Habitat International 64 (2017) 98–108

Contents lists available at ScienceDirect

Habitat International

journal homepage: www.elsevier.com/locate/habitatint

The predictors of the behavioral intention to the use of urban green spaces: The perspectives of young residents in Phnom Penh, Cambodia

Yat Yen [a, b, *], Zhanqi Wang [a, *], Yumin Shi [b], Feng Xu [a], Bunly Soeung [c], Muhammad Tayyab Sohail [a, d], Gelas Rubakula [a], Sahim Abdalla Juma [b]

[a] School of Public Administration, China University of Geosciences (Wuhan), Wuhan 430073, China
[b] School of Public Affairs, University of Science and Technology of China, Hefei 230026, China
[c] Faculty of Social Sciences, Svay Rieng University, Svay Rieng 20251, Svay Rieng Province, Cambodia
[d] Department of Government and Public Policy, National Defence University, Islamabad, Pakistan

ARTICLE INFO

Article history:
Received 7 September 2016
Received in revised form
1 January 2017
Accepted 19 April 2017

Keywords:
Urban green space
Behavioral intention
Young residents
PLS-SEM
Phnom Penh
Cambodia

ABSTRACT

Urban green spaces (UGSs) play a major role in enhancing the well-being and recreation areas for the urban dwellers; however, there is a very limited study of this field in Cambodia. In response to an increasing demand for recreational areas among urban dwellers, this study investigated the behavioral intention to the use of the UGSs from the perspective of the young residents of Phnom Penh using the Theory of Planned Behavior (TPB). The perceived safety, accessibility, and usefulness and the core constructs of TPB were conceptualized to predict their effects on behavioral intention. In all, 554 completed samples were collected from both online and face-to-face interviews among the respondents. Data were empirically analyzed using the partial least squares structural equation modeling (PLS-SEM) approach and SmartPLS 3.0 software. The results revealed that the behavioral intention to the use of the UGSs was significantly associated with the perceived safety and personal attitudes, but it was not significantly associated with perceived accessibility and usefulness. The safety of the UGSs is a critical concern that recoils the behavioral intention while a lack of basic knowledge regarding the usefulness and roles of the UGSs makes negative attitudes toward the behavioral intention. It is, therefore, the safety of the UGSs that should be ensured so as to foster a livable city as well as to promote the use of the UGSs.

1. Introduction

The urban green spaces (UGSs) are crucial elements of the ecosystem services (Jim & Chen, 2008, 2009). Many studies have identified the important roles of UGSs, such as the improvement of the well-being of residents (Charron, 2012; Koohsari et al., 2015; van den Berg et al., 2015), the promotion of recreational activities (Koohsari et al., 2015; Tu, Abildtrup, & Garcia, 2016), the mitigation of hot temperatures (Tan, Lau, & Ng; Madureira et al., 2015; Tan et al.,; Bowler et al., 2010; Norton et al., 2015; Maimaitiyiming et al., 2014; Feyisa, Dons, & Meilby, 2014), the reduction of air pollution (Jim & Chen, 2008), the reduction of CO_2 and the emission of more O_2 (Cohen, Potchter, & Schnell, 2014; Jim and Chen, 2006a), the abatement of noise (Madureira et al., 2015), the increase in wildlife habitats (Barrico et al., 2012; Chiquet, Dover, & Mitchell, 2013; Hussain & Tschirhart, 2013; Patón et al., 2012), the counteraction of flood and soil erosion (Greco & Larsen, 2014), the betterment of city amenities (Hladnik & Pirnat, 2011; Seburanga et al., 2014), and increases in property value (land and buildings) (Jim and Chen, 2006b; Li, Saphores, & Gillespie, 2015; Lin, Wu, & De Sousa, 2013; Shukur, Othman, & Nawawi, 2012). However, there have been few studies about UGSs in Cambodia and they are little known (Yen et al., 2016).

The strong awareness of and demand for the benefits that UGSs provide also influences the behavioral intention of the people toward their use of UGSs; however, this behavioral intention may also be motivated by other factors. Some studies have noted that the contextual and cultural differences of the users of UGSs affects users expectations and demands for UGSs (Barau, 2015; Jim & Shan, 2013; Lo & Jim, 2010; Qureshi, Breuste, & Jim, 2013). For example,

* Corresponding authors. School of Public Administration, China University of Geosciences (Wuhan), Wuhan 430073, China.
E-mail addresses: yy2014@mail.ustc.edu.cn (Y. Yen), zhqwang@cug.edu.cn (Z. Wang), shym@ustc.edu.cn (Y. Shi), whcugxf@163.com (F. Xu), bunlysoeung@sru.edu.kh (B. Soeung), tayyabsohail@yahoo.com (M.T. Sohail), gelas.hiel@yahoo.com (G. Rubakula), sahim@mail.ustc.edu.cn (S.A. Juma).

http://dx.doi.org/10.1016/j.habitatint.2017.04.009
0197-3975/

Sevgi Yilmaz, Zengin, and Yildiz (2007) asserted that in Turkey, UGSs were frequently used by unmarried males between the ages of 19–24 who were university graduates with a monthly income of US$65–125 (Yilmaz et al., 2007). Conversely, Chinese scholars found in Zhuhai that young Chinese aged 20–30 were less likely to visit the UGSs for their leisure because they preferred to pursue more active and exciting entertainment such as visiting pubs and bars and exploring the wilderness (Chen & Jim, 2008). In line with factors affecting the use of UGSs, it has been affirmed that the vitally important factors influencing the behavioral intention to the use of UGSs are geographical location and perceived access (Wang, Brown, & Liu, 2015a; Wang et al., 2015b). Other studies concur with accessibility of the UGSs (Wang et al., 2015c) which is based on number of the UGSs in the neighborhood (Ibes, 2015; Krusky et al., 2015; Sugiyama et al., 2013), and proximity to the UGSs (Koohsari et al., 2013; Sugiyama et al., 2013). Additional factors include the experience of joyful activities in the UGSs (Ferreira et al., 2016), the security of the UGSs (Latfi & Karim, 2012; Senda, 2015), the availability of personal leisure time (Lee, 2016), and personal income (Jim & Shan, 2013). In this studies, three perceived attributes of the behavioral intention to the use of UGSs, (perceived accessibility, perceived naturalness, and perceived provision of facilities) are proposed for a conceptual framework (Wan & Shen, 2015; Wang et al., 2015b), but perceived safety with these attributes has not been proposed.

