



Research Paper

Beliefs about physical activity and sedentary behaviors of adults with visual impairments

Justin A. Haegele, Ph.D.^{a,*}, Samuel R. Hodge, Ph.D.^b, Francis M. Kozub, Ph.D.^c^a Old Dominion University, USA^b The Ohio State University, USA^c The College at Brockport State University of New York, USA

ARTICLE INFO

Article history:

Received 5 September 2016

Received in revised form

4 January 2017

Accepted 10 March 2017

Keywords:

Beliefs

Physical activity

Sedentary

Blindness

Theory of planned behavior

ABSTRACT

Background: When exploring reasons why individuals with visual impairments (VI) may or may not engage in physical activity (PA) or sedentary behaviors (SB), theoretically grounded research on the determinants of these behaviors is scarce.

Objective/Hypothesis: Situated in the theory of planned behavior (TpB), the purposes of this study were to: (a) develop a theoretically-sound scale, *Beliefs about Physical and Sedentary Behaviors-Visual Impairment* (BAPS-VI), to determine if the constructs of TpB are useful in predicting PA and SBs of adults with VI; (b) analyze their beliefs about PA and SBs; and (c) determine which TpB constructs are the best predictors of PA behaviors.

Methods: Data were collected from adults with VI ($n = 209$, 65.5% women) using on-line survey methodology. Following reliability estimation, the PA and SB items were reduced using separate Principal Components analyses to examine the underlying dimension of the BAPS-VI in relation to TpB. A hierarchical regression model was used to determine what factors predicted self-reports of minutes of PA.

Results: Results supported the theoretical framework of the measure and explained 75% of the variance for intention to engage in PA and SB items, respectively. Six new variables, intention, and demographic data were then regressed on physical activity scores with only intention to engage in PA ($\beta = 0.30$, $p < 0.01$) remaining as a significant predictor of physical activity.

Conclusions: The development of the theoretically driven measure and results of this study can inform future research focusing on exploring PA and SBs of adults with VI.

© 2017 Elsevier Inc. All rights reserved.

Research has demonstrated that individuals with disabilities are less likely to be physically active than those without disabilities.^{1,2} According to Carroll et al.,³ nearly half of all adults with disabilities report being inactive, and those that are inactive are 50% more likely to report developing chronic diseases associated with inactivity (e.g., heart disease, stroke, depression, obesity). Of those with disabilities, individuals with visual impairments (that is, those with low vision as well as complete blindness) tend to be among the least physically active.⁴ Research suggests that adults⁵ and youth⁶ with visual impairments tend not to engage in recommended amounts or intensities of physical activity. Further, they are likely to spend the majority of their leisure-time engaging in sedentary

activities.^{7,8} Because individuals with visual impairments tend to opt for sedentary activities and are physically inactive, they are at a higher risk for developing health-related conditions associated with inactivity.^{9,10} For example, compared to the general population, the prevalence of obesity is nearly twice as high in persons with visual impairments as those without disabilities.^{7,11} In addition to health-related issues associated with obesity, inactivity has been associated with functional limitations for those with visual impairments.^{12,13}

Because of the significance of physical activity throughout the lifespan, it is important to understand predictors of physical activity among various populations.¹⁴ To date, however, the research base is undeveloped in identifying and analyzing factors that influence engagement in physical activity and sedentary behaviors among adults with visual impairments. Although slight, current research does identify that a number of socio-demographic variables that have been demonstrated to impact physical activity among

* Corresponding author. 4700 Powhatan Avenue, 2009 Student Recreation Building, Norfolk, VA 23529, USA.

E-mail address: jhaegele@odu.edu (J.A. Haegele).

individuals without disabilities (e.g., income level, body mass index¹⁵) may not predict physical activity for individuals with visual impairments.^{5,16,17} In addition, research indicates that age of visual impairment onset (e.g., congenital v. acquired)⁵ and level (e.g., low vision v. complete blindness)¹⁶ may not impact physical activity participation. Of seven socio-demographic variables tested, Haegele and colleagues¹⁶ found only gender to emerge as a significant predictor of physical activity for adults with visual impairments. In addition to socio-demographic variables, research has also demonstrated that individuals with visual impairments report a number of factors which may have prevented (e.g., cost associated with activity, lack of people to participate with) or facilitated (e.g., accessible environments) physical activity participation among this population.^{17,18} Among reported barriers, visual impairment in and of itself was described as the most important barrier to being physically active.¹⁷

When exploring reasons why individuals with visual impairments may or may not engage in physical activity or sedentary behaviors, theoretically grounded research on the determinants of these behaviors is scarce. By utilizing theoretical models to understand behaviors, researchers can make explicit the mechanisms that drive physical activity, which can assist in developing interventions utilizing accepted frameworks to change behaviors.^{19,20} Over time, adapted physical activity scholars have stressed the importance of using theoretical models to drive research.^{6,19,21} However, recent documentary analyses have demonstrated that most research in this area is considered atheoretical.²² Contributing to the lack of theoretically grounded research in this area is the dearth of theoretically-based instruments that measure determinants of physical activity and sedentary behaviors for this population. Although theoretically-based instruments that measure determinants of physical activity and sedentary behaviors have been well-established for individuals without disabilities,²³ they may not necessarily represent or accurately measure physical activity determinants for those with visual impairments. Recent research has focused on the validation of physical activity monitors^{24,25} and recalls,²⁶ as well as instruments measuring barriers to physical activity.²⁷ However, no research has developed or validated an instrument focusing on theoretically grounded determinants of physical activity for individuals with visual impairments.

