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User experience optimization in gyms and fitness studios

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Abstract

User-centric design in gyms and fitness studios focuses on creating environments and experiences that prioritize the needs, preferences, and goals of the users. This approach involves understanding the diverse motivations of gym-goers, from general fitness enthusiasts to those training for specific athletic goals, and designing spaces that cater to these needs. Key elements include intuitive layout designs, personalized fitness equipment, adaptable spaces for different activities, and easy access to amenities.

Incorporating user feedback and data-driven insights is crucial for optimizing user experience. Customizable workout programs, personalized tracking systems, and user-friendly interfaces for machines and apps enhance user engagement and motivation. The interior design, lighting, and acoustics play an essential role in creating a welcoming and motivating atmosphere. Additionally, accessibility features, such as clear signage, wheelchair access, and well-designed locker rooms, ensure that the facility is inclusive for all users.

By focusing on the holistic needs of users—whether physical, emotional, or social—user-centric design aims to foster an environment where individuals feel comfortable, supported, and empowered to reach their fitness goals. Ultimately, such an approach leads to increased user satisfaction, retention, and a positive impact on overall health and well-being.

Keywords: User Experience (UX), Ergonomics, Personalization, Space Planning, Sustainability

Introduction

In recent years, there has been a significant shift towards the prioritization of user experience (UX) in the design of various environments, including gyms and fitness studios. Traditional gym designs focused primarily on functionality, such as space allocation for equipment and workout routines. However, as the fitness industry grows, it is increasingly important to acknowledge the specific needs, preferences, and behaviors of gym-goers. User-centric design (UCD) is an approach that places the user at the center of the design process, ensuring that spaces are tailored to the users' comfort, needs, and overall experience. The concept of UCD in fitness environments involves understanding the goals and motivations of individuals who visit gyms and fitness studios. These motivations range from weight loss and body toning to general well-being and social interaction. Furthermore, integrating UCD principles into gym and fitness studio design not only improves user

satisfaction but can also drive engagement and retention.

A user-centric gym design includes considerations such as ergonomics, accessibility, aesthetic appeal, space planning, and the provision of personalized services. This research aims to explore how UCD principles can be applied in gym design to create spaces that enhance the overall experience of fitness enthusiasts.

This article will examine the role of physical and psychological elements in user satisfaction, identify key materials and design strategies, and explore user-centric trends in modern gym and fitness studio design.

Materials and Methods

The design of user-centric gyms and fitness studios requires a combination of physical materials, technological solutions, and psychological insights. Several key materials are commonly employed in the creation of such spaces:

1. Ergonomically Designed Equipment

- Materials: High-quality metals (steel, aluminium), cushioned surfaces (foam, leather), and non-slip coatings.
- These materials ensure that equipment is comfortable and safe to use, reducing strain and injury risks during workouts.
- Adjustable settings for various body types and workout intensities cater to individual preferences.

2. Flooring Materials

- Materials: Rubber flooring, foam tiles, vinyl, and cushioned mats.
- Flooring should offer durability, shock absorption, and safety. It also contributes to reducing noise levels, which enhances user comfort.

3. Lighting

- Materials: LED lights, natural lighting (through windows), and adjustable lighting systems.
- Proper lighting is essential for creating a welcoming atmosphere. It also helps in promoting physical well-being by providing a stimulating yet relaxing environment. Natural light is often preferred as it enhances mood and helps regulate circadian rhythms.

4. Acoustic Materials

- Materials: Soundproof panels, acoustic foam, and curtains.
- Acoustic considerations ensure that noise from gym equipment or group fitness classes does not disrupt the user experience, allowing for a peaceful atmosphere. Acoustic control is especially important in open-plan gyms or multi-purpose fitness spaces.

5. Technology Integration

- Materials: Interactive screens, wearable technology, and smart sensors.
- Incorporating digital tools such as personalized workout tracking, virtual fitness classes, or interactive exercise screens enhances user engagement. These technologies also enable users to track their fitness goals and progress.

6. Sustainable Materials

- Materials: Recycled rubber, bamboo, and low-VOC paints.
- Sustainability is an increasing priority in the design of gyms and fitness studios. Using environmentally friendly materials not only aligns with modern consumer values but also contributes to the well-being of users.

