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<ATL>Comorbidity of Posttraumatic Stress Disorder and Depression in
Tortured, Treatment-Seeking Refugees</ATL>

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<ABS>Comorbid posttraumatic stress disorder (PTSD) and depression is common in refugee groups; however, little is known about the predictors and correlates of comorbidity in treatment-seeking refugees. Participants in this study were 134 refugees resettled in Switzerland. Most participants were from Turkey, Iran, and Sri Lanka, and 92.6% had been exposed to torture. Self-report measures were implemented to assess PTSD, depression, mental and physical health-related quality of life (QoL), as well as pre- and postmigration experiences. Findings indicated that approximately half the sample met criteria for PTSD and depression, 33.6% met criteria for depression only, and only 2.2% met criteria for PTSD only. Female gender (odds ratio [OR] = 0.17), age (OR = 0.93), time in Switzerland (OR = 1.16), and trauma exposure (OR = 1.19) all emerged as predictors of comorbidity compared with no diagnosis. Postmigration stress was also associated with greater likelihood of comorbidity compared with no diagnosis (OR = 1.32) and a single diagnosis (OR = 1.14). Further, dual diagnosis was associated with significantly poorer mental health- and physical health-related QoL (mental health-related QoL: dual diagnosis vs. single diagnosis, $d = -0.52$ and dual diagnosis vs. no diagnosis, $d = -1.30$; physical health-related QoL: dual diagnosis vs. single diagnosis, $d = -0.73$ and dual diagnosis vs. no diagnosis: $d = -1.04$). Findings indicated that comorbidity was highly prevalent in this sample of treatment-seeking refugees and was associated with a substantial impairment burden. Psychological interventions for refugees should consider the dual impact of PTSD and depression symptoms to optimally decrease distress and improve QoL in this vulnerable group.</ABS>

<P>There is a growing number of refugees forcibly displaced by persecution across the globe (United Nations High Commissioner for Refugees [UNHCR], 2015). A sizeable proportion of refugees suffer from psychological disorders including posttraumatic stress disorder (PTSD) or depression, and these disorders have been demonstrated to commonly co-occur in community studies conducted with refugee groups. Marshall, Schell, Elliott, Berthold, and Chun (2005) found that 71.0&percent; of Cambodian refugees with a diagnosis of PTSD in the previous year met criteria for depression, and 86.0&percent; of those with depression also met criteria for PTSD. Research with Bosnian refugees in Croatia and Australia suggested that 20.6&percent; and 46.03&percent; of participants had comorbid PTSD and depression, respectively (Mollica et al., 1999; Momartin, Silove, Manicavasagar, & Steel, 2004). Comorbidity has also been found to be extremely prevalent in clinical settings. A study conducted in the Netherlands found that 63.9&percent; of treatment-seeking refugees and asylum-seekers with PTSD also had comorbid depression (Haagen, Ter Heide, Mooren, Knipscheer, & Kleber, 2016). Another study conducted in outpatient clinics in Norway found that 80.0&percent; of patients with PTSD also met criteria for major depression (Teodorescu, Heir, Hauff, Wentzel-Larsen, & Lien, 2012). Notably, studies have found that PTSD appears to occur in the absence of depression more frequently than depression occurs in the absence of PTSD (Fazel, Wheeler, & Danesh, 2005; Momartin et al., 2004). Overall, research findings converge to indicate that comorbidity is pervasive among forcibly displaced populations.</P>

<P>A dual diagnosis of PTSD and depression (i.e., comorbidity) is associated with substantially greater disability and impairment in refugees than a single or no diagnosis (Mollica et al., 1999; Momartin et al., 2004). Mollica and colleagues (1999) found that refugees with comorbid PTSD and depression were 5 times more likely to report significant disability than those with no diagnosis, even after controlling for demographic and contextual

variables. In addition, comorbid depression has been found to reduce treatment response among refugees with PTSD (Haagen et al., 2016; Silove, Manicavasagar, Coello, & Aroche, 2005). Despite this, little is known about the predictors and correlates of comorbidity among treatment-seeking refugees. Momartin and colleagues (2004) found that, among Bosnian refugees resettled in Australia, exposure to traumatic events characterized by life threat and traumatic loss was associated with PTSD and depression. A previous study conducted with war-affected individuals in South Sudan found that trauma exposure and low socioeconomic status were associated with having PTSD and/or PTSD-depression comorbidity, but not depression (Ayazi, Lien, Eide, Ruom, & Hauff, 2012). From the broader literature, a study conducted by O'Donnell, Creamer, and Pattison (2004) with survivors of traumatic injury indicated that trauma severity, psychiatric history, and life stressors were associated with comorbid PTSD and depression.

