

# Design of a Therapeutic Student Centre in Covenant University, Ota, Nigeria: User-Centred Approach

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**Abstract** This qualitative study addresses the pressing need for a therapeutic and supportive student center at Covenant University, Nigeria, to tackle escalating mental health concerns and the absence of dedicated well-being spaces on campus. Through semi-structured interviews with 100 undergraduate and postgraduate students, it gathers comprehensive insights into their needs, preferences, and perspectives regarding such a center. Employing a combined inductive-deductive approach to thematic analysis, grounded in trustworthiness strategies like prolonged engagement and member checking, key findings underscore the importance of natural lighting, private comfortable rooms, counseling services, art activities, and a welcoming atmosphere. These insights directly shape recommendations for the center's layout, furniture, services, and stigma-reduction campaigns. The study's rigorous methodology, emphasizing trustworthiness, highlights its contribution to capturing authentic student voices and translating them into actionable recommendations. Acknowledging limitations, such as cultural specificity, it calls for future cross-cultural studies and architectural expertise integration. By centering on students' perspectives, this research advances discourse on therapeutic architectural design's mental health impact, offering a model for higher education institutions to co-create supportive, user-centered spaces prioritizing holistic well-being.

**Keywords** Restorative Environments, Student Mental Health, Therapeutic Architecture, User-centered Design, Well-being Space Design

## 1. Introduction

A deteriorating mental health crisis quietly afflicts students on university campuses nationwide. Studies demonstrate surging rates of anxiety, depression, addiction, and distress among college cohorts, while in parallel, the long-standing stigma around support seeking persists within academic environments. Escalating pressures, including course loads, social issues, finances, competition, isolation from family, and the transition to independent adulthood converge, profoundly test students' coping capacities [1,2]. Yet even as more undergraduates suffer, institutional resources dedicated wholly to student well-being remain scarce on most campuses [3].

Therapeutic architecture offers a timely means of intervention by deliberately engineering built environments that measurably nurture both physical and psychological health. Ground-breaking research continues affirming strong links between thoughtfully designed spaces and positive healing outcomes, suggesting potential to strategically embed well-being promotion into the very infrastructure framing students' days [4]. Key tenets of

health-focused design champion patient-centeredness, nature integration, accessibility, privacy, and holistic sensory balance as central to crafting salutogenic spaces that proactively support users, rather than solely treat diseases [5,6]. Still, while evidence solidifies globally regarding therapeutic architecture's impacts, incorporation into higher education settings strikingly lags. This poses concerning implications for the increasingly distressed generation learning within their walls.

This urgent problem commands timely investigation and intervention development tailored to the university context. The aim of this research is to develop a user centered design approach for a therapeutic and supportive student center at Covenant University, a private Christian university situated in the semi-urban city of Ota, Ogun State, Nigeria. This location provided a unique socio-cultural context shaped by the institution's ethos, surrounding community dynamics, and its position within the Lagos metropolitan region. With a diverse student population residing on campus throughout their degree programs, the study explicitly focused on the perspectives and experiences of students enrolled in on-campus programs. By consulting the very students affected through participatory research on their well-being needs and environmental preferences, crucial insights can inform creation of on-campus therapeutic spaces designed to students' priorities. The resulting student-validated guidelines for user-centered therapeutic space could then guide universities nationwide, seeking to fundamentally embed dedicated mental health infrastructure into campuses. This unprecedented opportunity necessitates embracing students as partners and co-producers of a built environment envisioned to uplift their whole health, an endeavour wholly aligned with higher education's overarching purpose to enrich all facets of life.

## 2. Literature Review

Contemporary architectural discourse places a significant emphasis on understanding the symbiotic relationship between built environments and human well-being. This literature review aims to unravel the intricate connections between architectural design elements and their impact on physical, mental, and emotional health. As we delve into the literature, the concept of biophilic design emerges as a central theme. Kellert, Heerwagen, and Mador's [7] exploration of biophilic principles provides a foundational understanding of how integrating nature into architectural spaces contributes to enhanced mood and reduced stress. This emphasis on bringing buildings to life sets the stage for further discussions on the importance of nature in design. Continuing the exploration, Hescong and Saxena's [8] study on windows and office performance sheds light on the positive effects of natural light. The findings resonate with the biophilic design principles, underlining the role of

