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The Prevalence of Post Traumatic Stress Disorder Among Couples at PCEA Churches, Nairobi, Kenya

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Abstract:- The study sought to establish the prevalence of PTSD among couples in selected Presbyterian Church of East Africa (PCEA) Churches in Nairobi, Kenya. The Posttraumatic Stress Disorder Checklist (PCL-5) was used to collect data from the sample size of 50 couples/ participants using purposive sampling technique. Overall, the prevalence of moderate PTSD was 42% (n=42, M=27.02, S.D =14.96). PTSD was more pronounced among wives at 23% and husbands 19% although the relationship of PTSD and gender was not statistically significant. The prevalence of PTSD was observed to be dominant in participants aged 22-45 at 26.2 % compared to aged 46 and above at 16.2%. PTSD was more prevalent among participants married above 10 years at 29% compared to married 6-10 years at 9% and married 6-10 years at 12%. The findings indicate there was no relationship between marriage duration and PTSD severity in the control group (p=0.578), but in the experimental group, the relationship was statistically significant (p=0.011). The study concluded that PTSD symptoms can negatively impact relationship functioning among couples. Clinicians, family therapists and religious institutions need to evaluate the benefits of MBCBT.

Keywords:- *Prevalence, Posttraumatic Stress Disorder (PTSD), Mindfulness based Cognitive Behaviour Therapy (MBCBT), Relationship Functioning.*

I. INTRODUCTION & BACKGROUND TO THE STUDY

Posttraumatic Stress Disorder (PTSD) first appeared in the DSM-III in 1980. The impetus for the development of this diagnosis category arose primarily from the need to account for the characteristics array of symptoms displayed by Vietnam veterans in the United States, and as such PTSD was conceptualized around traumatized adults (Kamineret al; 2005). Posttraumatic stress disorder (PTSD) symptoms are robustly associated with intimate relationship dysfunction among veterans, where most existing research has focused on male veterans and their female partners (Knopp et al., 2021).Typically, PTSD affects relationship functioning (Campbell & Renshaw, 2018) in either or both partners in a romantic relationship, in addition to the individual psychological distress associated with the disease.

The prevalence of PTSD worldwide is about 3.9% of the general population and 5.6% in people who had experienced trauma (Worldwide prevalence of PTSD, (2021, October). NeuRA Library hence it's a global problem. In the United States, about 6 out of every 100 people (or 6% of the population) will have PTSD at some point in their lives (National Centre for PTSD, 2022). About 12 million adults in the U.S. have PTSD during a given year. This is only a small portion of those who have gone through a trauma. About 8 of every 100 women (or 8%) develop PTSD sometime in their lives compared with about 4 of every 100 men or 4% (National Centre for PTSD, 2022). The lifetime prevalence of posttraumatic stress disorder (PTSD) ranges from 6.1 to 9.2 percent in national samples of the general adult population in the United States and Canada with one-year prevalence rates of 3.5 to 4.7 percent (Goldstein & Smith, 2016).

In South Africa, the lifetime prevalence rates of PTSD in the general population have been found to be 2.3% for all ages and 1.8% for ages between 18 and 34 with the 12-month prevalence rate being 0.6% – 0.7% (Swain, Pillay & Kliewer, 2017). In Kenya, a study by Jenkins et al., (2015) assessed the prevalence of probable post-traumatic stress disorder (PTSD) and its associated behavioral risk factors in Maseno involving 1190 participants. The study reported 48% exposure to severe trauma; indicating a 10.6% PTSD symptom prevalence.

Previous studies have found that PTSD survivors and their spouses experience problems with emotional and physical closeness (Cook, Riggs, Thompson, Coyne, & Sheikh, 2004; Yehuda, Lehrner, & Rosenbaum, 2015). Similar studies have also found where PTSD is present, survivors and their spouses experience problems with emotional and physical closeness (Cook, Riggs, Thompson, Coyne, & Sheikh, 2004; Yehuda, Lehrner, & Rosenbaum, 2015). Some of the research suggests that interpersonal issues among couples can also play a role in the development of PTSD following a traumatic event; whereas PTSD symptoms appear to drive interpersonal difficulties over time (Hall, Bonanno, Bolton, & Bass, 2014). In the

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view of Lord et al., (2020) there is a bidirectional association between posttraumatic stress disorder (PTSD) symptoms and marital satisfaction. They hypothesize that PTSD symptoms are linked to increased relationship discomfort, a higher risk of divorce, a decrease in love and intimacy, and an increase in sexual dysfunction.