7. Decor and Aesthetic Elements

- Materials: High-quality paint, murals, glass, wood, and metal accents.
- Aesthetic appeal is integral to creating an environment that motivates and inspires users. The choice of materials can evoke energy or tranquility, which can impact users' exercise performance and emotional connection to the space.

8. Smart Environmental Control

- Materials: Automated climate control systems (HVAC), smart fans, and air purifiers.
- Ensuring optimal air quality, temperature, and humidity levels is important for user comfort.

Systems that adapt to occupancy levels and weather conditions improve both the comfort and energy efficiency of the space.

Literature review**Case Study 1: Divine fit tribe****1. The Evolution of Gym Design**

- Traditional gym designs were functional but not user-focused. Equipment placement and space usage were prioritized over user comfort and experience.
- Recent shifts have moved towards creating spaces that consider users' physical, psychological, and emotional needs to enhance satisfaction and retention.

2. Importance of User-Centric Design (UCD)

- UCD emphasizes designing environments based on the needs, behaviors, and preferences of users, making it a critical approach in creating effective fitness spaces.
- A well-executed UCD improves user engagement, boosts motivation, and supports long-term fitness goals.

3. Ergonomics and Comfort

- Ergonomically designed equipment and furniture reduce physical strain and prevent injuries, contributing to a positive user experience.
- Adjustable settings in machines (e.g., weights, seat positions) ensure a personalized and comfortable workout for different body types.

4. Space Planning and Layout

- Effective space planning that minimizes congestion and provides ample room for movement enhances comfort and accessibility.
- Open layouts, designated zones for cardio, strength training, and group classes, along with clear navigation, create a more organized and welcoming atmosphere.

5. Accessibility and Inclusivity

- UCD in gyms involves ensuring accessibility for people with different abilities. This includes accessible equipment, ramps, and wider spaces for wheelchair users.
- Inclusive design also considers the needs of older adults and people with diverse fitness levels, offering them an environment that promotes confidence and participation.

6. Aesthetic Appeal and Motivation

- The aesthetic environment of a gym, including lighting, color schemes, and decor, can influence user motivation and mood.
- Studies show that visually pleasing environments lead to greater satisfaction and increased time spent in the gym, encouraging frequent visits and social interaction.

7. Technology Integration

- The use of wearable devices, fitness apps, and interactive screens personalizes workouts, allowing users to track progress and receive real-time feedback.
- Smart equipment, like machines that adjust based on user performance, and virtual fitness classes are increasingly integrated to enhance the user experience.

8. Acoustic Design

- Acoustic comfort is a key component of user satisfaction. Noise reduction materials and design considerations ensure that loud gym equipment or music does not interfere with a positive experience.
- A balance between energy-inducing music and quiet

areas for rest or stretching improves the overall atmosphere.

9. Sustainability in Gym Design

- Environmental concerns are shaping the design of gyms, with a focus on sustainability. The use of eco-friendly materials like recycled rubber flooring and low-VOC paints aligns with growing consumer demand for sustainable practices.
- Green design elements like natural lighting and energy-efficient systems also contribute to creating a healthier and more sustainable gym environment.

10. Psychological Impact on User Experience

- Psychological factors such as mood, motivation, and social interaction play a significant role in fitness engagement. UCD considers how design can foster a positive emotional connection to the space.
- Creating social spaces, offering group fitness classes, and ensuring privacy and personal space for individual workouts enhances the overall user experience.

Case study 2: Cult fit

Cult gyms, known for their distinct branding, community-driven atmosphere, and immersive fitness experiences, have become a growing trend in the fitness industry. These gyms typically focus on creating a unique culture and fostering a sense of belonging among their members, all while providing specialized fitness programs. User-Centric Design (UCD) in Cult gyms is an essential approach that aims to enhance the member experience by emphasizing individualized needs, user comfort, emotional connections, and overall satisfaction. This literature review explores the elements of user-centric design in cult gyms and fitness studios, highlighting the factors that make them stand out in the fitness market.

