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Housing conditions, sanitation status and associated health risks in selected subsidized low-cost housing settlements in Cape Town, South Africa

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A B S T R A C T

This paper provides an assessment on the structural living conditions of selected government-subsidized low-cost housing settlements in the City of Cape Town and the associated health conditions of the inhabitants. Almost all of these houses have one or more informal dwellings in the backyard. Four subsidized housing communities were selected within the City of Cape Town in this cross sectional survey. Structured interviews were administered in 336 dwellings on 173 plots. Data was obtained from 1080 persons with a response rate of 100%. The vast majority of the main houses had two (38%) or three (48%) structural problems and 99% of the home owners could not afford repairs to the home. The integrity of the walls of the dwelling structure was problematic, showing large visible cracks. None of the walls were plastered causing rainwater to penetrate during rainstorms. During an inspection of the sanitation facilities in the home, 58% of toilets were non-operational, 66% of the bathrooms did not have toilet paper but had a supply of old newspaper instead, while 82% of the bathrooms did not have soap available to wash hands. At present the design of these low-cost housing schemes contribute to an increased risk of communicable diseases, rather than an improvement. The recipients of these houses were previously disadvantaged and their sanitation behaviour is inter alia shaped by the amenities at their disposal. The designers of low-cost houses should take serious note of the pathways of disease created by the provision and layout of sanitation-associated structures. The design of low-cost housing should not force the inhabitants of such houses into unsafe habits because of poor provision or poor layout of basic amenities.

Introduction

Housing is meant to provide shelter and security and is considered a fundamental development process, in which the built environment is created, used and maintained for the physical, social and economic well-being and quality of life of individuals and households (Lawrence, 2004). Populations with less disposable income have fewer choices and are liable to end up in poor housing (Howden-Chapmen, Isaacs, Crane, & Chapman, 1996). Less income is available for maintenance and repair, medicines and other necessary items such as food, which can have a direct impact on health status (Chaudhuri, 2004).

Insecure occupancy of housing and limited prospects of secure employment make living conditions difficult for the underprivileged worldwide. Such living conditions include poorly constructed housing from inferior quality building materials and limited building skills; the location of housing on contaminated or disaster prone sites; limited basic services like clean water, garbage collection and sewage treatment (Chaudhuri, 2004). Prolonged poor maintenance of houses leads to dilapidated buildings – leaking pipes, peeling paint or cracks and holes in ceilings. Buildings is such conditions create the risk of poorly or non-functioning toilets and taps and damp conditions that can act as stressors that affects the human immune system (Lehmann et al., 2001; Rauh, Chew, & Garfinkel, 2002). Housing disrepair among the poor exposes them disproportionately to lead, pests, air pollutants, contaminants and greater social risks (Rauh et al., 2002; Sharfstein, Sandel, Kahn, & Bauchner, 2001).

In South Africa the RDP (Reconstruction and Development Programme) engaged in working with government to end the issues associated with the apartheid regime and build a better life for its citizens through the improvement of social rights, such as health, housing, as well as opportunities for gainful employment (Hemson, 2004). Recently, the RDP was replaced by the Breaking New Ground (BNG) programme (City of Cape Town, Department of

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Housing, 2004). The new human settlements plan has as some of its central principles the improvement of quality of life for the poor, as well as using housing as an instrument for the development of sustainable human settlements. This paper investigates the design aspects of examples of such government-sponsored low-cost housing settlements and the resultant health profile of inhabitants of those communities.

Numerous technical, urban, social and economic factors have been associated with service delivery of low-cost housing projects in South Africa (Lizarralde & Massyn, 2008). With the rising need for adequate housing and the availability of space in the backyards of new housing settlements, backyard dwellings (informal housing) sprung up across all the new improved housing settlements (Crankshaw, Gilbert, & Morris, 2000). These informal dwellings referred to as shacks by the inhabitants are viewed as a ready source of income by the owners of the new low-cost houses. Prior to 1996, housing policies overlooked backyard dwellers and most national surveys captured them in the informal settlement bracket, though their circumstances and challenges are dissimilar (Lemanski, 2009). According to the South African Institute of Race Relations (SAIRR), 590 000 households (approximately one-third of all households living in informal housing settlements), reside in backyard shacks (South African Institute of Race Relations, 2008), representing 5.7% of all South African households (Statistics South Africa, 2006). The SAIRR have indicated that the proportion of households living in backyard dwellings is increasing more rapidly than the proportion in truly informal (squatter) settlements, indicative of the growing popularity of this housing type in the context of massive housing shortages (South African Institute of Race Relations, 2008). The aim of this is paper is to provide an assessment on the structural living conditions of selected government-subsidized low-cost housing settlements in the City of Cape Town and the associated health conditions of the inhabitants.

Methods

This study was approved by the Committee for Human Research at the Faculty of Health Sciences of Stellenbosch University and was conducted according to the ethical guidelines and principles of the International Declaration of Helsinki (World Medical Association, 2000), the South African Guidelines for Good Clinical Practice and the Ethical Guidelines for Research of the Medical Research Council of South Africa (Republic of South Africa, Department of Health, 2000). All respondents were informed of the objective of the study in their home language (English, Afrikaans or isiXhosa) and signed informed consent. A copy of the informed consent was provided to all participating households. The survey was conducted anonymously. All participants could inspect the completed questionnaire answer sheet for anonymity. They then posted the form into a sealed box with a postal slot. The box was only unsealed at the end of the study.

Four subsidized housing communities were selected within the City of Cape Town Metropole (CCTM) to participate in this cross sectional survey. The government subsidized low-cost housing communities identified as study sites were: Driftsands, Greenfield, Masipumelela and Tafelsig. These sites were selected to represent the best geographic spread of all the subsidized housing settlements within the city. The settlements were selected regardless of the local or central authority under whose jurisdiction the housing schemes were originally erected. They had to be older than 3 years. This was important because in some of the newer settlements structural wear and tear of the houses had not yet become evident to the same extent as in the older settlements. The settlements selected had to have distinct boundaries that did not blend into informal settlement areas (so-called squatter settlements) in order to avoid garbage and water pollution introduced from neighbouring areas. All 4 settlements had numerous low-cost houses (referred to as 'main house' from this point forward) with informal dwellings (called "shacks" by the inhabitants) made of temporary building materials in the backyard (referred to as 'shack' from this point forward) (Figs. 1–5). There were three settlements with predominantly black inhabitants and one settlement with predominantly coloured (mixed ancestry) inhabitants. This selection was representative of the overall demographic profile of the settlements in the city. No questions or annotations on race were included in the questionnaire.

Data were collected by means of structured interviews during home visits to all selected dwellings by the senior author, assisted

Fig. 1. A shack attached to a low-cost house in Masipumelela.