Other studies show evidence of higher correlations between PTSD symptoms and sexual concerns in African American women than in European American women (Gobin& Allard, 2016). Previous research (Moser et al.2020; Tang et al., 2017) has revealed correlation between childhood trauma and adult psychopathology such as Post Trauma Stress Disorder (PTSD). Related studies by Choi et al., (2015) established an association between childhood emotional and sexual abuse and PTSD, especially in high-trauma environments such as South Africa.

Some interventions such as the mindfulness based cognitive behavioural therapies have been viewed as efficacious in the treatment of PTSD as documented in a number of studies with promising results. Clinical studies (Teicher & Joss,2021) document that mindfulness-based interventions (MBI) such as Mindfulness Based Cognitive Behavioural Therapy (MBCBT) among adult survivors of trauma suggests that MBCBT can alleviate psychiatric symptoms like stress, anxiety, recurrent depression, substance abuse and PTSD. In some previous studies (Nilas, 2020; Griffiths, 2016 ;) a significant association has been established between mindfulness and improved relationship satisfaction among couples.

Southwick and Pietrzak (2021) advance that mindfulness can help couples improve in their relationship functioning by enabling the adaptation to traumatic incidents through enhanced personal acceptance of trauma-related experiences. Further, they suggest that mindfulness can reduce the effects of trauma-related and avoidance of trauma reminders by focusing on the present moment.

While there is potential to replicate similar studies among general populations exposed to trauma, Ajari (2020) notes that Africa's research output on the psychological construct of MBCBT is very limited and certified trainers of the practice are almost non-existent. This is despite the fact that the practice has been shown to relieve stress; a factor whose level is high in the continentand has been associated with much common disease, illnesses and other negative outcomes such as PTSD. She argues that there is, therefore, an overwhelming need to draw public attention towards the MBCBT practice and what it can offer to African health care systems.

II. METHODOLOGY

The two Churches in Nairobi County, Kenya were selected through purposive sampling owing to the fact that they have the desired characteristics and couples who are faced with relationship problems as a result of PTSD. The target population was married couples aged 22-50 years from the two selected churches of the Presbyterian Church of East Africa (PCEA from Nairobi County, Kenya. Couples who met the inclusion criteria were recruited into the study. PCEA Umoja was assigned the experimental group while PCEA Ruai was assigned to the control group through purposive sampling. A total of 50 heterogenous couples (N=50) of whom 25 pairs were designated to the experimental group while the other 25 pairs were in the control group. The two churches had similar demographic, geographical and situational characteristicssuch as religion, income, education, marital status and psychiatric diagnosis.

At the baseline, the PTSD checklist for DSM-5 (PCL-5), Childhood Trauma Questionnaire (CTQ) and the Couple Satisfaction Index (CSI) was administered to all the participants to establish the level of PTSD, trauma and relationship functioning. The inclusion criteria was a PCL- 5 score $\leq$ 31 but $\geq$ 33, a cut-off score that indicated the presence of either mild or moderate or severe PTSD. Relationship satisfaction was indicated by CSI; <104.5, a cut-off score indicating notable relationship dissatisfaction. The participants who exhibited symptoms of PTSD and relationship dissatisfaction were invited to take part in the study. Those assigned to the experimental group were given the MBCBT intervention. The rest of the participants who participated in the study as a control group were not subjected to the MBCBT intervention. The group model was chosen purposely for this study.

The researcher used both researcher-generated questionnaire and standardized psychological assessment tests. The study used four main instruments: a researcher-developed socio- demographic questionnaire (SDQ) used at baseline level, Child Trauma Questionnaire (CTQ) used at baseline level; The Posttraumatic Stress Disorder Checklist (PCL-5) and Couple Satisfaction Index(CSI) both used at level one (baseline), level two (midline) and level three (end line).

