Recorded Rates of Trauma Exposure in a Retrospective Epidemiologically Complete First-Episode Psychosis Cohort

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Abstract

Background: Trauma plays an important role in the development and maintenance of psychosis. However, it is still under-examined in daily clinical practice. The current study investigated the rates of recording of trauma-exposure in the clinical histories of a first-episode psychosis (FEP) cohort attending an early intervention psychosis service. **Methods:** This study used a retrospective chart review methodology in a six-year epidemiologically complete (FEP) first-episode psychosis cohort attending an early intervention psychosis service. The Trauma and Life Events Checklist was used to define the rate and types of trauma exposure reported in clinical histories. The relationships were examined between recorded trauma-exposure and positive and negative symptoms, depression, and duration of untreated psychosis at first assessment. **Results:** A high rate of recorded trauma exposure was found, indicating that clinicians are recording trauma-exposure in daily practice through clinical histories. Childhood trauma exposure was recorded in 47.4% of the sample. No significant relationships between the recorded trauma-exposure and symptom measures were found. A significant relationship was found between interpersonal stressors and positive symptoms, and work-related stress and negative symptoms, highlighting the important of proximal stressful life events. **Discussion:** Even though clinicians were not assessing trauma systematically using standardised instruments, this study found that clinicians were recording trauma-exposure in daily practice. The high rates of trauma-exposure highlighted the need for trauma to be systematically diagnosed, assessed and treated in planning services for people with psychosis. This study found no significant relationship between recorded trauma-exposure and symptomology.

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Results: A high rate of recorded trauma exposure was found, indicating that clinicians are recording trauma-exposure in daily practice through clinical histories. Childhood trauma exposure was recorded in 47.4% of the sample. No significant relationships between the recorded trauma-exposure and symptom measures were found. A significant relationship was found between interpersonal stressors and positive symptoms, and work-related stress and negative symptoms, highlighting the important of proximal stressful life events.

Discussion: Even though clinicians were not assessing trauma systematically using standardised instruments, this study found that clinicians were recording trauma-exposure in daily practice. The high rates of trauma-exposure highlighted the need for trauma to be systematically diagnosed, assessed and treated in planning services for people with psychosis. This study found no significant relationship between recorded trauma-exposure and symptomology.

Keywords : Psychosis, Trauma, FEP, Treatment Planning, Retrospective Chart Review.

Introduction

1.1 Research evidence of the Trauma and Psychosis Relationship

Research has found a high level of trauma exposure in individuals who experience psychosis (Kilcommons & Morrison, 2005; Campodonico et al., 2021; Humphrey et al., 2022; Panayi et al., 2022), leading to significant reported rates of PTSD, and C-PTSD in people with psychosis (Williams et al., 2018; Bloomfield et al., 2022). A dose-response relationship between psychosis, PTSD, and trauma has been repeatedly found (Carr et al., 2018; Larkin & Read, 2008; Matheson et al., 2013; Shelvin et al., 2007; Williams et al., 2018), leading the National Institute for Health and Care Excellence to recommend assessing individuals presenting with an FEP for PTSD and trauma exposure (NICE, 2014).

The literature hypothesises that trauma is a key element of the biopsychosocial model of psychosis (Luhrmann et al., 2019). Childhood traumatic experiences are a risk factor for psychosis (Bentall et al., 2014; Varese et al., 2012; Vila-Badia et al., 2021), with childhood interpersonal traumas being linked to the development and maintenance of psychotic symptoms (Bentall et al., 2014; Garety et al., 2001; Humphrey et al., 2022). Early life trauma may begin a chain of risk factors leading to a psychotic outcome. For instance, Kiburi et al. (2021) in their systematic review found that child trauma increased the risk of cannabis use and the subsequent development of psychosis. Individuals who have experienced trauma are more likely to display risky and challenging behaviours (Grattan et al., 2019), such as self-harm (de Kloet et al., 2011), aggression (Ford et al., 2012), substance use (Ford & Fournier, 2007), and homelessness (Grubaugh et al., 2011).

The type of trauma exposure appears to influence the type and content of psychosis presentations (Grattan et al., 2019; Hardy et al., 2016; Neill & Read, 2022). A link between childhood sexual abuse and auditory hallucinations has been found. A study of 17,337 people found that self-reported adverse childhood experiences doubled the risk of hallucinations (Whitfield et al., 2005) and childhood emotional abuse has been linked to delusions (Hardy et al., 2016). Delusions and hallucinations have been found to be related to negative evaluations of the self and others resulting from traumatic experiences (Kuipers et al., 2006).

