

# A Review and Analysis of the Experiences of Adverse Childhood Experiences and Trauma of Service Users in a Substance Use Service in South Wales

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Received: 20 Jan 2022; Accepted: 21 Feb 2022; Published: 26 Feb 2022

**Citation:** Petley L, Davies B. A Review and Analysis of the Experiences of Adverse Childhood Experiences and Trauma of Service Users in a Substance Use Service in South Wales. *Addict Res.* 2022; 6(1): 1-5.

## ABSTRACT

**Background and aims:** There is an established link between experiences of adverse childhood experiences (ACEs) and substance use difficulties. This paper aims to further explore the complex relationship between childhood adversity, trauma and substance use.

**Method:** This paper audited the number and nature of adverse childhood experiences and experiences of trauma reported by a sample of 25 individuals under a specialist substance use service in South Wales, in order to build on the current research on ACEs and substance use. The incidence of the ACEs and trauma in relation to the commencement of the substance use is also audited.

**Results:** The findings show high levels of reported ACEs and severely traumatic experiences within the sample, consistent with existing research. Nineteen service users had reported experiencing childhood trauma and the sample had a mean number of 2.76 reported ACEs. The majority of service users had experienced trauma and ACEs prior to the commencement of their substance use, supporting the self-medication explanation of the co-occurrence between substance use with trauma and adversity.

**Conclusions:** The findings have implications for service development in relation to promoting trauma informed services and meeting the psychological needs of those who have experienced trauma and use substances.

## Keywords

Childhood adversity, Trauma, Substance use.

## Introduction

Exposure to adversity and trauma can have lifelong implications for an individual's health and wellbeing. Adverse childhood experiences (ACEs) are distressing and potentially traumatic events that occur during childhood and/or adolescence [1]. They include having experienced physical, emotional or sexual abuse or neglect, as well as growing up in a household with the presence of substance use, mental health problems, domestic violence, parental divorce or incarceration. The experience of ACEs were first shown to be linked to a range of poor health outcomes by [2], these health outcomes included substance use, mental health problems and obesity. Since this original paper, two decades worth of research

has verified the relationship between ACEs and poor outcomes in adulthood. Exposure to ACEs has been shown to increase an individual's risk of future violence, victimisation, suicide, chronic health problems, mental health problems, and premature death in a dose response pattern [2-5]. Hence, the general pattern is that the more adversity a person has experienced in childhood the higher their risk of poor health outcomes in adulthood becomes.

It is well documented that there is a high prevalence of ACEs present in individuals with substance use difficulties. Research has shown a strong association between the experience of ACEs and problematic substance use [6]. The surprising commonality of ACEs in the general population is also well documented. A substantial proportion of the population of Wales have reported experiencing ACEs in their childhood, with 47% having

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experienced at least one ACE and 14% experiencing four or more ACEs [7].

Psychological trauma is defined as ‘an event that is outside of the range of usual human experience that would be markedly distressing for almost anyone and is usually experienced with intense fear, terror and helplessness’ [8]. Examples of traumatic experiences include natural disasters, torture, sexual assault and witnessing the death of a loved one. Individuals who have experienced psychological trauma may present with symptoms of post-traumatic stress disorder (PTSD). The rates of PTSD and trauma presentation have been shown to vary across the type of trauma experienced. There is a higher probability of developing PTSD and more severe trauma symptoms through experiencing interpersonal trauma such as rape, sexual assault, stalking or unexpected death of a loved one, compared to non-interpersonal trauma such as a natural disaster or witnessing an accident [9].

Trauma and substance use also frequently co-occur. Among individuals seeking treatment for substance use it is estimated that 36% to 50% meet the criteria for lifetime PTSD [7]. In a sample of 121 adults in outpatient substance use service 85.12% of the sample reported experiencing at least one traumatic event in their life [10]. Additionally 43% of a sample of individuals diagnosed with PTSD met the criteria for a lifetime diagnosis of substance use disorder [11]. Additionally, exposure to cumulative interpersonal trauma, compared to non-interpersonal trauma has been shown to be linked to an increased risk of substance use problems [12]. The co-occurrence of trauma and substance use is well established, however the reasons for this co-occurrence is often debated.

The self-medication hypothesis proposes that individuals who have experienced trauma use substances to self-medicate their distress and difficulties in relation to their trauma, which often becomes problematic and addictive for these individuals [13]. An alternative explanation for the co-occurrence between trauma and substance use is that other environmental factors are associated with both substance use and post-traumatic stress disorder, such as poverty, deprivation and living in areas of high urbanity [14,15]. Problematic substance use can also predispose somebody to experience traumatic events. Research found that cocaine and opiate users are more than three times more likely to report a traumatic event and more likely to meet the criteria for PTSD compared to comparison subjects. In this research, onset of the substance use preceded onset of the trauma symptoms, suggesting that substance use predisposes individuals to experiencing traumatic events [16].

