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Self-Build Practices on University Campus: Socio-Psychological Effects on Care and Intention to Spend Time in Outdoor Spaces

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Abstract

This study investigates the impact of a self-built architectural intervention implemented in three areas, two intervention sites and one control site of a university campus, focusing on how such interventions can influence the use and care of open spaces. Surveys were administered before and after the intervention to a purposive sample of 54 habitual campus users, recruited through peer referrals and contacted via informal channels such as in-person interactions, phone calls, and shared student groups. The surveys were completed anonymously using Google Forms. Data were analyzed using mixed-effects models to evaluate changes over time, across sites, and time x site interaction. Results showed a significant increase over time in participants' intention to care for the whole campus. Intentions to spend time in outdoor areas varied significantly across sites but did not change over time, and no time × site interaction was detected, indicating that observed changes were not confined to intervention sites. These findings highlight the potential of user-centered design interventions to enhance the quality, accessibility, and usability of open areas by providing empirical insights relevant to urban planning and the management of public spaces. Overall, this research suggests that self-build initiatives within university campuses can serve as scalable models for fostering sustainable urban environments, promoting citizen engagement, and improving urban well-being.

Keywords: participatory self-construction; socio-psychological impact; behavioral intentions in campus spaces; campus regeneration; environmental design; user engagement

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1. Introduction

1.1. Background

The accelerating pace of global urbanization has increased the demand for rapid, low-cost, and sustainable regeneration strategies. Within this context, urban regeneration and spatial transformation, particularly through participatory planning, have become central paradigms in urban studies, emphasizing stakeholder engagement, partnership-building, and innovative governance [1]. The concept of urban regeneration remains complex and multifaceted, spanning research, policy, and practice, while its definitions and purposes continue to evolve in response to emerging urban challenges [2,3]. Nevertheless, the social and sensory dimensions of spatial transformation and their influence on neighborhood dynamics remain underexplored [4]. Concerns about regeneration projects are often related to the displacement of communities and disruption of people–place relationships, particularly in contexts involving university campuses and adjacent neighborhoods [5,6]. Despite participatory intentions, many initiatives still rely on top-down approaches [7], which can trigger gentrification-driven dynamics, social homogenization, and socio-psychological effects such as reduced place attachment and feelings of powerlessness [8,9]. In response, there was growing attention to collaborative approaches involving universities and local communities, which foster interaction, support socio-cultural activities, and leverage shared resources to drive regeneration [10–12].

Recent strategies aimed to integrate campuses into the urban fabric; however, projects have often focused on physical expansion, leading to rising land prices and conflicts with residents [13]. Furthermore, the design and long-term management of open spaces remained critical issues [11]. Scholars advocated for participatory processes as collective learning paths, in which shifting power dynamics require tools for dialogue and trust-building among stakeholders [14,15]. Despite significant investment, the social outcomes of campus spatial transformations remain difficult to assess [16], and structured collaboration with local communities is still rare [17].

Within this debate, the concept of social infrastructure provided a valuable lens for understanding how physical interventions shape social interaction and place attachment [18]. Complementarily, theoretical perspectives such as the Human Environment Interaction (HEI) model [19] emphasized the emotional and cognitive responses elicited by experiences in everyday environments, including urban neighborhoods [20]. Within environmental psychology, place attachment has been widely examined as a multidimensional construct encompassing affective, cognitive, and behavioral bonds between individuals and meaningful environments [21,22]. Research has shown that stronger attachment is associated with a greater tendency to remain or return to a place even in the face of environmental or social changes [23,24], underscoring its relevance for understanding user engagement and care for shared spaces.

In parallel, urban design research highlighted the central role of outdoor use in shaping campus life. Seminal works by Gehl [25] and Carmona [26] illustrated how the physical, sensory, and social qualities of public spaces support accessible and comfortable environments that encourage outdoor activities and foster social interaction. These insights are especially pertinent when interpreting behavioral intentions within transformed campus settings, where the usability and attractiveness of open spaces directly influence patterns of presence and interaction among students.

Against this background, self-construction practices emerged as an approach capable of addressing both spatial and social dimensions of campus environments. They are increasingly recognized for their effectiveness, rapid implementation, and low costs, particularly when used to improve local quality of life [27]. Yet, despite their potential, evidence on their socio-psychological effects in university settings remains limited [28]. Bringing self-build interventions into dialogue with participatory design and environmental behavior frameworks can help explain how such practices can enhance users' sense of control, ownership, and care for shared spaces.

