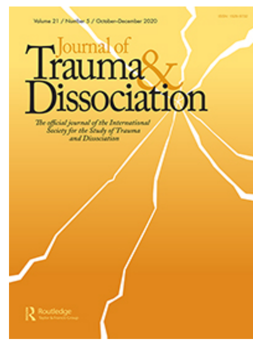

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A Preliminary Investigation of Depression in People with Pathological Dissociation

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ABSTRACT

Depression is a common and challenging comorbid condition in people with pathological dissociation. To our knowledge, this preliminary study is the first study that has looked at the clinical correlates of depression in a sample of people with pathological dissociation (N = 72). We found that severe depression is common in this sample and that depression is associated with dissociative symptoms, post-traumatic stress disorder (PTSD) symptoms, borderline personality disorder symptoms and clinical recovery; the level of depression is also associated with both childhood and adulthood betrayal trauma but not with childhood and adulthood trauma with less betrayal. PTSD symptoms are the most significant correlates of the level of depression in this sample. Some clinical implications are discussed. Our initial findings imply that it may be important to manage depression by preventing adulthood betrayal trauma and stabilizing PTSD and dissociative symptoms when working with service users with pathological dissociation. Further studies are needed.

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Depression; pathological dissociation; dissociative disorders; trauma; mental health

Dissociation refers to a failure in the process of integrating one or more aspects of biopsychosocial experiences (e.g., emotions, motor control, memories, identities) (American Psychiatric Association, 2013; Ross, 2007). Although some dissociative experiences are normal in our daily lives (e.g., daydreaming, trance-like states and forgetfulness), some dissociative experiences are regarded as pathological and can lead to significant distress and impairment. Examples of pathological dissociation include post-traumatic amnesia, flashbacks of traumatic experiences, hearing voices of dissociated self-states, depersonalization and dissociative fugue (Dell, 2009). Pathological dissociation is the core feature of dissociative disorders, but it also affects people with other mental health problems, such as post-traumatic stress disorder (PTSD), complex PTSD and borderline personality disorder (BPD) (Ross et al., 2014; Lanius et al., 2012; Mosquera et al., 2011; Stein et al., 2013;

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Van der Hart et al., 2005, 2006). Pathological dissociation is generally conceptualized as a transdiagnostic response to trauma and stress (Nijenhuis et al., 1998; Ross, 2007; Schimmenti & Caretti, 2014; Van der Hart et al., 2006). Although pathological dissociation can lead to considerable social and economic costs and individual suffering, the literature indicates that specific dissociation-focused interventions are effective and can reduce health care costs (Ross & Dua, 1993; Brand et al., 2009, 2016). Nevertheless, people with pathological dissociation, especially severe pathological dissociation, are an underserved group who receive insufficient attention in the mental health field (Coons, 1998; Fung & Lao, 2017). In particular, little is known about the clinical correlates of depression in people with pathological dissociation.

Depression is an important issue in people with pathological dissociation because depression is very common in this population and because depression is usually one of the most challenging comorbid conditions in the clinical management of pathological dissociation. The literature suggests that over 80% of people with severe pathological dissociation have a history of major depressive episode (Ross et al., 1990; Şar et al., 1996). Tutkun et al. (1998) also found that 82.4% of patients with dissociative disorders had past or current major depression. Severe depression is one of the major presenting problems that bring people with pathological dissociation to emergency services and inpatient treatments. Previous studies have indicated that depression is associated with high-risk behaviors (nonsuicidal self-injury and suicide) in patients with dissociative disorders (Webermann et al., 2016). These findings point out the importance of evaluating depression in people with pathological dissociation. A better understanding of depression and its clinical correlates in this population could have significant clinical and research implications. Although dissociation in people with depression has been investigated to a certain extent (e.g., it was found that patients with dissociative depression appear to have distinct clinical features, including more psychosocial-related symptoms) (e.g., Firoozabadi et al., 2019; Fung & Chan, 2019; Parlar et al., 2016; Şar, 2011, 2014; Şar et al., 2013) and depression is often measured to evaluate treatments for pathological dissociation (Brand et al., 2009), there is a research gap regarding the clinical correlates of depression in people with pathological dissociation. More needs to be done to understand depression in this specific population, including its frequency, risk factors and relationships with other clinically relevant variables (e.g., age, dissociative symptoms, recovery, number of psychiatric diagnoses, childhood and adulthood trauma). Against this background, this preliminary study examined depression and its clinical correlates in a sample of people with pathological dissociation. As the literature suggests that dissociation is more associated with betrayal trauma (i.e., a trauma perpetrated by someone who the victim trusts or relies on) than with non-betrayal trauma (Chavez, 2011) and that trauma caused by someone who is supposedly reliable during childhood is especially harmful (i.e., the problem of attachment

