Poverty and Mental Health in Three Inner City Communities in Accra, Ghana

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ABSTRACT

Despite the well-known relationship between poverty and mental health, the rapid urbanization and growth of slums in sub-Saharan Africa, and the increasing appreciation that there is a high prevalence of common mental health problems in countries in the region such as Ghana, little is known about mental well-being in urban poor communities, and the social, economic, environmental and demographic risk factors associated with these problems in sub-Saharan Africa. Using data from a cross-sectional survey (EDULINK 2011) conducted in three urban poor communities of Accra—that distinguish one slum community from two non-slum urban poor ones—this study, uses the Kessler scale, to show that psychological distress is substantial across the sexes, with a 55% general prevalence of "very high" psychological distress. An analysis of variance suggests that the poorest community has the highest levels of social capital, but the lowest odds of "poor" mental health, suggesting that social capital may attenuate the negative effect of poverty in that community. A multinomial logistic regression analysis reveals that social capital plays a key role in attenuating the negative effect of poverty on mental health. Indeed, a somewhat surprising finding was that, with controls for a host of predictor variables, the poorest of the three communities also had the highest social capital, and the lowest odds of individuals having "poor" mental health. The implications for plausible interventions are discussed.

Introduction

Health in urban communities remains a global concern, and even more so in developing countries and sub-Saharan Africa, the last continent to undergo its urban transition, and that amid much more complex socio political circumstances than experienced by other continents. The result of sub-Saharan Africa's increasing rate of urbanisation has been the consequent growth of slum populations with unhealthy environments in cities across the continent (Zulu *et al.*, 2002; Dodoo *et al*., 2007; Agyei-Mensah and de-Graft Aikins, 2010; Gruebner *et al.*, 2012). The region's urbanization has produced negative effects on both the physical health and mental health of the urban poor (de-Graft Aikins and Ofori-Atta, 2007). Unfortunately, the mental health concerns—although an integral part of daily life and the well-being of human beings (WHO, 2003)—tend to be overtaken by other health problems, especially in the rapidly urbanizing megacities of developing countries (Gruebner *et al.*, 2012). This is because the characteristics of slum dwelling such as poverty, joblessness, poor housing and sanitation (UN-Habitat, 2012), are the same factors posited to adversely affect physical health.

Numerous studies attribute adverse mental health to a variety of biological and psychological factors, more so than to socio-economic ones. Consequently, much of the literature on mental health has been based on institutional data only, to the neglect of non-institutional or population based data; thus, studies have remained small in scale, leading to the underestimation of cases (de Menil *et al.*, 2012). Common mental disorders such as depression and anxiety have been found to be more prevalent at the community level, where 'normal looking' people suffer an even greater burden than is projected by clinical cases or mentally-ill stereotypes (Prince *et al.*, 2007; Patel, 2010). Social and demographic factors are increasingly being found to have very potent influences on mental health in the general population (Harpham *et al*, 2005). For instance, a World Health Organization study found higher depression

and anxiety disorder rates among individuals with the lowest income and education in seven African countries (WHO-ICPE, 2000). Other studies have also reported that the social factors that influence physical and mental health include ethnicity, religion, social support, marital status, economic status, age, education, employment status, and gender (Ellison *et al.*, 2009; Lyons and Yilmazer, 2005; Suhail and Chaudhry, 2004).

Studies of stressful events have indicated that one of the most effective mechanisms via which individuals cope with concerns such as poverty, is by tapping their social capital, which serves as an insulating factor against the psychological distress that results from those stressful circumstances (Pickens *et al.*, 1995; Lowe *et al.*, 2010). Yet, with the few existing studies emanating from developed country settings it is not clear how, in African cultures—which like other collectivist ones, place considerable emphasis on social relationships—social capital might mitigate the stresses of life in the very poor contexts of emerging slums. Most African cultural values revolve around social relationships, which are reflected in social structures such as the clan, ethnic group, the extended family, and other multifaceted networks of social relationships (Belgrave and Allison 2010; Gyekye, 1996). Clearly, these networks suggest strong social capital whose impact on stressful situation associated with poverty begs clarification.

Data and Methods

This study was carried out with secondary data from the 2011 EDULINK Wave II Survey on population, health and poverty, in urban poor Accra: James Town, Ussher Town (indigenous urban poor communities) and Agbogbloshie (migrant slum). The data were collected from women and men aged 15-49 and 15-59 years, respectively. A sample of 952 respondents was derived, after filtering out the 22 cases of respondents who did not answer the questions on mental health.

Using a validated mental health scale called the Kessler Psychological Distress scale, the prevalence of non-specific psychological disorders was determined and respondents were classified on a continuum from having “no distress” to “very high” levels of psychological distress. The WHO reference measure of absolute poverty, represented as a continuous variable, was the main predictor of mental health in this study; higher scores indicated increasing deprivation of basic needs (i.e., food, shelter, safe source of water, improved sanitation and education).

Trivariate analyses to explore whether and how social capital mitigates the impact of poverty on mental health began with an Analysis of Variance (ANOVA). The analysis assessed how poverty, social capital, and mental health vary across residential contexts. Further to this, a series of sequential, multinomial logistic regressions was carried out to evaluate the effect of poverty on mental health; a bivariate regression of mental health on poverty was followed by a trivariate regression of further included social capital as an individual variable, and thereby allowed insight into how the latter mitigated the effect of poverty (by comparing the poverty coefficient in the binary and trivariate regressions). A third regression model incorporated the background characteristics of respondents, including age, sex, marital status, ethnicity, highest level of educational attainment, religious affiliation, locality of residence, type of occupation engaged in, and self-rated physical health status, were described using frequency distributions. Further regressions explored whether the effects of poverty and social capital varied across location, by assessing how poverty and community on the one hand, and social capital and community on the other hand affect mental health.