Stressful life events which would not meet Criterion A for PTSD, are also a risk factor for developing psychosis (Collip et al., 2010), with workplace stress being found to increase the risk of developing psychosis (Amin, 2023), and adulthood bullying has been linked to positive symptoms (O'Moore et al., 1998).

1.2 Trauma, Psychosis and Clinical Practice

Although populations experiencing psychosis have been found to have higher rates of childhood victimisation and PTSD than the general population (Conus et al., 2007; Kessler et al., 2005; Kraan et al., 2015; Steel et al., 2017), a study by Neill and Read (2022) investigating the documentation of trauma in community mental health services in England found that 87% of assessments in clinical records contained no documentation of trauma experienced by patients being treated for psychosis. The disparity between the research evidence for the relationship between trauma and psychosis and clinical practice emphasised that a trauma-focused approach had not become routine clinical practice. Staff may not be inquiring about trauma, patients may not be disclosing trauma exposures, or the sequalae of potentially traumatic events gleaned in narrative histories may not be the subject of more detailed inquiry.

A further consideration is that in recent years, many people may have had an increased risk of trauma-exposure due to their experiences during the COVID-19 pandemic (Kaubisch et al., 2022; Delz et al., 2023). Due to the recency of these events, it is unclear whether the COVID-19 pandemic may have impacted on psychosis presentations in the community and the detection of this putative pathway may be hampered by limited systematic enquiry of trauma symptomatology in clinical histories.

1.3 Current Study

The current study examined a 6-year dataset of intake assessments in an early intervention in psychosis service to identify reported trauma-exposure, characterise the reported traumas, and examine clinical correlates. The study hypothesised that there would be a low rate of trauma recording, in line with the findings of Neill and Read (2022).

Material and Methods

2.1 Study Design

This study was designed as a retrospective chart review of a complete six-year cohort of FEP patients referred to an urban catchment area (adult population 150,000 approximately) within an early intervention psychosis service, DETECT. This a partial replication of Conus et al.'s (2010) retrospective analysis of trauma-exposure in an FEP cohort attending EPPIC services in Melbourne, Australia. In the current study, every adult in contact with secondary mental health services within the geographically defined catchment area with a possible FEP is referred for assessment, diagnosis, and adjunctive interventions by the DETECT service. The thorough intake assessment includes an extensive history taking, SCID Interview, detailed symptom measures, and collateral interview.

2.2 Participants

All individuals who presented to the early intervention service with a FEP from 2017 to 2022 were included in the study. The sample size was n=133, with an a priori power analysis indicating that appropriate statistical power is n=107 (G*Power; Faul et al. 2009).

2.3 Materials

The Trauma Assessment and Life Experiences Checklist (TALE; Carr et al., 2018) defined exposure to a traumatic event. The TALE consists of 20 items relating to possible traumatic events an individual may have experienced. The TALE Interview was found to have satisfactory test-retest reliability convergent and construct validity (Carr et al., 2018). This was a novel use of Part A TALE of the Assessment in a retrospective chart review methodology. Due to the ubiquity of experiences of psychotic symptoms and hospitalisation within the sample and without the opportunity to explore individual responses to these experiences through an interview, an alternative, the TALE 14 is reported here; these are the first 14 items

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of the TALE which indicate trauma-exposure prior to the experience of psychosis. Exposure to trauma was dummy-coded into binary variables. The age at which the trauma occurred was recorded.

Work-Related Stress (WRS) and Interpersonal Stressors were included as dependent dummy-coded binary variables. WRS was defined as *"the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities, and which challenge their ability to cope "* (Leka et al., 2003, p. 3). Interpersonal Stressors were defined as *"stressful episodes between two or more people that involve quarrels, arguments, negative attitudes or behaviour, an uncomfortable atmosphere during a conversation or activity, and concern about hurting others' feelings "* (Kato, 2014, p.100).

Demographic variables collected were the age, sex, duration of untreated psychosis in months (DUP), service disengagement, and substance use were also collected. Service disengagement and substance use were binary-coded. Sex was recorded as male or female in the case files, so no other options for sex are included in the recorded data.

