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# How do interior environments of youth centers promote wellbeing?

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Research and Project  
Development  
in Interior  
Design

North Dakota  
State University

## **Abstract:**

The purpose of this study aims to understand what amenities and interior features can be implemented into a youth center that can support the wellbeing of teenagers ages twelve to eighteen. In today's world, teens are being exposed to outdated learning tactics, little to no education on how to handle emotions/feelings, and little means of self-expression. The interior design industry has studied how our interior environments can impact all three of those vital learning skills to better understand today's youth (Kim & Heo, 2021). A purposive study was conducted using an online survey among counselors and parents in the Fargo-Moorhead area that work directly with teens ages twelve to eighteen. The survey was conducted anonymously, and participants were given as much time as need to complete each question. A variety of questions were asked based on the participants' opinions of what types of amenities and interior features are deemed most vital to the youth they work and live around. Although the study was limited to a specific community in the area, the results gave precise and accurate representation for the youth in communities today.

## Introduction

Today more than ever, mental health services are vital to the overall wellbeing and health of society's youth. This study examines what interior features are most likely to support the development of youth's wellbeing. "Youth centers in particular were designed... Areas were provided for arts and crafts, music and dancing, and indoor sports" (Owens, 1997, p. 158). The study focuses on consumer preferences for the promotion of mental health services amongst teens. How can interior environments be designed to inclusively meet the needs of any end user?

Why are youth centers vital to communities and why would the Fargo-Moorhead area benefit from one of their own? Mitchell (2020), notes that, "When young people have opportunities for leadership, understanding, and friendship, it can help them navigate adolescence in ways that advance their skills and feel good about themselves," (para. 12). Similarly, Ott (2020) in the article *Youth Centers: Places to develop physical, social, emotional, and cognitive abilities*, contributes to the idea of developing today's youth through the inclusion of various therapeutic approaches to life teaching children how to cope with emotions and the challenges life presents.

"Public areas, particularly commercial and recreation areas, should be designed to encourage the activities of teens rather than discourage them as is typically the case" (Owens, 1997, p. 165). Benefiting productivity, mental health, and social being, the interior environment has been proven to have a massive impact on overall human health. Biophilia is a huge factor in humanistic mental wellbeing. "The biophilia hypothesis argues that since our ancestors evolved in wild settings and relied on the environment for survival, we have an innate drive to connect with nature" (Weir, 2020, para. 5). Biophilic design has been found to support cognitive

function, physical health, and psychological well-being. Incorporating it into interior spaces has the possibility of showing many benefits to the end users. Including plants, when possible, throughout a space is another easy way to bring the outside in. “Just a few moments of green can perk up a tired brain” (Weir, 2020, para. 7). Specifically in children, producing a green environment is beneficial for their cognitive upbringing. “Children who lived in neighborhoods with more green space had a reduced risk of many psychiatric disorders later in life, including depression, mood disorders, schizophrenia, eating disorders and substance use disorder” (Weir, 2020, para. 11). In the cold climate that presents itself in the Midwest, alternative solutions to adding greenery into a space should be considered to help prevent the effects of seasonal depression.

Looking at the article *Why are youth development organizations important* posted by Michigan State University, it is studied that various amenities, activities, and curriculums can support youth development and excel childhood learning in all aspects of wellbeing (Neff, 2020). The intention of this research paper is to learn how the interior design of youth centers effect the mental wellbeing of society’s youth in the Midwest region. The data will be gathered and presented in a manner that productively encourages innovative a new designs to enter the industry of publicly commercial facilities. The rest of this discussion will review the methodology, results and overall conclusions of what interior amenities and features benefit youth development. The results include quantitative data that shows accurate results and pushes design innovation forward in the industry.

## **Methods/Procedures**

To develop a deeper understanding of what interior features are viewed more successfully to promote wellbeing in interior environments, we conducted an online survey that was distributed to counselors in the area. Any participant eighteen years of age or older that works with teens and youth in mental health services or as parents were eligible to participate in the survey. Through a variety of multiple choice and short answer questions, the participants were able to give a precise idea of features and amenities to include in a space designed for teen wellbeing. The data will help us design an interior environment that is inclusive and considers the wants and needs of all guests.