The Rise of Cult Gyms

Cult gyms are different from traditional fitness centers because they often focus on creating a specific community or lifestyle around their fitness offerings. These gyms typically feature high-energy group classes, strong branding, and a sense of exclusivity, drawing people who are motivated by more than just physical fitness.

- **Branding and Culture:** Cult gyms are often known for their strong, distinctive brands and communities. Examples include SoulCycle, Barry's Bootcamp, and F45. Their brand identity creates an emotional connection that fosters loyalty and motivates individuals to continue their fitness journey (Brodie & Hollebeek, 2018).
- **Unique Experiences:** Unlike conventional gyms, cult gyms often feature unique, high-intensity classes designed to push individuals beyond their limits, while simultaneously fostering a sense of community and belonging.

Community-Centric Approach in Cult Gyms

One of the key elements of cult gyms is the emphasis on building a strong community. A user-centric design in these spaces incorporates not just the physical layout and aesthetic elements but also promotes social interaction, group participation, and emotional bonds among members.

- **Group Fitness and Social Interaction:** Cult gyms

typically focus on group fitness classes where participants can motivate each other and share experiences. This sense of camaraderie and mutual support plays a pivotal role in user satisfaction (Mao & Liu, 2020).

- **Social Spaces and Lounge Areas:** Cult gyms often design spaces that encourage interaction, including lounge areas, cafes, and relaxation zones. These areas foster social connections and are designed with comfort and community-building in mind.

Immersive Fitness Experiences

Cult gyms often prioritize creating immersive fitness environments that engage users both physically and emotionally. These environments aim to motivate individuals through sensory experiences, including lighting, music, and visually stimulating spaces.

- **Lighting and Music:** Lighting plays a critical role in enhancing the atmosphere of cult gyms. Bright, dynamic lighting often aligns with intense workout sessions, while softer lighting in relaxation areas provides a calming contrast. Music is another key element, with upbeat tracks designed to energize and motivate members during workouts (Hernandez *et al.*, 2019).
- **Themed Spaces and Branding:** Cult gyms tend to adopt bold visual designs that align with their branding. These spaces use color schemes, art, and signage to reinforce their brand identity and create a cohesive atmosphere. The design is usually bold, modern, and aimed at creating a sense of exclusivity and belonging.

Technological Integration for Personalized Experiences

Cult gyms are known for their integration of advanced technologies that contribute to the personalized fitness journey of each member. User-centric design in these spaces includes leveraging digital tools, interactive equipment, and virtual fitness platforms to cater to individual needs.

- **Smart Equipment and Tracking:** Many cult gyms integrate smart gym equipment that tracks users' progress in real-time, allowing members to monitor their workout metrics. This provides users with personalized insights, helping them adjust their workouts for optimal results (Moreno, 2021).
- **Virtual Classes and Remote Access:** As part of creating a personalized experience, many cult gyms offer virtual classes or on-demand videos. This allows users to engage with the brand and workout experience, even outside of the physical gym environment, promoting flexibility and catering to diverse schedules.

Ergonomics and Comfort

User-centric design in cult gyms pays close attention to ergonomics and comfort to enhance the workout experience. The design of fitness spaces and equipment in cult gyms is intended to ensure that users feel physically comfortable, whether they're pushing themselves through an intense class or unwinding post-workout.

- **Personalized Equipment:** Cult gyms often use equipment that can be adjusted to individual needs, such as adjustable weights or machines, ensuring comfort and reducing the risk of injury.

- **Comfortable Amenities:** Amenities such as towels, water stations, and high-quality locker rooms are designed with user convenience in mind, contributing to overall comfort and satisfaction.

Inclusivity and Accessibility

Inclusivity is a growing focus in user-centric design, and cult gyms are increasingly recognizing the need for more accessible and inclusive spaces. Cult gyms that prioritize inclusivity are able to appeal to a broader audience, beyond the stereotypical image of the “elite athlete.”

- **Accessibility for All Abilities:** Cult gyms are beginning to design spaces and programs that cater to a wider range of abilities, from beginner to advanced fitness levels. For example, some cult gyms are incorporating classes specifically designed for individuals with limited mobility or older adults.
- **Mental Health and Wellness:** Cult gyms often emphasize mental well-being as part of the fitness journey. This may include the design of calming spaces, meditation areas, and mindfulness programs that address the emotional and mental health aspects of fitness (Nakamura, 2020).