The scales for the assessment of positive symptoms (SAPS) (Andreasen, 1984a), and the scales for the assessment of negative symptoms (SANS) (Andreasen, 1984b) were used to assess positive and negative symptom severity. The Calgary Depression Scale for Schizophrenia (CDSS) (Addington et al., 1990) was used to assess depressive symptoms in psychosis. The Covid Traumatic Stress Symptoms scale from the Covid Stress Scales (Taylor et al., 2020) was used to identify retrospectively Covid-19-related trauma (CRT). The internal consistency, convergent and discriminant validity of the traumatic stress symptoms scale was satisfactory (Cronbach's Alpha = 0.93) (Taylor et al., 2020).

2.4 Procedure

The current study was designed as a retrospective chart review. The primary researcher reviewed each clinician-completed FEP assessment and entered the relevant data into the data-collection proforma.

2.5 Data Analysis

Data was analysed using IBM's SPSS 27 software. Binary variables were dummy-coded. TALE items were added to create a total score with possible scores ranging from 0 to 14 (TALE 14).

2.5 Ethics

The research ethics committees at University College Dublin and Saint John of God Community Services CLG approved this study. The study was conducted in line with the Declaration of Helsinki – Ethical Principles for Medical Research Involving Human Subjects (WMA, 2022).

Results

3.1 Missing Data Management

The data was screened for missing data. Five variables had missing data: DUP (14.3%), SAPS scores (3%), SANS scores (3%), CDSS scores (5.3%), and substance use (11.28%). This was managed through pairwise deletion (Peugh & Enders, 2004). Little's MCAR test (X^2 = 17.15, p = .248) was used to confirm data was missing completely at random in line with the assumptions of pairwise exclusion

3.2 Descriptive Statistics

The median age of the sample was 32 years. Fifty-nine per cent of the sample was male. Only 1.5% of the sample disengaged prior to assessment.

The data was assessed for normality. Due to a violation of the assumptions of normality, CRT, DUP, SANS and CDSS scores were $\log_{10}$ transformed. Following retesting, the transformed variables were normally distributed and met criteria for parametric statistics. The CRT did not meet assumptions of normality, even following transformation and was therefore recoded into a binary dummy variable. These transformed variables were used in all parametric testing. Age was recoded into six age bands as follows: 18-28, 29-38, 39-48, 49-58, 59-68, 69-78.

Descriptive statistics are reported in Table 1. A breakdown of the TALE by presence, median age of exposure, and child versus adult exposure is reported in Table 2.

A series of independent samples t-tests and chi square tests were conducted to investigate sex differences. A small significant difference in SAPS scores between males > females was found (Cohen's d = .38). A moderate significant difference in CDSS scores between males > females found (Cohen's d = .5). Males had a small increased likelihood of substance use compared to females (Phi = -.21).

Please Insert Table 1 Here

3.3 Exposure to Trauma

The Tale 14 rate of trauma exposure was 73.7%, with a median of 2 incidents. Childhood exposure to trauma was reported by 47.4% of participants, and adulthood exposure by 25.6%. Rates of CRT were low, with only 6% reporting CRT, with a mean of .17. Interpersonal difficulties were reported by 60.9% of participants and 23.3% of participants reported experiencing work stress.

Please Insert Table 2 Here

3.4 Association between Variables

Bivariate correlations were carried out to assess the associations between the variables (see Table 3). SAPS and SANS scores, and DUP length and SANS scores were positively, weakly associated, suggesting higher scores on one measure is associated with higher scores on the other measure.

Please insert Table 3 Here

3.5 Trauma Exposure as Symptom Predictor

A hierarchical multiple regression investigated the ability of interpersonal difficulties, work stress, and TALE 14 scores to predict SAPS scores, when controlling for sex (see Table 4). Interpersonal difficulties were found to have a significant, independent association with SAPS scores in Model 3 of the Regression.

A hierarchical multiple regression investigated the ability of interpersonal difficulties, work stress, and TALE-14 scores to predict SANS scores, when controlling for substance use (see Table 4). Work stress was found to be significantly and independently associated with SANS scores.

A linear multiple regression was carried out to investigate the ability of interpersonal difficulties, work stress, and TALE scores to predict CDSS scores (see Table 4). No statistically significant relationships were found.

A hierarchical multiple regression investigated the ability of interpersonal difficulties, work stress, and TALE scores to predict DUP lengths (see Table 4). The model was statistically significant (F (1, 112) = 7.01, p = .009), with work stress explaining 5.9% of the variance in DUP lengths. Work stress was significantly associated with DUP length (β = -.24, p = .009).

Please insert Table 4 Here

A binary variable was created which recorded whether TALE 14 trauma-exposure had occurring in childhood or adulthood. It did not find any significant association with the dependent variables.