The survey included five-point Likert scale questions, fill in the blank, and multiple-choice questions. The survey was opened on November 28<sup>th</sup>, 2022 and closed on December 12<sup>th</sup>, 2022. We received a total of sixteen responses from counselors in the Fargo area that work with teens answering a total of twenty-four questions each.

Variables in this study included age, gender, and race. The participants took the survey voluntarily and their identities remain anonymous. Surveyors were able to leave the survey at any time and any incomplete survey results were not recorded in today's findings. There was no time limit on the survey and participants were encouraged to take their time completing it. Distributed via email contacts, participants were able to access the survey through a link sent directly to them. Some of these questions were compromised of gathering information regarding demographics. Questions were organized by amenities, aesthetics, features, and perceptions of interior environments. Results were collected after several weeks of the survey being open.

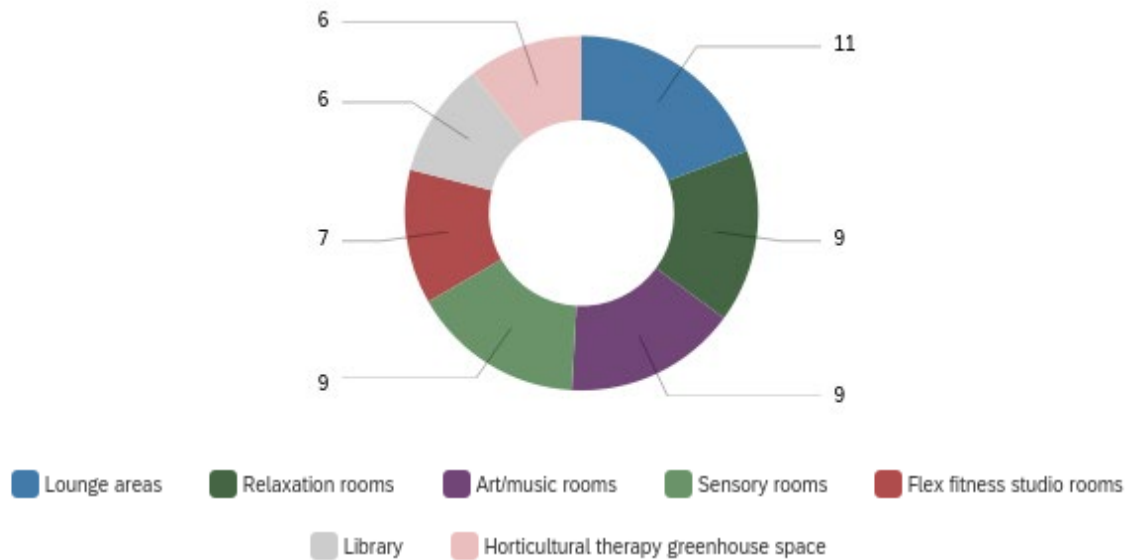
## **Results**

Based on the responses, the demographic of the participants in the survey was 79% female and 15% male. The greatest number of responses were received from the age range of 30-35 with 87% of participants being white/Caucasian and the other 13% answering “other” for their race. Other age ranges that responded to the survey included; 24-29 (14.29%), 36-41 (7.41%), 41-46 (14.29%), 47-51 (14.29%), 53-58 (14.29%), 65-70 (7.14%), and 82+(7.14%).

When asked to rate how well they think they know the need of today’s teens, 50% of the participants responded that they “agree” with the second highest response being “strongly agree” at 28.57%. 57.14% of the participants were counselors/therapists with parent/guardian coming in second at 21.43%. The next question on the online survey asked, “What is the age range of the adolescents/teens that you work with?”. Teen and late adolescence came in the highest at 31.25% and 34.38% respectively along with child (15.63%) and preteen adolescence (18.75%). Participant responses show that 75% have or currently work with 10+ teenagers while the other 25% have or still do work with just 1-2 teenagers.