Perceived safety could be combined with these attributes to predict the behavioral intention to the use of the UGSs. It is of keen interest in Cambodia due to scant information about UGSs and the study aimed to contribute more insight by combining additional attributes of perceived safety, perceived accessibility and perceived usefulness with the Theory of Planned Behavior (TPB) to predict the behavioral intention to the use of the UGSs by the young residents of Phnom Penh (YRPPs), Cambodia. This study used an empirical research survey and analysis to answer the following research objectives: (1) to predict the behavioral intentions to the use of the UGSs by YRPPs using a combination of the additional attributes with the Theory of Planned Behavior (TPB); (2) to explore the main predictors and their effects on the behavioral intention of YRPPs to the use of the UGSs.

2. Theoretical framework and hypotheses

2.1. Theory of planned behavior (TPB)

The theory of planned behavior (TPB) was initially evolved from the theory of reasoned action (TRA) that was criticized for being unable to predict the behavioral intention fully. A new construct called perceived behavioral control (PBC) was supplemented to the TRA by a psychologist Icek Ajzen (1991) (Ajzen, 1991; Wang et al., 2015b). The TPB is one of the most popular models to predict psychological behavior and has been employed in various fields of study including the occupational therapy, social work, special education, environmental health, and health-related behaviors yet few studies use the TPB to predict intention to the use of UGSs (Ajzen, 2011; Werner, 2012; Yazdanpanah and Forouzani, 2015a). Theoretically, the TPB comprises behavioral intention (BI), the attitude toward the behavior (Attd), the perceived behavioral control (PBC), and the subjective norms (SN). The conceptual model of the TPB shows that Attd, SN, and PBC are three core constructs influencing an individual's behavioral intention (BI), and the BI subsequently impacts on actual performance (Ajzen, 1991; Knabe, 2009; Wan & Shen, 2015). Attitude toward the behavior (Attd) refers to the individual's evaluation of an action, whether s/he wants or does not want to behave the action (Ajzen, 2011). Subjective norm (SN) is an individual's perception of social norms or pressure from other relevant groups such as family members and close friends to perform an action that has been carried out by majority of these groups (Ajzen, 1991), whereas perceived behavioral control (PBC) refers to individual's perceived ability (resources) and ease (means) to perform a particular behavior (Knabe, 2009; Wan & Shen, 2015).

2.2. Expanded TPB

The TPB is flexible enough to allow researchers to apply and meet various research objectives (Wang et al., 2015b). In this regard, other attributes or variables can still be added to the original TPB to investigate more research areas (Ajzen, 1991; Greaves, Zibarras, & Stride, 2013). In this study, the additional variables perceived safety, perceived usefulness, and perceived accessibility are included in the expanded model of the TPB to examine their relative contribution to the behavioral intention to the use of UGSs by YRPPs. Perceived safety (PS) is a critical fear of any crime and insecurity in the UGSs that provokes a barrier to keeping users off the UGSs (Naselli et al., 2016). To some extent PS has an adverse influence on the attitude toward the behavioral intention to the use of UGSs (Wang et al., 2015a). Perceived usefulness (PU) is a perception in which users think that the use of UGSs will benefit them mentally and physically. The stronger PU leads to the higher intention to the use of UGSs. Perceived accessibility (PA) is the physical proximity or travel time from a user's home to the UGSs. An improvement of the quality and functionalities of the UGSs through the construction of infrastructure and installation of the basic facilities would increase a positive perception of the visitors toward the UGSs (Wang et al., 2015b). The European Environmental Agency suggests that the UGSs should be within walking distance of 15 min or approximately 900 m away from users' home (Barbosa et al., 2007). The World Health Organization and Food and Agriculture Organization recommends a minimum area of 9 m^2 green space per capita for a city resident as an appropriateness for the UGSs (Kuchelmeister, 1998, pp. 1–45). A negative perception of the accessibility may contribute to a negative behavioral intention to the use of UGSs.

2.3. Research hypotheses

Fig. 1 presented the proposed and expanded TPB model with all theoretical hypotheses depicted as paths and research hypotheses. The Attd, SN, and PBC of the TPB are in a square box, and they have direct relationships (path coefficients) with the behavioral intention (BI). Adversely, the PA, PS, and PU of the TPB are out of the square box, and they were tested to find their direct relationships with Attd, SN, and PBC as well as to find the relationships with the behavioral intention (BI). Furthermore, the relationships of PS with PA and PU were also tested to explore an influence of perceived safety on the perceived accessibility and perceived usefulness (Fig. 1).

2.4. Hypotheses

The Fig. 1 indicated the path coefficients of all hypotheses and their associations with one another. From H_1 to H_3 were the path coefficients of core constructs of the TPB, whereas, H_4 to H_6 were the path coefficients of the additional constructs of the expanded TPB. The dotted lines represented the indirect relationships with behavioral intention. The detail of the hypotheses was explained below:

H1a. Subjective norm (SN) has a positive effect on the behavioral intention to the use of UGSs (BI);

H1b. Subjective norm (SN) has a positive effect on the attitude