Discussion

4.1 Summary

The current study examined a 6-year dataset of clinical histories taken as part of intake assessments in an early intervention in psychosis service to identify reported trauma-exposure, characterise the reported traumas, and examine clinical correlates. The study hypothesised that there would be a low rate of trauma recording, in line with the findings of Neill and Read (2022).

In contrast to the hypothesis, the current study found a high rate of recorded trauma within case histories. This was most frequently a "*permanent/ significant separation from someone close* " or a "*sudden change in*

circumstances ". This most commonly occurred in childhood. The regression analyses found no significant relationship between reported trauma-exposure and psychotic symptoms. However, a significant relationship was found between stressful life events (interpersonal stressors) and SAPS scores, and stressful life events (work-related stress) and SANS scores.

4.2 Recorded Rates of Trauma

Contrary to the hypothesis of this study, the results found a high rate of trauma recorded in the assessments. The results indicated that the majority of participants had some exposure to traumatic events, which was recorded by clinicians. This result contrasted with the findings by Neill and Read (2022), which found a very low rate of documented trauma exposure. This finding indicated that clinicians working within this service acted in line with the NICE (2014) recommendations for assessing FEP patients for trauma-exposure. This finding also aligns with other studies indicating a high rate of trauma-exposure in psychosis populations (Conus et al., 2010 (83%); DeTore et al., 2021 (80%); Neria et al., 2002 (68.5%). It was noticeable that this data was included as part of detailed clinical assessment, but was not systematically recorded or summarised, nor did it lead to further diagnostic assessment of PTSD or C-PTSD. Detailed clinical assessments, particularly within specialist services where there is a prominent focus on developmental and early life risk factors, may glean information about trauma exposure both deliberately and incidentally. The context of an initial assessment with an individual with a FEP means that by definition the trauma exposure will not represent the primary reason for help-seeking. The absence of a systematic, trauma-informed assessment protocol increases the risk that an event may be recorded but its relevance and sequalae missed. Longitudinally, the benefits of the trauma-informed history taking may be lost as the patient progresses through their treatment, if the trauma component of their presentation is not systematically incorporated into the treatment plan. This may be an intermediate link to appropriately deploying standardised assessments for PTSD or C-PTSD.

Forty-seven percent of the participants reported childhood trauma-exposure, indicating the potential importance of adverse early experiences in the development of psychosis. Although the variables of interest are not identical, this finding is in line with DeTore et al.'s (2021) prospective study and Conus et al. (2010) retrospective study of PTSD in FEP populations which indicated that a significant amount of the trauma exposure in FEP cohorts occurs before the age of 18. For instance, in DeTore et al., the average age for all trauma exposures was 18 or under. The current literature suggests that individuals experiencing psychosis may benefit from trauma therapies, such as TF-CBT or EMDR (van den Berg et al., 2015), where difficulties of PTSD or C-PTSD are identified.

In the current study, and similarly to DeTore et al. (2021) and Conus et al. (2010), attachment-oriented items were prominent (i.e., Item 2: Loss/ permanent separation from someone close to the patient; Item 3: a period of separation from someone close to the patient). The importance of attachment-oriented items aligns with a range of recent findings on the role of attachment difficulties as a mediator in the development of psychosis (e.g., Degnan et al., 2022; Grady et al., 2024), as well as the development of novel psychological interventions targeting attachment difficulties in psychosis (Airey et al., 2023).

Notably, later life experiences such as interpersonal stressors and work-related stress were related to psychotic symptoms and were commonly reported in participant assessments. The significant relationship between work-related stress and SANS scores supported research implicating stressful life events and work-related stress specifically in the development of psychosis (Amin, 2023; Collip et al., 2010).

The significant relationship between interpersonal stressors and SAPS scores is consistent with research by Bentall and colleagues (2014). It also supports the previously identified link between adulthood bullying and positive symptoms (O'Moore et al., 1998).