Following European calls for holistic and interdisciplinary approaches to regeneration [29], this study examined a collaborative project combining architecture and environmental psychology at the University Campus of Sa Duchessa (Cagliari, Italy). Three sites were identified for intervention (see Figure 1), two of which (Sites A and C) underwent self-construction projects (see Figures 2 and 3), while a third (Site B) served as a control area without intervention (see Figure 4). These sites, designed to serve hybrid educational, social, and community functions, were selected based on a preliminary observational study

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indicating a lack of suitable gathering spaces and limited opportunities for restorative breaks, both essential to well-being and everyday academic life [30].

Figure 1. Overview of the intervention area and specific sites. The main image shows the Sa Duchessa Campus of the University of Cagliari (Sardinia, Italy), with the intervention area highlighted and the three study sites labeled as A, B, and C. The bottom row presents images of each site: Site A and Site C underwent self-construction interventions as part of the urban regeneration project.

Figure 2. Site A is shown in two images: on the left, the site before the self-construction intervention, and on the right, the same site after the intervention.

Figure 3. Site C is presented in two images: the left image shows the site before the intervention, while the right image shows the site after the intervention.

Figure 4. Site B is shown in a single image, as it did not undergo any intervention, serving as a reference condition.

Building on previous ex-ante/ex-post assessment frameworks [31] and longitudinal ethnographic research [4], the project involved a co-design process with university students aimed at regenerating open spaces while fostering social and academic interaction. The interventions were conceived through an integrated design approach, addressing not only spatial provision but also the social and functional dimensions of the sites, which is a crucial element for effective campus renewal. This study contributes to the literature by offering quantitative evidence on the socio-psychological impacts of self-construction interventions in a university context, a dimension still largely overlooked in urban regeneration research.

1.2. Objective and Hypotheses

The present study aimed to examine whether the self-construction intervention improved participants' evaluations of the redesigned areas (Site A and Site C) in terms of their intention to care for and frequent the place. Specifically, we hypothesized the following:

H1 (Main effect of Time). *We expected a significant main effect of time for both intention to care for the site (H1a) and intention to stay on site (H1b), with higher scores in the post-intervention occasion than in the pre-intervention occasion.*

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H2 (Main effect of Site). *We expected a significant main effect of site for both intention to care for the site (H2a) and intention to stay on site (H2b), with the intervention sites (Site A and Site C) receiving higher scores than the control site (Site B).*

H3 (Time × Site interaction). *We further hypothesized a significant interaction between time and site for both intention to care (H3a) and intention to stay (H3b), with greater improvements from pre- to post-intervention for the intervention sites (Site A and Site C) compared to the control site (Site B), reflecting the expected impact of the self-construction activities.*

2. Method

2.1. Participants

Rather than using a probability-based sampling frame, recruitment relied on a purposive sample of actual campus users. This was a deliberate choice. The intervention was designed to affect the habitual users of the redesigned spaces, and our hypotheses concerned changes in perceptions and intentions within this specific population. Broader groups, such as the overall student body or university staff, include many individuals who do not frequent the Sa Duchessa campus; therefore, they were not considered the target population for the present study.

A priori power analysis was conducted to estimate the minimum number of participants needed to detect the hypothesized time × site interaction effect (H3) in a linear mixed-effects model (see Section 2.4 Data Analysis). The analysis was performed using simulation-based methods implemented in the *simr* R package (version 1.0.8) [32]. Effect sizes for the power simulation were set as Cohen's d = 0.10 (small) and d = 0.20 (small-to-medium) for the interaction effects. The simulation parameters included a random intercept standard deviation (σ subject) and residual error standard deviation (σ residual), both set to 1, resulting in an intraclass coefficient (ICC) of 0.50, meaning that half of the total variance was due to stable individual differences and half to within-subject variability from experimental conditions and measurement error. Power simulations were conducted across sample sizes ranging from 30 to 100 participants in increments of 10 (Figure 5).