Understanding factors associated with comorbidity in treatment-seeking refugees would advance knowledge regarding individuals who are at risk of experiencing high levels of mental health-related disability. This has the potential to aid treatment services in both identifying these individuals and planning psychological interventions. This study aimed to investigate the impact and correlates of comorbid PTSD and depression in a sample of tortured refugees who are undergoing psychiatric/psychotherapeutic treatment. Based on the limited evidence available regarding predictors of comorbid PTSD and depression in refugees and other trauma-affected groups, we hypothesized that greater trauma exposure would be associated with comorbid PTSD and depression. As female gender, older age, and greater postmigration living difficulties have all been associated with greater risk for PTSD and depression (Marshall et al., 2005; Porter & Haslam, 2005; Schubert & Punamaki, 2011; Silove, Sinnerbrink, Field, Manicavasagar, & Steel, 1997; Steel et al., 2006), we hypothesized that these factors would be linked to comorbidity in the current sample. The

evidence regarding the relationship between duration of stay in the resettlement country and mental health has been mixed; therefore, we did not specifically hypothesize about this variable (Jaranson et al., 2004; Steel et al., 2006; Uribe Guajardo, Slewa-Younan, Smith, Eagar, & Stone, 2016). Further, we predicted that individuals with comorbid PTSD and depression would report lower mental health-related quality of life (QoL) compared with those with one or no diagnosis.

Method

Participants and Procedure

Participants comprised 134 refugees and asylum-seekers receiving psychiatric treatment at outpatient clinics for victims of torture and war in Switzerland. Exclusion criteria included (a) the inability to use the tablet-based software used to collect data or complete self-report questionnaires, (b) pregnancy, (c) severe dissociative symptoms, (d) active psychosis, and (e) suicidality. Severe dissociative symptoms, psychosis, and suicidality were assessed by the treating clinician as part of clinical practice. No participants were excluded from this study. Overall, 152 individuals aged 18 years and older were invited to take part, with a final sample of 134 (88.2%). Participants were predominantly male ($n = 105$, 78.4%), with a mean age of 42.44 years ($SD = 9.83$). Participants' country of origin included Turkey: 53.7%, Iran: 12.9%, Sri Lanka: 8.2%, Bosnia: 4.5%, Iraq: 4.5%, and Afghanistan: 3.7%, with the remaining participants coming from other countries in Africa, Eastern Europe, and South Asia. Participants had been in Switzerland for a mean of 9.01 years ($SD = 6.67$), and had been in treatment for a mean of 30 months ($SD = 28.50$). Treatment included trauma-specific as well as nonspecific psychotherapy, medication, and social counseling, depending on symptom profiles and subjective focus of distress. Measures (translated and back-

translated into study languages: German, English, Turkish, Arabic, Farsi, or Tamil) were administered using a therapist-assisted computer-based assessment tool that presented questionnaires in written and auditory form to participants on an electronic tablet, overcoming potential limitations in literacy. If required, participants were assisted by a psychiatrist, clinical psychologist, or a supervised master's-level student of clinical psychology, as well as an interpreter if necessary. Participants were reimbursed 40 Swiss francs (CHF; ≈ \$USD 40). This study was approved by the Ethics Committee of the Cantons of Zurich and Bern, Switzerland.</P>

<H2>Measures</H2>

<H3>Trauma exposure.</H3>

<P>An amalgamation of the Harvard Trauma Questionnaire (HTQ; Mollica et al., 1992) and the Posttraumatic Diagnostic Scale (PDS; Foa, 1996) was used to assess trauma exposure. This scale comprised 23 items (16 from the HTQ and 7 from the PDS) measuring traumatic events commonly experienced by refugees and asylum-seekers (e.g., lack of food and water, murder of family and friends, sexual assault). A total count score of the number of types of trauma experienced and/or witnessed by each participant was derived for this study.</P>

<H3>Postmigration stressors.</H3>

<P>An adapted version of the Post-Migration Living Difficulties Checklist (PMLDC; Silove et al., 1997) was used to measure postmigration stressors. Participants rated themselves on 17 items that measure postmigration stress (e.g., loneliness, boredom or isolation, communication difficulties, discrimination) in terms of the extent to which they had been of concern over the past 12 months (0 = *not a problem* to 4 = *a very serious*

problem). Items scored at least 2 (*a moderately serious problem*) are considered positive responses, yielding a total count of living difficulties.

