



Research article

Addressing social isolation and suicide risk in South Korea's permanent rental housing: An empirical investigation of intervention Strategies[☆]

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ABSTRACT

This study examines social isolation and suicide risk in South Korea's permanent rental housing, which has been in existence since 1989. The research objectives are threefold: firstly, to identify individuals and households at heightened risk of mental health challenges; secondly, to analyze the causal relationships between residential environments and mental health outcomes; and thirdly, to formulate evidence-based recommendations for suicide prevention interventions. The study employs data from the Housing Management Agency and the Korea Welfare Panel Survey (KOWEPS) to examine a range of factors, including household composition, age, gender, housing satisfaction, and social relationships. The study's key findings indicate an elevated prevalence of suicide and loneliness, particularly among older adults and single-person households. Significant influences on these outcomes include financial stress, housing tenure, neighborhood characteristics, and housing quality. The study identifies depression as a critical factor, influenced by self-esteem, social support, and environmental satisfaction, with older residents with lower education and employment rates being most at risk. The research underscores the need for demographically targeted mental health strategies and highlights the importance of expanded public health interventions and housing improvements. It advocates for early identification and proactive management of mental health risks, emphasizing a comprehensive approach to reducing social isolation and suicide in permanent rental housing.

1. Introduction

Since its inception in 1989, the provision of permanent rental housing has been a cornerstone policy aimed at improving the housing well-being of lower-income populations. However, this approach has inadvertently promoted social segmentation, driven primarily by tenant selection criteria based on income and asset thresholds. This segmentation results in the stratification of housing by income levels, leading to several social challenges. In particular, this stratification creates a social and cultural disconnect from the wider community, characterized by a lack of positive social role models, the emergence of negative attitudes and perceptions, and spatial segregation within residential zones. These dynamics have been shown to have detrimental effects on the overall living conditions of residents [1,2]. In addition, permanent rental housing, which is predominantly allocated to economically disadvantaged

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groups, is often stigmatized as a last resort for the impoverished. This stigma is compounded by psychological distress, antisocial behavior, and economic hardship, which collectively hinder effective integration and interaction within the community [3].

As a result, the demographic composition of permanent rental housing often results in the formation of spatially isolated enclaves, predominantly inhabited predominantly by socially marginalized groups. This dynamic leads to pervasive experiences of social exclusion in many facets of daily life [3]. Residents of such housing structures often face limitations in their social networks, exacerbated by a physical layout that impedes neighborly interaction. From a sociological perspective, the lack of strong peer and neighbor relationships, inadequate social support networks, and diminished family communication and unstable family roles all contribute to the deterioration of mental health in these communities. This decline manifests itself in social isolation and psychological attrition, symptoms indicative of the broader phenomenon of social exclusion.

Empirical data from the Housing Management Corporation between 2018 and 2022 reveals a disturbing trend within public housing communities. During this time period, there were 193 documented deaths attributed to loneliness and 220 suicides among residents of public housing residents, a demographic that is predominantly composed of vulnerable groups, including recipients of public assistance and medical benefits. These statistics underscore a pronounced incidence of both suicide and loneliness within permanent rental housing environments. Specifically, in 2020 alone, 87.8 % (29 cases) of all reported suicides and 92.9 % (39 cases) of deaths attributed to loneliness occurred within permanent rental housing. This pattern has remained relatively unchanged over the past five years, as shown in Table 1. These statistics highlight the urgent need for targeted research to address the mental health crisis in these communities.