to the perpetrator) according to the trauma model (Ross, 2007), we included a trauma measure that can assess both types of trauma (in both childhood and adulthood). In addition to descriptive and exploratory analysis, we wanted to examine what symptom clusters that we measured in this sample could predict the level of depression in order to provide potential insights into the clinical management of depression in people with pathological dissociation. The analysis was conducted because it has been observed that depression in patients with pathological dissociation is sometimes the presenting problem resulting from internal and/or external stressors (e.g., internal conflicts, interpersonal-related symptoms) (Şar, 2016).

Methods

Participants

This study used data from an intervention study that evaluated the effectiveness of a web-based psychoeducation program for people with pathological dissociation (Fung, Chan & Ross, in press), which was approved by The Hong Kong Polytechnic University (PolyU) Human Subjects Ethics Sub-committee. In March 2019, people who were suspected or confirmed to have pathological dissociation were recruited through Facebook Groups and Fan Pages related to mental health. In order for potential participants to know what pathological dissociation is, the 23 phenomena of pathological dissociation recognized in Dell (2009) were listed as examples of pathological dissociation. Potential participants were told that they could freely access the psychoeducation and self-help resources in the web-based program. In the screening process, a total of 83 people provided informed consent and completed the online survey that included measures of trauma, pathological dissociation, depression, PTSD, BPD and clinical recovery. Only participants who scored 20 or above on the Dissociative Experiences Scale-Taxon (DES-T) were included for analysis in this study. Therefore, the sample consisted of 72 adults (5.6% were males, 91.7% were females, and 2.8% reported as "others") Their ages ranged from 19 to 70 (M = 40.11, SD = 10.36) and they were from diverse regions, such as the United States (45.8%), United Kingdom (12.5%), Canada (9.7%), Hong Kong (8.3%), Australia (4.2%) and Sweden (4.2%). The mean score of the DES-T was 50.9 (SD = 19.4), suggesting that this is a highly dissociative sample. Forty-four participants (61.1%) reported a clinical diagnosis of any dissociative disorder, 56.9% reported major depressive disorder (MDD), 70.8% reported PTSD, and 16.7% reported BPD.

Measures

Pathological dissociation

Pathological dissociation was assessed with the DES-T, which is an 8-item subscale of the original DES (Bernstein & Putnam, 1986; Waller et al., 1996; Waller & Ross, 1997). The DES-T can measure the level of psychoform dissociative symptoms, such as finding that other people, objects and the world are not real, being unable to recognize friends or family members, hearing voices inside, and feeling that one's body is not one's own. A cutoff score of 20 is recommended when the DES-T is used for screening purposes (Ross et al., 2002). Scores above 35 on the DES-T indicate strong evidence of pathological dissociation (Waller & Ross, 1997).

Dissociation-related features

Selected sections from the Self-Report Version of the Dissociative Disorders Interview Schedule (DDIS) were used to assess BPD symptoms and secondary features of dissociative identity disorder (DID). The DDIS is a reliable and valid structured interview for DSM-5 dissociative disorders (Ross et al., 1989) and it can also be used as a self-report measure (Ross & Browning, 2017; Fung, Choi et al., 2018; Fung, Ho et al., 2018). The DDIS can assess somatic symptom disorder, BPD, Schneiderian first-rank symptoms and childhood abuse in addition to the DSM-5 dissociative disorders. In this study, only sections for BPD, secondary features of DID and the dissociative disorders were used.