The Posttraumatic Stress Disorder Checklist (PCL-5) is a widely used DSM-correspondent self-report measure of PTSD symptoms (Blevins et al., 2015). The PCL-5 was recently revised to reflect DSM-5 changes to the PTSD criteria. The PTSD checklist specific for DSM 5 (PCL-5) contains 20 items and has a score range of 20–85. Results of a study by Ghazali and Chen (2018) showed the PCL-5 has great inner consistency (α = .91), test-retest dependability (r = .61) and simultaneous, joined, and discriminant legitimacy with the Harvard Trauma Survey (r = .69) and the Patient Health Questionnaire for Depression (r = .56).

Research on the PCL-5 suggested scores of 31 to 33 were optimally efficient for diagnosing PTSD (Bovin et al., 2016), while validation studies recommended a variety of cut-off scores ranging between 28 and 37 (Ashbaugh et al., 2016; Blevins et al., 2015). The PCL-5 has been widely used in studies and treatment in Africa in countries including Zimbabwe, Rwanda and Kenya. The instrument is more dependable if the alpha value is >0.7 (Streiner, 2003). According to Kline (2000), good internal consistency is shown by an alpha coefficient of 0.70 or above. In line with previous studies (Ashbaugh et al., 2016; Blevins et al.,

2015), PCL-5 has shown excellent internal consistency (Cronbach's alpha = 0.94). PCL-5 validation studies show all four PTSD criterion scales demonstrate high internal consistency (Cohen et al., 2015) and a high correlation between the two scoring methodologies: symptom severity and diagnostic classification (Cohen et al., 2015).

The Couples Satisfaction Index (CSI) is a self-report measure to assess marital satisfaction. The concept of couples' satisfaction is one's subjective evaluation of marital relationship and the level of perceived happiness from this relationship. The CSI is a psychometrically optimized, self-report questionnaire (Funk & Rogge, 2007) that measures relationship satisfaction. CSI is psychometrically sound (Mayer et al.,2012) with strong psychometric properties (test-retest reliability = 0.817; Cronbach's alpha = 0.879). In 2018 these results were replicated in a large multi-country sample (Cronbach's αlpha= 0.92).

The CSI has 32-item, on relationship satisfaction. One global item uses a 7-point scale: "Please indicate the degree of happiness, all things considered, of your relationship", from 0 = extremely unhappy to 6 = perfect. However, the other 31 items will use a variety of response anchors, all with 6-point scale. To score the CSI, the responses across all the items are summed up. CSI-32 scores can go from 0 to 161. Higher scores will show more high levels of relationship fulfilment. CSI-32 scores falling beneath 104.5 suggest remarkable relationship disappointment.

A Norwegian version of the CTQ short version was administered to score childhood traumatic incidents (Bernstein et al., 2003; Aas et al., 2014). The Childhood Trauma Questionnaire also demonstrated good test-retest reliability over a 2- to 6-month interval (intraclass correlation = 0.88) as documented by (Bernstein et al., 1994, 2003). This 28-item self-report questionnaire (Bernstein et al., 2003) gives scores on five subscales of trauma (Emotional abuse (EA), physical abuse (PA), sexual abuse (SA), physical neglect (PN), and emotional neglect) on a Likert scale format, ranging from never true to very often true (Bernstein et al., 2003). The Childhood Trauma Questionnaire also demonstrated good test-retest reliability over a 2- to 6-month interval (intraclass correlation = 0.88)

- *Ethical Issues*

The screening and recruitment exercise as well as data collection commenced immediately after the researcher obtained ethical clearance from Daystar University Institutional Scientific Review Committee (DU-ISERC), a letter from the School of Applied Human Sciences (SAHSS), a permit from National Commission for Science, Technology and Innovation (NACOSTI) and authorizations from the moderators in the selected Churches (PCEA Ruai and PCEA Umoja). Participation into the study was voluntary. The couples who participated in the study were informed of what the research entailed, the risk, freedom to discontinue or withdraw whenever they deemed fit, and that participation was voluntary with no repercussion. Only the participants who consented to participate and who met certain inclusion criteria were included in the study.

III. RESULTS

Based on the PTSD scores there were those who were asymptomatic (<31) meaning that they had mild PTSD while those who scored (≥ 31) were considered symptomatic as having confirmed PTSD symptoms in the range of moderate and above.