Theoretical framework and purpose

One theoretical framework that is appropriate for exploring predictors of physical activity among individuals with visual impairments is the theory of planned behavior (TpB).²⁸ TpB is an integral model which postulates the relationships between

beliefs, attitudes, and intentions with human behavior (such as engagement in physical activity and sedentary behaviors). According to TpB, human behavior is guided by three kinds of considerations; beliefs about the likely consequences or other attributes of the behavior (i.e., behavioral beliefs), beliefs about the normative expectations of other people (i.e., normative beliefs), and beliefs about the presence of factors that may further or hinder performance of the behavior (i.e., control beliefs).²⁹ These beliefs then influence four TpB-based variables that can predict human behavior. More specifically, behavioral beliefs produce a favorable or unfavorable *attitude toward the behavior* (i.e., one's personal evaluation of a behavior); normative beliefs result in perceived social pressure or *subjective norm* (i.e., beliefs about whether key people approve or disapprove of the behavior); and control beliefs give rise to *perceived behavioral control* (PBC) (i.e., beliefs that one has, and can exercise, control over performing a behavior).^{28,29} Collectively, attitude toward the behavior, subjective norm, and PBC influence one's behavioral *intention* (see Fig. 1).

According to TpB, behavioral intention (i.e., the perceived likelihood of performing a behavior), is the main predictor and immediate antecedent to actual behavioral performance.^{28,30} Behavioral intention is defined as one's perceived likelihood, or readiness, to perform a particular behavior (e.g., physical activity).²⁸ Conceptually, the more favorable one's attitude and subjective norms are, and the greater control a person perceives to have over the behavior, the higher probability that one will carry out the intention and demonstrate the behavior.³¹ This relationship suggests that attitudes toward physical activity, subjective norms, and PBC are potential predictors of one's intention to participate in physical activity.³²

The TpB is a well-supported theoretical framework which has been used to study physical activity among various populations,²³ including individuals with disabilities³³ and chronic diseases.³⁴ Because of the utility in TpB tenets in predicting physical activity in other populations, it was selected as the foundation of this study. This analysis and the development of the instrument which is central to this study are centralized on the four TpB-based predictor variables of attitude, subjective norm, PBC, and intention. This study had three interrelated purposes. The first purpose was to develop a theoretically-sound scale, *Beliefs about Physical and Sedentary Behaviors-Visual Impairment* (BAPS-VI), to determine if the constructs of the TpB were useful in predicting physical activity and sedentary behaviors among adults with visual impairments. The second purpose was to analyze beliefs about physical activity and sedentary behaviors of adults with visual impairments. A third and final purpose was to determine which TpB constructs are the best predictors of physical activity behaviors in adults with visual impairments.

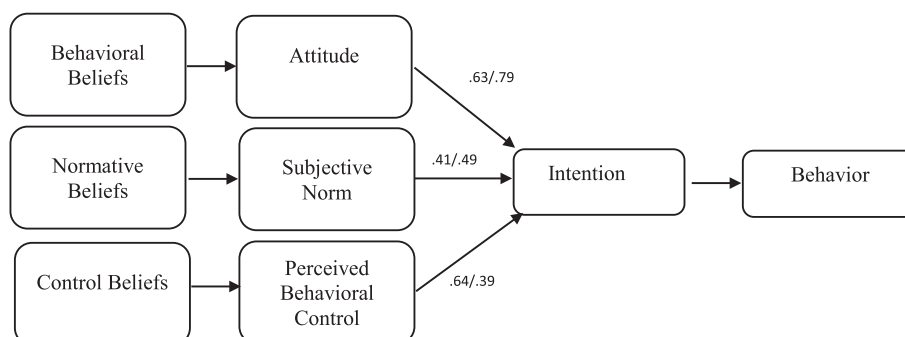


Fig. 1. The TpB model and key study relationships from the sample. Correlations are reported for constructs related to physical activity and sedentary behavior (BIVIPA/BIVISA).

Download English Version:

<https://daneshyari.com/en/article/5723173>

Download Persian Version:

<https://daneshyari.com/article/5723173>

[Daneshyari.com](https://daneshyari.com)