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Mental health problems of street children in residential care in Zambia: Special focus on prediction of psychiatric conditions in street children

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This study aims to find out mental health problems and examine their role in prediction of psychiatric conditions in street children in residential care. Five (5) street children residential centres in Lusaka District, as well as a cross-section of street children (74) in residential care aged between 7 and 17 years were used for this study. Overall, 74 (68 males and 6 females) children in residential care were at risk of having a mental health problem. Forty of them were at risk of having multiple mental health problems. The most frequent disorders were behavioural and emotional disorders, because 40.5% of the children and young people scored above average stress levels. The findings also indicated a strong correlation between co-morbidity and overall stress, rho = 68, n = 74, p < 0.001, that is, co-morbidity helps to explain 46% shared variance in respondent's scores on overall stress. There was a strong relationship between mental health problems and prediction of psychiatric conditions in street children. The results in this study illustrate that mental heath problems and levels of stress co-exist. Therefore, assessment of multiple mental health problems in providing mental health services to street children in residential care should be included in the management plan. In addition, multiple mental health problems indicate the complexities of mental health problems, an aspect that demands collaborative efforts from various stakeholders involved in child care systems.

Key words: Co-morbidity, mental-health-problems, stress-among-street-children, residential-care.

INTRODUCTION

The number of children and adolescents living in Zambian residential care homes is approximately 2,500 (Department of Social Welfare Annual Report, 2009). Multiple risk factors such as poverty, broken homes, neglect, sexual and physical abuse, discontinued relationships, and genetic factors have an impact on the mental health of children and adolescents in residential and foster care (Richardson and Lelliot, 2003; Rutter, 1985; Newton, 1988). International prevalence rates for mental health problems/disorders in residential care for children and adolescents are estimated to be between 44 and 96%, with large studies reporting a prevalence of 60 to 70% (Schmid et al., 2008). In addition, research evidence indicates that a considerable number of this

group of children has multiple mental health problems/disorders (co-morbidity) and exhibit high levels of mental health needs and poorer functioning (McCann et al., 1996; Clark et al., 2005). In Zambia, however, research in the field of child mental health is limited. The few studies that have been conducted focus on mental illness or psychosis (Mayeya et al., 2004).

These studies reveal that the most common disorders are conduct (behavioral problems) and emotional problems. Further, the reviewed literature indicate that there is a relationship between multiple mental health problems (co-morbidity) and levels of mental health needs, that is, levels of stress and impact of mental health problems on children and young people in the care system.

The current study was conducted to explore the mental health problems amongst street children in residential care and to examine the relationship between multiple mental health problems (co-morbidity) and levels of stress which is an indicator of mental health need.

Hypothesis

The foregoing analysis of previous research studies led to the formation of the hypothesis that children and young people with mental health problems are more vulnerable to predictability of psychiatric conditions.

METHODOLOGY

Study design and sampling

This study was a cross-sectional survey which provided numeric or quantitative descriptions of mental health problems and needs amongst street children in residential care, with the resultant information being generalized to the population of this group of children. This study used a wide age range to enable the researcher capture different age groups of children and young people in care and to collect all the needed data at a single point in time, taking into consideration the fact that the study had a time limit.

A purposive sample of 74 children and young persons (68 males and 6 females) between the age of 7 and 17 was constructed from five different residential placements for street children in Lusaka. Information on the age of children was obtained from the registers in the identified centres. The number of females was smaller than that of males, because most of the centres visited mainly looked after male children. The researcher used purposive sampling, because some of the young persons were above 18 years and thus, could not qualify to part of the study, because they were not considered as children. The sample size was similar to that used in earlier studies (McCann et al., 1996; Mount et al., 2004; Stanley et al., 2005) and was considered adequate to reflect a range of mental health problems, while also fitting in the time-frame set for the research.

The centres were identified through the Lusaka District Social Welfare Office Directory for Child Care facilities. For each identified child, the key care worker [carer] (informant) most involved in delivery of care to the child was asked to complete a brief questionnaire (Strengths and Difficulties Questionnaire [SDQ]) to measure the child's mental health status. In addition to the questionnaire that was completed by key carers, older children (11 to 17) were required to give a self report using a similar questionnaire, though the wording was slightly different in order to have more reliable information. The researcher administered the self-rated SDQ to the children who could not read.

Participant information and consent form

This form was developed for the present study. This is a written information and consent form which stated the purpose of the study, the need for the participants' involvement, what their participation would entail and issues pertaining to ethics and confidentiality. The form also elicited information that the respondents had agreed to be part of the study. Prior to the administration of all parameters, the willingness of the subjects to participate in the study was ascertained and they were made to sign the consent form.