Table 1 The Prevalence of PTSD in the Experimental and Control Groups

Group	N	Mean	Std. Dev.	PTSD status	Prevalence
Experimental	50	23.08	14.30	Symptomatic (≥30)	14(28%)
				Asymptomatic (<31)	36(72%)
Control	50	30.96	14.70	Symptomatic(≥31)	28(56%)
				Asymptomatic (<31)	22(44%)
Total	100	27.02	14.96	Symptomatic (≥31)	42(42%)
				Asymptomatic (<31)	58(58%)
ANOVA	F=7.39; P=0.008				

Table 1 shows the Prevalence of PTSD in the Experimental and Control Groups. Participants who scored < 31 on PCL-5 were classified as asymptomatic (< 31) meaning that they had symptoms of PTSD but did not meet full criterion for diagnosis based on DSM-5; albeit they presented mild PTSD symptoms while those who scored (≥ 31) were considered symptomatic as having confirmed PTSD symptoms in the range of moderate and above as per the DSM-5. The overall prevalence of symptomatic PTSD was 42%.

Table 2 The Prevalence of PTSD levels Among the Respondents in the Control and Experimental Groups by Gender.

Group	Spouse	PTSD severity		
		Mild	Moderate	Total
Control	Husbands	12(24)	13(26)	25(50)
	Wives	10(20)	15(30)	25(50)
	Total	22(44)	28(56)	50(100)
P.Chi-Square =.589				

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Experimental	Husbands	19(38)	6(12)	25(50)
	Wives	17(34)	8(16)	25(50)
	Total	36(72)	14(28)	50(100)
P.Chi-square =.605				
Total	Husbands	31(31)	19(19)	50(50)
	Wives	27(27)	22(23)	50(50)
	Total	58(58)	42(42)	100(100)
P.Chi-square =.446				

Table 2 presents the relationship between the PTSD levels in respect to gender both in the control and experimental groups. PTSD was more prevalent among women at 23% compared to men at 19%; although a Chi-square statistical test indicated that the difference in the distribution of PTSD and participant's gender was not a statistically significant relationship in the control group (p=0.589), in the experimental group (p=0.605) and in the overall sample (p=0.446).

Table 3 The Prevalence of PTSD levels Among the Respondents in the Control and Experimental Groups by Age Group.

Group	**Age group**	**PTSD severity**		**Total**
		Mild	**Moderate**	
Control	22-45	14(28)	14(28)	28(56.0)
	Above 46	8(16)	14(28)	22(44.0)
	Total	22(44)	28(56)	50(100.0)
P.Chi-Square = .582				
Experimental	22-45	26(53.2)	12(24.4)	38(77.6)
	Above 46	9(18.3)	2(4.1)	11(22.4)
	Total	35(71.5)	14(28.5)	49(100.0)
P.Chi-square =.704				
Total	22-45	40(40.5)	26(26.2)	66(66.7)
	Above 46	17(17.2)	16(16.2)	33(33.3)
	Total	57(57.6%	42(42.4)	99(100)
P.Chi-square= .564				

Table 3 shows the Prevalence of PTSD levels among the respondents in the Control and Experimental Groups by Age. Chi-square analysis indicated that there was no relationship between age and PTSD severity in the control group (p=0.582), in the experimental group (p=0.704) and in the overall sample (p=0.564). The prevalence of PTSD was observed to be dominant in participants aged 22-45 at 26.2 % compared to aged 46 and above at 16.2%.

Table 4 The Prevalence of PTSD levels Among the Respondents in the Control and Experimental Groups by Education Levels.

Group	**Socio demographic variables**	**PTSD severity**		
		Mild	Moderate	Total
Control	Secondary	1(2.0)	2(4.0)	3(6.1)
	Diploma	5(10.2)	8(16.4)	13(26.5)
	Degree	15(30.6)	18(36.7)	33(67.3)
	Total	21(42.9)	28(57.1)	49(100.0)
P.Chi-square	.896			
Experiment	Primary	0(0.0)	3(6.0)	3(6.0)
al	Secondary	2(4.0)	1(2.0)	3(6.0)
	Diploma	20(40.0)	5(10.0)	25(50.0)
	Degree	13(26.0)	5(10.0)	18(36.0)
	N/A	1(2.0)	0(0.0)	1(2.0)
	Total	36(72.0)	14(28.0)	50(100.0)
P.Chi-square	.427			
Total	Primary	0(0.0)	3(3.0)	3(3.0)
	Secondary	3(3.0)	3(3.0)	6(6.1)
	Diploma	25(25.3)	13(13.2)	38(38.4)
	Degree	28(28.3)	23(23.1)	51(51.4)
	N/A	1(1.0)	0(0.0)	1(1.0)
	Total	57(57.6)	42(42.4)	99(100.0)
P.Chi-square	.607			