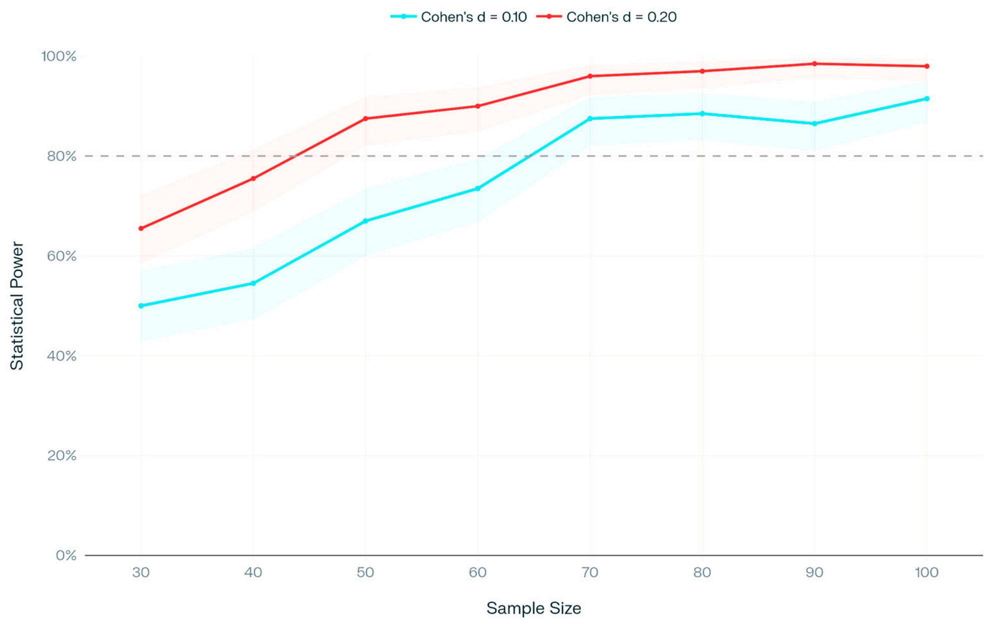

Figure 5. Power curve showing statistical power as a function of sample size for two interaction effect sizes (Cohen's d = 0.10 and d = 0.20) in a 3 × 2 within-subjects design. Shaded regions represent 95% confidence intervals. The horizontal line at 0.80 indicates the conventional power threshold.

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For each sample size, 200 datasets were simulated based on the specified model parameters, and the proportion of significant likelihood ratio tests ($\alpha = 0.05$) for the interaction term was calculated. The target power level was set at 0.80, following conventional recommendations [33]. Results showed that at least 45 participants were needed to detect a small effect, and 65 participants for a small-to-medium effect, with adequate power ($\geq$0.80).

Of the 70 participants initially contacted through purposive sampling, 66 provided informed consent. Of these, twelve were subsequently excluded because, despite agreeing to participate in the research, they reported attending the campus only occasionally, making them unavailable for post-test assessments. Six of them also failed an attention-check item placed immediately before the section assessing behavioral intentions. The analyses were completed with a total of 54 participants. Forty-two participants were women (77.8%), and the mean age of the sample was 27.2 years (*SD* = 10.15). According to the simulations, this sample size provided a 67% chance of detecting a moderate interaction effect under the specified conditions.

2.2. Procedure

The overall study procedure, including participant recruitment, pre-test data collection, the intervention phase, and post-test data collection, is summarized in Figure 6.

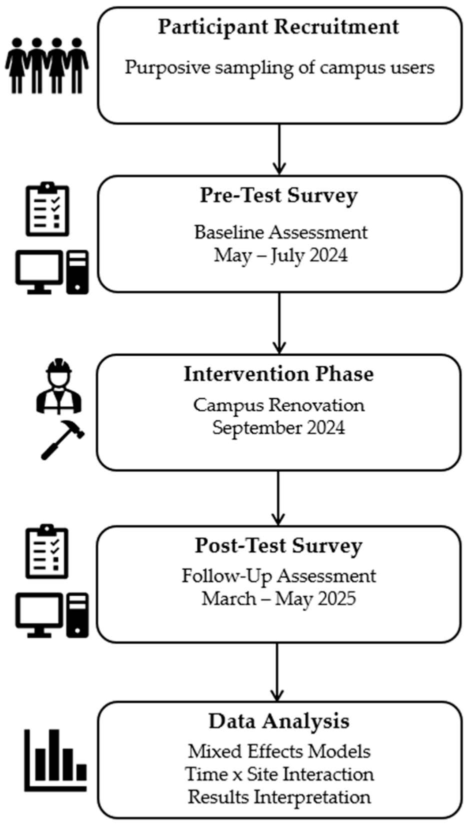

Figure 6. Schematic overview of the study procedure, including participant recruitment, pre-test data collection, intervention phase, post-test data collection, and data analysis.

