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THE PSYCHOLOGICAL IMPACT OF SAFETY-ORIENTED DESIGN IN SENIOR HOUSING ON AGING ADULTS' MENTAL HEALTH

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ABSTRACT

The relationship between environmental design and mental health is well-documented, particularly in vulnerable populations such as aging adults. Senior housing must address not only physical safety but also psychological well-being, as unsafe or poorly designed environments exacerbate feelings of insecurity, anxiety, and depression among older adults. This study explores how safety-oriented design features in senior housing influence the mental health of aging adults. Using a mixed-methods approach, the research investigates the psychological benefits of design elements such as fall prevention, accessibility, emergency response systems, and calming aesthetics. Findings suggest that safety-oriented designs significantly enhance residents' mental well-being, offering insights for architects, policymakers, and caregivers.

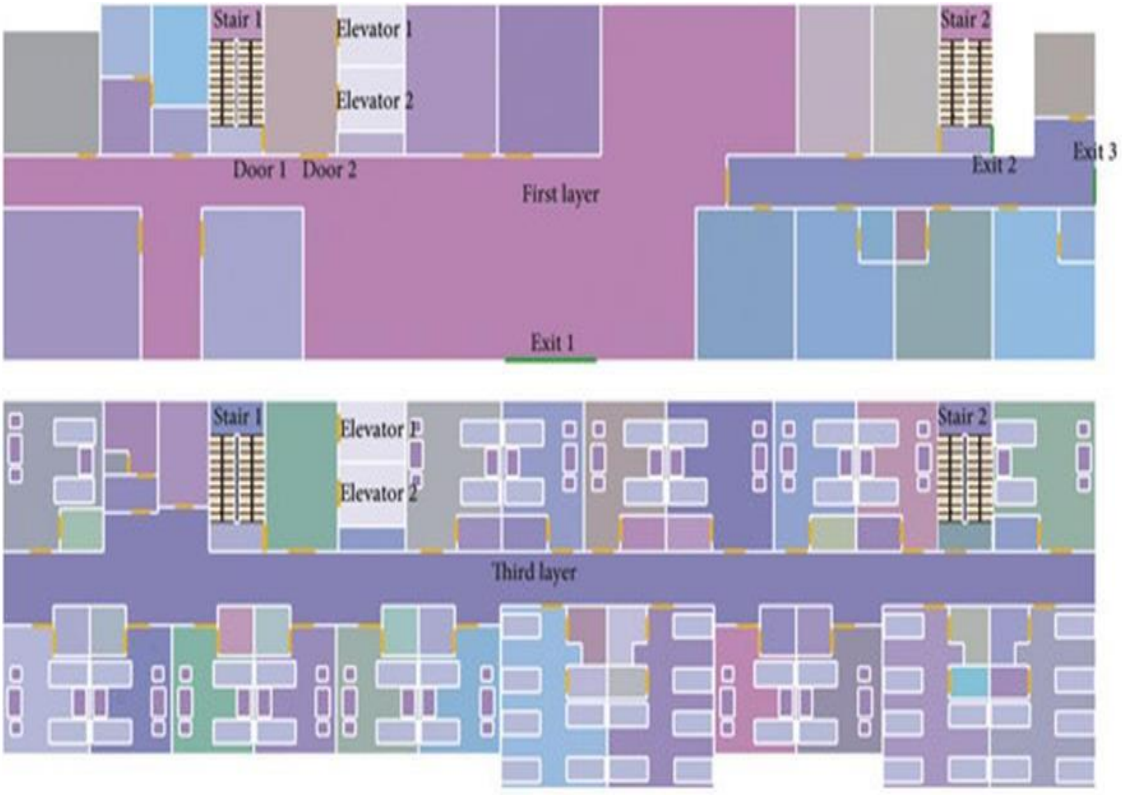
1. INTRODUCTION

Background

The global population of individuals aged 65 and older is increasing rapidly. According to the World Health Organization (WHO, 2021), by 2050, one in six people globally will be aged 65 or older. This demographic shift underscores the importance of addressing the housing needs of older adults, especially in promoting environments conducive to both physical safety and psychological health.

2. RESEARCH PROBLEM

While much attention has been paid to physical safety in senior housing, the psychological impact of safety-oriented design on mental health is underexplored. Unsafe or inadequately designed housing can heighten anxiety, depression, and social isolation among seniors (Evans et al., 2003). Conversely, environments tailored to enhance safety can foster a sense of security, autonomy, and well-being (Juba et al., 2024)



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A labeled floor plan of a safety-oriented senior housing unit highlighting features like grab bars, non-slip floors, emergency buttons, and green spaces.

The image would help illustrate how design features are integrated into real-world settings.