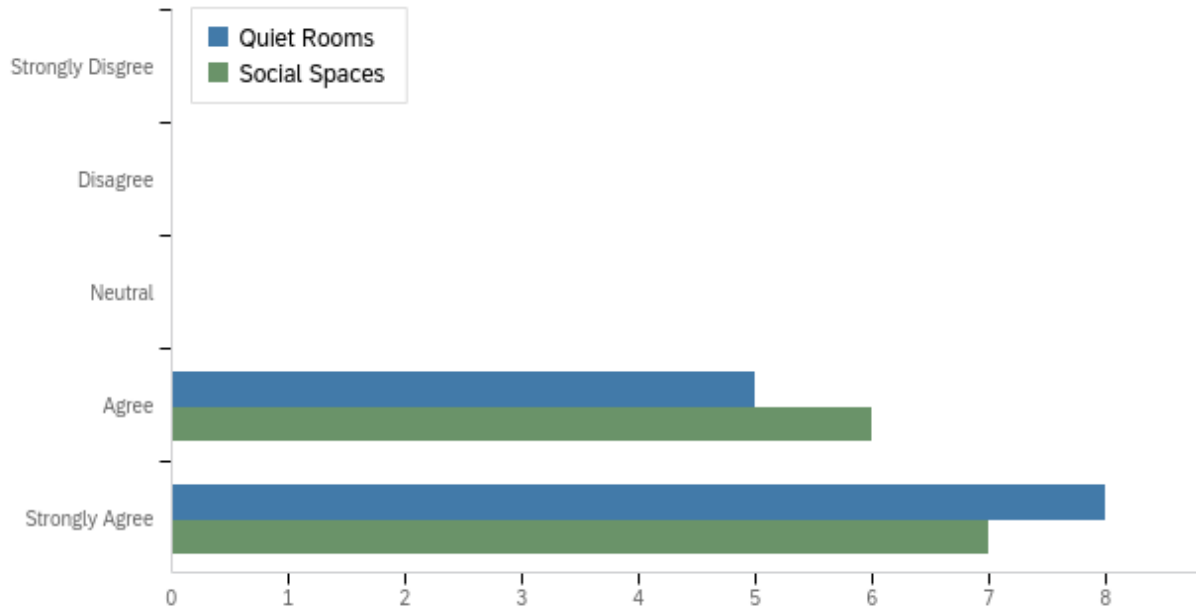
After receiving information about the participants, the survey questions transitioned to the interior design of a youth center. As shown in Figure 1, when asked to rate the amenities in a youth center that would be beneficial towards teens mental wellbeing, most of the respondents chose lounge areas with relaxation, sensory, and art/music rooms as a close second. In response to the short answer questions about what the amenities to be included within the youth center, one participant said that “Separate spaces to chill out - away from others” should be included and another suggested “Ample space for physical activity”.

**Figure 1:**  
Spaces in a youth center that are beneficial to youth mental health.



When utilizing a five-point Likert scale, participants were encouraged to rank each statement on a scale of whether they strongly agreed, agreed, neither agreed or disagreed, disagreed, or strongly disagreed. The first question utilizing the Likert scale asked participants to rate the need for quiet rooms and social spaces. As shown in Figure 2, participants agreed that there is a need for both public and private spaces and through the short answer questions responders suggested “Quiet spaces to reflect” and “...spaces that encourage social interaction”.

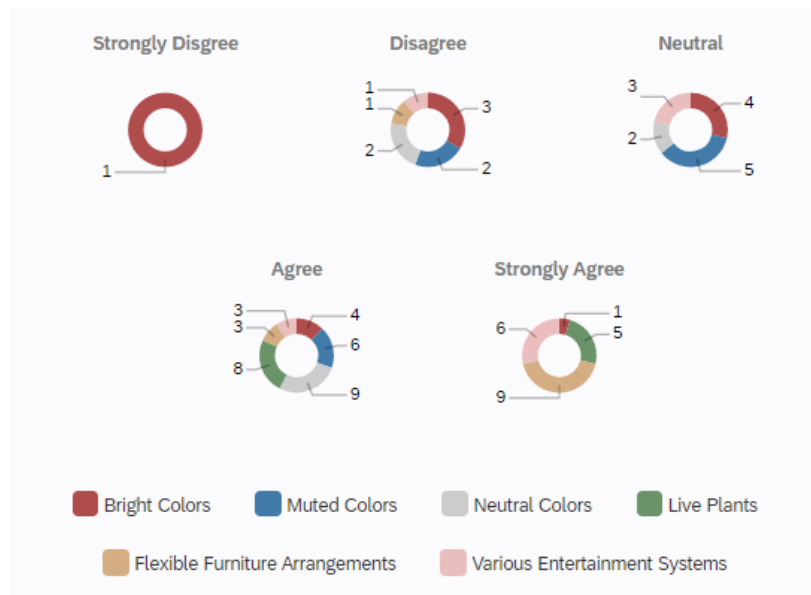
**Figure 2:**  
Space amenities to be included.