Results

A substantial portion of the urban poor population were found to suffer the burden of very high and high levels of psychological distress, with a general prevalence of 55% across both sexes, 39% prevalence of moderate psychological distress, 5% prevalence of low psychological distress, whereas less than 1% reported no psychological distress. The prevalence of psychological distress was highest among those aged 35 to 49 years, the males, residents of Ussher Town, those who had never married, those who had higher education, the Ga-Adangmes (indigenes), the Christians and those who self-reported poor health status. Model 1 shows the independent effect of poverty on mental health without controls. Poverty is evidenced to have a clear impact on very high psychological distress, as compared to low levels of distress. On the other hand, it does not significantly discriminate between high, moderate and low levels. Poverty is associated with an increase in the odds of having very high levels of mental distress, relative to having low mental distress. Model 2 goes on to assess how social capital could moderate the impact of poverty, given the identified effect of poverty on mental health. However, the effect of poverty on mental health does not show any variation from the previous model. What is rather evidenced is the important role social capital seems to play independently in protecting against adverse mental health outcomes. Increasing social capital is associated with a decrease in the odds of having very high, high and moderate levels of mental distress, relative to having low mental distress. A third model shows that, the effect of poverty on mental health reduces, although it remains significant, when socioeconomic and demographic variables are controlled. In a fourth model which explores how poverty and community co-vary to influence mental health, the interaction is seen not have a significant influence on mental health experience in the localities of residence. Studies by Dodoo *et al*. (2007) and Zulu *et al*. (2002) have alluded that slum residents are at higher risk of poorer health than non-slum residents. Interestingly, results shown in Table 1 indicate that the slum is not characteristic of worse mental health status, as was previously thought in this study.

Future Directions

In the next few weeks, further analysis of contextual features by way of a three-way interaction of poverty, social capital and locality effects, will examine whether the influence of poverty (on mental health) and the hypothesized mitigating effect of social capital on poverty vary across the three communities. In so doing, we can speak, even if indirectly, to the question of whether there is a qualitative difference in the impact of slum poverty and poverty in non-slum settings, where factors such as social ties and trust levels are presumably greater.

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Table 1 Multinomial Logistic Regression Models for the Independent Effect of Poverty on Mental Health, net of Social Capital and Socio-demographic Factors.

VARIABLE	VERY HIGH				HIGH				MODERATE			
	MODEL 1 EXP β	MODEL 2 EXPβ	MODEL 3 EXPβ	MODEL 4 EXPβ	MODEL 1 EXPβ	MODEL 2 EXPβ	MODEL 3 EXPβ	MODEL 4 EXPβ	MODEL 1 EXP β	MODEL 2 EXP β	MODEL 3 EXP β	MODEL 4 EXPβ
Poverty	1.551**	1.545*	1.419**	0.705	1.148	1.013	1.004*	0.940	1.035*	1.035**	1.017**	0.773
Social Capital		0.93	0.936***	1.066		0.830	0.976**	1.024		0.548	0.987**	1.014
Age												
20-34			0.958*	0.943			1.067	1.072			1.624	1.624
35-49			3.130**	3.193			1.330	1.299			2.554	2.601
50-59			2.282	2.275			3.406**	3.406			2.179	2.182
15-19 (Ref)			1.000	.			1.000	.			1.000	.
Sex												
Male			0.868	1.023			0.646	0.645			0.642	0.641
Female (Ref)			1.000	.			1.000	.			1.000	
Marital status												
In union			0.896	2.032			1.071	1.063			1.044	1.034
Formerly married			1.850	0.903			0.618	0.615			0.528	0.523
Never mar. (Ref)			1.000	.			1.000	.			1.000	.
Ethnicity												
Ga			0.827	0.839			0.873	0.878			0.304	0.622
Others (Ref)			1.000	.			1.000	.			1.000	.
Occupation												
Formal			0.896***	18.198			1.045	8.981			1.432*	5.989
Informal			1.850**	2.480			0.863	2.621			1.368*	1.963
No employment			1.000	.			1.000	.			1.000	.
Locality												
Ussher Town			0.896*	1.343			1.045*	0.887			1.432**	1.299
James Town			1.850**	1.434			0.863*	1.114			1.368	0.945
Agbogbloshie (Ref)			1.000	.			1.000	.			1.000	.
Self-rated health												
Unhealthy			4.035*	3.909			2.043*	2.056			1.296	1.293
somewhat healthy			1.291	1.305			1.809*	0.818			1.936	0.923
very healthy			1.000	.			1.000	.			1.000	.
Education												
Primary			5.588	5.972			2.084	2.061			1.839	1.761
Middle/JHS			4.820	5.415			2.081	2.070			1.220	1.138
Sec. and Higher			9.307*	9.201			3.764**	3.745			1.925	1.833
No education (Ref)			1.000	.			1.000	.			1.000	.
Religion												
None			0.765	0.778			0.480	0.477			1.545	1.496
Christian			1.143	1.177			1.024	1.025			1.348	1.319
Traditional			.940	1.197			1.739	1.752			0.848	0.785
Muslim (Ref)			1.000	.			1.000	.			1.000	.
Interaction 1				0.768				1.205				1.086
Interaction 2				1.159				1.030				1.491

Model 1 Adjusted R^2 = 0.008 (Poverty & Mental health) Model 2 Adjusted R^2= 0.017 (Poverty, Social capital & Mental health) Model 3 Adjusted R^2=0.141 (Poverty, SC, Controls & MH) Model 4 Adjusted R^2=0.142 (Poverty, SC, Controls & MH with poverty-locality interaction effects)