Socio-Demographic Predictors of Residents' Attitudes Towards the Use of Green Infrastructure in Lagos Metropolis, Nigeria

Receive 2023/11/15
Accepted 2024/10/20

Abstract

To harness the multifunctional capacity of Green Infrastructure (G.I.) in enhancing environmental quality and sustainability, it is pertinent to uncover the socio-demographic characteristics that motivate residents to use G.I. in their neighborhoods. This study assesses the socio-demographic predictors of residents' attitudes towards using G.I. in Lagos Metropolis, Nigeria. Data was gathered using the multi-stage sampling technique through questionnaire administration in four Local Government Areas (total n=1560). Results from descriptive and multinomial regression analyses reveal that age, educational level, rank in occupation, and type of housing, among others, emerged as predictors of residents' attitudes toward using G.I. in the study area. In the adjusted multinomial regression analysis, only the *residents' occupation rank* is significantly associated with the attitude of users of the G.I. facilities. In particular, compared with the management staff/business owners, those in the senior staff cadre are approximately twice (1.837) more likely to have an averagely good attitude toward using G.I. in Lagos Metropolis. This study demonstrates the importance of availability and publicly accessible G.I. facilities for different occupational ranks/levels of residents in a crowded city. The results can help to plan better and design G.I. facilities, responding to the needs and distribution for usage across different strata of society among the urban population in developing nations.

Keywords: Ecology, Green infrastructure, Lagos Metropolis, Occupational rank, Predictors

1.0 Introduction

Going by the alarming rate of green space depletion and the rampant reduction in human-nature connection, urgent actions are required toward efforts that can promote improved ecosystems and provide opportunities for constant human reconnection to nature, especially through effective use and activities around green spaces. Studies on G.I. have become one of the major efforts by researchers in promoting the restoration of depleted green spaces in the built environment. Many studies on ecology often use the concepts' green space' and 'green infrastructure' interchangeably. However, green space is just an aspect of the concept of green infrastructure (G.I.), which generally refers to a network of multifunctional green spaces such as parks, gardens, playing fields, grasses, woodlands, street trees, horticulture, allotments, water bodies, community forests, green walls, green roofs, and other open spaces. These open spaces are interconnected to deliver various quality and environmental benefits in rural and urban settings (Wolch et al., 2014; Kumar et al., 2019; Dipeolu et al., 2021). Approaches through G.I. have also assisted in creating and maintaining balanced ecosystem services for human well-being. However, technological advancements, industrial revolutions, and rapid increase in population over the past decades have made human activities negatively impact ecosystem services and reduce biodiversity functions (Dipeolu et al., 2020a; Narh et al., 2020). As the large-scale depletion of these natural resources continues, it becomes imperative to develop better strategies to mitigate, restore, and protect further degradation. Such strategies and approaches will help enhance ecosystem services' continuous functions and reduce exposure to risks emanating from dysfunctional environmental services among urban populations (Woldegerima et al., 2016; Kozamernik et al., 2020).

Lagos State (in Southwest Nigeria) recently embarked on massive environmental greening through the Lagos State Parks and Gardens Agency (LASPARK) under the Ministry of Environment. LASPARK had been saddled with various responsibilities, among others, to maintain and manage all created parks/recreational spaces in Lagos state, promote afforestation with relevant tree species in various neighborhoods, take proper records of all trees and green spaces within the State (Dipeolu, 2017; LASPARK, 2019). This enumeration will allow close monitoring of shortfalls in the number of G.I.s in the State and consequently create an opportunity to replace such facilities within the state. This current initiative of the Lagos state government to increase environmental greening and ensure a sustainable environment in the state has continued to attract both encomiums and criticisms. Issues being raised are those related to the selective distribution of the parks and gardens within the state, neglect of stewardship for G.I. facilities by residents, lack of correct usage of the facilities by residents, and residents' perception of inadequate technical facilities to implement this laudable project by the government (Oluwafeyikemi & Julie, 2015; Babalola & Akinsanola, 2016). This research seeks to assess the socio-demographic predictors of residents' attitudes toward using G.I. in Lagos Metropolis to ascertain the needed corrective measures. The specific objectives are to examine residents' attitudes toward the use of G.I. in the study area, investigate the extent of the influence of residents' socio-demographic characteristics in having good attitudes toward G.I. in the study area, and determine the socio-demographic factors that mostly predict residents' attitude toward the use of G.I. in the study area. Mainly, this study contributes to knowledge on sustainable urban design practices and management of urban open spaces by clarifying the major factors of residents' characteristics that mostly enhance adequate usage of G.I. facilities in densely populated and developing cities. Apart from adding to the growing literature on this subject, this study also identifies ways to improve the