daylight not only in improving sleep quality but also in boosting overall productivity. This seamless transition from biophilic design to the specific impact of natural light underscores the interconnectedness of these architectural considerations. Zooming out to the broader urban context, Jackson's [9] research seamlessly extends the conversation. The focus on urban planning and community design broadens our perspective, highlighting the impact of walkable neighbourhoods, accessible parks, and well-planned urban spaces on individual well-being. The discussion now spans from individual spaces to the communal, emphasizing the holistic nature of architectural influence. The visual appeal of built environments comes into focus through Bellizzi and Hite's [10] and Owoseni, Oluwatayo and Aderonmu's [11] exploration of environmental colour. Connecting seamlessly with the previous discussions, this segment emphasizes the psychological impact of colour schemes on human emotions. The aesthetic dimension of architecture becomes a critical factor in influencing occupant experiences and, consequently, their well-being. Transitioning smoothly, the impact of poorly designed acoustics on stress levels becomes a central consideration in our exploration. Stansfeld and Matheson's [12] research brings attention to the often-overlooked aspect of noise pollution, reinforcing the notion that a thoughtful approach to acoustics is crucial in creating environments conducive to mental health. Shifting gears to the professional realm, Sundstrom, Town, Rice, Osborn, and Brill's [13] study on office design seamlessly connects with the broader discussions. The workplace environment, as an integral part of our daily lives, comes under scrutiny. Ergonomic design, access to natural light, and collaborative spaces are identified as key contributors to creating a healthy and productive workspace, showcasing the relevance of these architectural considerations in various contexts. Nasar's [14] exploration of urban design aesthetics introduces a cultural and historical perspective. This segment seamlessly extends our understanding, emphasizing how the cultural context of architecture shapes individuals' sense of identity and connection to their environment. The conversation broadens, highlighting the diversity of factors influencing human well-being. Our journey concludes by delving into the sustainable aspect of architectural choices. Kibert's [15] work on sustainable building and construction provides a fitting closure, highlighting the dual benefits of contributing to the health of the planet and positively impacting the health and well-being of occupants. This reinforces the overarching theme of architecture as a holistic influence on human happiness. This literature review navigates through a rich tapestry of research, connecting the threads of biophilic design, natural light, urban planning, aesthetics, acoustics, workplace design, cultural perspectives, and sustainability. Collectively, these discussions form a comprehensive understanding of how architectural choices significantly influence human

health and well-being. This synthesis underscores the need for a holistic approach in architectural design, acknowledging the interconnected nature of spaces and their profound impact on the individuals who inhabit them.

Therapeutic landscapes and purposefully designed well-being facilities are gaining traction [16], especially on campuses seeking holistic student support. The University of Westminster recently unveiled the Derek Myers Therapeutic Hub featuring evidence-based sensory rooms with aroma diffusers, audio/visual relaxation tools and textured furniture supporting neurodiverse students and their self-regulation [17]. Similarly, Canada's University of Waterloo developed a Therapeutic Landscape Design master plan embedding access to natural scenery, contemplative gardens, walking trails and other restorative ecosystem elements to uplift community mental health in alignment with biophilia principles [18]. In the U.S., Swarthmore College's Live Well Center empowers student healing through integrative therapies from yoga and meditation spaces to nutrition/sleep hygiene education - reducing barriers via convenient scheduling and normalized utilization [19]. The University of Michigan - Flint likewise delivers trauma-informed care access by co-locating counselling with academic advising, disability services and a wellness lounge in their Community Psychological Services clinic [20]. Based on emerging neuroscience, Clemson University weaves biophilic fractal patterns mimicking natural geometric structures into flooring and architectural details to subconsciously induce calm where students congregate [20,21]. Internationally, United Kingdom institutions increasingly sponsor pet therapy spaces found to meaningfully alleviate student anxiety and loneliness strains when missing family pets [22]. Within a Middle Eastern context, designers fused cultural place-making and sustainable features at Gulf Medical University to actualize an indigenous therapeutic landscape promoting communal healing aligned with Emirati healing traditions - including majlis-style gathering spaces oriented around central water features [23]. The campus' vernacular Gazbeya hut forms merge modern and native architectural elements as a tranquil refuge amid bustling Abu Dhabi. These global precedents illuminate how contextual therapeutic space innovation holds immense potential to respond to diversifying frontline mental health realities. As a universal design and decolonizing architecture dialogues continue unfolding across higher education, the approaches highlighted above showcase how to sensitively weave localized spatial understandings, student voices, ecology, and cross-disciplinary research to holistically enrich lived experiences for 21st century minds.