Posttraumatic stress disorder.

The Posttraumatic Diagnostic Scale (PDS; Foa, 1996) was used to measure PTSD; four additional items were included to measure the new *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM-5*; American Psychiatric Association, 2013) symptoms of PTSD, resulting in a 20-item scale. Example items include “Recurrent and intrusive distressing recollections of the event,” “Experiencing physical reactions when you were reminded of the traumatic event,” and “Persistent negative beliefs about yourself, others or the world.” Items were measured on a 4-point scale (0 = *not at all/ only once* to 3 = *5 or more times a week/ almost always*). A total sum score was used to represent PTSD symptom severity. We also employed an algorithm based on *DSM-5* criteria to create a dichotomous variable reflecting probable PTSD diagnosis. This algorithm required one or more intrusive symptoms, one or more avoidance symptoms, two or more symptoms representing negative alterations in cognition and mood, and two or more symptoms representing alterations in arousal and reactivity. This scale has been used with refugee groups (e.g., Neuner et al., 2004; Turner, Bowie, Dunn, Shapo, & Yule, 2003, and has been demonstrated to have strong psychometric properties including internal consistency, test-retest reliability and convergent validity (Foa, Cashman, Jaycox, & Perry, 1997). Internal consistency for this scale in the present sample was $\alpha = .94$.

Depression.

The 15-item depression subscale of the Hopkins Symptom Checklist (HSCL; Mollica, Wyshak, de Marneffe, Khuon, & Lavelle, 1987) was used to measure depression. Example items include “Feeling low in energy, slowed down,” “Poor appetite,”

and “Feeling lonely.” Items were measured on a 4-point scale (1 = *not at all* to 4 = *extremely*). A total sum score was used to represent depression symptom severity. We also employed a *DSM-5*-based algorithm to determine likely depression diagnosis. This algorithm required participants to report either low mood or anhedonia, as well as at least three other symptoms of depression. The HSCL has been employed with a number of refugee groups (e.g., Carlsson, Mortensen, & Kastrup, 2005; Schweitzer, Melville, Steel, & Lacherez, 2006) and has been found to have excellent psychometric properties, including test-retest reliability, interrater reliability, sensitivity, and specificity (Mollica et al., 1987). Internal consistency for this scale was $\alpha = .89$.

Mental and physical health-related quality of life.

The 12-item Medical Outcomes Study-Short Form (SF-12; Gandek et al., 1998) was used to measure mental and physical health-related QoL. This scale yields scores on the Mental and Physical Health-Related Quality of Life subscales. Example items include “During the past 4 weeks, have you accomplished less than you would like as a result of your physical health?” and “During the past 4 weeks, did you not do work or other regular activities as carefully as usual as a result of any emotional problems, such as feeling depressed or anxious?”

Data Analysis

All analyses were conducted using SPSS Version 24. There was less than 5.0% missing data on any of the variables in this study, and listwise deletion was employed for missing data. First, we used the *DSM-5* algorithms for PTSD and depression described above to determine how many participants in the sample met criteria for PTSD and depression, and comorbid PTSD and depression. Next, we conducted a multinomial logistic regression to investigate predictors of dual diagnosis (comorbidity) and single diagnosis

relative to no diagnosis, and dual diagnosis relative to single diagnosis. Multinomial logistic regression can be used to examine predictors of categorical dependent variables, yielding ORs of the association between membership in a particular category (e.g., dual diagnosis) and predictor variables. Predictors examined in this study included gender, age, length of time in Switzerland, trauma exposure, and postmigration living difficulties. Finally, we used one-way analyses of variance (ANOVAs) with planned contrasts to investigate whether individuals with dual, single, and no diagnosis differed in mental health- and physical-health related QoL. Effect sizes (Cohen's d) were used to represent between-group differences with $d = 0.700$ representing a large effect, $d = 0.500$ representing a medium effect, and $d = 0.200$ representing a small effect (Cohen, 1998).