The interplay between housing affordability and housing quality is central to meeting individuals' basic housing needs and shaping their mental health and overall well-being [4,5]. This relationship has received considerable attention in urban planning, public health and social work research in recent decades. While depression has been extensively studied in this context, the study of suicide—a serious manifestation of mental distress—in relation to housing conditions remains under-explored. Previous literature has mainly focused on aspects such as housing tenure, financial instability, and the impact of living in public housing on mental health [6–9]. Despite these efforts, there is a notable gap in empirical evidence directly linking housing quality to depression and suicidal tendencies. In addition, comprehensive data on the groups most vulnerable to mental health problems related to housing quality are poorly collected and analyzed. This study was undertaken to address the critical need to understand the mental health challenges faced by residents of permanent rental housing in South Korea. The high rates of social isolation and suicide within these communities highlight the critical need to identify vulnerable populations and develop targeted interventions. This research aims to address the existing gap in the existing literature by providing empirical evidence on the factors influencing mental health and suicide risk in this specific context.

This study has three primary objectives: (1) to systematically categorize individuals and households within permanent rental housing who are at increased risk of social isolation and mental health challenges, (2) to analyze the causal relationship between residential environment and mental health outcomes, and (3) to develop evidence-based recommendations for suicide prevention interventions. The extant literature is broadly in agreement that the disconnection between living environments and social isolation that is prevalent in permanent rental housing serves to exacerbate a wide range of psychological and mental health issues, including anxiety and depression. Nevertheless, a notable research gap persists, as there is a dearth of targeted analyses addressing the mental health challenges specific to these residents, particularly with respect to suicide prevention strategies. This study aims to address this gap by providing a comprehensive examination of the mental health dynamics within the context of permanent rental housing and proposing evidence-based strategies to mitigate the associated risks.

2. Literature review

2.1. Mental health in the context of public housing

The conceptualization of mental health, as delineated by the World Health Organization (WHO), encompasses a comprehensive state of well-being wherein individuals acknowledge their abilities, manage daily life stressors effectively, contribute productively to their communities, and engage in meaningful work [10]. This inclusive definition extends beyond the absence of clinical mental disorders to encompass a broader range of well-being, social functionality, and productivity. While the definition is comprehensive,

Table 1

Comparative analysis of suicide and loneliness-related deaths in public rental housing in South Korea (2018–2022).

(Unit: cases)								
Year	Permanent Rental Housing		National Rental Housing		50-year Public Rental Housing		Total	
	Suicides	Lonely deaths	Suicides	Lonely deaths	Suicides	Lonely deaths	Suicides	Lonely deaths
2018	32	45	8	3	3	2	43	50
2019	45	38	9	2	2	1	56	41
2020	29	39	2	3	2	–	33	42
2021	27	28	10	2	3	1	40	31
2022	35	22	11	6	2	1	48	29
Total	168	172	40	16	12	5	220	193

Source: Compiled by the author based on internal data from the Korea Housing Management Corporation

empirical studies in this domain have predominantly quantified mental health through specific indicators, including depression, anxiety, and psychological distress [11–14]. The WHO framework highlights the importance of a holistic approach to health, emphasizing the necessity for individuals to effectively manage everyday stressors, avoid debilitating anxieties, and ensure emotional, social, and psychological well-being.

This research primarily examines the relationship between mental health conditions, such as depression and suicide, and their correlation with stressors, financial instability, and material deprivation [15]. A substantial body of scholarly work supports the conclusion that the manifestation of depression and anxiety is influenced by socio-economic factors [16,17]. However, the etiological complexity is further compounded when considering mental health disorders induced by substance abuse or associated with neuro-behavioral and learning disabilities [18]. The American Psychiatric Association has indicated that these conditions frequently require prolonged pharmacological and therapeutic intervention. Moreover, the Association posits that merely ameliorating aspects such as housing affordability may not substantially influence the overall trajectory of these mental health conditions.