Developing emotionally responsive and inclusive design frameworks is paramount for creating environments that prioritize well-being and cater to diverse needs. Two noteworthy frameworks that guide this approach are the Universal Design and the WELL Building Standard.

Originating in architecture but extending to various disciplines, the Universal Design framework focuses on crafting spaces accessible and beneficial to all individuals, irrespective of age, ability, or background [24]. Its principles, including equitable use, flexibility, simplicity, and perceptibility, emphasize a broad consideration of users' abilities and preferences [25]. Complementing this, the WELL Building Standard, a performance-based system, measures and certifies features of the built environment impacting human health and well-being [26]. Encompassing concepts like air and water quality, nourishment, light, fitness, and comfort, it embeds inclusivity within a broader focus on holistic health. These frameworks converge on the fundamental principle of designing spaces that prioritize the needs of diverse individuals. By integrating emotional responsiveness and inclusivity, architects and designers can create environments that not only meet functional requirements but also contribute to the emotional well-being of their occupants. The synergy between the Universal Design and the WELL Building Standard offers a robust foundation for crafting environments that not only accommodate diverse needs but also foster emotional well-being through inclusive design practices.

### 3. Materials and Methods

#### 3.1. Research Design

The research employed a predominantly inductive, or data-driven approach to coding and analysis. This approach involves deriving codes directly from the data itself, without being constrained by pre-existing theoretical frameworks or conceptual models as emphasized by Braun and Clarke [30]. The aim is to capture the authentic meanings conveyed by the data, rather than forcing the data to fit into predetermined categories. However, the researchers acknowledged that a purely inductive approach is not entirely feasible, as some degree of deductive analysis is necessary to ensure that the coded information remains relevant to the research questions [30,31,32]. This was supported in the work of Byrne [33]. Consequently, the study adopted a balanced approach, where open coding was used to emphasize the participant-based meanings, while a degree of deductive analysis was employed to align the emergent themes with the research objectives. This combined inductive-deductive approach enabled the researchers to prioritize the data-driven insights while maintaining a clear connection to the overarching research aims.

Prior to commencing this study, a rigorous ethical review process was undertaken to ensure the highest standards of research integrity and participant protection. The research protocol was submitted to the Institutional Review Board (IRB) at Covenant University, Covenant Health Research Ethics Committee (CHREC), where it

underwent a comprehensive evaluation. After a thorough assessment of the study's objectives, methodologies, and potential risks, the IRB granted formal approval, deeming the research ethically sound and compliant with all relevant regulations and guidelines. Stringent measures were implemented to uphold ethical conduct throughout the research process. Paramount among these was the acquisition of informed consent from all participants. A detailed information sheet was provided, clearly outlining the study's purpose, procedures, potential risks and benefits, and the participants' rights, including the option to withdraw at any time without consequence. Participants were given ample time to review this information and raise any concerns before providing their voluntary, written consent. Ensuring confidentiality and anonymity was a top priority. All personal identifiers were removed from the data, and participants were assigned pseudonyms to protect their privacy. The collected data was securely stored, with access strictly limited to the research team. Additionally, any potential risks or discomforts were carefully considered and mitigated. For instance, sensitive topics were broached with utmost care, and participants were provided with resources for support services when they experience any distress.

As researchers, we acknowledge that our backgrounds, experiences, and beliefs inevitably shape our perspectives and approaches to this study. Having grown up in Nigeria, our cultural upbringings and exposure to diverse communities have undoubtedly influenced our worldview and understanding of the research topic. Moreover, our academic training in Architecture has equipped us with theoretical lenses through which we interpret and analyze data. Throughout the research process, we remained vigilant about potential biases and preconceptions that could arise from our positionalities. We engaged in regular self-reflection, questioning our assumptions, and actively seeking out alternative perspectives. Additionally, we maintained open and collaborative dialogues within our research team, encouraging critical feedback and diverse viewpoints. To mitigate the influence of personal biases, we employed various strategies collectively. First, we engaged in bracketing exercises, consciously setting aside our preconceptions and striving to approach the data with open and curious minds. Second, we employed member-checking techniques, sharing our interpretations with participants and seeking their validation or clarification. Third, we collectively maintained a reflexive journal, documenting our thoughts, decisions, and potential biases throughout the research journey.