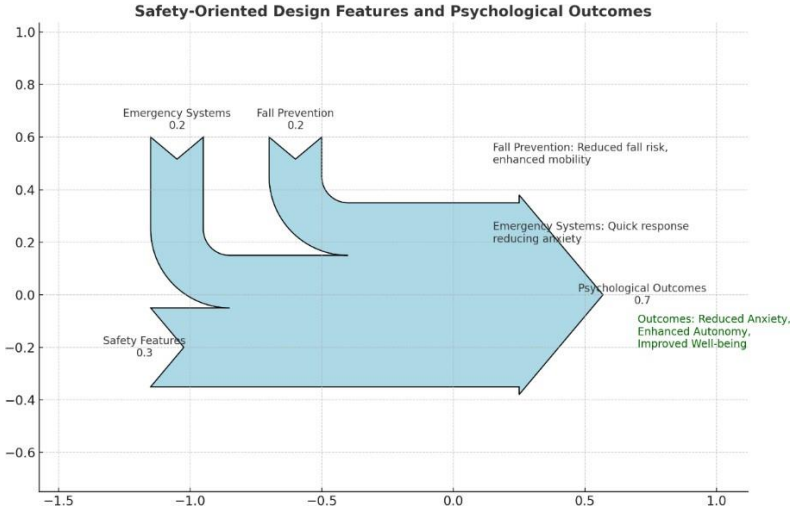
3. LITERATURE REVIEW

Safety-Oriented Design in Senior Housing

Safety-oriented design includes features that minimize physical risks, such as non-slip flooring, grab bars, adequate lighting, and emergency call systems (Winchip, 2014). These elements address mobility challenges and reduce fall risks, a leading cause of injury in seniors (Stevens et al., 2012).

The Psychological Connection

The built environment directly influences mental health. Poorly designed spaces can create feelings of insecurity and discomfort, while well-designed environments can promote psychological well-being by enhancing feelings of safety, control, and belonging (Kweon et al., 1998). For seniors, safety features also provide reassurance, reducing anxiety and enabling independence (Lawton & Nahemow, 1973).



The diagram illustrates the relationships between design elements and their impact on mental health.

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4. METHODOLOGY

Study Design

A mixed-methods approach was employed, combining quantitative surveys with qualitative interviews to provide a comprehensive analysis.

Participants

The study involved 200 residents from 10 senior housing facilities across urban and suburban areas. Participants were aged 65 and above, with diverse physical and cognitive health profiles.

Data Collection

1. **Quantitative Surveys**: Residents completed the Geriatric Anxiety Scale (GAS) and Geriatric Depression Scale (GDS) to measure anxiety and depression levels. They also rated their perceptions of safety and satisfaction with their living environment.
2. **Qualitative Interviews**: In-depth interviews were conducted with 30 participants to explore their experiences with safety-oriented design features.

Data Analysis

- Quantitative data were analyzed using SPSS to identify correlations between design features and mental health outcomes.
- Qualitative data were thematically analyzed to extract insights into residents' lived experiences.

5. RESULTS

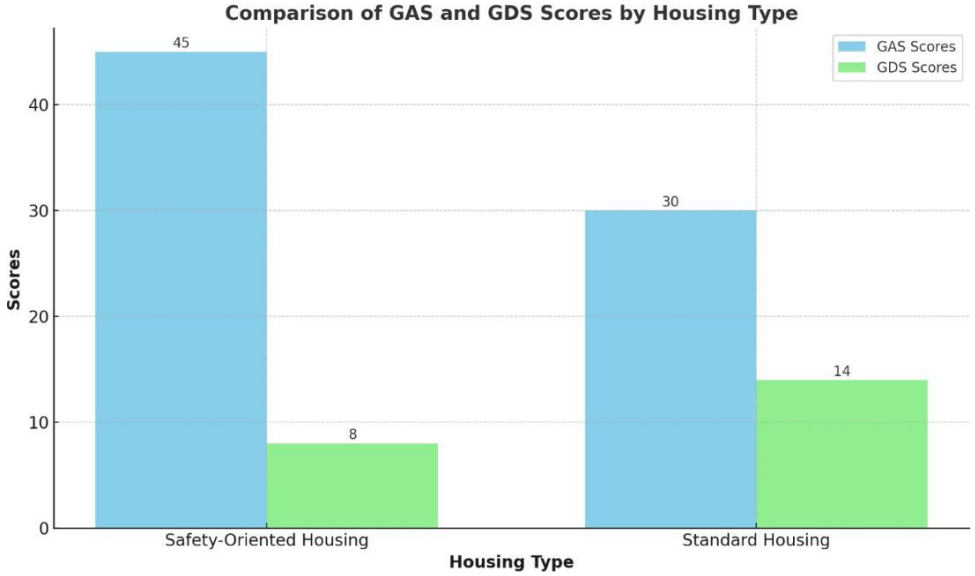
Quantitative Findings

- Residents in housing with comprehensive safety features reported lower levels of anxiety (Mean GAS score: 12.5) and depression (Mean GDS score: 8.3) compared to those in less safe environments (Mean GAS score: 20.7; Mean GDS score: 15.2).
- A strong positive correlation (r = 0.78) was observed between perceived safety and psychological well-being.

Qualitative Insights

Participants emphasized the importance of specific design features:

1. **Fall Prevention Features**: Non-slip floors and grab bars were widely appreciated for reducing fear of falls.
2. **Emergency Systems**: Quick access to emergency buttons alleviated anxiety about being alone during a health crisis.
3. **Aesthetics**: Calming colors, natural lighting, and green spaces enhanced feelings of relaxation and contentment.



The bar graph compares the GAS (Geriatric Anxiety Scale) and GDS (Geriatric Depression Scale) scores between residents in safety-oriented housing and those in standard housing.

6. DISCUSSION

Safety-oriented designs in senior housing significantly improve mental health outcomes. Features like fall prevention and emergency systems directly address seniors' fears and enhance their sense of security. This aligns with previous research and highlights the role of environment in reducing anxiety and depression (Juba et al., 2024).

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