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Letter to the Editor

Prevalence and severity of posttraumatic stress symptoms in psychosis: Associations with affective and patient-centered variables in those referred for psychological services

Dear Editors,

Consistent evidence suggests that individuals with psychosis experience high rates of trauma exposure (e.g., Lommen and Restifo, 2009), the severity of which proportionally contributes to the intensity of psychotic symptoms (e.g., Spauwen et al., 2006). Additionally, the spontaneous disclosure of abuse history is unlikely (Cunningham et al., 2016), which is problematic given that posttraumatic stress symptoms (PTSS) often go unnoticed due to psychotic symptom overlap, yet when asked, most individuals desire treatment even for subthreshold PTSS (Dallel et al., 2018).

Given the tendency to overlook PTSS, if associations are found between PTSS severity, clinical symptomology, and patient-centered variables, it will further justify the need to enhance PTSS screening during routine care to encourage appropriate referral to specialized services. This study aims to determine the following in a real-world clinical sample referred for psychological services: i) the prevalence and severity of PTSS, ii) its associations with psychotic and affective symptoms (stress, anxiety, depression), as well as patient-centered variables (quality of life (QoL), wellbeing), and iii) to refine trauma screening recommendations in this population.

Written informed consent was provided by all participants and respected the Douglas Mental Health University Institute Research Ethics Board policies. One hundred and two individuals with a psychotic disorder completed an intake evaluation following referral for psychological services at a clinic specializing in psychological interventions for psychosis. Version II of the PTSD Checklist for DSM-5 (PCL-5; Weathers et al., 2013) assessed for valid DSM-5 PTSD criterion A traumatic events and PTSS over the last month. Data was also included if the traumatic event was not disclosed or if psychosis was identified as the traumatic event. Other measures included the Depression Anxiety Stress Scale-21 (DASS-21; Antony et al., 1998), the Warwick-Edinburgh Mental Well-being Scale (WEMWBS; Tennant et al., 2007), the MECCA Quality of Life Scale (Priebe et al., 2002), and the Psychotic Symptoms Rating Scales (PSYRATS; Haddock et al., 1999). Prevalence of trauma exposure was explored in conjunction with PTSS severity and referral-type. Posttraumatic stress symptoms were dichotomized into low, moderate, and severe categories. Chi-square tests of independence examined the relation between demographic variables and PTSS categories. The MECCA and the DASS-21 subscales were entered into a multivariate analysis of variance (MANOVA) with dichotomized PTSS severity categories. Due to smaller sample sizes, PSYRATS and WEMWBS variables were analyzed independently by means of analysis of covariance (ANOVA). Post hoc analyses explored significant effects.

Table 1 reports means, standard deviations, and percentages for demographic information and all variables of interest. Of the 102 participants, 21.6% reported no prior trauma and 14.7% reported invalid events not meeting the DSM-5 PTSD criterion A. Data for the remaining 65 participants were included in subsequent analyses. 6.2% of individuals were referred for trauma-related objectives. 81.5% reported criterion A events, 10.8% reported psychosis-related events, and 7.7% did not disclose an event. PCL-5 scores were dichotomized using the 33rd and 66th percentiles, translating into low (≤ 24), moderate (25–47), and severe (≥48) categories. Subjective depression, anxiety, stress, and QoL were entered into a one-way MANOVA with PTSS severity categories. Delusion severity and wellbeing were entered into one-way ANOVAs with PTSS severity categories. There were not enough participants with auditory hallucinations to reliably include in the analysis. Table 1 reports Chi-Square, MANOVA, and ANOVA results. There were no significant differences between categories on any demographic variables. Significant main effects surviving Bonferroni correction emerged for all variables except delusion severity and wellbeing. Depression, anxiety, and stress were all significantly higher in the severe compared to low PTSS categories. Quality of life was significantly lower in the severe versus low PTSS category.

Twenty-two percent of participants reported no prior trauma, which falls within the 2 to 31.5% range reported in the literature (e.g., Resnick et al., 2003). Given that 15% reported invalid events, we recommend that individuals with psychosis complete the PCL-5 with the aid of a healthcare practitioner. This will better ensure that the DSM-5 PTSD criterion A is met. Of the remaining 64% of participants whose data was included, only 6.4% had been referred with trauma-related objectives. This is striking given that two thirds of these individuals presented with moderate-to-severe PTSS, clearly suggesting inadequate referral rates to trauma-related services when they are indeed warranted.