Results

Means and standard deviations of study variables are presented in Table 1 (Table 1). Participants had been exposed to a mean of 13.11 ($SD = 4.70$) types of traumatic events and 9.77 ($SD = 5.16$) types of living difficulties. Notably, nearly the entire sample ($n = 114$, 92.7%) had experienced torture.

In this sample, 63 (47.0%) participants met criteria for both PTSD and depression, 45 (33.6%) participants met criteria for depression only, 3 (2.2%) participants met criteria for PTSD only, and 23 (17.2%) participants did not meet criteria for PTSD or depression. Of those who met criteria for depression, 41.7% also met criteria for PTSD. Of those who met criteria for PTSD, 95.5% also met criteria for depression. A χ^2 test revealed that this difference was statistically significant, $\chi^2(1) = 18.36, p < .001$. To compare refugees with comorbid psychiatric morbidity and those with a single disorder, we combined those

meeting PTSD or depression probable diagnosis into a single category (35.8% n = 48).

Multinomial logistic regression (see Table 2 {FIG2}, overall model: $\chi^2(10) = 39.68, p < .001$) revealed that women were more likely to have a single diagnosis than no diagnosis compared with men, whereas men were more likely to have a dual diagnosis than no diagnosis compared with women. Younger participants were also more likely to have a dual diagnosis than a single/no diagnosis. Individuals who had lived in Switzerland for longer were more likely to have a dual diagnosis than a single diagnosis or no diagnosis. Greater trauma exposure was associated with greater likelihood of having a dual diagnosis compared with no diagnosis. Greater living difficulties were associated with greater likelihood of having a dual diagnosis compared with a single diagnosis or no diagnosis.

Means and standard deviations of mental and physical health-related quality of life according to diagnostic group are presented in Table 3 {TBL 3}. A one-way ANOVA indicated that there was a significant difference in the diagnosis groups in terms of mental health-related QoL, $F(2, 116) = 10.62, p < .001$. Planned contrasts revealed that those in the dual diagnosis or single diagnosis groups reported significantly lower mental health-related QoL compared with those in the no diagnosis group, $t(116) = 3.93, p < .001$; dual diagnosis versus no diagnosis, $d = -1.30$; single diagnosis versus no diagnosis, $d = -0.71$. In addition, those in the dual diagnosis group reported significantly lower mental health-related QoL compared with those in the single diagnosis group, $t(116) = 2.61, p = .010, d = -0.52$.

A one-way ANOVA also indicated that there was a significant difference in the diagnosis groups in terms of physical health-related QoL, $F(2, 116) = 1.85, p < .001$. Planned contrasts revealed that participants in the dual or single diagnosis groups reported significantly lower physical health-related QoL compared with the no diagnosis group, $t(116) = 2.51, p = .013$; dual diagnosis versus no diagnosis, $d = -1.04$; single diagnosis versus no diagnosis, $d = -0.25$. In addition, those in the dual diagnosis group reported significantly lower physical health-related QoL compared with those in the single diagnosis group, $t(116) = 3.69, p < .001, d = -0.73$.

Discussion

This study investigated predictors of comorbidity and the association between comorbidity and disability in a sample of treatment-seeking refugees. Notably, nearly half of the sample met criteria for both PTSD and depression, with a dual diagnosis being more common than a diagnosis of depression alone (33.6%), PTSD (2.2%) or no diagnosis of PTSD or depression (17.2%). In contrast to previous findings from Fazel and colleagues (2005) and Momartin and colleagues (2004), PTSD rarely occurred in the absence of depression in the current sample. Although further research is required to elucidate this finding, it may be that individuals with a single diagnosis of PTSD are less likely to seek help from established services compared with those with depression, highlighting the especially debilitating nature of the dual diagnosis of PTSD and depression. Alternatively, PTSD may be more responsive to treatment than depression among traumatized refugees, leading to fewer of the participants in this sample reporting a diagnosis of PTSD alone. Accordingly, it is important to note that participants in this study had received treatment for a mean of 30 months ($SD = 28.50$).

Our finding that both single and dual diagnosis compared with no diagnosis and dual diagnosis compared with single diagnosis were associated with poorer mental health and physical health-related QoL was highly consistent with past research highlighting the pervasive impact of comorbidity on functional impairment (Mollica et al., 1999; Momartin et al., 2004). It appears that experiencing both the fear- and arousal-related symptoms characteristic of PTSD and the low mood associated with depression has a uniquely impairing impact on the functioning of refugees. This finding has important implications for clinical services for refugees, indicating that those with dual diagnoses may require more intensive and/or longer-term interventions to address the pervasive effects of these diagnoses on their everyday lives.