The participants in the pre-test were recruited between 27 May and 3 July 2024. They were reached through peer referral, as students on campus were invited by their fellow students to participate in the survey using informal channels such as in-person contact, phone calls, and shared student groups. Because the study did not employ a probability-based sampling method, the findings should be interpreted with reference to the participants included in the study and should not be generalized to the entire student population.

They were contacted with a request to complete a survey on students' perceptions of the university campus's socio-psychological qualities. Participation was voluntary, and responses were collected anonymously. However, at the end of the survey, participants were asked, voluntarily, to provide their email address so that they could be contacted later for a possible follow-up phase of the study. Construction work at the intervention sites commenced in September 2024 and lasted approximately one week. Post-test participants (N = 54) were contacted by email and completed the survey again between 13 March and 16 May 2025.

The survey was administered on both occasions through the Google Forms platform. Most pre-test responses were submitted via smartphones, predominantly in situ, whereas the post-test employed the same technology but was completed primarily remotely. Participants were not informed of the specific hypotheses of the study (H1–H3). Instead, they were told that the research aimed to explore students' behaviors, perceptions, and preferences on the Sa Duchessa Campus. Before beginning the survey, participants provided informed consent for the processing of their personal data in accordance with the General Data Protection Regulation (EU Regulation 2016/679–GDPR) and applicable national data protection laws. They were informed that participation was voluntary and that all responses would be treated confidentially and used exclusively for research purposes. Participants were instructed to respond to each statement according to the option that best represented their own perception or intention. They were reminded to answer all questions attentively and honestly, considering that there were no right or wrong answers. Instructions preceding each part of the survey explained how to respond to the items, and participants were asked to indicate their answers without overthinking. The key items for hypothesis testing were included in the survey, specifically at the end of the questionnaire, and focused on participants' *intentions to care for* and *frequent* the locations involved in the intervention (see Measures), without explicitly connecting them to the main research objective. Just before these items, an item such as "respond with the number 2 to this question" functioned as an attention check.

2.3. Measures

The items for hypothesis testing were preceded by photos of the sites, as shown in Figures 2–4. The images of Sites A and C were different at pre-test and post-test, reflecting the state of the sites (see Figures 2 and 3). The image of Site B, used as a control, was the same (Figure 4).

The *intention to care for the sites* was measured using three items: 1. I wish to help keep this place clean, 2. I wish to preserve the integrity of this place, 3. I would like to contribute to the improvement of the place. Participants were asked to indicate for each site their agreement using a seven-point scale (1 = 'Completely disagree' to 7 = 'Completely agree'). Cronbach's reliability coefficients for the composite scores at pretest were 0.84, 0.84, and 0.89 for Sites A, B, and C, respectively. At post-test, the coefficients were 0.87, 0.79, and 0.83, respectively.

The *intention to stay on the sites* was measured using three items: 1. I wish to continue spending time in this place, 2. I would gladly spend time in this place, 3. I would like to keep visiting this place in the future. Participants were asked to indicate their agreement for each site using a seven-point scale (1 = 'Completely disagree' to 7 = 'Completely agree'). Cronbach's reliability coefficients for the composite scores at pretest were 0.93, 0.96, and 0.95 for Sites A, B, and C, respectively. At post-test, the coefficients were 0.93, 0.94, and 0.92., respectively.

The *intention to care for the sites* and the *intention to stay on the sites* were measured with ad hoc items developed specifically for this study, based on the objectives of the intervention and previous observations. These items were designed to be clear and relevant to the research questions. An ad hoc piloting test was conducted with 80 students enrolled in a Psychology course to evaluate the clarity and comprehensibility of the ad hoc items and scales, as well as the recognizability and correct visualization of the visual stimuli (i.e., images of the three sites). The reliability of the scales was excellent ($\alpha > 0.80$), a pattern that was subsequently confirmed in the main study.

