

Influence of Urban Design on Pain and Disability in Women with Chronic Low Back Pain in Urban Cairo

Authors : Maha E. Ibrahim, Mona Abdel Aziz

Abstract : Background: Chronic low back pain (CLBP) in urban communities represents a challenge to healthcare systems worldwide. The traditional biomedical approach to back pain has been particularly inadequate. Failure of the biomedical model to explain the poor correlation between pain and disability on the one hand, and biological and physical factors that explain those symptoms on the other has led to the adoption of the biopsychosocial model, to recognize the reciprocal influence of physical, social and psychological factors implicated in CLBP, a condition that shows higher prevalence among women residing in urban areas. Urban design of the built community has been shown to exert a significant influence on physical and psychological health. However, little research has investigated the relationship between elements of the built environment, and the level of pain and disability of women with CLBP. As Egypt embarks on building a new capital city, and new settlements proliferate, better understanding of this relationship could greatly reduce the economic and human costs of this widespread medical problem for women. Methods: This study was designed as an exploratory mixed qualitative and quantitative study. Twenty-Six women with CLBP living in two neighborhoods in Cairo, different in their urban structure, but adjacent in their locations (Old Maadi and New Maadi) were interviewed using semi-structured interviews (8 from Old Maadi and 18 from New Maadi). Located in the South of Cairo, New Maadi is a neighborhood with the characteristic modern urban style (narrow streets and tall, adjacent buildings), while Old Maadi is known for being greener, quieter and more relaxed than the usual urban districts of Cairo. The interviews examined their perceptions of the built environment, including building shapes and colors and street light, as well as their sense of safety and comfort, and how it affects their physical and psychological health in general, and their back condition in particular. In addition, they were asked to rate their level of pain and to fill the Oswestry Disability Index (ODI), and the General Health Questionnaire (GHQ-12) to rate their level of disability and psychological status, respectively. Results: Women in both districts had moderate to severe pain and moderate disability with no significant differences between the two districts. However, those living in New Maadi had significantly worse scores on the GHQ-12 than those living in Old Maadi. Most women did not feel that specific elements of the built environment affected their back pain, however, they expressed distress of the elements that were ugly, distorted or damaged, especially where there were no ways of avoiding or fixing them. Furthermore, most women affirmed that the unsightly and uncomfortable elements of their neighborhoods affected their mood states and were a constant source of stress. Conclusion: This exploratory study concludes that elements of the urban built environment do not exert a direct effect on CLBP. However, the perception of women regarding these elements does affect their mood states, and their levels of stress, making them a possible indirect cause of increased suffering in these women.

Keywords : built environment, chronic back pain, disability, urban Cairo

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