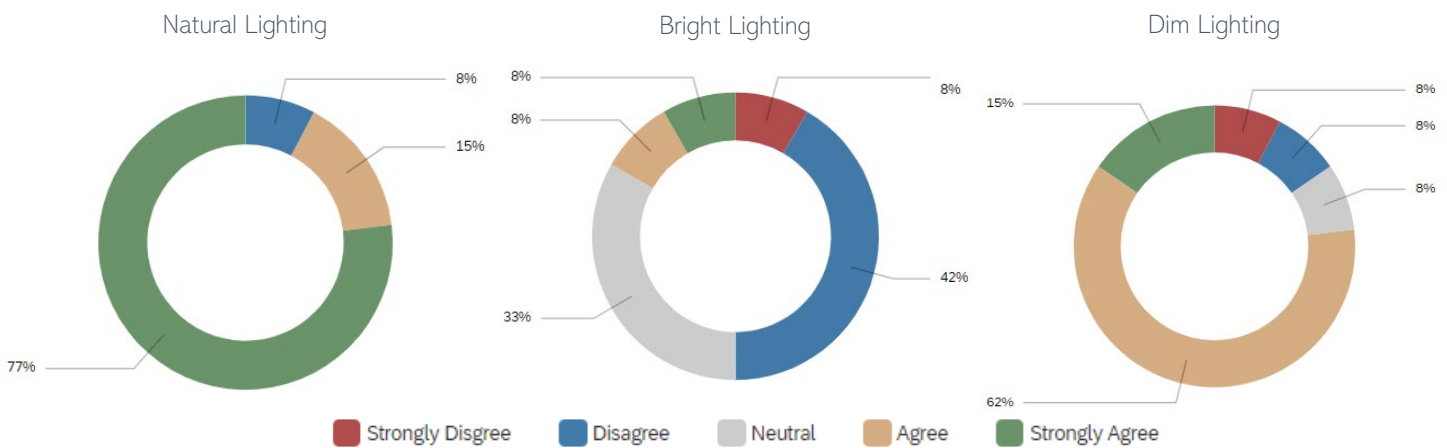
Using the Likert scale, participants were asked to rank the importance of interior aesthetics and design features. Lighting had the highest responses of importance along with acoustics, colors, and biophilic design as shown in Figure 3. When asked to elaborate further on the specifics of lighting, color, biophilia and acoustics, participants showed an importance of adjustable lighting that can be dim or bright per the users' needs (Figure 4), neutral colors with accents of muted primary colors (Figure 3), natural lighting and live plants (Figure 3 & 4), and music/white noise for acoustical control within a youth center (Figure 5). Through the short answer questions provided, participants elaborated further on these subjects: "(Include) places that allow...connection to the outdoors without actually being outside", "...Big windows, natural lighting, and live plants", "Include as much natural light as possible".



**Figure 3:**  
Importance of design features.



**Figure 4:**  
Importance of lighting types.



**Figure 5:**  
Importance of acoustical features.

#	Field	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
1	Music	0.00% 0	0.00% 0	0.00% 0	46.15% 6	53.85% 7	13
2	White Noise	0.00% 0	7.69% 1	38.46% 5	46.15% 6	7.69% 1	13
3	Nature Sounds	0.00% 0	7.69% 1	46.15% 6	30.77% 4	15.38% 2	13
4	Water Features	0.00% 0	7.69% 1	46.15% 6	30.77% 4	15.38% 2	13

For the last part of the survey on interiors of youth centers, participants were asked to choose an image out of a selection that best showed what they thought each space should be designed as aesthetically to best suit the needs of today's youth/teenagers (Figures 6). After reviewing the responses, all the highest selected images shared these common features: neutral natural colors and materials with muted primary colors, geometric and organic shapes, biophilia, and flexible furniture.