### 3.2. Data Collection

The qualitative research methodology adopted for this study draws upon the insights of Gill, Stewart, Treasure, and Chadwick [27], who highlight interviews as a common and effective method for qualitative healthcare research.

Additionally, we incorporate the saturation principle outlined by Guest, Bunce, and Johnson [28] along with Mason [29] as a guiding rule for determining the sample size in our qualitative study. Our research design is intricately woven with a participatory research approach, a deliberate choice aimed at crafting a user-centered design for a therapeutic and supportive student center at Covenant University. This approach delves deep into the essence of our research, aiming to unravel the intricate tapestry of views, experiences, beliefs, and motivations held by both undergraduate and postgraduate students from diverse academic departments.

The study included a heterogeneous sample of 100 participants, comprising 80 undergraduates and 20 postgraduates drawn from diverse departments across 4 faculties. This thoughtful selection aimed to capture a mosaic of voices, reflecting the varied perspectives within the academic ecosystem. The participants, meticulously chosen for their diversity, were expected to contribute rich and varied experiences. The sample size of 100 participants aligns with and exceeds the recommended sample size for reaching data saturation in qualitative research [28,29].

Individual semi-structured interviews were conducted with each participant. The structured nature of the interviews provided a guide through participants' views on the therapeutic and supportive student center, while intentional flexibility allowed for probing discussions, particularly on sensitive topics. The interviews were audio-recorded and subsequently transcribed verbatim for analysis. The structured interview questions explored participants' familiarity with therapeutic spaces, experiences with therapeutic architecture, current mental health stressors, barriers or gaps in student mental health services, preferences for activities and services within a therapeutic student center, desired environmental characteristics for such a center, recommended specific features or components, and concerns or stigmas associated with its use. Additionally, participants were asked to rate the urgency level of identified stigmas or concerns.

### 3.3. Data Analysis

The data analysis process involved thematic coding, where initial codes were inductively derived from the data, and themes were iteratively refined through constant comparative analysis [30,33]. The research process extended to member-checking, where preliminary findings were shared with participants for validation, ensuring the accuracy of interpretations and adding layers of authenticity to the evolving analysis. Saturation, the point at which no new insights emerge from additional data collection, was meticulously assessed and marked the culmination of this research process. The chosen sample size of 100 participants aimed to ensure comprehensive saturation. The final step involved a cross-case analysis,

examining variations and commonalities across departments, faculties, and student categories to enrich the research's findings.

This comprehensive research design, with its systematic interplay of participants, methods, and analysis, aims to compile a collection of insights that resonate with the diverse needs and preferences of the student community at Covenant University. The research aims to contribute to the creation of a space that aligns authentically with the community's requirements, providing a transformative framework for the envisioned therapeutic and supportive student center.

## 4. Results and Discussion

### 4.1. Thematic Analysis

In exploring the nuanced perspectives of respondents on the concept of Therapeutic Architecture, a thematic analysis was conducted across various survey questions. Participants were prompted to share their thoughts on what comes to mind when hearing the term "Therapeutic Architecture", recount any encounters with such architecture on campus or elsewhere, express the activities and services they deem crucial for a therapeutic student center, elucidate the environments that would make them comfortable utilizing such a center, recommend specific features or components, and finally, detail any obstacles or stigmas that concern them in the utilization of such centers. The thematic analysis of the responses from the respondents revealed several key themes related to the design of a therapeutic student center at Covenant University. These themes highlight the students' perspectives, needs, and preferences, providing valuable insights for creating a user-centered environment that supports their overall well-being.

#### 4.1.1. Theme 1: Need for Dedicated Spaces for Counseling and Mental Health Support

One of the prominent themes that emerged from the data was the strong desire for dedicated spaces within the student center specifically designed for counseling and mental health support services. Respondents emphasized the importance of having private, comfortable, and welcoming spaces where they could seek professional help and engage in therapy sessions. Table 1 presents relevant quotes that illustrate this theme.

The need for dedicated spaces for counseling and mental health support services highlights the importance of creating an environment that promotes accessibility, privacy, and a sense of comfort for students seeking support. By providing specialized areas tailored to these needs, the student center can help reduce barriers and stigma associated with seeking help, encouraging more students to prioritize their mental well-being.

