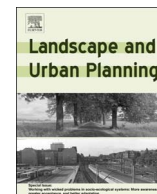




Contents lists available at ScienceDirect

Landscape and Urban Planning

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

Research Note

Further exploration of environment preference and environment type congruence on restoration and perceived restoration potential

Stephanie Wilkie^{a,*}, Heather Clements^b^a School of Psychology, Shackleton House, University of Sunderland, Sunderland, SR1 3SD, UK^b School of Psychology, University of Sunderland, Sunderland, SR1 3SD, UK

ARTICLE INFO

Keywords:

Urban green space
Nature
Environmental preference
Perceived
restoration potential
Person-place relationships
Place identity

ABSTRACT

Previously, ‘environmental preference as place identity’ interacted with environment type impacting perceived restoration potential and positive mood; this was called the congruence effect. These studies were replicated with two modifications. Place attachment and dependence, in addition to place identity, were used to investigate the convergent validity of environmental preference. Stimuli were modified to increase presence and determine whether prior null effects on restoration were stimuli-based. Participants ($N = 88$) indicated environmental preference (nature/urban), rated it on place attachment/identity/dependence, viewed one of three walks, and completed restoration and perceived restoration potential measures. Evidence for convergent validity between environmental preference and place identity/attachment/dependence was found. The positive potential for urban green space was reinforced; it equalled nature in influencing fatigue and perceived restoration potential compared to urban streets. Congruence impacted two aspects of perceived restoration potential but not restoration; suggesting it may only affect perceived restoration potential but not restoration.

1. Introduction

Environmental preference is often defined as ‘liking’ (Peschardt & Stigsdotter, 2013) or finding locations aesthetically pleasing (Hartig & Staats, 2006); and considered a result of perceived restoration potential (PRP), the belief locations restore depleted cognitive resources (van den Berg, Koole, & van der Wulp, 2003). Yet, environmental preference may influence PRP and represent something other than a general positive evaluation. In two studies, environmental preference (nature/urban) was treated as a quasi-independent variable representing place identity that interacted with environment type to influence PRP (Wilkie & Stavridou, 2013; Wilkie & Clouston, 2015). The environment preference/environment type congruence effect was most evident on PRP in the nature preference group; its effect on restoration was mixed. Because few studies have defined environmental preference in this way, the current study replicated earlier work with two modifications.

Since ‘environmental preference as place identity’ challenges common definitions of environmental preference, it was important to further explore its convergent validity. Wilkie and Clouston (2015) found place identity, the part of self that is linked to place (Proshansky, Fabian, & Kaminoff, 1983), was moderately high with the preferred environment, did not vary by preference, and concluded preference

represented place identity. However, person-place relationships are complex and environment researchers consider two other concepts important to understanding this complexity. Place attachment is an emotional bond towards an environment (Lewicka, 2011). Place dependence is the extent environments supports goal attainment (Stokols & Shumaker, 1981). Attached individuals find places restorative with/without natural components (Korpela, Ylén, Tyrväinen, & Silvennoinen, 2008); place dependence reduces consideration of viable alternatives (Kyle, Graefe, Manning & Bacon, 2004). The first modification was to include place attachment and dependence to further investigate the convergent validity of environmental preference. Convergent validity was examined through analyses of differences in place identity/attachment/dependence by environmental preference.

Wilkie and Clouston (2015) found nature and urban green spaces equally influenced mood and fatigue but not directed attention compared to urban streets. Congruence affected positive mood, but not negative mood, fatigue, or directed attention. Stimuli were modified to establish if these earlier mixed restoration findings were stimuli-based. Images from similar locations were replaced with images of a walk through a nature, urban green space, or urban street to invoke a sense of movement and presence, the “experience of being in one place...when physically situated in another” (p. 225, Witmer & Singer, 1998). Presence correlated with mood (deKort,

* Corresponding author.

E-mail addresses: stephanie.wilkie@sunderland.ac.uk (S. Wilkie), bf90jg@sunderland.ac.uk (H. Clements).<http://dx.doi.org/10.1016/j.landurbplan.2017.04.013>Received 28 September 2016; Received in revised form 24 April 2017; Accepted 26 April 2017
0169-2046/ © 2017 Elsevier B.V. All rights reserved.

Meijnders, & Sponselee, & IJsselsteijn, 2006), suggesting it may impact other restoration outcomes. In the current study, the following hypotheses were tested:

H₁: As evidence of convergent validity:

H_{1A}: Place identity ratings towards the preferred environment will be above scale mid-point and similar irrespective of preference.

H_{1B}: If environmental preference *also* has convergent validity with place attachment and place dependence, similar patterns to place identity would be expected.

H₂: Restoration and PRP will be equivalent after nature/urban green space exposure and both higher than urban street exposure.

H₃: Environmental preference/environment type congruence will influence restoration and PRP; the largest variability will be in those with a nature preference.

H₄: If earlier null-effects on restoration were stimuli-related, increased stimuli presence will increase the number of outcomes influenced by environment type and congruence.