Aesthetic Appeal and User Engagement

The aesthetic design of a cult gym is not only visually stimulating but also serves as a tool for member engagement. The design reflects the gym's values and community ethos, creating an environment where members feel connected to the brand.

- **Motivational Environment:** Cult gyms use décor and

design elements to inspire users. Inspirational quotes, branding visuals, and artwork may adorn the walls, motivating members to push through challenging workouts.

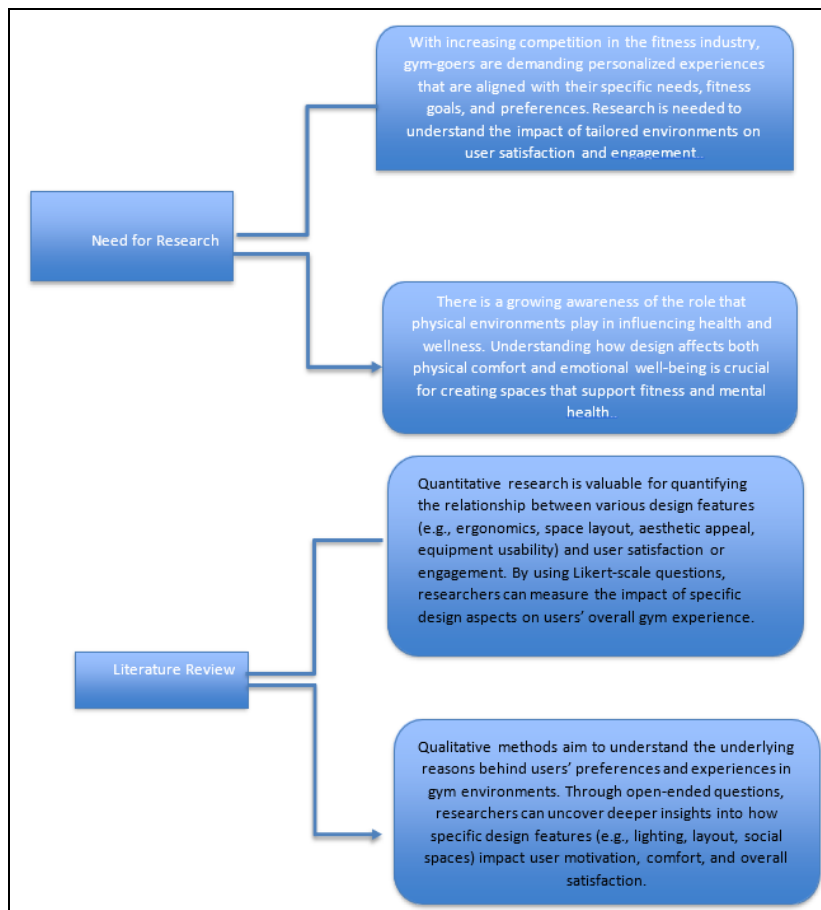
- **Appeal to the Senses:** The overall ambiance in cult gyms is designed to stimulate the senses, from the scent of the gym’s environment to the sounds of motivating music. These elements contribute to the gym’s immersive experience, which reinforces the user’s emotional connection to the space.