**Table 1.** Quotes Highlighting the Need for Dedicated Spaces for Counseling and Mental Health Support

Direct Quotes	Respondents
<i>"I think it's really important to have private rooms or spaces where we can meet with counselors or therapists without feeling exposed or judged."</i>	Respondent 8
<i>"The student center should have a dedicated area for mental health services, like one-on-one counseling sessions or support groups. It would make it easier to access these resources."</i>	Respondent 21
<i>"Having a quiet and calming environment for counseling would make me feel more comfortable opening up about my struggles."</i>	Respondent 14
<i>"Confidentiality is crucial when seeking mental health support, so the counseling spaces should be designed to ensure privacy and discretion."</i>	Respondent 27
<i>"I would feel more at ease discussing sensitive issues if the counseling rooms had soothing decor and a warm, inviting atmosphere."</i>	Respondent 11

#### 4.1.2. Theme 2: Importance of Recreational and Social Spaces

Another recurring theme was the need for recreational and social spaces within the student center. Respondents recognized the value of having areas where they could engage in physical activities, participate in group events, or simply socialize with their peers. These spaces were seen as essential for promoting overall well-being and fostering a sense of community. Table 2 presents relevant quotes highlighting this theme.

**Table 2.** Quotes Emphasizing the Importance of Recreational and Social Spaces

Direct Quotes	Respondents
<i>"I would love to see a multipurpose room or gym area where we can do yoga, dance classes, or just work out. Physical activity really helps me manage stress."</i>	Respondent 3
<i>"Having a lounge or common area for socializing and hanging out with friends would be great. It's important to have spaces that promote a sense of community."</i>	Respondent 19
<i>"Maybe we could have a game room or a space for hosting events and activities. It would be a nice break from studying and could help us relax."</i>	Respondent 27
<i>"Outdoor spaces like gardens or courtyards would be amazing for relaxation and connecting with nature, which can have a calming effect."</i>	Respondent 9
<i>"A space for group activities or workshops related to mental health and well-being could be really beneficial, fostering a supportive community."</i>	Respondent 16

The emphasis on recreational and social spaces highlights the students' desire for a holistic approach to well-being that extends beyond traditional counseling services. By incorporating areas for physical activity, socialization, and community-building, the student center can create a more comprehensive environment that addresses various aspects of mental and emotional health. These spaces promote stress relief, social connections, and a sense of belonging, all of which contribute to overall well-being.

4.1.3. Theme 3: Importance of Sensory Elements and Ambiance

Respondents also expressed a strong preference for incorporating sensory elements and creating a soothing ambiance within the student center. They recognized the impact of environmental factors on mental and emotional states, emphasizing the need for thoughtful design choices that promote relaxation and a calming atmosphere. Table 3 presents relevant quotes illustrating this theme.

**Table 3.** Quotes Highlighting the Importance of Sensory Elements and Ambiance

Direct Quotes	Respondents
<i>"The lighting should be soft and warm, not harsh or fluorescent. It can really affect your mood and stress levels."</i>	Respondent 22
<i>"I think it would be great to have some natural elements like plants or water features. They can create a more peaceful and grounding environment."</i>	Respondent 5
<i>"The color scheme and decor should be soothing and inviting, avoiding overly bright or bold colors that could be overwhelming."</i>	Respondent 18
<i>"Incorporating calming scents, like essential oils or incense, could help create a relaxing atmosphere in certain areas of the center."</i>	Respondent 25
<i>"Sound insulation and noise control are important considerations, especially for the counseling areas, to ensure privacy and minimize distractions."</i>	Respondent 13

The emphasis on sensory elements and ambiance highlights the students' recognition that the physical environment can significantly impact their emotional and mental well-being. By incorporating thoughtful design choices that engage the senses, such as natural elements, soothing colors, and sound insulation, the student center can create a more conducive environment for relaxation, focus, and overall comfort.

4.1.4. Theme 4: Accessibility and Inclusivity

Another theme that emerged from the data was the importance of ensuring accessibility and inclusivity within the student center's design. Respondents stressed the need for accommodating diverse needs and abilities, as well as promoting a welcoming and inclusive environment for all

students. Table 4 presents relevant quotes illustrating this theme.