**Figure 6:**  
Most liked spaces out of options for each category of interior space.

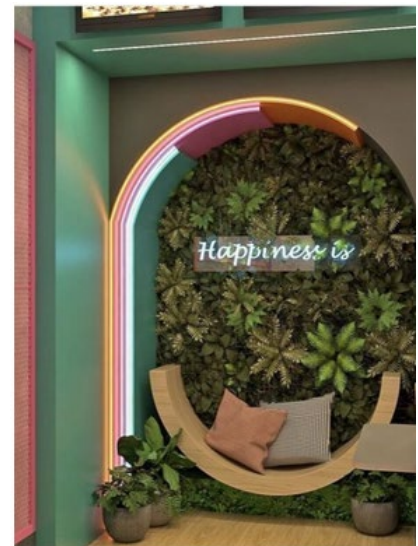
**Lounge**



**Interactive Space**



**Study Nook**



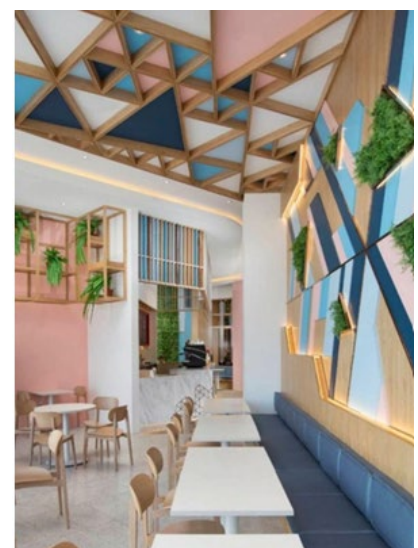
**Flexible Fitness Room**



**Library**



**Cafe**



## Conclusions/Discussion

After reviewing the outcomes of the study/survey, there is now a better understanding of what interior elements go into designing a successful youth center in today's society. Everything from the sounds of the space to the layout and style of furniture was answered with the results of the survey. There is now a better grasp on the effects an interior has on the mental health of teens and youth in communities.

Although research numbers were limited, we were able to obtain more accurate and usable data based on the participants under a more specific demographic. All of the participants work with the youth on mental health rehabilitation and managing inner emotions either as professionals or parents. We trust that their opinions are accurate as they work directly with developing teenagers every day to better understand the psychology of their minds.

This study indicated that most participants agreed that quiet lounge areas would be the most impactful out of a list of five options. Next, the art/music, relaxation, and sensory rooms tied as the second most important spaces to include in the design of youthful environments. Survey participants then identified flex fitness rooms as third most important. Finally, the library and greenhouse spaces were identified as the last in importance. It should be noted, however, that these spaces were not listed as unimportant, just passed as least popular by the other options. With the lack of biophilic design in public schools, there is a large demand for bringing nature into interior environments. Although the demand was not sought for in the results of this question, later questions on biophilia in interior environments seemed to have counteracting results.

Flexible furniture that can be interchangeable dependent on the child's needs was recommended by most participants as they indicated that they strongly agree that it is helpful in a space. Others indicated neutral colors and lots of plant life were important. Much to a surprise from previous information gathering, neutral colors were a very popular option in youth environments. The conclusion of this can be drawn to the need for teens to find seclusion and private spaces to develop mentally/psychologically. Some participants even mentioned bright colors as a negative thing in interior environments with children as it can become a distraction or overstimulating.

When asked about the needs of teens in communities today, valuable information was retrieved that designers will be able to incorporate in the development of any youthful design. Participants found lighting to be one of the factors with the greatest impact on wellbeing, especially in the case for natural lighting. Almost every participant agreed that it was one of the most important elements to be included in a space as it tends to show benefits in mental health. A close second was acoustics; the participants advised that this was also highly important to consider when designing a space in determining if the area is private, public, or what activities are appropriate to be taking place there.

Included in the survey were fill in the blank sections that allowed for suggestions for future interior design and architecture project to come. It was recommended that youth centers have an area dedicated for plants and greenery. This would provide teens with a way to escape the cold winter and experience a calming summer atmosphere, even in the worst of weather. Another recommended the inclusion of plenty of quiet spaces for teens to reflect, which would allow them to process emotionally in a safe environment. Many recommendations were provided

to create a warm environment that is filled with natural light and plants to sustain a healthy wellbeing of teenagers and children in youth centers.

For future research, determining how the weather affects the mental health of youth, and how the design of spaces can assist with negative weather outcomes would provide more direction to studies to come. Weather has proven to be difficult on individuals, mentally, emotionally, and physically, and this can often lead to effects of seasonal depression. There are many factors in a building that can help prevent this and allow all end users to remain happy, active, and healthy while maintaining a concise wellbeing.