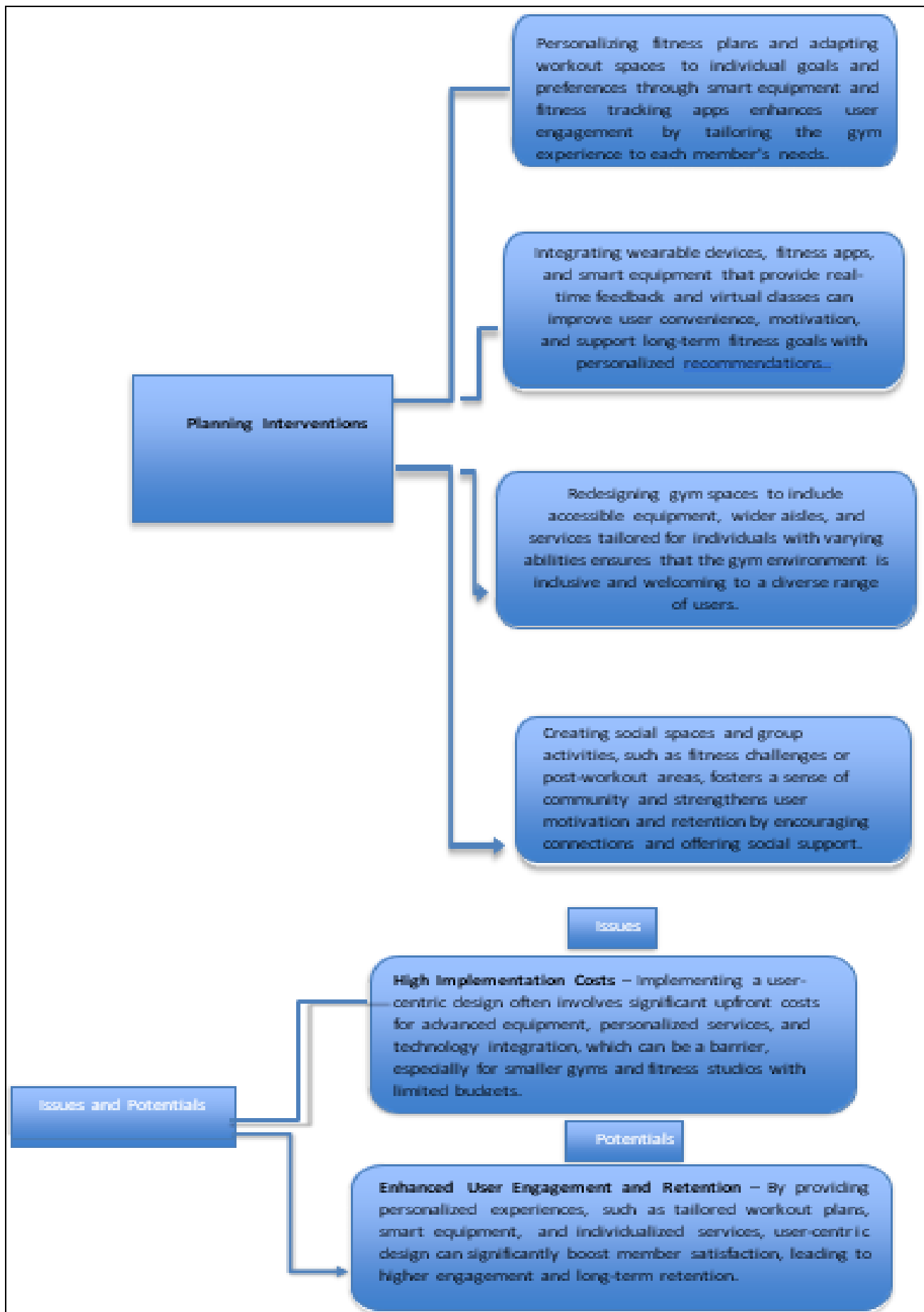
Psychological Impact of User-Centric Design in Cult Gyms