4.3 Trauma and Symptom Severity

The absence of a significant relationship between the retrospective assessment of trauma-exposure and symptom severity contrasts with the previous literature (Carr et al., 2018; Larkin & Read, 2008; Matheson et al.,

2018; Shelvin et al., 2007). Childhood exposure to trauma also had no relationship with symptom severity, again contrasting with previous literature (Bentall et al., 2014; Humphrey et al., 2022). This finding may indicate that it is not the presence of trauma-exposure that impacts the symptomology of psychosis but possibly the appraisal and the related distress. For instance, recent research has indicated the role of complex PTSD as a potential mediator between early trauma and the development of psychosis (Mason et al., 2023). Another possible explanation for this finding is that other factors mediate the influence trauma exposure has on symptom severity. For example, attachment and cannabis-use have been shown to be mediating factors in the relationship between childhood trauma and psychosis (Humphrey et al., 2022; Kiburi et al., 2021). Finally, methodological issues with retrospective assessment of trauma-exposure based on case-histories may also have impacted the findings. This methodology does not have the advantage of being able to explore trauma-exposure experiences with participants to understand the nuances of the experiences, the impact or trauma-related symptomatology.

4.4 Strengths and Limitations

The study's strengths include the assessment of a complete FEP cohort using validated diagnostic and clinical instruments; the use of a standardised assessment measure ensured a reliable definition of trauma-exposure reporting. Furthermore, the sample size was appropriately powered for the statistics used. This study design is a partial replication of the study design used by Conus et al. (2010) in a similar FEP cohort in Melbourne Australia.

Limitations include that the TALE measure was originally designed as a questionnaire or interview tool. This is a novel use of the TALE to retrospectively categorise and classify the information recorded in clinical assessments. Previous studies using this methodology pre-date the development of the TALE and used other trauma-exposure frameworks. As a result, the researchers may have incorrectly attributed difficult life events as traumatic, which would account for the high prevalence of trauma-exposure. Nonetheless, the rates reported in this study are in line with other trauma exposure assessed in other FEP cohorts (Conus et al., 2010; DeTore et al., 2021; Neria et al., 2002). All assessments were performed by senior clinical staff. However, interviewing participants would allow for a more detailed assessment and classification of trauma. The retrospective use of the TALE should be validated in a further study. This study did not measure trauma severity or PTSD symptoms, which may have a stronger link to symptomology (Conus et al., 2010; DeTore et al., 2021). It is reasonable to assume that the more severe trauma exposure, the more severe their psychosis symptoms may be. In a prospective study using the TALE, recurrent trauma-exposure but not trauma-exposure alone was a significant predictor of symptoms severity (Grady et al., under review).

4.5 Conclusion

The high rates of recorded trauma exposure in the cohort highlighted the ability of services to identify trauma-exposure through a thorough clinical assessment. This study did not find a significant relationship between trauma-exposure and symptom severity, which may reflect that the relationship is complex and likely mediated through factors not assessed in this study. Trauma-exposure should be considered in structured assessments and treatment planning, including pharmacological, social, and psychological interventions, to deliver comprehensive trauma informed care.

Data Availability Statement: The data that support the findings of this study are not openly available due to reasons of sensitivity Based on the research ethics approval for this current retrospective chart review, which also included a data protection impact assessment we do not have permission to share the data publicly. Data are located in controlled access data storage at DETECT, Early Intervention in Psychosis Services, under the auspices of St John of God Community Services.

Declaration of Interest Statement: There are no known conflicts of interest.

of a Master's programme.

Ethics approval statement: The research ethics committees at University College Dublin and Saint John of God Community Services CLG approved this study. The study was conducted in line with the Declaration of Helsinki – Ethical Principles for Medical Research Involving Human Subjects (WMA, 2022).

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Table 1

Descriptive Statistics

Variable	Mean (95% Confidence Intervals)	Std. Error Mean	Median	SD	Range
Age	34.25 (32.22 − 36.27)	1.02	32	11.81	48
DUP*	13.03 (8.39 − 17.67)	2.34	1.38	25.02	119.97
SAPS	8.01 (7.23 − 8.78)	.39	8	4.45	21
SANS*	4.79 (3.9 − 5.68)	.45	4	5.12	22
CDSS*	3.94 (2.93 − 4.95)	.51	1	5.72	25
CRT*	.17 (.05 − .28)	.06	0	.69	4
TALE 14	1.98 (1.67 − 2.3)	.16	2	1.82	8
				Frequency	Percentage
Sex					
Male				79	59.4
Female				54	40.6
Service disengagement					
No				131	98.5
Yes				2	1.5
Substance use					

Variable	Mean (95% Confidence Intervals)	Std. Error Mean	Median	SD	Range
Absent				37	27.8
Present				81	60.9
Interpersonal difficulties					
Absent				52	39.1
Present				81	60.9
Work Stress					
Absent				102	76.7
Present				31	23.3
Trauma-Exposure TALE 14					
Childhood				63	47.4
Adulthood				34	25.6

Note. * = Raw data was used to generate descriptive statistics instead of the log transformed or binary versions of the variables.

