTSD symptoms promote a detachment from and otherwise altered relationships with other people, especially when these symptoms are longstanding (Herman, 1992; Washton & Zweben, 2006). For this reason, the final phase of treatment emphasizes reintegrating the client into normal, adaptive human relationships, and may include interpersonally oriented individual therapy as well as group therapy. Progression through these phases is often non-linear, with ebbs and flows and returns to previous phases over the course of treatment.

Phase-based approaches to treating co-occurring AUD and PTSD tend to be integrative not only in the sense that they treat both AUD and PTSD at the same time, but also in that they call upon several difference intervention protocols over the course of treatment.

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However, demonstrations of the efficacy of phase-based approaches have led to the development of standalone treatments that address the symptoms of both conditions simultaneously. One of the first and best known of these is Seeking Safety (Najavitis, 2002), a treatment for co-occurring disordered substance use and PTSD that is present-focused and skills-based (e.g., in contrast to PE, which involves exposure to the memory of past events). Research suggests that Seeking Safety is associated with reduction in both AUD (and other SUD) and PTSD symptoms in veteran samples, in community mental health settings, and when used in conjunction with medication (Hien et al., 2004; Boden et al., 2012). Other integrated approaches that have demonstrated efficacy for co-occurring AUD and PTSD include Integrated CBT (McGovern et al., 2009) and Couple Treatment for Alcohol Use Disorder and PTSD (CTAP; Schumm, Monson, O'Farrell, Gustin & Chard, 2015). A common feature in these integrated treatment protocols is mindfulness, or purposeful, non-judgmental focusing of attention in the present moment (Kabat-Zinn, 1994). Indeed, mindfulness-based therapies have demonstrated efficacy in treating individuals with AUD and PTSD separately (Simpson et al., 2003; Marlatt et al., 2004; King, Street, Gradus, Vogt, & Resick, 2013), as well as those with co-occurring diagnosis (Simpson et al., 2007) with some success. Another class of treatments for co-occurring AUD and PTSD have roots in prolonged exposure, one of the primary mechanisms of treating PTSD on its own. These treatments include Concurrent Treatment of PTSD and SUDs using Prolonged Exposure (COPE; Back, Dansky, Carroll, Foa & Brady, 2001a), Transcend (Donovan, Padin-Rivera & Kowaliw, 2001), Seeking Safety with Exposure (Najavits, Schmitz, Gotthardt & Weiss, 2005), and Substance Dependency Posttraumatic Stress (SDPT; Triffleman, Carroll & Kellogg, 1999). Though exposure may not be preferred for all individuals in treatment, research suggests that individuals who experienced exposure in treatment believed that exposure was a particularly useful component to their treatment (Najavits et al., 2005).

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DISCUSSION

In this chapter we reviewed the prevalence and co-occurrence of AUD and PTSD, discussed factors associated with AUD/PTSD co-occurrence, and described assessment and treatment with people who struggle with co-occurring AUD and PTSD. In addition to highlighting the importance of thinking about AUD and PTSD as related conditions, this review also has implications for future research and clinical practice on AUD/PTSD co-occurrence.

Among the factors that research suggests are especially related to co-occurring AUD and PTSD are exposure to specific kinds of traumatic events (namely, interpersonal traumas), sex, and constellations of specific personality traits. Although evidence is well established for each of these factors independently, there is much less research on how these factors might combine to influence presentations of co-occurring AUD and PTSD. For example, there is little research on whether personality trait profiles contribute to co-occurring AUD and PTSD similarly across sex and/or across different trauma histories. Similarly, although there is research on the assessment of both AUD and PTSD, these studies tend to be contained within separate avenues of research, with AUD assessment emphasizing seemingly different themes (e.g., motivations) than PTSD assessment (which emphasizes themes like posttraumatic appraisals). However, there may be commonalities across both AUD and PTSD assessment, which themselves may overlap with personality traits. Future research should examine these and other possibilities.

There has been much work in recent years improving the assessment and treatment of co-occurring AUD and PTSD. However, these two aspects of clinical intervention have by and large remained separate from each other. This is in contrast to recent trends in the clinical assessment more broadly, which has increasingly emphasized the integration of assessment and treatment. Specifically, recent work highlights the use of assessment as a therapeutic tool in and of itself, especially for cases that are difficult to treat or otherwise complex (see Finn, 2007). The integration of assessment and treatment may thus be especially useful for people with

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co-occurring AUD and PTSD, whose presentations are often complicated. Future work should thus focus not only on how to integrate assessment and treatment, but also the degree to which this integration may differ depending on the phase of treatment in which assessment occurs. For example, assessment in the early phase of integrated AUD/PTSD treatment might target symptom severity and risk of relapse, whereas treatment in later phases might target factors more closely tied to affective experience and interpersonal functioning. This work would of course be aided by advances in the integration of basic AUD and PTSD research already mentioned.

Co-occurring AUD and PTSD presents a common and complex problem to clinicians and researchers. Although in this chapter we review and extend some of its more salient factors, future work can and should expand upon this more.

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