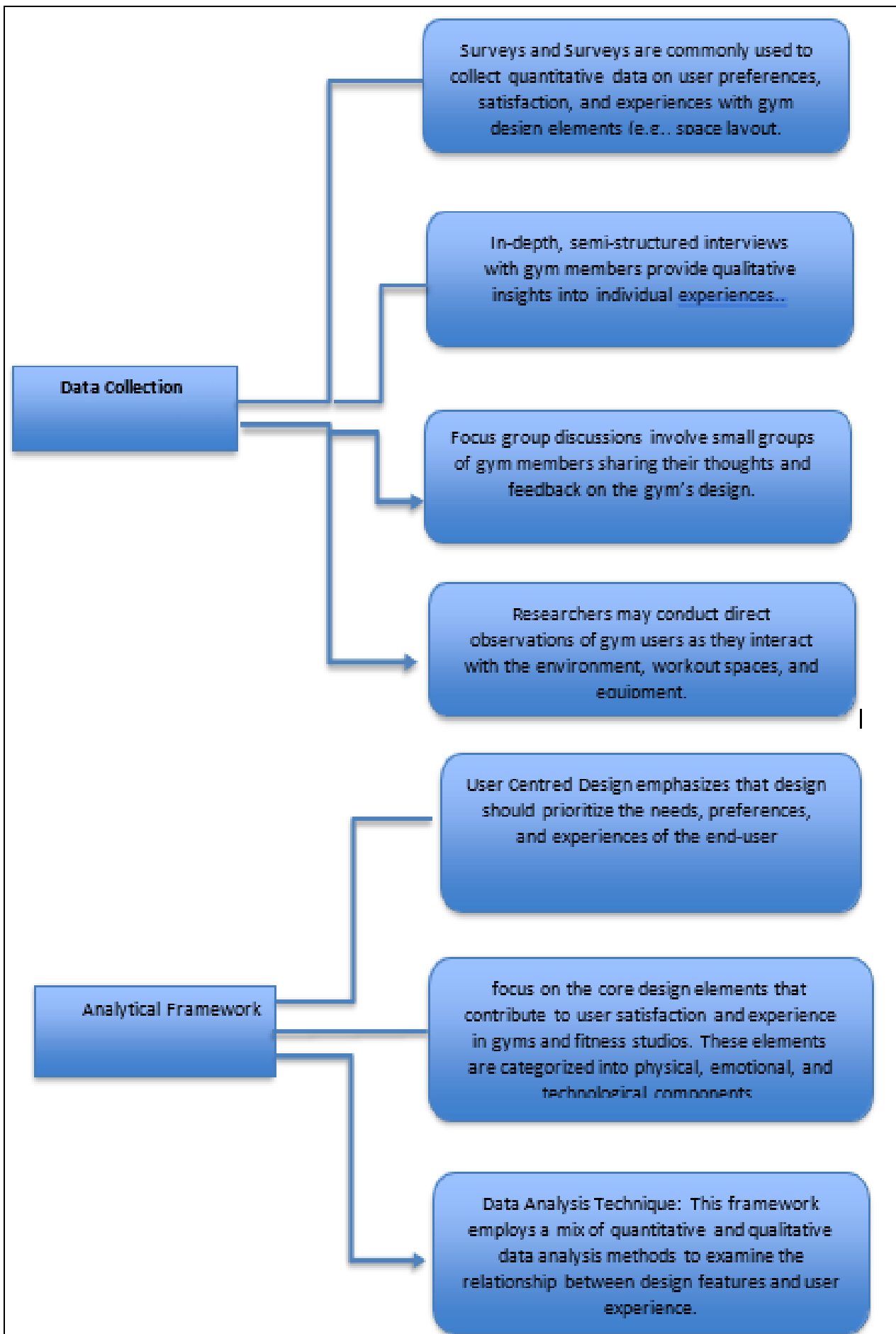
Psychologically, the user-centric approach in cult gyms impacts motivation, satisfaction, and long-term engagement. A well-designed environment helps create an emotional bond between the gym and its members, encouraging them to stay committed to their fitness goals.