ISSN No:-2456-2165

Table 4 presents the prevalence of PTSD levels among the respondents in the control and experimental groups by education levels.The data shows that the proportion of symptomatic PTSD was dominant among married couples with degrees at 23.1% compared to Diploma at 13.2%, Secondary level 3% and Primary at 3%. Chi-square model of statistical test shows insignificant difference in the distribution of PTSD between education levels and PTSD severity in the control group (p=0.896), in the experimental group (p=0.427) and in the overall sample (p=0.607).

Table 5 The Prevalence of PTSD levels Among the Respondents in the Control and Experimental Groups by Marriage Duration.

Group	**Marriage duration**	**PTSD Severity**		**Total**
		Mild	Moderate	
Control	0-5years	3(6)	2(4)	5(10)
	6-10years	8(16)	6(12)	14(28)
	above10	11(22)	20(40)	31(62)
	Total	22(44)	28(56)	50(100)
P. Chi-square = .578				
Experimental	0-5years	1(2)	1(2)	2(4)
	6-10years	3(6)	3(6)	6(12)
	above10	32(64)	9(18)	41(82)
	N/A	0(0)	1(2)	1(2)
	Total	36(72)	14(28)	50(100)
P. Chi-square = .011				
Total	0-5years	4(4)	3(3)	7(7)
	6-10years	11(11)	9(9)	20(20)
	above10	43943)	29(29)	72(72)
	N/A	0(0)	1(1)	1(1)
	Total	58(58)	42(42)	100(100)
P. Chi-square = .730				

Table 6 displays the prevalence of PTSD levels among the respondents in the Control and experimental groups by marriage duration. PTSD was more prevalent among participants married above 10 years at 29% compared to married 6-10 years at 9% and married 6-10 years at 12% The findings indicate there was no relationship between marriage duration and PTSD severity in the control group (p=0.578), but in the experimental group, the relationship was statistically significant (p=0.011) and in the overall sample, the relationship was not statistically significant (p=0.730). The findings indicate that in the experimental group, marriage duration was related to PTSD severity among wives (p=0.011) but not among the husbands (p=0.584).

Table 7 Relationship Between Gender/Marriage Duration and PTSD Severity in the Control and Experimental Group

Group	**Gender**	**Marriage duration in years**	**PTSD Severity**		**Total**	**P.Chi-square**
			Mild	Moderate		
Experimental	Husbands	0-5	1(4)	1(4)	2(8)	.584
		6-10	3(12)	0(0)	3(12)	
		Above10	15(60)	5(20)	20(80)	
		Total	19(76)	6(24)	25(100)	
	Wives	6-10	0(0)	3(12)	3(12)	.000
		Above10	17(68)	4(16)	21(84)	
		Na		1(4)	1(4)	
		Total	17(68)	8(32)	25(100)	
	Total	0-5	1(2)	1(2)	2(4)	.011
		6-10	3(6)	3(6)	6(12)	
		Above10	32(64)	9(18)	41(82)	
		Na	0(0)	1(2)	1(2)	
		Total	36(72)	14(28)	50(100)	
Control	Husbands	0-5	1(4)	1(4)	2(8)	.532
		6-10	5(20)	3(12)	8(32)	
		Above 10	6(24)	9(36)	15(60)	
		Total	12(48)	13(52)	25(100)	
	Wives	0-5	2(8)	1(4)	3(12)	.650
		6-10	3(12)	1(4)	6(24)	
		Above 10	5(20)	5(20)	16(64)	
		Total	10(40)	7(28)	25(100)	
	Total	0-5yrs	3(6)	1(2)	5(10)	.578

		6-10yrs	8(16)	3(6)	14(28)	
		Above 10	11(22)	7(14)	31(62)	
		Total	22(44)	11(22)	50(100)	

