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Quality of life and co-occurrence of health problems in poor people

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Abstract

The influence of quality of life in the co-occurrence between health problems and posttraumatic stress disorder (PTSD) was analyzed. The participants were 93 individuals in conditions of forced displacement in Colombia. The measure of the quality of life was composed of the units of consumption and the modified index of relative inequality. Other measures comprised the Davidson Trauma Scale and the General Health Questionnaire. In a structural equation model, it was observed that increasing quality of life reduces co-occurrence, and increasing the scores of PTSD augments co-occurrence, while other health problems have no influence in co-occurrence.

Keywords: Quality of life, poverty, health, pottraumatic stress disorder, co-occurrence.

1. Introduction

Being healthy requires, among other things, to have a certain quality of life; according to this, if you do not have a minimum of economic resources it is more difficult to have health (Rosenfield, 1991); thus, economic disparities, promote the morbidity and mortality among low-income classes (Pearlin, Schieman, Fazio, & Meersman, 2005). The conflicts lead many people to poverty, due to the increased number of displaced persons (Contat, 2001; Gaviria, et al., 2002); Colombia has more than 3,400,000 people in forced displacement (Organización Panamericana de la Salud, Oficina Regional de la Organization Mundial de la Salud, & Programa de Emergencias y Desastres [OPS, OMS, & PED], 2005), which has caused social and family disruptions, and destroyed educational opportunities and access to basic needs (Deng, 1998), resulted in unemployment and low educational level (Castillo, 2005) and led displaced persons to a situation of poverty.

The events associated with displacement, cause personal or family crisis (Rodríguez, 2006) affecting the health of the population (Cáceres, et al., 2001; Camilo, 2000; Naranjo, 2004; Sacipa, 2003;) and

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especially the mental health (Mogollón, Vázquez, & García, 2003) in poor and displaced people (Médicos Sin Fronteras [MSF], 2006). This increases the morbidity of psychological problems (Gonzáles, 2002; Martín & Ochotorena, 2004) and is associated with posttraumatic stress disorder (PTSD) (Palacios & Heinze, 2002; Santacruz & Ardila, 2002; Yehuda, 2002), being the co-occurrence, or existence of more than one disorder, common in PTSD (Palacios & Heinze, 2002). The displacement causes PTSD (Prieto, 2002) together with anxiety and mood problems (Falla, Chávez, & Molano, 2005); in the displaced population in Colombia, there is a worsening of living conditions (Falla, et al, 2005), ie poverty and degradation of quality of life, along with PTSD, depression and anxiety, somatisation, eating disorders and difficulties at work (Sacipa, 2003), mourning and mood disorders (Alejo, 2005). Most municipalities in Colombia have no resources to care about basic needs and health for this population (Consultoría para los Derechos Humanos y el Desplazamiento [CODHES], 2006, p. 29), which accentuates their poverty and deteriorating health, making it necessary to meet their personal conditions (Schell, Marshall, & Jaycox, 2004) and needs (Mogollon et al., 2003). Thus, the aim of this study is to analyze the relationship between quality of life and the co-occurrence between PTSD and other health problems among the poor, considering the quality of life as a work area (Post, Witte, & Schrijvers, 1999) with different indicators.

2. Methods

2.1 Participants

The participants were 93 poor individuals in condition of forced displacement without receiving any psychosocial intervention and registered in the program of the Presidential Agency for Social Action and International Cooperation, in the department of Boyacá, Colombia. These persons had no source of income, except for humanitarian aid from others.

2.2 Measures

From the registration data the socioeconomic characteristics of number of people in household and family relationship, marital status (single, divorced or widowed, married), occupation (housewife, unemployed, different occupations), education (primary, secondary, technical, university), age and sex of each participant were obtained. With these features, family consumer units (Prieto, 1982), and the relative inequality index (Bacallao, 2007), which was modified for this study, were calculated; both of them were considered as indicators of quality of life.

Participants completed the 28-item General Health Questionnaire (GHQ-28) (Goldberg, 1978). Its reliability coefficient, by Cronbach's alpha, is .89, and the criterion validity is .92 with the Beck Depression Questionnaire, and .85 with the Spielberger´s Inventory of Trait-State Anxiety (Garcia, 1999). It also has validity coefficients between .32 and .53, for the different scales and the total score of the questionnaire, with the Present State Examination, 80% sensitivity and 60% specificity (Retolaza, et al., 1993). It has 4 dimensions (somatic symptoms, anxiety and insomnia, social dysfunction, depression), allowing to establish the existence of mental health problems, through a cut-off point.

The Davidson Trauma Scale (DTS) (Davidson, 1996) was also completed, which assesses symptoms of PTSD. The scale has items related to symptoms of intrusion, avoidance and hyper-reactivation. For all of them it assesses the frequency and severity. Internal consistency, by Crobanch´s □, is .99 for the total scale, .97 for the component of frequency, and .98 for the component of severity, test-retest reliability is .86 (Bobes, Bousoño, Calcedo-Barba, & Gonzáles, 2000). Using a cut-off point, the instrument allows for determining the existence of PTSD.