**Table 4.** Quotes Highlighting the Importance of Sensory Elements and Ambiance

Direct Quotes	Respondents
<i>"The student center should be designed with accessibility in mind, ensuring that individuals with physical disabilities can easily navigate and access all areas."</i>	Respondent 7
<i>"It would be great to have gender-neutral restrooms and changing facilities to accommodate diverse gender identities and expressions."</i>	Respondent 20
<i>"The center should have multilingual signage and resources to cater to the diverse cultural backgrounds of our student population."</i>	Respondent 15
<i>"Incorporating universal design principles, such as wide doorways, ramps, and adjustable furniture, would make the space more inclusive and user-friendly."</i>	Respondent 23
<i>"Providing quiet spaces or sensory-friendly areas could be beneficial for students with autism, ADHD, or other neurodivergent conditions."</i>	Respondent 12

The emphasis on accessibility and inclusivity underscores the students' desire for a welcoming and equitable environment that caters to the diverse needs and identities within the university community. By considering factors such as physical accessibility, gender inclusivity, cultural diversity, and neurodivergence, the student center can foster a sense of belonging and ensure that all students feel comfortable and supported.

4.1.5. Theme 5: Accessibility and Inclusivity

In the digital age, respondents also expressed a desire for the integration of technology and digital resources within the student center. They recognized the potential benefits of leveraging technology to enhance accessibility, provide educational resources, and facilitate virtual support services. Table 5 presents relevant quotes highlighting this theme.

The integration of technology and digital resources reflects the students' recognition of the potential benefits. These tools can offer support to their well-being. By incorporating online resources, virtual counseling options, interactive displays, and reliable technology infrastructure, the student center can enhance accessibility, facilitate educational opportunities, and provide alternative modes of support for those who may prefer or require digital services.

The thematic analysis revealed a diverse range of perspectives and priorities among the respondents regarding the design of a therapeutic student center. By carefully considering and addressing these themes, the university can create a user-centered environment that

effectively meets the well-being needs of its student population, fostering a supportive and inclusive community that promotes holistic health and personal growth.

**Table 5.** Quotes Emphasizing the Integration of Technology and Digital Resources

Direct Quotes	Respondents
<i>"It would be great to have access to online resources and digital tools related to mental health and well-being within the student center."</i>	Respondent 6
<i>"Perhaps we could have a dedicated space or kiosks where students can access virtual counseling or telehealth services."</i>	Respondent 17
<i>"Incorporating interactive displays or digital signage could be a creative way to share information about the center's services and upcoming events."</i>	Respondent 24
<i>"Having charging stations and reliable Wi-Fi would make it easier for students to access digital resources or attend virtual workshops while in the center."</i>	Respondent 10
<i>"A dedicated computer lab or resource center within the student center could provide access to educational materials and self-help tools."</i>	Respondent 26

## 5. Discussion

The exploration into respondents' perspectives on Therapeutic Architecture through an intricate thematic coding analysis offers a nuanced understanding of the multifaceted connections that individuals establish between architectural design and mental well-being. The comprehensive analysis traversed diverse survey questions, unveiling rich themes, expectations, and concerns. The ensuing discussion delves into the profound insights garnered from each thematic thread, highlighting the convergence of perspectives, areas of saturation, and patterns that transcend individual cases.

### 5.1. Healing Spaces and Mental Well-being

The thematic analysis revealed several key themes that align with and build upon existing literature on therapeutic architecture, user-centered design, and the promotion of well-being in educational settings. The findings underscore the importance of creating environments that prioritize mental health support, foster a sense of community, promote sensory balance, ensure accessibility and inclusivity, and leverage technology to enhance overall well-being.

The prominent theme of the need for dedicated spaces for counseling and mental health support echoes the growing recognition of the mental health crisis afflicting

university campuses nationwide, as highlighted in the introduction [1,2,3]. This finding resonates with initiatives undertaken by institutions like the University of Westminster's Derek Myers Therapeutic Hub [17] and the University of Michigan - Flint's Community Psychological Services clinic [20], which have implemented specialized spaces for counseling and support services. The emphasis on privacy, confidentiality, and a soothing ambiance within these spaces aligns with the principles of therapeutic architecture, which emphasizes the creation of environments that nurture both physical and psychological health [4,5,6].

