Correlates of Post-Traumatic Stress Disorder Diagnosis among Rape Survivors: Results and Implications of a South African study

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Abstract

This study aimed to describe factors associated with the experience of **Post-Traumatic Stress Disorder** (PTSD) among rape survivors, Participants were female survivors of rape with a treatment center in South Africa (Blacks =85% and 15% coloureds population, age range =18 to 55 years). Data collection was done through interviewing all rape survivors who agreed to participate in this study using PDS-5 PTSD diagnostic tool. Descriptive statistics, chi-square, phi-crammer and regression analysis were used to determine the relationship of PTSD and the demographic data .About 74.5% of rape survivors had high PSTD. PSTD symptoms were most elevated among those with high religiosity only among all the demographics that were tested with PTSD.

Keywords: Rape, Prevalence of PTSD, raped woman or survivors, South Africa

Introduction

According to the World Health Organisation (WHO) (2016), approximately 35% of women worldwide experience sexual assault or rape in their lifetime. The experience of rape is a strong predictor of Post-Traumatic Stress Disorders (Littleton, Buck, Rosman & Grills-Taquechel, 2012; Edwards, 2005; Ullman, Filipas, Townsend and Starzyinki (2008). PTSD is defined as a mental health condition that's elicited by a petrifying incident, whichever experiencing it or witnessing it (Osei-Bonsu, Bolton, Stirman, S Eisen, Herz & Pellowe, 2017). Symptoms of PTSD may include flashbacks, nightmares and severe anxiety, as well as uncontrollable thoughts about the event (Osei-Bonsu et al.,2017).Untreated PTSD Post- is associated with long-term morbidity, mortality, economic burden and impairment in occupation, social functioning, depression, substance abuse and other risks to health (Zinzow, Resnick, McCauley, Amstadter, Ruggiero & Kilpatrick, 2010).

In rape survivors, PTSD typically manifests after six weeks, impairing the psychological functioning of survivors (Cassano & Fava, 2002). About 65- 81% of the survivors in the USA and the UK reported with PTSD post rape experiences (Kilcommuns, Morrison & Lobban, 2008; Ullman et al., 2008). Surprisingly, a South African study reported about 23.3 % of rape survivors with PTSD post rape experiences (Nöthling, Lammers, Martin & Seedat, 2015). It is unclear as to the wide difference in self-reported PTSD symptoms between the Western and South African settings.

Survivors of rape experience can be from any social class or education background, although a greater proportion of rape survivors may be from violence prone lower socio-economic status neighbourhoods (Ssenyonga, Owens & Olema 2012).Survivors of rape from deprived

communities also are less likely to report having been victimized from fear of retaliation or being disbelieved (Dosekun 2007). Moreover, social services in low-income neighbourhoods may not prioritize sexual health safety so that many rape survivors may be discouraged from reporting or seeking treatment care. This study aimed to explore factors associated with PTSD among rape survivors with a treatment center in the developing country of South Africa. We sought to address the following questions: what is the prevalence of PTSD among rape survivors consulted in TCCs of the NWP of SA?

What is the relationship between PTSD and the demographic data among rape survivors consulted in TCCs of the NWP of SA?

Method

Participants and setting

Participants were 98 of 137 rape survivors attending a treatment center in the North West Province of South Africa (see Table 1). Their age range was from 18 years to 55 years. Sixty-five percent of the survivors who participated in this study were unmarried. About 48% of the survivors had less than high school education and 71% of them were unemployed. Eighty-five percent of the survivors self-reported to practice Christianity whereas 55% self-identified a traditionalist in culture.

Table 1. Demographic information

Characteristics	Frequency (n=98)	Percentages (%)
Sociodemographic:		
Age		
From age 18 to age 30	72	73
From age 31 to age 43	18	18.4
From age 44 to age 55	8	8.2
Ethnicity		
Blacks	85	85%
Coloureds	15	15%
Marital Status		
Never married	64	65%
Married	34	35%
Level of Education		
Less than matric	47	48%
Matric	36	38%
Diploma/Degree	15	10%
Work Status		
Unemployed	70	71%
Employment	38	29%
Religion		
Christian	85	85%
Muslim or other	15	15%
When was rape reported		
At night	35	36%
During the day	63	64%
Importance of Religion		
Not at all important	24	25%
Somewhat important	32	33%
Very important	42	42%
Cultural believe system		
Yes	54	55%
No	44	45%
Importance of culture		
Not at all	53	54%
Somewhat important	21	24%
Very important	24	25%

Measures

The participants completed the Post Traumatic Diagnostic Scale -5 (PDS-5; Foa, McLean, Zang, Zhong, Powers, Kauffman & Knowles, 2016). They also self-reported their demographics including ethnicity, age, marital status, education, work status, religion, rape report and cultural believe system. The PDS-5 comprises of 24 items to measure survivor experiences of unwanted upsetting memories, bad dreams or nightmares, and perceptions of reliving the traumatic event or feeling as if it were actually happening. The items were scored on a 4- point Likert scale from 0=only one time, 1=once in a while, 2=half of the time, 3=almost always. The reliability of scores from the PDS-5from a previous study was .95 (Foa et al., 2016). In the present study, scores from the PDS-5 achieved a reliability of 0.89

Procedure

The study was approved by the School of Nursing Science Board and the Ethics Committee of the Faculty of Agriculture, Science and Technology (FAST) of the North-West University (NWU; # NWU-0477-17-A9). The Department of Health (DoH) in the also approved of the study. Participants consented for study with assurances that their participation in the study was voluntarily and that they had the right to terminate their participation in the study at any stage without any penalty or discrimination.