2. Method

2.1. Participants

Students ($N = 88$, $M_{\text{age}} = 25.27$, $SD = 8.85$, female = 74%) at a university in an English city centre close to coastline and countryside received course credit. Residential location was not obtained. A student sample ($N = 45$) rated stimuli naturalness but did not participate in the main study

2.2. Environment stimuli

Regional locations were selected based on prior research (e.g. Beil & Hanes, 2013; van den Berg, Jorgensen, & Wilson, 2014). Nature was a 16.04-acre woodland six miles from the city with varied vegetation and little sign of human influence. The urban green space was a Victorian park. Urban streets were in the city centre with few natural elements. Photography occurred in early summer in similar weather. Naturalness (1 = *urban*; 7 = *nature*) varied across environments ($M_N = 5.07$, $SD = 0.67$; $M_{UGS} = 4.17$, $SD = 0.76$; $M_{US} = 2.21$, $SD = 1.23$; $F [2, 42] = 37.12$, $p < 0.001$, $\eta_p^2 = 0.64$, all post-hoc $p < 0.01$).

2.3. Environmental preferences

Participants indicated if they were a “country person or a city person” based on where they most enjoyed spending time. Country persons ($n = 49$) were categorized with a nature preference. Despite issues with urban/rural categorizations (Nairn, Panelli, & McCormack, 2003), this categorization has been implemented (Knez, 2005).

2.4. Convergent validity

The 12-item sense of place scale captures affective (attachment), behavioural (dependence) and cognitive (identity) aspects of person-place relationships, all distinct concepts important to environmental engagement (Jorgensen & Stedman, 2001; Jorgensen & Stedman, 2006). ‘Environment’ replaced ‘lake property’ in all items. Participants responded *considering the preferred location* (1 = *strongly disagree*; 5 = *strongly agree*). Cronbach’s α values were: place attachment (0.81), place dependence (0.73), and place identity (0.72). Correlations ranged from 0.62–0.71 (all $p < 0.001$).

2.5. Restoration and perceived restoration potential

Change was calculated so positive values indicated improvement. Correlations between restoration outcomes ranged from -0.01 ($p = 0.48$) to 0.32 ($p < 0.01$). PRP was only measured post-imagery.

2.5.1. Directed attention

Participants were presented with 80 colour words printed in incongruent colours (*pink* in blue ink) and named the ink colour as quickly as possible (Stroop, 1935). Completion time (seconds) and errors were recorded.

2.5.2. Mood

The Positive and Negative Affect Scale (Watson, Clark & Tellegan, 1988) consisted of 10 positive and negative mood states (1 = *very slightly/not at all*; 5 *extremely*). Cronbach’s α was 0.88 for positive mood 0.86 for negative mood.

2.5.3. Fatigue

Participants were asked “how mentally fatigued you feel right now” (1 = *no fatigue*, 7 = *completely fatigued*).

2.5.4. Perceived restoration potential

The PRS-11 Perceived Restoration Scale has advantages over earlier PRP scales (Pasini, Berto, Brondino, Hall & Ortner, 2014). Responses for *the walk location* were on a scale modified so the lowest anchor was consistent with other measures (1 = *not at all*, 10 = *very much*). Cronbach’s α varied from 0.89 (fascination, being away) to 0.78 (coherence) and 0.63 (scope). Correlations ranged from 0.14 ($p = 0.09$) to 0.66 ($p < 0.001$).

2.6. Design and procedure

Place attachment/dependence/identity were dependent variables in a multivariate design. Environmental preference ($n_N = 49$; $n_U = 39$) was the between-subjects independent variable. A 2×3 design tested the congruence effect. Environmental preference and environment type ($n_N = 32$; $n_{UGS} = 29$; $n_{US} = 27$) were between-subjects independent variables. Restoration outcomes and PRP were dependent variables. A six-level preference/type congruence variable was created for post-hoc analyses with Bonferroni correction: nature/nature ($n = 20$), nature/urban green space ($n = 19$), nature/urban street ($n = 10$), urban/nature ($n = 12$), urban/urban green space ($n = 10$), and urban/urban street ($n = 17$).

British Psychological Society ethics (2010) were implemented. Participants were allocated to environment type prior to arrival to minimize the impact of cancellations. They completed baseline restoration measures and viewed a 7-min slide show presented a 0.35-mile walk (Fig. 1) consistent with average adult walking speed (Waters & Mulroy, 1999). Participants completed convergent validity, PRP, restoration measures, and demographics including familiarity with the viewed location.

3. Results

Familiarity could not affect convergent validity variables, which referred to preferred locations. Most (67%) were familiar with the walk location; few (12%) visited weekly or more. Only PRP ‘being away’ and ‘scope’ varied. Being way was lower in those familiar with the walk location ($M = 4.91$, $SD = 2.78$) compared to unfamiliar participants ($M = 6.16$, $SD = 2.25$, $t [86] = -2.12$, $p = 0.03$). Scope was also lower for the familiar group ($M = 5.80$, $SD = 2.06$) compared to the unfamiliar ($M = 7.30$, $SD = 1.81$, $t [86] = -3.36$, $p = 0.001$).

Correlations between convergent validity variables were appropriate for MANOVA (Tabachnick & Fidell, 2014). Restoration-related correlations were not and separate ANOVAs conducted. Familiarity could not be included because its addition resulted in small cell sizes. Descriptive and inferential statistics for main effects are in Table 1. Environmental preference did not affect restoration or PRP.

Download English Version:

<https://daneshyari.com/en/article/7460140>

Download Persian Version:

<https://daneshyari.com/article/7460140>

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