Investigation of predictors of dual diagnosis revealed that refugees who had been in Switzerland for a longer time were more likely to have a dual diagnosis, which is in line with some research suggesting that longer duration of stay in the resettlement environment is associated with more psychological distress (Jaranson et al., 2004; Uribe Guajardo et al., 2016), but contrary to other studies that found an inverse relationship between length of time in the resettlement environment and PTSD symptoms (Steel et al., 2006). There are several possible explanations for this finding. First, many refugees may be initially unfamiliar with Western concepts of mental health (May, Rapee, Coello, Momartin, & Aroche, 2014; Slewa-Younan et al., 2014) and/or experience stigma that precludes reporting of psychological symptoms (Gong-Guy, Cravens, & Patterson, 1991; Miller, 1999). It is possible that, as refugees reside in the resettlement country for a longer period, acculturation processes may lead to increased mental health literacy, which may then lead to greater reporting of psychological symptoms. In addition, as participants in this study received psychological therapy for their symptoms, they may have experienced a reduction in self-stigma related to mental health, paradoxically leading to greater reporting of

psychopathology. Conversely, increased psychopathology with longer resettlement may be associated with the myriad of postmigration stressors that refugees may experience in the resettlement environment (Li, Liddell, & Nickerson, 2016). This is consistent with our finding that exposure to greater postmigration stress was associated with comorbidity. Some commentators have argued that there may be a “honeymoon effect” whereby refugees report lower levels of psychological distress upon initial resettlement as they are removed from the context of persecution from which they initially fled, before being faced with numerous challenges in the postmigration environment which lead to increased reporting of psychological symptoms (Uribe Guajardo et al., 2016). Further research is required to investigate why longer periods of residency may be associated with greater comorbidity in resettled refugees.

The finding that premigration trauma exposure was associated with higher likelihood of having a dual diagnosis compared with no diagnosis was consistent with a large body of research attesting to the dose-response effect of trauma exposure on psychological symptoms in refugees (Hauff & Vaglum, 1995; Mollica et al., 1998). In addition, we found that participants who were exposed to greater postmigration living difficulties were more likely to have a dual diagnosis than no diagnosis, and more likely to have a dual diagnosis than a single diagnosis. These findings are consistent with a growing body of evidence that postmigration stress impacts on mental health of refugees over and above the effects of premigration trauma exposure (Li et al., 2016; Porter & Haslam, 2005). As noted above, refugees are typically exposed to multiple and complex stressors in the resettlement environment, including loneliness and boredom, difficulties with the immigration process, and financial and language difficulties. These stressors are likely to present an enormous challenge to the psychological recovery from traumatic events experienced in the country of origin and during displacement. These results provide further

evidence that these stressors contribute to pervasive psychological distress across diagnostic categories. Findings from this study thus highlight the key role of the postmigration environment in contributing to profiles of psychopathology, and the importance of addressing these daily living difficulties in conjunction with psychological interventions to improve mental health and functioning.

Surprisingly, we found that female refugees were more likely than male refugees to have a single diagnosis than no diagnosis, whereas male refugees were more likely to have a dual diagnosis compared with a single diagnosis. This is inconsistent with research indicating that female gender is a risk factor for more severe PTSD and depression (Schubert & Punamaki, 2011; Silove et al., 1997), although some studies conducted with refugees and asylum-seekers have found no difference in symptom levels of PTSD and depression (Renner & Salem, 2009), or comorbidity (Momartin et al., 2004), between gender groups. These findings may reflect specific psychopathology and/or treatment-seeking patterns in refugee groups, potentially indicating that the high level of impairment afforded by a dual diagnosis of PTSD and depression may increase help-seeking behavior among male refugees specifically. It is notable, however, that 80% of the current sample was male, and thus further research is required to systematically investigate gender differences in comorbidity in refugees.