Table 7 presents the cross-tabulations between gender, marriage duration and PTSD levels in the experimental and control group. Severe PTSD was reported among those in marriage for above 10 years (n=16). In the experimental group, increase in marriage duration is associated with development of PTSD was significant among the wives (p=0.00) based on the chi-square analysis; but not significant among the husbands. The findings indicated in the control group, marriage duration was not related to PTSD among the husbands (p=.532), among the wives (p=.650) and among both husbands and wives combined (p=.578)

IV. DISCUSSION

The first objective sought to establish the prevalence of PTSD among couples in selected churches in Nairobi. The prevalence of PTSD was established using PCL-5. Overall, the prevalence of PTSD was 42% (n=42, M=27.02, S.D =14.96). Majority of the respondents (58%) had mild PTSD, followed by those who had moderate PTSD (42%).

In the experimental group Mild PTSD was 28% (n=14,) and Moderate PTSD was 72% (n=36) (M=23.08, S.D=14.30). In the control group, the prevalence of Mild PTSD was 56% (n=28) and Moderate PTSD was 44% (n=22) (M= 30.96, S.D =14.70). The difference in the PTSD means between the control and experimental group were statistically significant (F=7.39, p=0.008). This means that the respondents in the control group had statistically higher PTSD scores compared to respondents in the experimental group. There were no statistically significant differences regarding PTSD prevalence based on age of respondents (p=.478), education levels (p=.228) and marriage duration (p= .672). This indicates that the prevalence of PTSD was not influenced by any of the socio demographic variables.

PTSD was more prevalent among women at 23% compared to men at 19%. This outcome is similar to other studies such as the National Epidemiologic Survey NESARC-III survey (2020), which included over 3,100 Veterans where lifetime prevalence was higher among female Veterans (13%) than male Veterans (6%). Prevalence of lifetime war-zone-related PTSD was 17% in men and 15% in women (Marmar,Haase, Purchia et al., 2015). This is parallel to other studies that show that although men experience traumatic events more often than women overall, studies have shown that women are 2 to 3 times more likely to develop PTSD after experiencing a traumatic event than men: about 10% to 12% in women compared with 5% to 6% in men (Kessler; 2017, Yazawa; 2022).

In Kenya, few studies carried out with regard to development of PTSD indicate that women are at a higher risk of developing PTSD (King`ori, 2021). Ethieno (2015) in a household survey in Kenya on prevalence of PTSD and its associated risk factors found higher rates of PTSD among women than men. Related studies by Ng, Stevenson, Kalapurakkel, et al. (2020) show that people living in sub-Saharan Africa (SSA) and document that he overall pooled prevalence of probable PTSD was 22% (95% CI 13%–32%) nonetheless there was no significant difference in the pooled prevalence of PTSD for men and women.

Regarding the socio demographic factors, variables were statistically insignificant except for marriage duration. Related studies in Nigerian study by Sekoni et al., (2021) revealed that none of the socio demographic characteristics considered (age, education, gender) were associated with PTSD. In the current study, a statistically significant difference in means was observed in ‘spouse’ (p=.049) and ‘marriage duration’ (p=.001) which shows that gender of spouse (husband or wife) and marriage duration had an influence in the severity of PTSD among the respondents. In the experimental group, marriage duration was related to PTSD severity among wives (p=0.011) but not among the husbands (p=0.584). In both husbands and wives combined, marriage duration was not related to PTSD severity (p=0.730).

Among wives, Mild (n=17), Moderate (n=3) and Extremely severe PTSD (n=1) were among those in marriage for 6-10 years but not among those in marriage for 0-5 years. Severe PTSD was among those in marriage for above 10 years (n=1). Thus, increase in marriage duration was associated with development of PTSD among the wives but not among the husbands. In the current study, the prevalence of PTSD was observed to be dominant in participants aged 22-45 at 26.2 % compared to aged 46 and above at 16.2%. Relevant research conducted in US by Lei et al., (2021) during the COVID -19 recorded a prevalence of 29.5% among younger people (< 30 age). The study revealed that in the < 30 age group PTSD was significantly higher, as compared to the 40- 45 age group (Lei et al., 2021).

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