2.4. Data Analysis

Data were analyzed using mixed-effects models implemented through the GAMLj module [34] in Jamovi 2.6 [35]. Two dependent variables were examined: *intention to care for* and *intention to stay on the sites*. Both time (pre- vs. post-intervention) and site (Sites A, B, and C) were treated as within-subject factors, since each participant provided responses for all sites at both time points. To account for the non-independence of repeated measurements, random intercepts for participants were included, allowing each participant to have their own baseline level. Random slopes for site, time, and their interaction were not included because each participant provided only six repeated observations, an amount insufficient to support identifiable and interpretable participant-specific slopes. The final models, therefore, retained only random intercepts and fixed effects of time, site, and the time × site interaction. Degrees of freedom were computed using Satterthwaite's method. Conditional and marginal R^2 indices were used to evaluate model fit, and estimated marginal means were computed to interpret the direction of significant effects.

3. Results

The descriptive statistics for *intention to care* and *intention to stay* across sites and measurement times are reported in Table 1, providing an overview of distribution characteristics.

Table 1. Descriptive statistics for the variables *intention to care* and *intention to stay* across Sites (A, B, C) and times (pre and post), including mean, median, standard deviation, skewness, and kurtosis.

	Site	Time	N	Mean	Median	*SD*	Min	Max	Skewness	SE	Kurtosis	SE
Intention to care	A	Pre	54	5.53	5.67	1.34	1.67	7.00	−0.798	0.325	0.062	0.639
		Post	54	5.78	6.00	1.34	1.00	7.00	−1.502	0.325	2.551	0.639
	B	Pre	54	5.23	5.33	1.53	2.00	7.00	−0.529	0.325	−0.655	0.639
		Post	54	5.59	6.00	1.26	1.00	7.00	−1.089	0.325	1.791	0.639
	C	Pre	54	5.18	5.50	1.59	1.00	7.00	−0.893	0.325	0.202	0.639
		Post	54	5.59	6.00	1.28	1.00	7.00	−1.036	0.325	1.527	0.639
Intention to stay	A	Pre	54	4.02	4.17	1.70	1.00	7.00	−0.105	0.325	−0.908	0.639
		Post	54	4.07	4.17	1.53	1.00	7.00	0.002	0.325	−0.653	0.639
	B	Pre	54	3.14	3.00	1.67	1.00	7.00	0.594	0.325	−0.521	0.639
		Post	54	2.93	3.00	1.38	1.00	7.00	0.636	0.325	0.160	0.639
	C	Pre	54	3.93	4.00	1.72	1.00	7.00	0.119	0.325	−0.866	0.639
		Post	54	3.88	4.00	1.53	1.00	7.00	−0.211	0.325	−0.627	0.639

Regarding *intention to care*, the analysis revealed a significant main effect of time, $F(1, 265) = 10.39$, $p = 0.001$, $\eta^2 p = 0.038$, indicating higher scores in the post-intervention occasion compared to the pre-intervention occasion. Specifically, the estimated difference between post- and pre-intervention scores was 0.342 (SE = 0.106, 95% CI [0.133, 0.550], t(265) = 3.22, $p = 0.001$), confirming a meaningful increase following the intervention. The main effect of site was only marginally significant, $F(2, 265) = 2.62$, $p = 0.075$, $\eta^2 p = 0.019$, while the time × site interaction was also not significant, $F(2, 265) = 0.22$, $p = 0.805$, $\eta^2 p = 0.002$. These results confirm H1a, whereas H2a and H3a were not supported. Overall, the model accounted for 17.2% of the variance when considering both fixed and random effects (conditional R^2) and 8.6% when considering fixed effects only (marginal R^2). Estimated marginal means are presented in Figure 7.