PTSD symptoms

The Post-traumatic Stress Disorder Checklist for DSM-5 (PCL-5) was used to assess PTSD symptoms. It is a 20-item self-report instrument designed for assessing DSM-5 PTSD and it has sound psychometric properties (Blevins et al., 2015). On the PCL-5, 31 to 33 are the recommended cutoff scores for screening for PTSD (Bovin et al., 2016).

Depression

Depression was assessed with the Patient Health Questionnaire-9 (PHQ-9), which is a 9-item measure of depression that can be used to make a tentative depression diagnosis as well as to evaluate the severity of depressive symptoms (Kroenke & Spitzer, 2002; Manea et al., 2012). According to Manea et al. (2012), scores of 8 to 11 are considered to be an acceptable PHQ-9 cutoff for screening for MDD.

Trauma

Trauma was assessed with the Brief Betrayal Trauma Survey (BBTS). The BBTS is a self-report measure of 12 different types of traumatic experiences (Goldberg & Freyd, 2006). In particular, it assesses childhood trauma with

more betrayal (items 3a, 5a, 6a, 8a and 10a), childhood trauma with less betrayal (items 1a, 2a, 4a, 7a and 9a), adulthood trauma with more betrayal (items 3b, 5b, 6b, 8b and 10b), and adulthood trauma with less betrayal (items 1b, 2b, 4b, 7b and 9b). Examples of trauma with more betrayal include "*you were deliberately attacked severely by someone with whom you were very close*" and "*you were emotionally or psychologically mistreated over a significant period of time by someone with whom you were very close (such as a parent or lover)*". Examples of trauma with less betrayal include "*been in a major automobile, boat, motorcycle, plane, train, or industrial accident that resulted in similar consequences*" and "*you were deliberately attacked severely by someone with whom you were not close*". Participants may answer "never", "one or two times" or "more than that" for each item. For analysis in this study, a participant was considered to have experienced a certain traumatic event if he or she endorsed "one or two times" or "more than that" for that item.

Clinical recovery

Clinical recovery was assessed with the Clinical Recovery ("Mastering my illness") subscale of the Recovery Assessment Scale – Domains and Stages (RAS-DS), which is a self-report measure of mental health recovery with sound psychometric properties (Hancock et al., 2015) (for the details, see https://ras-ds.net.au/). The Clinical Recovery subscale, which has 7 items, mainly evaluates one's sense of control over one's mental health problems.

Demographic information and psychiatric histories were also gathered in the online survey.

Data analysis

Statistical analysis was conducted using SPSS 22. We examined the frequency of depressive symptoms as measured with the PHQ-9. We also explored the relationships of depression with other variables in this sample. Regression analysis was used to understand the relationship of PHQ-9 total scores with other symptom clusters (i.e., DES-T scores, PCL-5 scores and number of BPD symptoms). We conducted an analysis to determine whether the relationship among variables were largely linear; a Q-Q plot and distribution of residuals determined that the residuals had a constant variance, were independent and were normally distributed. The Durbin-Watson statistic was close to 2 which further validated the assumption of independent residuals.

Results

First, we examined the frequency of depression in the sample. The mean PHQ-9 score was 18.2 (SD = 5.08). Most participants (75%) were within the range of "moderately severe" depression (PHQ-9 = 15 to 19) or "severe" depression (PHQ-9 = 20 to 27). Although this sample was different from those reported in other studies, we compared our results with prior studies in order to show the high frequency of depression in our sample. Initial one sample t tests showed that the mean PHQ-9 score in this sample was significantly higher than in some other samples of patients with depression, such as a sample of N = 677 patients with depression ($M_{PHQ\text{-}9}$ = 15.5, SD = 4.4) (t = 4.527, p <.001) (Campbell et al., 2007) and a sample of N = 1522 Veteran outpatients with nonpsychotic MDD ($M_{PHQ\text{-}9}$ = 16.2, SD = 5.2) (t = 3.357, p = .001) (Zisook et al., 2016). These findings on the PHQ-9 suggest that comorbid depression is very common in people with pathological dissociation and that such individuals could, as a group, be more depressed than people with depression but no pathological dissociation.