In conclusion, between information gathering, the survey, research, and concluding results, there has been a large amount of knowledge from trained professionals in our society that has provided relevant information towards interior design in youth environments. The information will be used to further future designs and create spaces that can serve the youth of communities.

## Bibliography

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## Appendix



## Default Question Block

**NDSU**

NORTH DAKOTA STATE UNIVERSITY

### **How can the interior design a youth center positively impact mental health amongst teens?**

Dear Participant:

Hello, our names are Nathan Head, Natalia Chrisinger, and Jasmine Erbes. We are senior students in the interior design program at North Dakota State University and are conducting a research project to better understand how the design of a youth center can impact the effectiveness and mental wellbeing of its users. Through our research we hope to learn what features in a space are the most impactful to the success of youth in the community.

You are invited to participate in this research study. The only criterion for participating is that you must be 18 years of age or older. Your participation is entirely voluntary, and you may change your mind or quit participating at any time, with no penalty; however, your assistance would be greatly appreciated in making this a meaningful study.

It should take about 10 minutes to complete the questionnaire about interiors and their affects on mental wellbeing. If you desire, you may provide your email to the faculty member listed at the bottom if you would like to receive a copy of the research results of this study.

Your identity will not be linked with your survey responses. Your information will be combined with other information from other people taking part in this survey, we will write about the combined information that we have gathered. You will not be identified in these written materials. We may publish this study; however, we will keep identifying information private.

If you have any questions about this project, please contact: Nathan Head at [nathan.head@ndsu.edu](mailto:nathan.head@ndsu.edu), Natalia Chrisinger at [natalia.chrisinger@ndsu.edu](mailto:natalia.chrisinger@ndsu.edu), Jasmine Erbes at [jasmine.erbes@ndsu.edu](mailto:jasmine.erbes@ndsu.edu), or contact our facility advisor, S. Ray-Degges at 701.231.7218 or [susan.ray-degges@ndsu.edu](mailto:susan.ray-degges@ndsu.edu). If you have questions about the rights of human participants in research, or report a problem, contact the NDSU Institutional Review Board (IRB) Office, at 701.231.8995, toll-free 855.800.6717, or [ndsu.irb@ndsu.edu](mailto:ndsu.irb@ndsu.edu).

Thank you for your participation in this study. If you wish to receive a copy of the research results, please email [susan.ray-degges@ndsu.edu](mailto:susan.ray-degges@ndsu.edu)



Are you 18 years are older?

- ☐ Yes
- ☐ No

Are you a parent/guardian or do you work with teens ages 12-18?

- ☐ Parent/guardian
- ☐ Teacher
- ☐ Counselor
- ☐ I have never worked with teens.
- ☐ Other

What is the age range of the adolescents/teens you work with? Please select all that apply.

- ☐ Early Adolescence (ages infant-5)
- ☐ Child Adolescence (ages 5-10)
- ☐ Preteen Adolescence (ages 11-13)
- ☐ Teen Adolescence (ages 14-18)
- ☐ Late Adolescence (ages 19-21+)

How many children do you have or have worked with?

- ☐ 1-2
- ☐ 3-4
- ☐ 5-10
- ☐ 10+

How well would you say you know the needs of today's teens?

- ☐ (1) Strongly disagree
- ☐ (2) Disagree
- ☐ (3) Neither agree nor disagree
- ☐ (4) Agree
- ☐ (5) Strongly agree

Below are interior elements that can affect one's feelings of comfort and relaxation within a space. Please rate each feature on a scale **Strongly Disagree to Strongly Agree** as to whether or not you think it would benefit the mental health and well being of teens.

### Lighting

	Benefits of Different Types of Lighting				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Dim Lighting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bright Lighting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Natural Light	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Space Amenities

	Different Interior Amenities				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Quiet Rooms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social Spaces	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Acoustics

	What does the interior "sound" like? Consider the different physical reactions teens may have to these "sound" opportunities.
	Strongly Disagree Disagree Neutral Agree Strongly Agree
Music	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
White Noise	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
Nature Sounds	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
Water Features (Fountain, Water Wall, etc.)	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>

### Aesthetics and other Design Features

	What does the interior "sound" like? Consider the different physical reactions teens may have to these "sound" opportunities.
	Strongly Disagree Disagree Neutral Agree Strongly Agree
Bright Colors	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
Muted Colors	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
Neutral Colors	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
Live Plants	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
Flexible Furniture Arrangements	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
Various Entertainment Systems	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>

When considering interior design features for a youth center, please determine the importance of the following:

	Least Important	Not important	Neutral	Somewhat Important	Most Important
Lighting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Acoustics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Colors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Textures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biophilic Design (connecting the natural environment using nature in interior spaces)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Pick your top five spaces you would like to see included as amenities in a youth center beneficial to youth mental health.