Table 2

A breakdown of TALE items by presence, mean age, and child/adult exposure

TALE item	Absent	Present	Percentage present
1. Exposure to war	131	2	1.5
2. Loss/permanent separation to someone close to Px	72	61	45.9
3. Period of separation to someone close to Px	83	50	37.6
4.Sudden/unexpected change in circumstances	93	40	30.1
5. Bullying/harassment	110	23	17.3
6. Discrimination	127	6	4.5
7. Someone close to Px humiliating Px	121	12	9
8. Someone close to Px being violent/aggressive	118	15	11.3
9. Witnessing physical violent/verbal aggression in home	120	13	9.8
10. Someone unknown being violent/aggressive	125	8	6
11. Feeling unsafe, unloved or unimportant during childhood	114	19	14.3
12. Going hungry, thirsty, not having clean clothes, safe place during childhood	128	5	3.8
13. Unwanted sexual contact before 16th birthday	124	9	6.8
14. Unwanted sexual contact after 16th birthday	132	1	.8

Table 3

Correlation Table

Variable	DUP	SAPS	SANS	CDSS	
DUP	-				
SAPS	.14	-			
SANS	.36*	.32*	-		
CDSS	.12	-.17	.22*	-	
TALE 14	.01	.13	.16	-.04	-

Note. df=114-123; * = p < .05

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Table 4

Hierarchical regressions investigating predictive ability of TALE scale

Model	Independent variable	F change	df	P	Adjusted R^2	β
Dependent: SAPS						
F= 2.122, df=5, 123, p<.067						
1	Sex	4.62	1, 127	.034*	0.27	-.166
2	Interpersonal difficulties	0.013	2, 126	.911	.020	-0.48
3	Work stress	5.37	3, 125	.022	.053	-.179
4	CRT	.212	4, 124	.646*	.047	-.045
5	TALE 14	.39	5, 123	.533	.042	.061
Dependent: SANS						
*F=3.126, df=5, 108, p=.011**						
1	Substance use	4.27	1, 112	.041*	.028	.233
2	Work stress	6.28	1, 111	.014*	.072	-.285
3	Interpersonal difficulties	.939	1, 110	.335	.071	.021
4	CRT	.84	1, 109	.362	.070	-.07
5	TALE 14	2.91	1, 108	.091	.086	.17
Dependent: CDSS						
F=1.194, df=4, 125, p=.317						
1	Work Stress	1.663	1,124	.2	.005	-.058
2	Interpersonal Difficulties	.636	1,123	.427	.002	-.098
3	CRT	2.187	1, 122	.142	.012	-.141
4	TALE 14	.300	1, 121	.585	.006	.056
Dependent: DUP						
F=.398, df=3, 110, p=.755						
1	Age	.181	1,112	.672	-.007	.038
2	CRT	.006	1, 111	.938	-.016	.003
3	TALE 14	1.008	1, 110	.318	-.016	-.096

Note: * = p < .05,

Supplemental. Table 1

Testing sex, age substance differences on clinical variables

Variable	T-value	df	Variable	F-value	df
Sex			*Age*		
TALE	.06	131	TALE	1.07	4
TALE 14	-.66	131	TALE 14	1.26	4
SAPS	2.1*	127	SAPS	.99	4
SANS	.15	92	SANS	2.16	4
CDSS	-2.13	79	CDSS	.73	4
DUP	1.84	112	DUP	.48	4
Substance use					
TALE	-.49	116			
TALE 14	-.23	116			
SAPS	-.49	112			
SANS	2.21*	85			
CDSS	.02	31.24			

Variable	T-value	df	Variable	F-value	df
DUP	1.12	99			
Chi square test of independence	Pearson chi-square	df			
Substance use and interpersonal difficulties	.13	1			
Substance use and work stress	2.68	1			
Substance use and child/adult TALE exposure	.02	1			
Substance use and child/adult TALE 14 exposure	.86	1			
Substance use and CRT	1.39	1			
Sex and interpersonal difficulties	.1	1			
Sex and work stress	2.03	1			
Sex and child/adult TALE exposure	1.38	1			
Sex and child/adult TALE 14 exposure	3.05	1			
Sex and CRT	7.76**	1			
Age and interpersonal difficulties	5.53	4			
Age and work stress	14.57**	4			
Age and CRT	9.64*	4			

Note. *** = p < .001, ** = p < .01, * = p < .05