2.3 Procedure

DTS and GHQ-28 instruments were applied to each participant, as they came into contact with the office of Social Action of the Territorial Unit of Boyacá, and voluntarily accepted taking part of the investigation.

3. Results

Most participants were women (n = 69, 74.2%), housewives (n = 46, 49.5%), with an average age of 37.72 years old (*SD* = 11,198), and married or living with a partner (n = 61, 65.6%). The participants lived mostly with three children (n = 29, 31.2%) and, on average, with five people (n = 20, 21.5%). The 59.1% of participants (n = 55) had completed primary school, only 3.2% (n = 3) had a university education.

Table 1 shows that in the DTS, the highest average was obtained for avoidance symptoms (18.87, *SD* = 14.47), with an average for the total scale of 48.23 (*SD* = 34.72); in the GHQ-28, the highest average score was obtained on symptoms of anxiety and insomnia (3.42, *SD* = 2.54), with an average of 10.22 (*SD* = 6.94) in the total of the scale. Using the cut-off points of questionnaires, the existence of PTSD and mental health problems were established; as shown in Table 1, for the case of GHQ-28, 74.2% (n = 69) of the participants had mental problems, in turn, according to the DTS, 50.5% (n = 47) had PTSD. To observe whether there was co-occurrence, we obtained the coefficient of contingency between the existence of health problems and the existence of PTSD. According to Table 1, 44 participants had both PTSD and other mental problems, while 49 showed no co-occurrence.

Table 1. Descriptive data of the DTS and the GHQ-28, and existence of co-occurrence

PTSD (DTS)			Health Problems (GHQ-28)			Co-occurrence between PTSD and Health problems				
ensions	$\bar{X}$	*SD*	Dimensions	$\bar{X}$	*SD*			Coefficient of contingency	*p*	
sion	13.22	11.14	Somatic	3.39	2.35			.409	.000	
dance	18.87	14.47	Anxiety and Insomnia	3.42	2.54			PTSD		
er-reactiv.	16.14	12.01	Social dysfunc.	1.75	1.94			No	Yes	T
l	48.23	34.72	Depression	1.66	1.95	Health problems	No	21	3	
			Total	10.22	6.94		Yes	25	44	
D	**n**	**%**	**Health Problems**	**n**	**%**					
	46	49.5	No	24	25.8					
	47	50.5	Yes	69	74.2					
l	93	100.0	**Total**	93	100.0					

The quality of life indicators were extracted from the index of wellbeing and from the index of relative inequality. The wellbeing index is calculated based on family income, divided by consumption units; each unit is a specific score assigned to each family member, depending on its age, gender and kinship (Prieto, 1982); participants in our study had no income, so only the sum of the units of consumption of the household of each participant was used. The index of relative inequality is calculated by a regression of socioeconomic variables on health status, and dividing the regression coefficients by the health status (Bacallao, 2007); on this occasion, we applied a regression of marital status, occupation and educational level on the co-occurrence, obtaining a coefficient of .051 for the occupation, of -.20 for marital status, and of .11 for education; but since the variable co-occurrence has two states, existence or not of co-occurrence (1 or 0), to avoid reducing the range of the index of relative inequality, the co-occurrence was not divided between the coefficients of regression, but instead we used the regression formula, assigning each participant the outcome. These indicators, together with

data from the GHQ-28, DTS, and the co-occurrence variable, were included in a structural equation model (Figure 1).