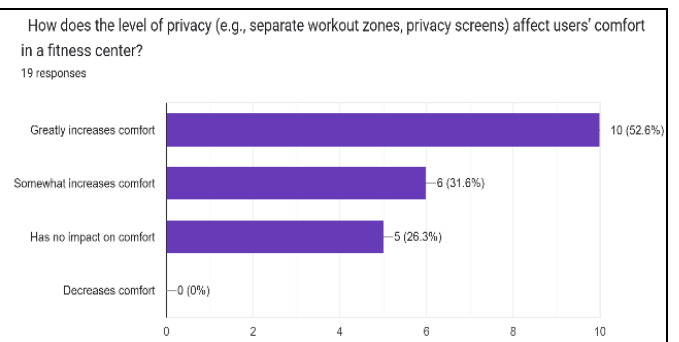
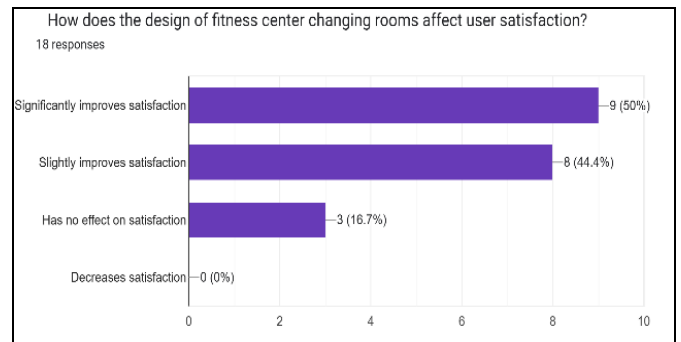
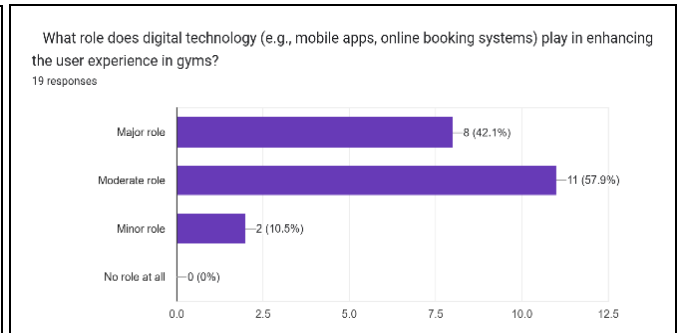
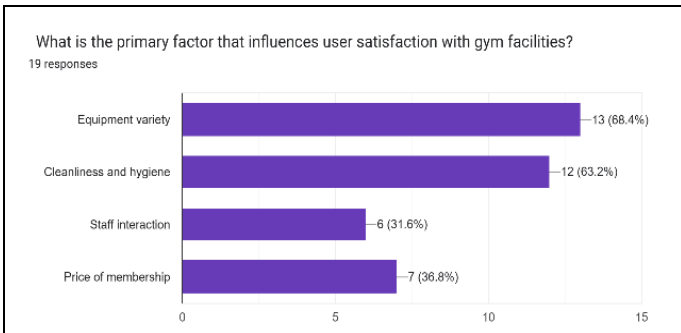
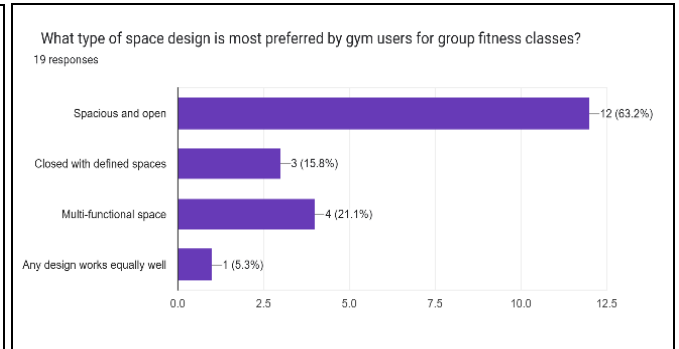
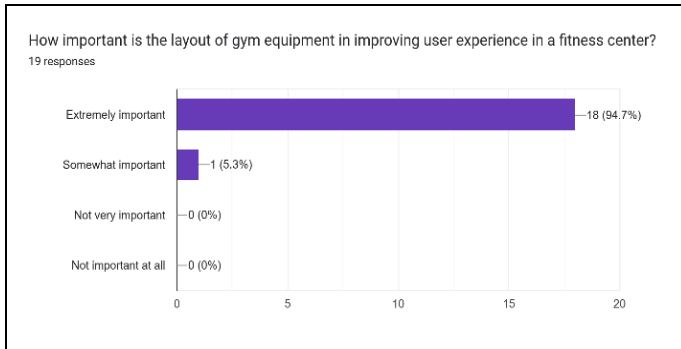
- **Social Identity and Belonging:** Many cult gyms focus on creating a strong sense of community and belonging, fostering a social identity for members. This aspect is crucial for maintaining engagement, as individuals feel connected to a group with similar goals and values (Brodie & Hollebeck, 2018).
- **Motivation Through Experience:** Cult gyms emphasize experience over mere fitness. They seek to offer an emotionally engaging experience that motivates users not only to work out but to continually return for the community and immersive atmosphere.