Individuals in the severe PTSS category presented with significantly higher levels of self-reported depression, anxiety, and stress, and lower QoL. Results also indicated a trend increase in delusion severity. Overall, results suggest that assessing PTSS severity ranges in lieu of clinical cut-offs arguably captures a broader range of people experiencing distressing symptoms who likely require specialized intervention.

This study was limited to a lack of statistical power to assess associations between PTSS severity and auditory hallucinations. Nonetheless, routine PTSS assessment is warranted, especially considering the discrepancy between those presenting with distressing PTSS and referral-rate, and their association with affective and patient-centered variables.

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Table 1
Demographic characteristics, variables of interest, Chi-Square, MANOVA, and ANOVA results.

	Low PTSS (*n*=20)	Moderate PTSS (*n*=22)	Severe PTSS (*n*=23)	No trauma (n=22)	Non-valid event (*n*=15)
Measure	M(SD)	M(SD)	M(SD)	M(SD)	M(SD)
Age	39.45(12.04)	44.47(11.68)	35.78(8.86)	34.6(10.8)	41.93(12.62)
Duration of Illness[a] (DOI)	12.95(9.99)	20.20(17.38)	12.76(11.30)	16.5(14.6)	19.27(16.63)
Education[b]	12.70(2.90)	11.82(2.20)	11.61(2.08)	11.8(2.4)	13.73(3.67)
PSYRATS-Hallucinations[c]	24.50(0.71)	26.43(6.21)	27.00(10.17)	25(9.9)	32.40(4.93)
PSYRATS - Delusions[d]	12.36(3.14)	15.31(4.15)	15.58(3.45)	14.9(4.3)	13.20(5.14)
Depression[e]	7.20(4.97)	10.05(5.42)	12.61(5.73)	9.1(5.8)	11.07(6.56)
Anxiety[e]	5.85(4.46)	9.27(6.09)	12.30(5.07)	5.8(5.5)	9.40(9.72)
Stress[e]	7.05(4.40)	9.55(5.94)	13.13(5.18)	6.6(5.5)	11.33(8.21)
Quality of life[f] (QoL)	58.55(13.51)	56.38(8.53)	49.95(10.99)	55.3(13.1)	51.08(10.92)
Wellbeing[g]	43.29(9.77)	41.71(11.58)	37.90(8.37)	37.6(11.6)	41.75(12.64)
	%	%	%	%	%
Sex: men(women)	65(35)	54.5(45.5)	52.2(47.8)	68.2(31.8)	53.3(46.7)
Ethnicity[h]: Caucasian(visible minority)	80(20)	77.3(22.7)	69.6(30.4)	68.2(31.8)	73.3(26.7)
Diagnosis: non-affective(affective)	80(20)	81.8(18.2)	65.2(34.8)	72.7(27.3)	60(40)
Hospitalized[i]: yes(no)	10(90)	4.5(90.9)	4.3(91.3)	13.6(77.3)	6.7(93.3)

Chi-square[j] (X^2)	*df*	N	Chi-square value	*p* value
Age	160	102	165.310	.370
DOI	180	95	170.957	.673
Education	52	102	60.968	.185
Sex	4	102	1.883	.757
Ethnicity	32	94	27.749	.682
Diagnosis	4	102	3.314	.507
Hospitalization	4	98	2.090	.719

MANOVA[k]	*df*	Error *df*	Pillai	*f* value	*p* value
	8	114	.322	2.735	.009

Between-subjects effects	*df*	*f* value	*p* value
Depression	2	4.640	.013
Anxiety	2	6.963	.002
Stress	2	6.674	.002
Quality of life	2	3.322	.043

Multiple comparisons	Low PTSS M(SD) (n=20)	Moderate PTSS M(SD) (n=21)	Severe PTSS M(SD) (n=21)	*p* value
Depression	**7.20**(**4.97**)	10.33(5.38)	**12.33**(**5.89**)	.010
Anxiety	**5.85**(**4.46**)	9.43(6.19)	**12.05**(**5.15**)	.001
Stress	**7.05**(**4.40**)	9.62(6.08)	**13.10**(**5.32**)	.002
QoL	**58.55**(**13.51**)	56.38(8.53)	**49.95**(**10.99**)	.042

ANOVA[l]	*df*	*f* value	*p* value
Wellbeing	2	1.494	.233
Delusion Severity	2	3.058	.058