Instruments

DSQ

SDQ (Goodman, 1997, 2001) was used to collect data on children's behavioural and emotional problems resulting from stress levels in order to assess mental health and the levels of mental health need. SDQ is a brief behavioural questionnaire administered to parents/caregivers of 4 to 17 years old and to 11 to 17 years old themselves. It comprises 25 items (some positive others negative), with answers being rated on a 3-point scale. The SDQ provides total difficulties score (TDS) as well as 5 individual subscale scores of emotional problems, conduct problems, hyperactivity/inattention problems, peer relationship problems and pro-social behaviour. With the exception of the pro-social subscale, the sum of the other subscales generates the TDS.

Good reliability and validity of the SDQ has been well documented (Goodman, 1997, 1999, 2001; Goodman and Scott, 1999; Menon et al., 2008). Its limitations however have been found in its sensitivity in detecting specific phobias, separation anxiety and eating disorders, in comparison to individuals with conduct, hyperactivity and depressive disorders (Goodman, 2000).

Ethical considerations

The research gained ethical approval by the University of Zambia Research Ethics Committee. Informed written consent was obtained by all individuals participating in the study. Young people were debriefed and appreciated for their participation and cooperation and all the managers and staff (carers) that took part in the study for their contribution.

Anonymity codes were assigned to all participants to protect personal and organizational identity. All data obtained were kept under strict confidence. Questionnaires and consent forms were stored in a secured place.

Data analysis

The software, Statistical Package for Social Sciences (SPSS) was used to analyse quantitative data. Frequencies and percentages were used to describe the data, because the goal was to generalise the findings to a larger population of street children in residential care. Already existing computerised algorithms for predicting mental disorder were used to bring together information on symptoms and impact from the completed SDQs (Goodman et al., 2000). The
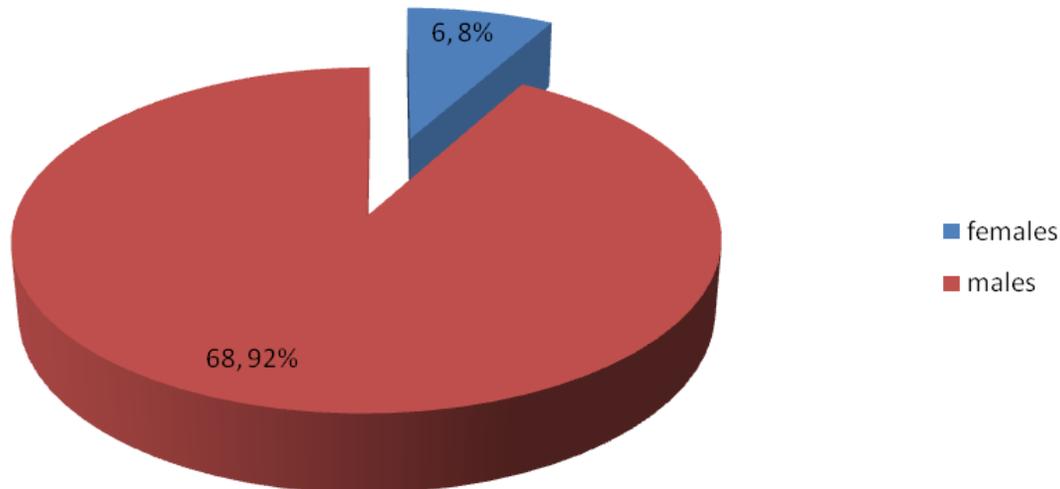
Figure 1. Sex distribution of the sample.

algorithms made separate predictions for three groups of disorders, namely, conduct-oppositional disorders, hyperactive/inattention disorders and anxiety-depressive disorders. Predictions of these three groups of disorders were combined to generate an overall prediction about the presence of a disorder. Correlation tests (Bivariate-Spearman Rank Order correlation and Partial Correlation) were used to test the research hypothesis, that is, children and young people with multiple mental problems (co-morbidity) have high levels of stress (mental health need). A partial correlation test was also performed to assess if age affected the relationship between co-morbidity and levels of stress.

SDQ was used to determine stress levels owing to the finding by Woodhead (2004) that children in a deplorable state are usually exposed to maltreatment and emotional abuse. This lack of nurturance and support from individuals who are normally expected to provide for them makes children develop distress which the SDQ infers from the manifestation of observed symptoms such as fear, loss of confidence, and feelings of worthlessness.