The importance of recreational and social spaces, as identified in the second theme, aligns with the biophilic design principles discussed by Kellert, Heerwagen, and Mador [7], which highlight the benefits of integrating nature into architectural spaces. The respondents' desire for outdoor spaces, gardens, and courtyards echoes the findings of the University of Waterloo's Therapeutic Landscape Design master plan [18], which recognizes the restorative potential of natural environments. Additionally, the emphasis on community-building and social connections resonates with Swarthmore College's Live Well Center [19], which promotes a holistic approach to well-being through group activities and a supportive community.

The third theme, which focused on the importance of sensory elements and ambiance, reinforces the findings of Heschong and Saxena [8] on the positive effects of natural light and the impact of environmental factors on mood and productivity. The respondents' preferences for soothing lighting, natural elements, and calming scents align with the principles of health-focused design, which prioritize holistic sensory balance and the creation of salutogenic spaces [5,6]. This theme also resonates with the biophilic fractal patterns employed by Clemson University [20,21], which aim to induce a sense of calm through the integration of natural geometric structures.

The fourth theme, which highlighted the need for accessibility and inclusivity, aligns with the Universal Design framework [24,25] and the WELL Building Standard [26]. The respondents' emphasis on accommodating diverse needs, including physical disabilities, gender identities, cultural backgrounds, and neurodivergence, underscores the importance of creating environments that prioritize equitable use, flexibility, and perceptibility. This theme resonates with the inclusive design practices adopted by institutions like the University of Waterloo [18] and the Gulf Medical University [23], which have incorporated elements of cultural place-making and sustainable features to create therapeutic landscapes that resonate with local traditions and values.

The fifth theme, which focused on the integration of technology and digital resources, reflects the increasing importance of leveraging technology to enhance accessibility and provide alternative modes of support in educational settings. The respondents' desire for online

resources, virtual counseling options, and interactive displays aligns with broader trends in digital health and the use of technology to promote well-being. This theme resonates with initiatives undertaken by institutions like the University of Westminster [17], which has incorporated audio/visual relaxation tools and interactive displays into its therapeutic spaces.

The findings from the thematic analysis align with and contribute to the existing body of literature on therapeutic architecture, user-centered design, and the promotion of well-being in educational settings. The themes highlight the importance of creating environments that prioritize mental health support, foster a sense of community, promote sensory balance, ensure accessibility and inclusivity, and leverage technology to enhance overall well-being. By integrating these elements into the design of the therapeutic student center, Covenant University can create a comprehensive and holistic environment that addresses the diverse needs and preferences of its student population, aligning with the overarching purpose of higher education to enrich all facets of life.

It is worth noting that while the findings resonate with existing literature and practices, the specific context of Covenant University, as a private Christian university in Nigeria, may require further consideration of cultural, religious, and socio-economic factors in the implementation of the therapeutic student center design. Continued collaboration with students and stakeholders, as well as ongoing research and evaluation, will be crucial in ensuring that the center effectively serves the unique needs of the university community.

## 6. Conclusions

The exploration of respondents' perspectives on Therapeutic Architecture, rooted in a detailed thematic coding analysis, has provided a nuanced understanding of the intricate connections that individuals forge between architectural design and mental well-being. The comprehensive discussion section unraveled key themes, convergence patterns, and critical insights that offer profound implications for the design and implementation of therapeutic spaces.

The overarching theme of associating Therapeutic Architecture with healing spaces underscores the universal recognition of the pivotal role these environments play in fostering mental, emotional, and even spiritual rejuvenation. Respondents envision therapeutic spaces as more than physical constructs; they are envisioned as sanctuaries that contribute significantly to mental well-being. This aligns with the evolving discourse on biophilic design, emphasizing the therapeutic impact of nature-inspired elements in architectural spaces.

Encounters with therapeutic architecture revealed a dual narrative, with specific locations on campus serving as prototypes for successful designs and a need for increased

visibility and education on the therapeutic qualities of these spaces. The recognition of existing areas with therapeutic qualities serves as a blueprint for intentional integration in future projects, while the lack of encounters highlights a potential gap in awareness that requires addressing.