Note. *N*=102; PTSS = posttraumatic stress symptoms per the PTSD Checklist for DSM-5 (PCL-5); Low PTSS = PCL-5 total score of ≤ 24; Moderate PTSS = PCL-5 total score between 25 and 47; Severe PTSS = PCL-5 total score ≥48; a = duration of illness in years; b = education in years; c and d = auditory hallucination and delusion severity per total scores on the Psychotic Symptoms Rating Scales (PSYRATS), modules are administered only if the symptom is present; c = Low PTSS, n=2, Moderate PTSS, *n*=7, Severe PTSS, *n*=9, No Trauma, *n*=6, Non-Valid Event, *n*=5, auditory hallucinations were not included in analyses as it was deemed that sample sizes were too small to reflect valid results; d = Low PTSS, *n*=11, Moderate PTSS, *n*=13, Severe PTSS, *n*=19, No Trauma, *n*=12, Non-Valid Event, *n*=10; e = depression, anxiety, stress per total subscale scores on the Depression Anxiety Stress Scale-21; f = quality of life per total scores on the MECCA Quality of Life Scale; g = wellbeing per total scores on the Warwick-Edinburgh Mental Well-being Scale, Low PTSS, *n*=17, Moderate PTSS, *n*=21, Severe PTSS, n=21; h = Moderate PTSS, *n*=21, Severe PTSS, n=21, No Trauma, *n*=18, Non-Valid Event, *n*=14; i = hospitalization status at the time of assessment, Moderate PTSS, n=21, Severe PTSS, *n*=22; No Trauma, *n*=20; j = chi-square tests of independence were performed to examine the relation between demographic variables and all PTSS groups, including the no trauma and non-valid event groups, no significant differences emerged; k = MANOVA = multivariate analysis of variance, depression, anxiety, stress, and quality of life were entered into a one-way MANOVA, significant multiple comparisons surviving Bonferroni correction are denoted in bold; l = ANOVA = analysis of variance, separate one-way ANOVAs were run for wellbeing and delusion severity due to smaller sample sizes.

CRediT authorship contribution statement

DP conducted the literature review, statistical analyses, and wrote the manuscript. ML created the study protocol. ML and GEB provided feedback on the manuscript.

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Declaration of competing interest

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References

Antony, M.M., Bieling, P.J., Cox, B.J., Enns, M.W., Swinson, R.P., 1998. Psychometric properties of the 42-item and 21-item versions of the depression anxiety stress scales in clinical groups and a community sample. Psychol. Assess. 10 (2), 176.

Cunningham, T., Shannon, C., Crothers, I., Hoy, K., Fitzsimmons, C., McCann, R., O'Hare, J., Mulholland, C., 2016. Enquiring about traumatic experiences in psychosis: a comparison of case notes and self-report questionnaires. Psychosis 8 (4), 301–310.

Dallel, S., Cancel, A., Fakra, E., 2018. Prevalence of Posttraumatic Stress Disorder in Schizophrenia Spectrum Disorders: A Systematic Review.

Haddock, G., McCarron, J., Tarrier, N., Faragher, E., 1999. Scales to measure dimensions of hallucinations and delusions: the psychotic symptom rating scales (PSYRATS). Psychol. Med. 29 (4), 879–889.

Lommen, M.J., Restifo, K., 2009. Trauma and posttraumatic stress disorder (PTSD) in patients with schizophrenia or schizoaffective disorder. Community Ment. Health J. 45 (6), 485.

Priebe, S., McCabe, R., Bullenkamp, J., Hansson, L., Rössler, W., Torres-Gonzales, F., Wiersma, D., 2002. The impact of routine outcome measurement on treatment processes in community mental health care: approach and methods of the MECCA study. Epidemiologia e Psichiatria Sociale 11 (03), 198–205.

Resnick, S.G., Bond, G.R., Mueser, K.T., 2003. Trauma and posttraumatic stress disorder in people with schizophrenia. J. Abnorm. Psychol. 112 (3), 415.

Spauwen, J., Krabbendam, L., Lieb, R., Wittchen, H.-U., Van Os, J., 2006. Impact of psychological trauma on the development of psychotic symptoms: relationship with psychosis proneness. Br. J. Psychiatry 188 (6), 527–533.

Tennant, R., Hiller, L., Fishwick, R., Platt, S., Joseph, S., Weich, S., Parkinson, J., Secker, J., Stewart-Brown, S., 2007. The Warwick-Edinburgh mental well-being scale (WEMWBS): development and UK validation. Health Qual. Life Outcomes 5 (1), 63.

Weathers, F.W., Litz, B.T., Keane, T.M., Palmieri, P.A., Marx, B.P., Schnurr, P.P., 2013. The ptsd Checklist for dsm-5 (pcl-5) (Scale available from the National Center for PTSD at www. ptsd. va. gov).

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