RESULTS

The sample size was 74 with an age range of 7 to 17 years, mean of 14 years (standard deviation (SD) = 2.69), median of 14 years, and mode of 17 years. As shown in Figure 1, the sample included 68 males (92%) and 6 females (8%).

Mental health problems

The findings of the present study according to the general diagnosis of mental health problems showed that in overall (combining the responses from the carers and the young person's), 74% of children and young people in residential care had a mental health problem. Findings from the young people's responses indicated that 41% had one mental health problem, with 35% having multiple problems (co-morbidity). On the other hand, findings from

the carers' responses indicated that 28% of the children and young people in residential care had one mental health problem whilst 45% had multiple (co-morbidity) problems. The results are as shown in Figure 2.

Specific mental health disorders

The results from the young people's responses showed that 40% of the young people where at risk of having a behavioural/conduct disorder. Thirty percent were in the medium risk category with 10% in the high risk category. Prediction for emotional disorder indicated 10% medium risk and 12% high risk, that is, 22% were at risk of having an emotional disorder. With regards to hyperactivity/concentration disorder only 8% of the young people were at risk of having a hyperactivity/concentration disorder and these were in the medium risk category.

Levels of stress

Overall for males and females, 14.5% (14 and 15%), [n = 74] of the children and young persons had very higher levels of stress, 10% (13 and 7%) had high levels of stress, 16.5% (18 and 15%) had slightly raised levels of stress, whilst the majority, 60% (56 and 64%) scored close to average (normal levels of stress).

Mental health problems in relation to mental health needs

As indicated in Table 1, the findings indicated a strong correlation between co-morbidity and overall stress, rho = 68, n = 74, p < 0.001, that is, co-morbidity helps to explain
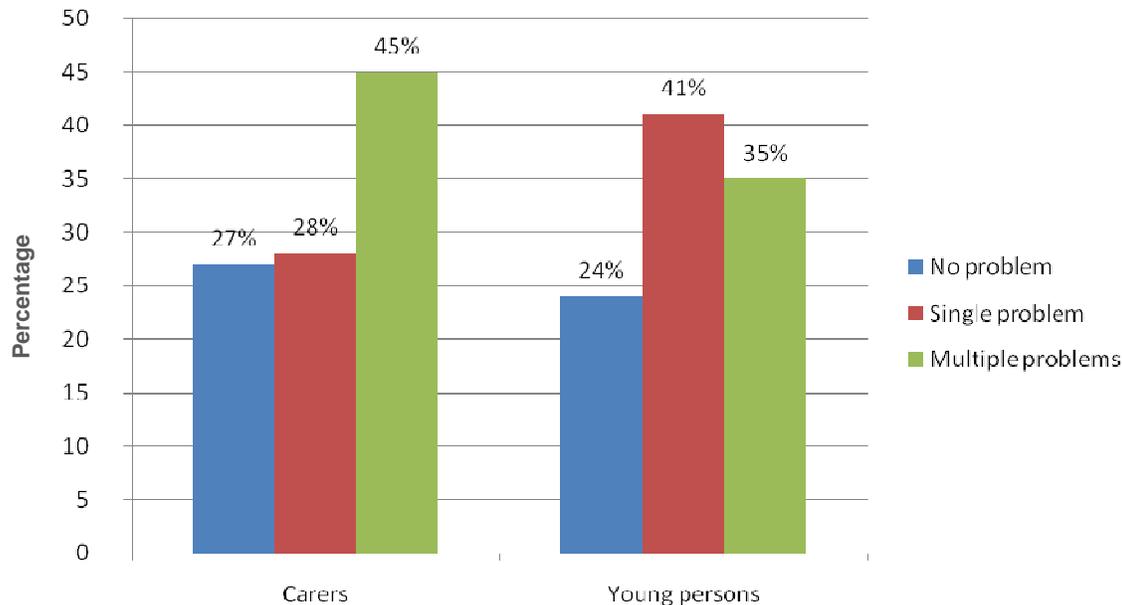
Figure 2. Mental health problems.

Table 1. Bivariate correlation test.

Spearman's rho		Co-morbidity
	Correlation coefficient	287*
Age	Sig. (2-tailed)	0.013
	N	74
	Correlation coefficient	0.680**
Overall stress	Sig. (2-tailed)	0.000
	N	74

*Correlation significant at 0.05 level (2-tailed); **Correlation significant at 0.01 level (2-tailed).

