

Urban Planning to Promote Women Health in Mashhad using Vitamin G

Mohammad Rahim Rahnama^{1*}, Lia Shaddel², Omid Ali Kharazmi³

1. Professor of Geography and Urban Planning, Department of Geography, Ferdowsi University of Mashhad, Iran
2. PhD Candidate in Geography and Urban Planning, Department of Geography, Ferdowsi University of Mashhad, Iran
3. Assistant Professor of Urban Management, Department of Geography, Ferdowsi University of Mashhad, Iran

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Extended Abstract

Introduction

Due to the urbanization growth, a greater proportion of the world's population is being exposed to the risks limited to urban areas. It is essential to understand these effects on the health. According to the conducted studies, urban green spaces play major roles in health improvement. A relationship between green space and health is also verified, and green space is called Vitamin G. Urban green spaces are positively related to physical activity, physical and psychological health and should be considered as the main source of health. Women have unique health conditions due to biological and behavioral/social differences. They use health service system more than men during their lifetime. Investment in women's health has a significant effect on the health and well-being of the next generation. Women have more depressive symptoms than men; and there is a high proportion of obesity with symptoms of depression. Perceived public health is also weakened by increasing distance from green spaces; and this is very significant in women, whereas changes are not significant in men. According to the present research, an assessment was conducted on the effects of Vitamin G on women's physical and psychological health in Mashhad city. A structural equation modeling was utilized in this field. Understanding the nature of these relationships helps urban planners make better decisions to improve urban green space. Generally, urban green space stimulates a suitable field for physical activity leading to physical and psychological health. Furthermore, psychological health affects physical health. On this basis, we draw the research model.

Methodology

This study is an applied research in terms of objective, and correlational with regression type based on the nature; and quantitative in terms of method; and it was among the cross-sectional survey studies. Structural equation modeling was also used to fit latent variables. A questionnaire was used to collect data. The questionnaire consisted of four dimensions namely physical and psychological health, physical activity and green space. Four variables namely protection, facilities, availability and access were used to assess the green space. Statistical population covered 380 women of Mashhad, those who were selected as samples by Cochran's formula, completed then 450 questionnaires. Appropriate ranges were determined for completing questionnaires according to the following procedure:

Based on the statistics from Mashhad Municipality in 2013, the first cause of Mashhad

* Corresponding Author, Email: rahnama@um.ac.ir

Tel: +989151152584

women death was blood circulation disease, and 2443 people were died from this disease in that year (35% of total died people). Their house addresses were first obtained from the relevant organization. In order to determine the spatial distribution, location of houses of the dead persons was shown by points in GIS software, 1680 out of 2443 addresses were complete. Accordingly, the obtained spatial distribution map and income classification map of Mashhad were overlapped, and then 9 neighborhoods were selected for completion of questionnaires based on density of residential points and income classification. The 400 completed questionnaires were analyzed through Amos software. It is worth mentioning that the green space refers to urban parks above one hectare in area. Distance of 1600 meters from green spaces is also considered as a critical distance between the parks and sidewalks. Therefore, 1600-meter buffers were obtained from the parks above 1 hectare in target neighborhoods. It was indicated that the selected neighborhoods were inside the range.

Results and discussion

According to the obtained results, Body Mass Index (BMI) was equal to 27. This value indicates the extra weight of studied population. The average age of the participants was 35.5 years; and the appropriate age of this group was 24 years according to the BMI calculation. Therefore, people were overweight.

Analysis of the method for fitting hypothesis model with unobserved data is an important component in application of structural equation model. Various indices are usually used for fitting evaluation including the RMSEA and Chi-square as the important indices. In the present study, these two of RMSEA and Chi-square were obtained equal to 0.074 and 0.02, respectively. Based on the results, the total fitness of the model was within the acceptable limits. In Mashhad City, green space had an impact of 0.37 on women's physical activity. The physical activity had an impact of 0.2 on physical health and impact of 0.4 on psychological health. Furthermore, psychological health had an impact of 0.6 on the physical health. Among dimensions of green spaces, protection and facilities had the highest effects.

Conclusion

Other findings of empirical research also indicated that the urban green space was positively related to physical activity which partly played an intermediate role in a relationship between green space and health. Green space increased physical activity that results in lower levels of obesity. Thus it was essential to improve the women's long-term health. Results of the present research were consistent with research by other experts.

Results of the present study indicated that the green spaces had an impact on 54 women's physical activity which was affected by their physical and psychological health. Since most of participants lived in apartments and were overweight, it was very important to provide infrastructures for physical activities. Therefore, the research findings have important applications for urban planners and managers because the environmental quality and nature of development are among the main factors of health. There is a historical relationship between urban planning and health. Improvement of urban green spaces is very important in low-income areas because women have less physical activities in lower-income areas and, thus, utilization of green spaces can reduce the health inequality between income areas.

Keywords: urban planning, health, women in Mashhad, vitamin G.

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