In essence, the discourse on Therapeutic Architecture is not merely confined to physical structures but extends into the realms of mental, emotional, and spiritual well-being. Architects and designers, armed with the insights and recommendations gleaned from this analysis, have the opportunity to shape environments that transcend traditional notions of architecture, becoming catalysts for holistic healing and well-being. As Therapeutic Architecture evolves, the synthesis of user perspectives, interdisciplinary collaboration, and the infusion of innovative design principles will play a pivotal role in crafting spaces that resonate with diverse needs, fostering a profound impact on the collective human experience. The journey toward a more empathetic and well-designed built environment, intricately woven with the tapestry of mental well-being, unfolds with endless possibilities and transformative potential.

### 6.1. Limitations and Areas for Further Research

This research on Therapeutic Architecture, while providing valuable insights into the perspectives and preferences of students at Covenant University regarding a therapeutic and supportive student center, acknowledges certain limitations that pave the way for future investigations.

While the study employed rigorous strategies to establish trustworthiness, such as prolonged engagement, triangulation, member checking, and peer debriefing, the cultural specificity of the research context may limit the transferability of the findings to other settings. Cross-cultural studies could further enhance our understanding of how diverse cultural backgrounds influence perceptions of therapeutic spaces.

The qualitative nature of the study, while offering rich, in-depth insights, presents limitations in terms of statistical analysis and generalization. Future research could incorporate quantitative methodologies to complement the qualitative findings and facilitate broader generalizations.

As the study focused on the academic perspectives of undergraduate and postgraduate students, further exploration beyond educational settings is warranted to understand the broader societal impact and applicability of Therapeutic Architecture.

The study's cross-sectional design captures a snapshot in time, potentially overlooking the evolving perceptions and needs of students over time. Longitudinal studies could provide valuable insights into the dynamic nature of these perceptions and inform the adaptability of therapeutic spaces.

The absence of architectural expertise among the student respondents raises the importance of comparing



perceptions between architectural professionals and non-experts. Such comparisons could contribute to a more comprehensive understanding of the design and implementation of effective therapeutic spaces.

Finally, while the study focused on positive aspects and preferences for a therapeutic and supportive student center, future research could explore negative experiences or barriers to utilizing such spaces. This exploration could provide a more holistic understanding of the challenges and considerations involved in creating inclusive and accessible therapeutic environments.

By acknowledging these limitations, the study paves the way for a more diverse, comprehensive, and refined exploration of Therapeutic Architecture, contributing to the development of inclusive and culturally responsive therapeutic spaces that address the evolving needs of diverse communities.

## 6.2. Recommendation

Based on the comprehensive insights gleaned from this study, the following recommendations are proposed for architects, designers, and stakeholders involved in creating therapeutic spaces:

- 1) Prioritize the integration of healing spaces that promote mental, emotional, and spiritual well-being, acknowledging the profound impact of design on overall human wellness.
- 2) Replicate and build upon the therapeutic qualities of specific locations identified on campus, leveraging these existing prototypes as blueprints for future projects.
- 3) Increase visibility and education on campus regarding the therapeutic potential of architectural spaces, fostering awareness and appreciation among students and the broader community.
- 4) Incorporate holistic mental health support services, such as counseling, within therapeutic spaces, creating an integrated approach to well-being.
- 5) Design spaces that cater to a diverse range of activities and services, accommodating varying preferences and needs of the student population.
- 6) Create private and nature-immersed environments that offer respite and opportunities for contemplation, aligning with biophilic design principles.
- 7) Incorporate recommended design elements, such as natural lighting, soothing color schemes, and integration of natural elements, based on participants' preferences.
- 8) Establish clear communication and ethical guidelines to address concerns about misconceptions and monitoring, ensuring transparency and trust in the implementation of therapeutic spaces.
- 9) Develop effective management strategies to handle potential overcrowding concerns, ensuring accessibility and optimal utilization of therapeutic spaces.

10) Foster continuous user engagement and interdisciplinary collaboration throughout the design and implementation processes, ensuring that therapeutic spaces evolve to meet the dynamic needs of the community.

11) Conduct longitudinal studies to assess the long-term impacts of therapeutic spaces on mental well-being, contributing to the ongoing refinement and improvement of these environments.

By implementing these recommendations, architects, designers, and stakeholders can create therapeutic spaces that not only meet physical comfort needs but also foster holistic well-being and mental health, aligning with the evolving discourse on the therapeutic potential of architecture.

## Conflict of Interest

The authors declare no conflict of interest.

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