Difficulties within an individual's environment and family have been hypothesised to be related to later substance use. Family conflict in childhood has been shown to be a strong predictor of adult substance use and mental health problems [17]. Conversely, problematic substance use can have adverse effects on the individual's family system, including relationship distress, economic problems and family instability [18]. This research audited the presence and nature of family difficulties present within the sample in an effort to increase understanding on the complex

relationship between problematic substance use and difficulties within the family.

Research often tends to measure the number of reported ACEs and traumatic experiences in a random group of individuals and then measures the association between health outcomes and ACEs from this sample. By contrast, this study measures the number of self-reported ACEs and trauma from a particular population, in a sample of service users with a specialist substance use service in South Wales. These individuals often have poor health outcomes and therefore it was hypothesised that there would be a high prevalence of reported ACEs and trauma within this sample. This paper also audited the order of occurrence of the experience of trauma and the commencement of substance use in an effort to establish which theory would best apply to explain any co-occurrence in this sample.

### Methodology

A review was conducted of 25 service user files in a specialist substance use service in South Wales. Twenty-five files were reviewed- 17 men and 8 women. More male files were reviewed to reflect the proportion of men to women accessing the service. All individuals in the sample were seeking or receiving treatment for their substance use and had a degree of complexity in their presentation, for example mental health difficulties, complex physical health problems or pregnancy.

The documented number of self-reported adverse childhood experiences, the presence or absence of reported experiences of trauma and family difficulties (current or past) were all audited, as well as the nature of these experiences and difficulties, the age at which any trauma or adversity was experienced and the age of onset of substance use. An experience was recorded as traumatic if it fitted the definition of a traumatic experience- an event that is outside of the range of usual human experience that would be markedly distressing for almost anyone and is usually experienced with intense fear, terror and helplessness. Childhood trauma was also recorded, this was defined as the traumatic experience having occurred prior to the age of 18. The incidence of the experience of trauma in relation to the commencement of substance use was also recorded in an attempt to establish whether the data supported any of the dominant theories around why substance use and trauma co-occur.

The adverse childhood experiences recorded were those included in the original Felitti et al. [2] research: abuse (physical, emotional and sexual), neglect (physical and emotional) and household dysfunction (mental illness, incarcerated relative, domestic violence, substance abuse and parental divorce). An adverse experience was recorded as an ACE if it fitted into one of these categories and the individual had experienced it prior to the age of 18. Family difficulties were recorded when the notes indicated significant burnout, relationship problems, abuse, estranged relationships or relationship strain within the individual's family system that were either historical or appeared to be present at the time of the audit.

All audit data was obtained through a review of the patient files, hence data was either self-reported by service users in assessments or sessions with professionals or was obtained via documents written by professionals outside of the service, for example referrals, risk assessments and mental health assessments.

## Results

### Number of ACEs experienced by the sample

**Table 1:** Illustrates the mean, mode and range values of reported ACEs in the sample.

	Mean	Mode	Range
ACE score	2.76 (25)	3 (7)	0-6

The mean ACE score across the sample was 2.76, indicating a high level of childhood adversity across individuals accessing the substance use service. The range of ACE scores was between 0 and 6, indicating a high level of variance in service users' reported experiences of ACEs.

**Table 2:** Illustrates the incidence of trauma, childhood trauma, and family difficulties recorded within the sample.

	Yes	Not recorded or denied
Trauma	25 (25)	0 (25)
Childhood trauma	19 (25)	6 (25)
Family difficulties	21 (25)	4 (25)

All 25-service users disclosed experiencing at least one emotionally distressing experience, including bullying, having a child removed from their care and feeling highly distressed by a hospital admission. Many service users disclosed experiencing severely traumatic experiences, these included a rape which lead to HIV, childhood sexual abuse, witnessing one parent shooting the other, being in a traffic accident, losing a parent by suicide, traumatic childbirth, losing a son, being forcibly injected with heroin, finding a friend dead and witnessing a friend's mother's death. There was also a high incidence of childhood trauma, with 19 service users reporting experiencing trauma in childhood and/or adolescence (defined as under 18). All of the service users had some kind of interpersonal trauma present. One service user additionally had experienced a non-interpersonal trauma of having been in a traffic accident.

There were significant family difficulties and needs within the sample. 21 out of 25 service users had some kind of family difficulty or problem, these were both historical and ongoing, and the majority of these difficulties (19 out of 25) appeared to be ongoing at the time of the audit. The family difficulties recorded included children being removed from their care, estrangement from family, domestic violence, long-term abuse from family members, traumatic family bereavements, emotional neglect, invalidation and tension within relationships due to the individual's substance use.

**Table 3:** Displays the order of occurrence of the commencement of substance use and the experience of trauma.

	Yes	No or not recorded
Trauma experienced prior to substance use difficulty only	15 (25)	10 (25)
Trauma experienced after substance use difficulty only	2 (25)	23 (25)
Trauma experienced both before and after substance use difficulty	3 (25)	22 (25)
Unknown	3 (25)	22 (25)

Fifteen out of the 25 service users had experienced a traumatic experience prior to the onset of their substance use difficulty only. Two service users reported experiencing trauma after they started using substances only and three-service users experienced trauma both before and after they started using substances. For three service users the timing of the distressing experience and when they started using substances is unclear, hence these were recorded as unknown.