Second, we looked at the relationship between the level of depression and psychiatric histories. Pearson correlations showed that participants who reported a clinical diagnosis of MDD (n = 41) scored significant higher on the PHQ-9 than those who did not report MDD (n = 31) (M = 19.6, SD = 4.71 vs M = 16.4, SD = 5.02), t = 2.823, p = .006. Participants who reported a depersonalization/derealization disorder diagnosis (n = 14) also scored significantly higher on the PHQ-9 than those who did not (n = 58) (M = 20.6, SD = 5.17 vs M = 17.6, SD = 4.92), t = 2.043, p = .045. Additionally, participants who were currently receiving medications for mental health problems (n = 39) scored significantly higher on the PHQ-9 than those who were not (n = 33) (M = 19.6, SD = 5.15 vs M = 16.5, SD = 4.51), t = 2.664, p = .010. Participants who endorsed the item "*currently having recurrent suicidal ideation, suicidal attempts or homicidal plans (in the past two months)*" (n = 16) also scored significantly higher on the PHQ-9 than those who did not (n = 56) (M = 22.1, SD = 2.93 vs M = 17.1, SD = 5.04), t = 4.980, p < .001. Participants who were currently unemployed (n = 34) also scored significantly higher on the PHQ-9 than those who were currently employed (n = 38) (M = 20.2, SD = 4.03 vs M = 16.4, SD = 5.27), t = 3.441, p = .001.

Third, we examined the relationship between trauma and the level of depression. It was found that the PHQ-9 score was significantly correlated only with trauma with more betrayal; in particular, its relationship with adulthood betrayal trauma was stronger than with childhood betrayal trauma (see Table 1).

Table 1. Correlations between depression and other clinical variables in a sample of people with pathological dissociation (N = 72).

	1	2	3	4	5	6	7	8	9	10
1. PHQ-9 total score	1									
2. Childhood trauma with more betrayal	.275*	1								
3. Childhood trauma with less betrayal	0.128	.471**	1							
4. Adulthood trauma with more betrayal	.310**	.637**	.378**	1						
5. Adulthood trauma with less betrayal	0.052	.326**	.554**	.532**	1					
6. DES-T total score	.296*	.501**	.383**	.245*	0.115	1				
7. Secondary features of DID	0.188	.535**	.383**	.236*	0.104	.790**	1			
8. PCL-5 total score	.741**	.407**	.274*	.314**	0.054	.448**	.299*	1		
9. BPD symptoms	.424**	.297*	0.006	.323**	−0.044	.244*	0.164	.478**	1	
10. Clinical Recovery subscore of the RAS-DS	−.241*	0.111	0.161	−0.109	−0.035	0.102	0.049	−0.161	−.232*	1
11. Number of previous/current psychiatric diagnoses	0.204	.476**	.332**	.308**	0.216	.346**	.426**	.273*	0.141	−0.005

**p <.01, *p <.05.

PHQ-9 = the Patient Health Questionnaire-9; DES-T = the Dissociative Experiences Scale-Taxon; DID = Dissociative identity disorder; PCL-5 = the Post-traumatic Stress Disorder Checklist for DSM-5; RAS-DS = Recovery Assessment Scale – Domains and Stages.

Table 2. Regression analysis summary for depression as measured with the PHQ-9.

Variable	β	t	p
(Constant)		−.937	.352
PCL5	.719	7.217	.000**
DES-T	−.049	−.541	.590
Number of BPD Symptoms	.092	1.001	.320

**p <.01, *p <.05.

Fourth, we found that the PHQ score was correlated with the DES-T score; however, it was more closely correlated with both PTSD and BPD symptoms (see Table 1). It should be noted that, in this sample of people with pathological dissociation, clinical recovery was only correlated with the PHQ score and BPD symptoms (see Table 1).