Research Methodology









Results

- 1. Personalized Experience:** Tailoring fitness plans, equipment, and workout routines based on individual goals, fitness levels, and preferences increases member engagement and satisfaction.
- 2. User-Friendly Layouts:** Thoughtfully designed layouts that promote easy movement, clear signage, and sufficient space for different activities enhance user comfort and minimize congestion.
- 3. Technology Integration:** Incorporating smart equipment, fitness tracking apps, and virtual classes allows for real-time feedback, progress tracking, and a more interactive experience.
- 4. Comfort and Ergonomics:** Using ergonomic equipment and providing comfortable spaces, such as cushioned flooring and adjustable machines, ensures users' physical well-being and reduces the risk of injury.
- 5. Aesthetic Appeal:** A visually appealing environment with thoughtful design elements, including lighting, color schemes, and décor, positively impacts mood and motivation.
- 6. Inclusivity and Accessibility:** Designing spaces and offering equipment that accommodates users with disabilities or different fitness levels fosters inclusivity and ensures everyone feels welcome.

- 7. Community Engagement:** Providing spaces for social interaction and creating group classes or fitness challenges helps build a sense of community, improving user motivation and retention.
- 8. Sustainability:** Incorporating eco-friendly practices, such as energy-efficient lighting, water-saving systems, and sustainable materials, appeals to environmentally conscious users.
- 9. Health and Wellness Focus:** Offering additional services like recovery areas, wellness consultations, and mental health support promotes holistic well-being, improving users' overall experience.
- 10. Continuous Feedback and Adaptation:** Regularly gathering user feedback through surveys or digital tools allows gyms to adapt their design and services based on real-time needs, ensuring constant improvement and user satisfaction.

Conclusion

User-Centric Design in gyms and fitness studios is essential for creating environments that prioritize the needs, preferences, and well-being of users. By focusing on personalization, accessibility, and comfort, gym designs can enhance user engagement, motivation, and overall satisfaction. Integrating technology, fostering community interaction, and promoting inclusivity also contribute to a

more holistic and enjoyable fitness experience. As fitness centers continue to evolve, adopting a user-centric approach not only improves individual experiences but also strengthens member retention and loyalty, ultimately driving the long-term success of gyms and fitness studios. By continuously gathering feedback and adapting to user needs, fitness spaces can remain dynamic and responsive, ensuring that users feel valued and supported throughout their fitness journey.

Compliance with ethical standards

Acknowledgements

I would like to express my sincere gratitude to all those who have contributed to the development and completion of this work on User-Centric Design in Gyms and Fitness Studios. First and foremost, I would like to thank my mentor and advisor for their guidance, support, and valuable insights throughout this research. Their encouragement and expertise were instrumental in shaping the direction of this study.

I would also like to extend my appreciation to the gym owners, fitness professionals, and users who participated in the surveys and interviews. Their feedback and experiences provided essential information that enriched this study and helped highlight the importance of user-centric design in fitness environments.

Conflict of interest statement

I declare that there are no conflicts of interest related to the research on User-Centric Design in Gyms and Fitness Studios. This study was conducted independently, and the findings and conclusions presented in this work are based solely on objective research, without any external influence or financial gain from gym or fitness studio organizations, product manufacturers, or any other related parties. The research was carried out with full transparency, and no personal, financial, or professional interests have affected the integrity of the study.

Statement of ethical approval

This research on User-Centric Design in Gyms and Fitness Studios was conducted in accordance with ethical guidelines for research involving human participants. Ethical approval was obtained from the relevant ethics committee prior to data collection. All participants provided informed consent before taking part in surveys and interviews. The privacy and confidentiality of all participants were strictly maintained, and their responses were anonymized to ensure that no personal information was disclosed. Participants were informed that their participation was voluntary, and they could withdraw from the study at any time without consequence. The study adhered to ethical principles to ensure the well-being and rights of all individuals involved in the research.

Statement of informed consent

By participating in this study on User-Centric Design in Gyms and Fitness Studios, you are agreeing to voluntarily contribute to the research. This study aims to explore user experiences and preferences related to gym and fitness studio design. Your participation involves answering a set of questions through surveys or interviews, and your responses will be used solely for research purpose

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