## Discussion

The findings suggest significant exposure to ACEs in the sample of individuals with substance use difficulties and complex needs as hypothesised. This supports existing research demonstrating that exposure to ACE's increase someone's risk of poor health outcomes, including substance use [2,6]. The findings also suggest significant exposure to traumatic experiences within this population complimenting existing research around the co-occurrence of experiencing trauma and substance use [7,11]. The high incidence of interpersonal trauma could also be interpreted as supporting existing literature, around interpersonal trauma having a larger impact on individuals and being linked to more severe PTSD symptoms [9]. However, as the impact of exposure to trauma or PTSD symptoms were not measured in this research this cannot necessarily be concluded.

The mean ACE score calculated is lower than would be expected considering the complex health needs of the sample. There are several explanations of these findings. It could be argued that the 'ACE scores' in this audit often did not truly reflect the adversity and trauma that the service users had experienced in childhood. Many other adverse childhood experiences were present, for example childhood bullying and witnessing a death of a child. These were not recorded to ensure that the adverse childhood experiences (ACEs) recorded fitted with those recorded in dominant research, however it should be acknowledged that additional traumatic and adverse experiences in childhood were present and are not reflected in the data. It is worth noting that many of those with lower ACE scores often had later experienced trauma in adulthood or had few adverse childhood experiences that were incredibly traumatic and likely to have had a significant impact on the individual. Also ACEs may be under-reported as often when people are traumatised they lack a clear narrative around their trauma, and may struggle to trust others, including the workers who are completing the assessment and asking about these issues. In addition, most assessments do not specifically ask about trauma, in contrast to typical research on the impact of ACEs.

The findings can be interpreted to support the self-medication hypothesis [13], as in the vast majority of cases the trauma was experienced prior to the commencement of the substance use, suggesting that the experience of adversity may have caused or been a contributory factor towards the commencement of the substance use. Additionally, with 5 out of 25 individuals experiencing trauma after starting using substances it could be interpreted that this audit supports the hypothesis that substance use also predisposes individuals to experiencing trauma [16]. The results suggest a complex link between ACEs, trauma and substance use and suggest that that the sample are at increased risk of experiencing trauma.

There was a high prevalence of family difficulties within the sample, with 21 out of 25 service users having some kind of past or current difficulty within their family, including estrangement from family, domestic violence, ongoing abuse from family members, traumatic family bereavements, emotional neglect, invalidation and tension within relationships due to the individual's substance use. This is consistent with existing research around family difficulties and substance use [17]. Interestingly, out of the service users who reported improvement in their mental health and/or substance use, several of these service users fully or partially attributed their improvement to the support from those around them- their family and partner. For example, one service user described managing their stress through speaking to their mother and sister rather than using alcohol. Taken together, this indicates the a high presence of family difficulties present for substance use service users, the presence of emotional needs and burnout of some those supporting service users, and a positive impact of supportive relationships for the sample. This may indicate the need for more systemic approaches to be on offer within substance use services to better support those around the service user and promote positive outcomes for service users and their support networks.

A limitation of this research is that recording the number of adverse childhood experiences does not measure the severity and impact of this experience on an individual and certain very traumatic experiences may have been missed as they did not fit into the categories recorded in the audit. Protective and aggravating factors were also not recorded, which could be important in understanding the impact of ACEs, trauma and family difficulties on individuals as well as what mitigates the impact of ACEs/trauma/family difficulties. This paper could be complimented by another study interviewing service users in a substance use service about their experiences of ACEs and trauma to gather more qualitative and quantitative data around the association between substance use difficulties with ACEs and trauma within a population of individuals with complex needs who have difficulties with substance use. Another limitation of this research is that it does not measure the degree of poverty or deprivation in the sample. This is potentially highly relevant to the link between trauma, adversity and substance use, particularly as the audit was conducted in an area of high deprivation. A recommendation for further research would be to compare the results to individuals who had similar experiences of trauma and adversity but did not develop problematic substance

use. This could have implications in understanding the causes of problematic substance use as well as what makes certain individuals more resilient after experiencing trauma and ACEs. If this could be better understood and established this could have important implications for the education system, social services and health in promoting resilience in individuals who have experienced ACEs and trauma. It is also clearly evident from this audit that people within substance use services have significant psychological needs which need to be addressed in future service planning.

In conclusion this audit has found a high prevalence of severe trauma histories, early life adversity, family difficulties and psychological needs in the sample of service users in a specialist substance use service. These findings have implications for service development within substance use services. Substance use services are at times heavily medication based; the findings suggest a role for trauma informed practice, psychological informed practice, systemic interventions and increased provision to offer psychological therapies flexibly around the needs of this population. This could have implications for training and service development within substance use services and for services more widely. However, further research would be needed to gather more in-depth data to better inform any recommendations for substance use services.

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