Fifth, a multiple linear regression was performed to understand the relationship of PHQ-9 total scores (dependent variable) with DES-T scores, PCL-5 scores and the number of BPD symptoms (independent variables). The variance inflation factor among variables was below the norm of 2.5 and therefore multicollinearity was expected to be minimal. Results of the multiple linear regression indicated that there was a collective significant effect of all the independent variables, ($F(3, 68) = 28.586$, $p < .001$, $R^2 = .558$). All variables were examined simultaneously in a single regression. The findings indicated that PTSD symptoms ($t = 7.217$, $p < .001$) were a significant predictor in the model (see Table 2). As shown in Table 1, PTSD symptoms had the strongest relationship with the level of depression in this sample.

Discussion

This study examined the frequency and clinical correlates of depression in people with pathological dissociation. There are several preliminary findings: (1) consistent with the literature, depression as measured with the PHQ-9 is a very common comorbid condition in people with pathological dissociation, (2) the level of depression was associated with both childhood and adulthood betrayal trauma in people with pathological dissociation, (3) the level of depression was most strongly associated with the PCL-5 scores (i.e., PTSD symptoms), and (4) clinical recovery was related to the level of depression and BPD symptoms rather than dissociative symptoms in this sample. These findings may have some clinical implications and they also require further discussion.

People with pathological dissociation are generally depressed

It was found that severe depression is common in our sample of people with pathological dissociation and that they can be more depressed, as a group, than patients with depression but no pathological dissociation. This finding implies that it is important to screen for pathological dissociation when working with service users who present with a high level of depression – pathological dissociation may be hidden behind depressive symptoms. It has been suggested that depressive symptoms in people with pathological dissociation are often resistant to typical treatments for depression but can be effectively treated with dissociation-focused interventions (Şar & Ross, 2006). Given that a high level of depression is common in people with pathological dissociation as shown in this study and that pathological dissociation is also common in people with depression as reported in previous studies (for example, it was found that over 40% of female participants with current major depression had a lifetime dissociative disorder in a community study) (Şar et al., 2013), practitioners treating patients with depression or pathological dissociation need to be aware of the possibility of the occurrence of untreated comorbid symptoms.

Our findings are consistent with and in support of Sar's hypothesis of a dissociative subtype of depression (Şar, 2011, 2014; Şar et al., 2013). According to Sar, the dissociative subtype of depression is characterized by higher rates of childhood trauma, comorbidity, suicidal ideation and treatment resistance. Our findings are consistent with this hypothesis and support it with data from a diverse regional sample; Sar's research is from Turkey. Additionally, in an American sample, Ellason et al. (1996) found that 97.2 percent of 102 inpatients with dissociative identity disorder met criteria for major depressive episode on the Structured Clinical Interview for DSM-III-R (Spitzer et al., 1990). Given this literature, consideration should be given to future research on a dissociative subtype of depression, similar to the dissociative subtype of PTSD in DSM-5 (American Psychiatric Association, 2013), and similar to the dissociative subtype of schizophrenia proposed by Ross (2004). Given that complex dissociative symptoms are common in BPD as well (Ross et al., 2014; Lanius et al., 2012; Mosquera et al., 2011; Stein et al., 2013; Van der Hart et al., 2005, 2006), one might also consider the possibility of a dissociative subtype of BPD with more severe trauma, more comorbidity and resistance to standard treatments.

Successful management of depression may require stabilization of PTSD

Our findings suggest that a high level of depression is associated with a variety of clinical variables in people with pathological dissociation,

including higher levels of PTSD and more BPD symptoms. These variables may be seen either as the signs of, or as potential risk factors for, severe depression, and they can remind the practitioner to assess the severity of depression and risk for suicide in service users with pathological dissociation. In particular, the level of depression is most strongly associated with PTSD symptoms in our sample, although dissociative and BPD symptoms are also associated with depression.