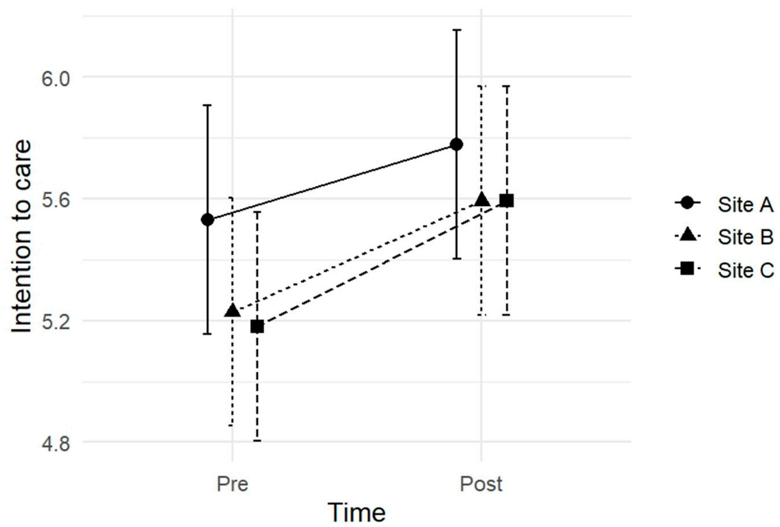

Figure 7. Estimated marginal means for intention to care across time and site. Scores in the post-intervention condition were significantly higher than in the pre-intervention condition. The site and the time × site interaction effects were not significant.

Regarding intention to stay, the analysis revealed a significant main effect of site, $F(2, 265) = 19.37$, $p < 0.001$, $\eta^2 p = 0.127$. Neither the main effect of time, $F(1, 265) = 0.26$, $p = 0.608$, $\eta^2 p = 0.001$, nor the time × site interaction, $F(2, 265) = 0.29$, $p = 0.751$, $\eta^2 p = 0.002$, were significant. Planned contrasts indicated that the two intervention sites (Sites A and C) scored significantly higher than the control site (Site B), $t(265) = 6.17$, $p < 0.001$ (estimate = 0.314, SE = 0.051, 95% CI [0.214, 0.415]), while no other comparisons were significant. These results supported H2b, whereas H1b and H3b were not supported. The fixed effects accounted for 18.4% of the variance (marginal R^2), whereas the full model, including random effects, explained 35.1% of the variance (conditional R^2). Estimated marginal means are presented in Figure 8.

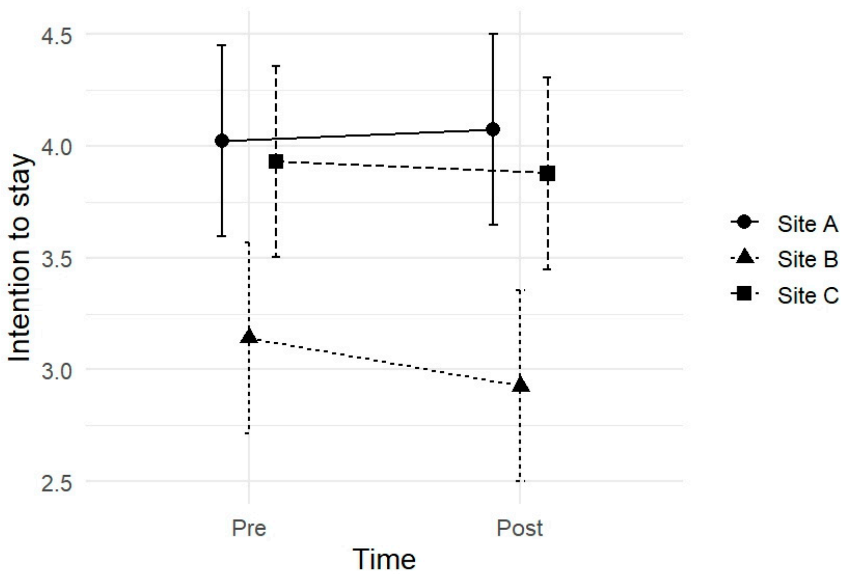

Figure 8. Estimated marginal means for intention to stay across time and site. Scores at the two intervention sites (Sites A and C) were significantly higher than at the control site (Site B). The time and the time × site interaction effects were not significant.