46% shared variance in respondent's scores on overall stress. Even after controlling for age, the findings indicated a strong partial correlation between co-morbidity and overall stress, rho = 0.61, n = 74, p < 0.001. An inspection of the zero order correlation (rho = 0.68) suggested that controlling for age responding had very little effect on the strength of the relationship between these two variables.

DISCUSSION

Previous research evidence indicates that looked after children are characterised by high rates of mental health problems (McCann et al., 1996; Mount et al., 2004; Ford et al., 2007). In addition, research evidence indicates that a considerable number of this group of children have multiple mental health problems/disorders (co-morbidity) and exhibit high levels of mental health needs and poorer

functioning (McCann et al., 1996; Clark et al., 2005). Mental health levels vary to a greater extent partly because previous studies focused on different populations and used different methodologies.

Overall, 74 children and adolescents in the current study had a mental health problem based on the report from the SDQ by at least one of the two informants, namely, the carer or young person. On the other hand, overall, 50.5% of the children and adolescent were diagnosed to be at risk of having a significant mental health disorder according to the SDQ prediction using the DSM-IV/ICD-10 diagnostic criteria. However, this prevalence rate for mental health problems was con-siderably high. The findings were in accordance with results obtained in previous studies (Meltzer et al., 2003; McCann et al., 1996; Clark et al., 2005; Schmid et al., 2008). Nonetheless, the results still probably represent an underestimate in one way, that is, internalizing disorders (such as depression or anxiety) may have gone

undiagnosed in some of these instances when only a carer was interviewed as they may not be able to precisely describe the child's emotions and cognitions.

The most frequent diagnoses amongst the children and young people in care were behavioural disorders (overall 39%) and emotional disorders (overall 21%). This finding was consistent with results from previous studies (Lindsey, 2000; Meltzer et al., 2003). Such mental health problems can manifest in various distressing behaviours, such as aggression, self harm, substance misuse, and other activity that compromises sexual health (Speciality Advisory Committee, 2002).

Similarly, there was a high rate of co-morbidity (overall 41%) amongst the group of children and young people which indicates significant levels of impairment. The finding (47%) from the carers responses was closer to Clark et al. (2005) estimate of 53% mental health levels for children and adolescents. Equally, striking was the low self reported mental health problems/disorders. Adolescents assessed themselves as having fewer problems than their carers did. To this effect, it is important to use a multi-informant approach in mental health studies if one is to yield reliable information.

According to Janssens and Deboutte (2010), assuming young people assess their mental health status using valid and reliable measurement instruments, it would mean that they disagree with their carers concerning their mental health problems. This had been previously described by Goodman et al. (1998). This would pose a challenge when it comes to referring the young people for professional mental health assistance, because there would be a high possibility that the child will not embrace the idea.

The study found a strong relationship between multiple mental health problems (co-morbidity) and levels of need amongst the children and young people in residential care. This finding is congruent to previous studies (McCann et al., 1996; Clark et al., 2005). The implication of the finding is that children and young with multiple and complex problems are at the apex of professionals' and carers' concern and thus need more formal assessment for effective targeting of resources, along side exploration and development of appropriate interventions (Clark et al., 2005). The findings thus, stress the vulnerable mental status of street children in residential care and the need for additional support for professionals working with children as well as the children themselves.

Conclusion

Conclusively, the present study shows that indeed children and young people in residential care are a risk population to mental health problems an aspect that calls for substantial mental health service provision. The relationship between predict multiple mental health problems and levels of stress has a significant implication for comprehensive assessment of mental health problems for effective intervention. In addition, the complexity of mental health problems amongst street children in residential care needs collaborative efforts from various stakeholders, including educationists, social workers, child mental health specialists, and other relevant practitioners in order to ensure effective mental health service provision for this group of children and young people.

STRENGTHS AND LIMITATIONS OF THIS STUDY

The findings have to be considered in the methodological strengths and limitations of the study. The sample was a representative of the street children in residential care in terms of age and placement. The response rate was very good as looked after children and adolescents have always been considered as a difficult group to study (Richardson and Lelliot, 2003). However, the study could not use the earlier proposed sample size of 100 children, that is, 20 from each identified institution, because four of the institutions identified had less than 20 children and young people except for one which had 42. In addition, young people above the age of 17 were not included in the study, thus lessening the sample size.

With regards to informants for the study, teachers were not included in the study, because not all the children were in school and in some instances, the carers were also the teachers to the children and young persons in residential care where some residential homes have community schools within the same premises. To this effect there was no possibility to cross validate the data with a teacher assessment. In addition, no mental health interview was conducted with the children for cross validation of the results.

Conflicts of interest

Authors have none to declare.

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