Younger age was associated with greater likelihood of having a dual diagnosis compared with no diagnosis or a single diagnosis, which is consistent with some previous studies conducted with refugees (Keller et al., 2006), and contrary to others (Marshall et al., 2005; Steel et al., 2006). It may be the case that, in the current sample, younger age was associated with greater likelihood of having been directly involved in insurgency or combat. If so, the association between younger age and greater psychological symptoms may be

related to exposure to specific trauma types. Again, further research is required to test this hypothesis.

The current study represents (to our knowledge) the first investigation of predictors of comorbidity among highly traumatized treatment-seeking refugees. This study has a number of limitations, including the use of measures that (although validated cross-culturally), had not been validated with all groups in this study; the implementation of self-report measures rather than clinician-administered diagnostic interviews; and the investigation of only PTSD and depression rather than broader diagnostic categories. In addition, although research has indicated that factors associated with psychopathology in refugees vary according to specific experiences and communities (Hollifield et al., 2002), the sample size of this study precluded investigation of predictors of comorbidity in specific refugee communities. Nevertheless, findings from this study have clinical implications for settings that provide services to refugees from diverse backgrounds, pointing to the potential utility of developing and evaluating psychological treatments that target both PTSD and depression concurrently in refugees to reduce the burden of impairment. Further, these results highlight the importance of contextual factors, in particular exposure to significant postmigration stress, in contributing to comorbid PTSD and depression among refugees. Understanding pathways to and the impact of comorbidity in refugees has the potential to directly inform policy and service provision to promote positive mental health outcomes among resettled refugees.

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<TN>Table 1

<TT>Means and Standard Deviations of Study Variables

<TC>	<i>M</i>	<i>SD</i>
<TB>Gender (Male) ^a	105	78.4%
Age	42.44	9.83
Length of time in Switzerland	9.01	6.67

Trauma exposure	13.11	4.70
Living difficulties	9.77	5.16
Mental health-related quality of life	39.05	7.47
Physical health-related quality of life	39.32	7.51

<TFN>^aIn this row, values presented in the *M* column are numbers; values presented in the *SD* column are percentages.

<TN>Table 2

<TT>*Multinomial Logistic Regression Investigating Association Between Single/Dual Diagnosis, Demographics, and Refugee Experiences*

<TC>Variable	β	SE	OR	95% CI
<TB>Single diagnosis vs. no diagnosis ^a				
Gender (female vs. male)	1.73	0.84*	5.65	[1.08, 29.54]
Age	0.14	0.03	1.02	[0.96, 1.08]
Length of time in Switzerland	-0.04	0.05	0.96	[0.87, 1.06]
Trauma exposure	-0.12	0.06	0.89	[0.79, 1.01]
Living difficulties	-0.14	0.07	0.87	[0.76, 1.00]
Dual diagnosis vs. no diagnosis ^b				
Gender (female vs. male)	-1.78	0.87*	0.17	[0.03, 0.94]
Age	-0.08	0.03*	0.93	[0.87, 0.99]
Length of time in Switzerland	0.15	0.05**	1.16	[1.05, 1.28]
Trauma exposure	0.17	0.07**	1.19	[1.05, 1.35]
Living difficulties	0.27	0.08***	1.32	[1.13, 1.53]

Dual diagnosis vs. single diagnosis^c

Gender (female vs. male)	-0.05	0.49	0.96	[0.37, 2.47]
Age	-0.06	0.03*	0.94	[0.90, 0.99]
Length of time in Switzerland	0.11	0.04**	1.12	[1.03, 1.21]
Trauma exposure	0.05	0.05	1.05	[0.96, 1.16]
Living difficulties	0.11	0.06*	1.14	[1.02, 1.28]

<TFN> ^aSingle diagnosis, $n = 48$, 35.8%; no diagnosis, $n = 23$, 17.2%. ^bDual diagnosis, $n = 63$, 47.0%; no diagnosis, $n = 23$, 17.2%. ^cDual diagnosis, $n = 63$, 47.0%; single diagnosis, $n = 48$, 35.8%.

* $p < .05$. ** $p < .01$. *** $p < .001$.

<TN>Table 3

<TT>*Means and Standard Deviations of Mental Health- and Physical Health-Related Quality of Life for Dual, Single, and No Diagnosis Groups*

<TC>Group	Mental health-related quality of life		Physical health-related quality of life	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<TB>Dual diagnosis	36.40	6.66	36.36	6.75
Single diagnosis	40.03	7.26	41.57	7.34
No diagnosis	44.99	6.61	43.35	6.71

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