4. Discussion

The study's results provided insight into how a self-construction intervention was associated with students' behavioral intentions toward the regenerated areas of the campus. Our results indicated that participants' intention to care for the places tended to increase after the intervention, compared with the pre-intervention condition, which is consistent with H1a. This pattern suggests that well-designed regeneration interventions may be linked to a heightened sense of responsibility and a greater inclination to care for shared spaces. These findings are in line with the theory of the aesthetics of care, which posits that ecologically and socially tended landscapes are more likely to be sustained when they evoke enjoyment and approval from the public [36,37]. The observed increase in students' intention to care for the spaces might reflect this mechanism: the intervention made the areas appear more clearly "cared for" and therefore more likely to be perceived as worthy of attention and maintenance, possibly contributing to a motivational effect among participants. It should be noted, however, that intentions do not always translate into actions [38], and the so-called intention–behavior gap [39] remains a well-documented phenomenon. This is particularly relevant in the present study, as the intervention involved newly regenerated spaces that, despite their attractiveness, may remain vulnerable to neglect or vandalism if intentions are not followed by consistent behaviors. Nevertheless, intention has frequently been identified as a strong predictor of actual behavior in studies on pro-environmental behaviors, including travel behavior [40] and energy saving [41]. In line with this evidence, the Theory of Planned Behavior (TPB), a widely used social psychology model [42], conceptualizes intention (shaped by attitudes, perceived behavioral control, and social norms) as a proximal antecedent of actual behavior, rather than a guarantee of it. This pattern also aligns with perspectives on social infrastructure, which underscore how the quality and accessibility of shared environments can be related to users' involvement and collective responsibility [18].

The absence of a significant main effect of place, thereby rejecting H2a, and the lack of the time $\times$ site interaction, rejecting H3a, suggested that the increase in care intentions was not confined to the intervention sites but extended across all campus areas. The absence of site-specific effects, along with the pattern of observed changes not confined to intervention sites, may reflect a general awareness effect, potentially generated by the intervention, which appears to have heightened participants' attention to the maintenance and preservation of shared environments, regardless of their specific location. A similar phenomenon was described by Manunza et al. [30], who found that specific behaviors in regenerated urban spaces could be attributed to broader shifts influencing the entire campus, beyond the specific intervention areas. This view is consistent with the Human–Environment Interaction (HEI) model, which highlighted how environmental cues shape users' cognitive and affective evaluations of everyday settings [19]. Supporting this interpretation, Chen et al. [43], examining residents' satisfaction within a neighborhood undergoing urban regeneration, found that interventions targeting a limited portion of an area produced wider benefits, including improved public facilities, green spaces, and commercial accessibility. Thus, Chen et al. [43] demonstrated that intensive intervention in a single area can generate positive spillover effects extending to the broader urban context. In the present study, a similar dynamic might be at play, with improvements in the regenerated sites possibly influencing participants' perceptions across the broader campus. This interpretation, grounded in previous theory and research, highlights how localized regeneration interventions can have positive indirect effects on adjacent or connected spaces, thereby reinforcing the broader impact of targeted interventions on user engagement and care behaviors.

Regarding the *intention to frequent the places*, the results revealed that the two intervention sites (A and C) were rated overall more positively than the control site (Site B).

This finding was consistent with H2b, indicating that students perceived the regenerated areas as more attractive and desirable destinations. However, no significant effects of time or of the time × site interaction were observed, thereby rejecting H1b and H3b. In other words, intention to frequent specific sites did not change substantially from pre- to post-intervention. This stability may partly reflect strong pre-existing bonds [21,22] or preferences for Sites A and C, which were already key gathering areas on campus. Indeed, Site A offers comfortable shaded spaces that are particularly valued during the warm season, while Site C is in front of the main campus library, a highly frequented area [30]. At the same time, the absence of a time effect could also be related to contextual factors such as seasonal differences between the pre-test (early summer) and the post-test (spring) [44]. Taken together, these results suggest that students' preferences for frequenting certain areas may be associated with pre-existing characteristics of the sites rather than the intervention itself. Specifically, Sites A and C were consistently rated more positively than Site B, which may reflect differences in the intrinsic qualities of these places rather than changes over time influencing students' intentions to visit them.

As highlighted by Soja [45], a place cannot be separated from the people who inhabit it and give it meaning, a notion also incorporated in the HEI model [19]. Spaces become meaningful places when physical and cultural attributes interact with individuals' affective perceptions and functional needs [46]. Such stability is coherent with theoretical accounts of place attachment, which describe spatial preferences as grounded in affective and experiential bonds with meaningful environments [21,22]. The meanings associated with places can, in turn, generate strong emotional bonds that influence attitudes and behaviors [23,24,47].