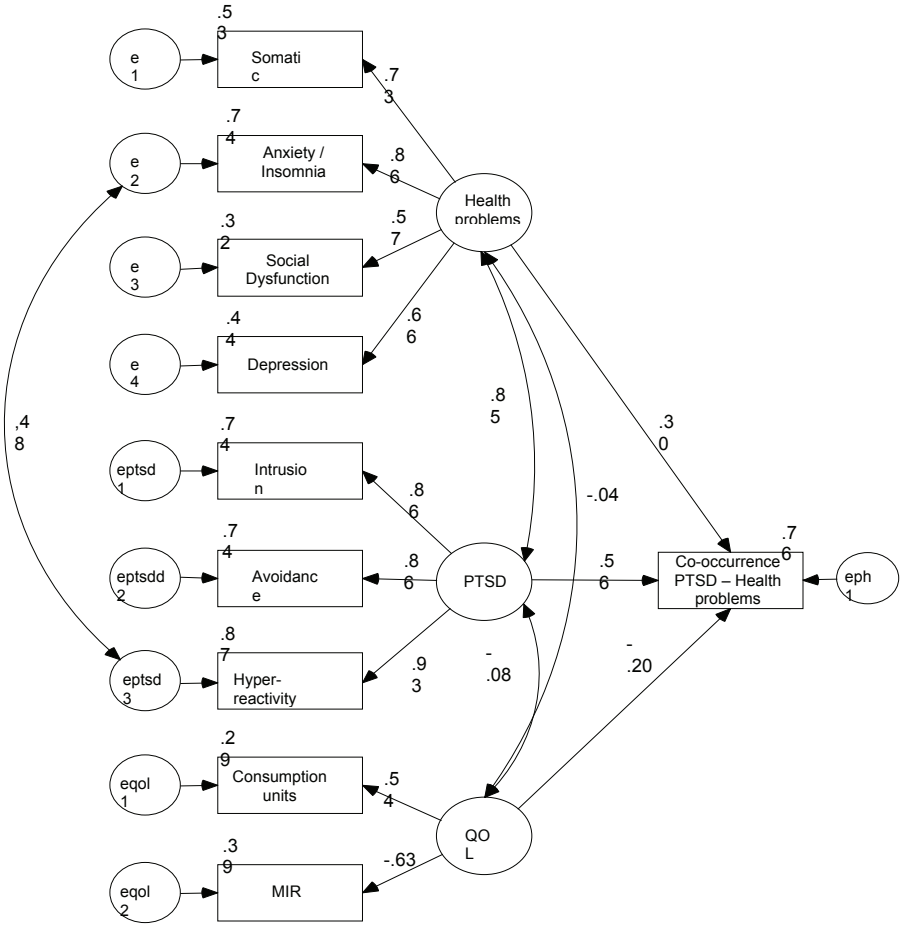

Figure 1. Structural equation model of the co-occurrence between PTSD (DTS) and health problems (GHQ-28), the model includes the index of consumption units and the modified index of relative inequality (MIRI), as QOL measures.

The model was significant (□2: 29.529, *p*: .438, □2 / *df*: 1.018, GFI: .939, AGFI: .883, RMSEA: .014, explained variance: .76), and quality of life indicators (consumption units and modified index of relative inequality) were relevant in predicting the co-occurrence (standardized coefficient: -.20, *p*: .049), as PTSD symptoms (DTS) (standardized coefficient: .56, *p*: .000), while health problems (GHQ-28) were not significant (standardized coefficient of .30, *p*: .068). Moreover, not significant correlation between QOL and health problems (*r*: -. 04, *p*: .834) and between QOL and PTSD (*r*: -.08, *p*: .589) were found, while there was a significant correlation between health problems and PTSD (*r*: .85, *p*: .000). An unwanted aspect in the model, is the significant correlation (*r*: .48, *p*: .011) between the e2 and eptsd3 residual variables, which may be due to the fact that hyper-reactivity is usually found among the symptoms of anxiety. This model had a better fit than a similar one that did not include quality of life; this second model was also significant (□2: 19.647, *p*: .293, □2 / *df*: 1.156, GFI: .947, AGFI: .888, RMSEA: .041, explained variance: .72), resulting that the health problems (GHQ-28) were not significant in the co-occurrence (standardized coefficient of .28, *p*: .090) while PTSD was significant in the co-occurrence (standardized coefficient of .60, *p*: .000); this model yielded similar coefficients to the previous model.

Thus, the inclusion of quality of life influences the reduction of co-occurrence, without altering the structure of relationships of the health problems, PTSD, and co-occurrence.

4. Discussion and conclusions

The socioeconomic characteristics of the participants in the study are consistent with those reported in other studies, with poor and displaced people, about sex, age, occupation, education, marital status and number of family members (see Amnesty International, 2004; Castillo, 2005). There was evidence of PTSD in 50.5% of the participants, although the percentage of subjects without PTSD (49.5%) is similar, indicating that not all poor people who were displaced, suffer from this problem but its occurrence depends on other variables (Alarcon, 2002; Tobal, González, & López, 2000; Yeager & Roberts, 2003): 74.2% of the participants reported other medical conditions (GHQ-28), showing that the mental health of these people is affected (see Mollica, et al., 1999, MSF, 2006). The findings of our study partially confirmed the existence of comorbidity of PTSD with other mental disorders (Table 1) (see Keane & Wolfe, 1990; Prieto, 2002; Rodriguez, 2006; Sacipa, 2003); on the other hand, the high significant correlation between PTSD and health status (Figure 1) points out that PTSD is a risk factor for other health problems (Taboada, 1998), or that health problems are a factor risk for PTSD (Kessler, 2000), among other explanations.

Cconsumption units and the modified index of relative inequality, grouped into the construct of quality of life, were significant. However, in this population the level of consumption is very low, so the increase in household members may, in fact, lead to an increase of income. For the modified index of relative inequality, the change in marital status (i.e. married vs. single) reduces the co-occurrence, the increase in educational level (i.e. college vs. high school) increases the co-occurrence, while employment (i.e. employed vs. unemployed) has little effect, as participants had no formal employment; however, the interpretation of these indicators should be made jointly (Bacallao, et al., 2002), and their overall effect results in a reduction of the co-occurrence. Thus, quality of life reduces the co-occurrence through the management of its specific aspects, introducing a new explanatory factor and new possibilities for intervention. An important aspect of the model is that introducing the variable quality of life does not alter the structure of relationships between the concepts of health, although the co-occurrence is reduced.

According to the above, counseling, guidance, case management and social reintegration, as strategies for health management, should be directed toward changing those socioeconomic conditions that can be modified, to reduce co-occurrence in poor people.

Finally, problems encountered in this study relate primarily to the selection of participants, all of whom had similar socioeconomic and displacement conditions, which allowed characterizing a particular group, but reduced the range of the variables, being necessary to diversify sample.

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