- ☐ Flex fitness studio rooms for various fitness classes
- ☐ Art/music rooms
- ☐ Library
- ☐ Lounge areas
- ☐ Animal therapy rooms
- ☐ Sensory rooms with adjustable lighting, sound, smell, and comfort features
- ☐ Relaxation rooms
- ☐ Teaching kitchen
- ☐ Horticultural therapy greenhouse space

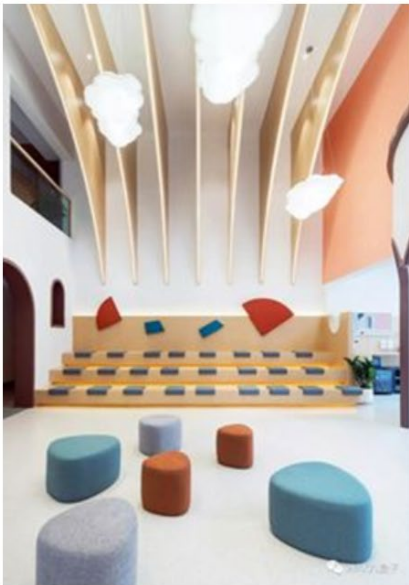
Because of Fargo's long winters, are there any things that could/should be considered in the design of a community youth center that would aid in youth wellbeing in the prevention of seasonal depression?

Are there additional interior space considerations that an interior of a community youth center should integrate to best support the challenges youth are currently facing?

Choose which gathering/lounge space you think teens would like the most:



Choose which interactive space you think teens would like the most:





Choose which study nook space you think teens would like the most:

☐



☐



☐



☐



Choose which space you think teens would like the most:

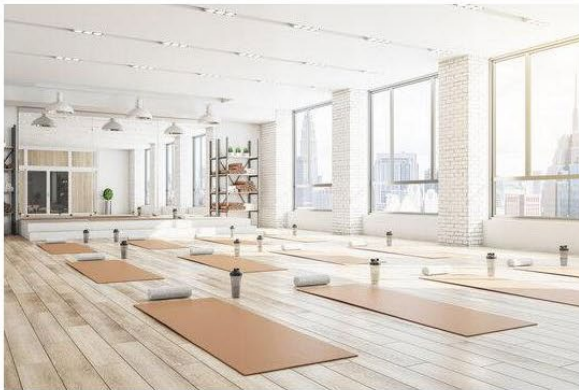
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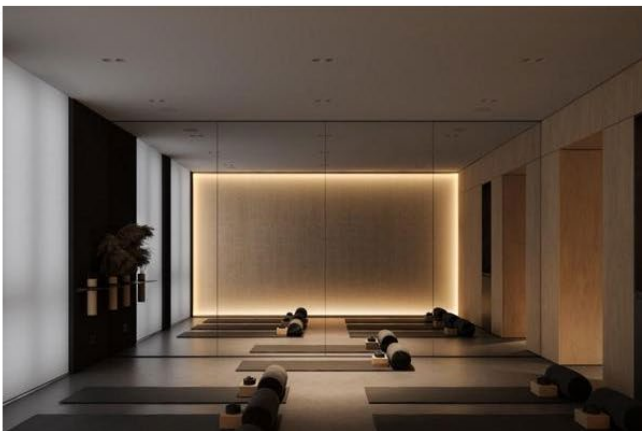
☐



☐



☐





Choose which library space you think teens would like the most:

☐



☐



☐



☐



Choose which cafe space you think teens would like the most:

☐



☐



☐



☐



Your Gender:

- ☐ Male
- ☐ Female
- ☐ Transgender
- ☐ Non-binary

☐ Other:

- ☐ Prefer not to answer

Please identify your age range:

Your Race:

- ☐ Asian or Pacific Islander
- ☐ Black or African American
- ☐ Hispanic or Latino
- ☐ Native American or Alaskan Native
- ☐ White or Caucasian
- ☐ Multiracial or Biracial

☐ Other:

- ☐ Prefer not to answer