Data analysis

We utilized the Statistical Package for Social Science (SPSS) (PASW statistical version 25) for the data analysis. First, we computed descriptive statistics to summarize and describe the prevalence of PTSD among survivors of post rape experiences by demographics. Second, we

applied the Chi-square (x^2) test Phi Cramer's (φ_c) to measure the associations between categorical or nominal variables in relation to PTSD diagnosis. Finally, we computed regression analysis to predict PSTD severity from socio-demographic variables.

Results

The results of this study revealed that 74.5% of rape survivors presented PTSD post rape experiences. The prevalence of PTSD diagnosis in this study was comparable to that reported in the UK and the USA at 65-81% (Kilcommons et al., 2008, Ullman et al., 2008 and much higher than the 23.3percentage of prevalence of PTSD diagnosis in one of the studies conducted in Cape Town, South Africa (Nöthling et al., 2015).

As indicated in Table 2, there were no significant differences in PTSD experience by age, marital status, and level of education; with most of the survivors having less than matric, diagnosed with PTSD ($p > 0.05$). Similarly, there was no difference in PSTD diagnosis by religion, work status, or cultural orientation.

These findings are contrary to those by Nagel, Matsuo, McIntyre & Morrison (2005); Campbell, Dworkin and Cabral (2009) and Ben-Ezra, Sternberg, Berkley, Eldar, Glidai & Shrira (2010) who reported prevalent PTSD diagnosis by level of education, marital status, employment status as well as both religious and cultural belief systems. Nonetheless, those with religiosity self-reported with higher PTSD symptoms.

Table 2. PTSD cross tabulations with religion

Demographic Information	PTSD Score		Significance value(p>.001)or (p<.001)	Symmetric measures
Sociodemographic:	*No PTSD:*	*Having PTSD:*	*X^2 (P-value):*	*Phi Cramer's V:*
Age			1.9600 [a] (.375)	.141 (.375)
From age 18 to age 30	21%	51%		
From age 31 to age 43	3%	15%		
From age 44 to age 55	1%	7%		
Marital Status			.107 [a] (.743)	.033 (.748)
Never married	17%	47%		
Married	8%	26%		
Level of Education			2.171 [a] (.338)	.149 (.338)
Less than matric	9%	38%		
Matric	12%	24%		
Diploma/Degree	4%	11%		
Work Status			.193 [a] (.660)	-.044 (.660)
Unemployed	17%	53%		
Employed	8%	20%		
The time for reporting s the rape			1.004 [a] (.316)	-.101 (316)
During the day	63	64%		
At night	35	36%		
Religion			.283 [a] (.595)	.054 (.595)
Christian	22%	61%		
Muslim or other	3%	12%		
Importance of religion			10.143[a] (.006)	.322 (.006)
Not all important	12%	12%		
Somewhat important	5%	27%		
Very important	8%	34%		
Cultural believe system			.011 [a] (.917)	.011 (.917)
Yes	14%	40%		
No	11%	33%		
Importance of culture			2.256 [a] (.324)	.152 (.324)
Not at all important	12%	41%		
Somewhat important	8%	13%		
Very important	5%	19%		

As indicated in Table 3, following regression analysis, the importance of religion was a significant predictor of PTSD among rape survivors with $\beta = 1.35$, $t = 2.99$, $p < 0.004$. Additionally, religion showed a significance of proportion of variance with adjusted r2 = 0.129, F = 0.003n, p < 0.003n. In this regard, it was only 34% of rape survivors who saw religion as very important in their lives, who were mostly affected by PTSD symptoms.

Table 3. Regression analysis of PTSD and the demographic data such as the importance of religion and the time the rape was reported at the TCCs

Model	**R**	**R^2**	**Adjusted R^2**	**SE**		
	PTSD score > 47 (Selected)				**F**	**Sig.**
12	.359[l]	.129	.108	.331	**.003[n]**	**.003[n]**

Coefficients[a,b]

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
12	(Constant)	1.732	.149		11.596	.000
	Importance of religion	.135	.045	**.308**	**2.991**	**.004**
	Time rape occurred	-.125	.075	-.173	-1.675	.098

Model 12 Predictors : Constant, importance of religion and rape reported be it during the day or at night

Model 12 (a). Dependent Variable: PTSD score

Model 12 (b). Selecting only cases for which PTSD > 47

Ben-Ezra et al. (2010) and Herman (1992) stated that the effects of rape changes how one believes in God, resulting in a lower religious belief system because survivors are most likely to feel abandoned from the faith they had in God. This could mean that, even if the survivors of this study see religion as important in their lives, they can still be prone to post rape complications such as PTSD because of the hope they had in God. In contrast to this, Calhoun and Tedeschi (1998) reported that, in some cases, traumatic events are likely to strengthen one's belief system and therefore prevent consequences that may result from rape.

Limitations

The study only assessed prevalence of PTSD diagnoses in one district of South Africa and therefore the results of this study cannot be generalized to other regions of the country. The other limitation is that sample size was small so that the findings may be unreliable.

Conclusion

In conclusion, PTSD post rape experiences in a reality for the majority of survivors. Furthermore, those believing strongly in a religious belief system are at elevated risk for PTSD diagnosis, calling for the need to screen for religiosity in the treatment of rape survivors.

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