Overall, the results indicated a coherent pattern consistent with the characteristics of hybrid and multifunctional spaces. The intervention seemed to promote participants' general responsibility for caring for the sites, whereas the attractiveness and actual use of the sites depend on the quality and the physical and functional characteristics of the spaces.

5. Limitations

Despite its contributions, this study has several limitations that should be acknowledged. First, the sample size was non-probabilistic and predominantly female, which may limit the generalizability of the findings to the broader student population. This gender imbalance may also have influenced how participants perceived and evaluated the campus spaces, as gender-related differences in spatial experience are well documented [48,49]. Therefore, the results should be interpreted with caution, considering that the perspectives of male and gender-diverse students are underrepresented. Second, the use of a purposive sampling strategy may have introduced self-selection bias, as participants could have been more motivated or engaged than the average student [50]. Nevertheless, the study was grounded in clearly formulated, theory-driven hypotheses derived from previous literature on place-based interventions and campus environments, thus providing insights into the socio-psychological effects of self-construction interventions and behavioral intentions within the campus context. However, while the sample size was sufficient to detect main effects (time and site), it offered limited statistical power for identifying interaction effects (time × site). Third, the study focused on pre- and post-intervention measurements without long-term follow-up, leaving open questions regarding the persistence of the observed effects over time. Additionally, we used self-reported behavioral intentions rather than actual behaviors, which may be subject to social desirability bias and could not fully capture the intention–behavior gap [39]. Contextual factors, such as campus events, seasonal conditions, or social dynamics among students, were not controlled for and could have influenced perceptions and use of the spaces. Moreover, the intrinsic qualities of Sites A and C, which were preferred even before the intervention, made it difficult to isolate

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the impact of the self-construction activities on site frequentation. Furthermore, while this study employed quantitative surveys to assess behavioral intentions, incorporating qualitative methods, such as interviews or focus groups, could provide deeper insight into students' experiences, perceptions, and motivations, capturing nuances that structured questionnaires may overlook [51,52]. Future research could address these limitations by including larger and more diverse samples, using randomized or controlled designs, incorporating behavioral measures, and examining the long-term effects of participatory interventions on both care and usage behaviors.

6. Practical Implications

The findings of this study offer relevant implications for urban regeneration practice and campus design.

First, the observed increase in participants' *intention to care* for the regenerated sites highlighted the potential of participatory self-construction interventions to strengthen users' sense of responsibility and stewardship. This suggests that integrating co-design and hands-on construction activities into regeneration strategies can help foster long-term maintenance behaviors and community-led care of shared environments. Importantly, such participatory processes can also generate indirect benefits that extend beyond the intervention sites, creating a campus-wide culture of environmental awareness and shared responsibility.

Second, the evidence that participants consistently preferred the intervention sites over the control site, regardless of temporal effects, underscored the crucial role of spatial quality and functional design in shaping user preferences. Beyond mere physical transformation, the planning of open spaces should prioritize hybrid, multifunctional environments that can support both social interaction and restorative experiences. These results suggest that effective regeneration requires a combined focus on physical improvements, social functions, and affective dimensions of place, aligning with contemporary approaches to sustainable urban development.

From a policy and planning perspective, these insights advocate for a shift toward collaborative governance models that actively involve users throughout the design and implementation process. By leveraging community knowledge and engagement, institutions such as universities can design interventions that are not only spatially effective but also socially resilient and aligned with the everyday needs of their users.

7. Conclusions

Despite relying on a non-probabilistic sample of specific campus users, which warrants caution in drawing broader generalizations, this study contributed to the growing body of research on participatory urban regeneration. Specifically, it offers preliminary insights into the socio-psychological correlates of self-construction interventions within a university campus context. Such interventions may be associated with an enhanced sense of responsibility among users and with variations in behavioral intentions toward shared spaces, while also underscoring the importance of spatial quality in shaping site use and preferences.

Taken together, these findings highlight the potential value of adopting integrated approaches to regeneration that combine participatory processes, architectural design, and insights from environmental psychology. Such approaches may assist urban planners and decision-makers in developing interventions that not only enhance physical environments but also support social cohesion, community engagement, and more sustainable patterns of site use. In this regard, self-construction initiatives implemented in university contexts could be considered as potentially scalable and adaptable models for broader urban transformation efforts, particularly in socially sensitive or vulnerable areas.

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