These findings imply that successful management of depressive symptoms in people with pathological dissociation may especially require stabilization of PTSD symptoms. In fact, in clinical practice, it is common to see severe depression occurring because of untreated PTSD and dissociative symptoms (e.g., a very depressed alternate personality state, frequent intrusive symptoms). Thus, practitioners working with service users who suffer from both depression and pathological dissociation should not just focus on treating depression while ignoring other trauma-related symptoms and disorders. However, further investigation is required to further understand the interactions among depression, dissociation, post-traumatic stress and BPD symptoms in patients with pathological dissociation as well as in other psychiatric populations.

Timely social intervention is needed to prevent more betrayal trauma

This preliminary study found that the level of depression is associated with both childhood and adulthood betrayal trauma in people with pathological dissociation, suggesting that adulthood betrayal trauma may also be a potential risk factor for a high level of depression in this population. This finding implies that prevention of ongoing betrayal trauma in adulthood may be important in preventing severe depression, although further investigation of the relationship is necessary. Therefore, early social interventions for people with childhood trauma and pathological dissociation should be considered to enable them to avoid ongoing trauma in adulthood. For instance, a childhood abuse survivor with pathological dissociation may need social work support to stay away from his or her abusive family (Fung et al., 2019).

Depression and BPD symptoms as significant correlates of poor clinical recovery

Our preliminary findings indicate that a high level of depression and BPD symptoms, instead of dissociative symptoms, are two significant correlates of poor clinical recovery (here the term 'recovery' refers to having a sense of control over one's mental health problems) in people with pathological dissociation. Further investigation is needed to examine whether it is true that depressive and BPD symptoms should be stabilized in order for service

users to have a better chance of clinical recovery. In people with pathological dissociation, it is possible that some parts of the personality are more depressed while other parts are less depressed – practitioners need to take care of the needs of different parts so as to successfully manage depressive symptoms and facilitate clinical recovery (see Ross & Halpern, 2009; International Society for the Study of Trauma and Dissociation, 2011). Our study provides the first data regarding the clinical correlates of clinical recovery as measured with the RAS-DS in people with pathological dissociation.

Limitations and needs for further research

This study provides some preliminary yet interesting findings that may have clinical implications, but there are some limitations to the study. For example, we relied on online survey and self-report data (in particular, the depression measure, PHQ-9, is also a self-report measure that cannot replace a diagnostic interview), although these methods have proven to be reliable and valid in other studies and are commonly used in the health care and social science literature (Chan et al., 2017; Collins & Jones, 2004; Vallejo et al., 2007; Fung, Choi et al., 2018). We did not conduct structured or diagnostic interviews to confirm the presence of pathological dissociation in the participants. There may be some other covariates (e.g., previous treatment, diagnostic status) that we did not consider in this study. Additionally, we used screening data in an intervention study – the mental health problems of our participants may be less severe than those of patients in clinical settings. The study is also limited by a predominantly female sample. Therefore, future studies should use a more clinically representative sample of people with pathological dissociation. One of the strengths of our study is that all measures are well validated in the literature. However, we only measured one specific aspect of clinical recovery, and therefore future studies should also investigate the relationship between depression and other aspects of recovery in people with pathological dissociation. Finally, this cross-sectional study could not determine whether depression is causally related to other clinical variables in people with pathological dissociation.

Concluding remarks

Depression is an important issue in people with pathological dissociation and it requires further investigation. To our knowledge, this is the first study that looked at the clinical correlates of depression in a sample of people who reported pathological dissociation. Our preliminary findings imply that it may be important to manage depression by preventing adulthood betrayal trauma and stabilizing PTSD symptoms when working with service users

who have both depression and pathological dissociation. Also, since severe depression is common in people with pathological dissociation, it is particularly important for practitioners to assess the level of pathological dissociation in service users who have chronic treatment-resistant depression. Further studies are needed.

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