A consensus exists within the academic community that financial stress is a significant risk factor for depression in individuals [16, 19]. It can thus be proposed that entry into permanent rental housing, which ostensibly alleviates the financial burden associated with housing costs, should theoretically exert a beneficial effect on the mental health of residents, potentially diminishing symptoms of anxiety and depression. However, the scholarly discourse maintains that the etiology and determinants of behavioral and cognitive disorders, such as psychosis, aggressive behavior, substance abuse, and neurocognitive impairments, are inherently more complex. These disorders encompass a range of biological, psychological, and cognitive dysfunctions [20,21], as well as an array of associated socio-economic factors and childhood experiences [22], which collectively contribute to the exacerbation of mental health challenges in adulthood. Therefore, merely improving housing affordability is an inadequate approach to significantly altering the prevalence or severity of these complex behavioral and cognitive issues. In order to address these challenges, it is often necessary to adopt a comprehensive approach that encompasses community care and access to a range of health and social services. However, these are not typically included within public rental housing programs that have been designed for low-income demographics.

A substantial body of research has been undertaken to examine the mental health outcomes of public housing residents in comparison to other demographic groups [11–14,23,24]. These studies encompass a diverse range of populations, including those who pay subsidized rents in the private sector, homeowners, and individuals on waiting lists for public housing. The studies employ disparate methodologies for conceptualizing and quantifying housing affordability. For example, Casciano and Massey [12] defined low housing affordability as households earning less than 80 % of the area median income and spending over 30 % of their income on rent and utilities. Bentley et al. [13] identified the bottom 40 % of income earners as facing significant challenges in affording housing. Chambers et al. [11] utilized income thresholds based on household size as defined by the U.S. federal government, whereas Kalousová and Evangelist [25] considered households with an annual income not exceeding 50 % of the area median income as eligible for housing assistance.

The diversity in these methodological approaches, while enhancing the research landscape, also presents challenges in directly comparing outcomes across studies. This is primarily attributable to the disparate levels of housing affordability stress endured by participants in disparate studies. As a result, the applicability of these findings to different populations and contexts is constrained. Furthermore, the inconsistency in how housing affordability is defined and measured introduces additional constraints on the reliability and validity of cross-study comparisons. This heterogeneity highlights the necessity for a more standardized approach to research in this area, with the aim of improving understanding of the impact of housing affordability on mental health outcomes in public housing residents.

Prior scholarly endeavors have extensively examined the constructs of anxiety and depression, with theoretical frameworks and methodologies varying significantly according to the specific objectives of each researcher [11–14,24]. These studies have employed a range of scales to assess mental health, including measures of depression and anxiety, psychological distress, emotional distress, and broader mental health disorders. The construct of "psychological distress," as operationalized by Bentley et al. [13] and Fenelon et al. [14], encompasses a range of symptoms, extending from depression and generalized anxiety to more complex manifestations such as personality dysfunctions and behavioral issues. This term is used to describe a range of disorders and conditions. Similarly, the concept of "emotional difficulties and social-emotional problems," as employed by Fenelon et al. [24], encompasses a variety of responses including worry and unhappiness, as well as behaviors and symptoms typically associated with depression and anxiety in children, expressed in diverse manifestations.

A significant challenge within the extant literature on mental health is the difficulty in precisely delineating the nature and etiology of mental health issues. Investigations that examine respondents' emotional states over a preceding period, such as a week, may not adequately capture the complexities and underlying causes of their mental health conditions [12]. For example, the overarching category of depression is comprised of numerous subtypes, including postpartum depression, major depressive disorder, and persistent depressive disorder, each with its own distinct characteristics. There is a pressing need for more nuanced research that explores the potential associations between diverse mental health symptoms and various factors, including socio-economic challenges, psychological or physical trauma, and life stressors such as divorce, job loss, or bereavement. Furthermore, an investigation into potential genetic predispositions is imperative. These multifaceted issues present a significant challenge to the analysis of the impact of living in public housing on mental health, as well as to the establishment of comparability and reliability in research findings within this domain.

A substantial proportion of research examining the relationship between public housing and mental health primarily utilizes cross-sectional data [11,12,14,24]. However, cross-sectional studies are inherently limited in their ability to capture the sequential progression of events, the temporal dynamics of relationships, and cumulative effects (Wang & Cheng, 2020). Consequently, while these studies may identify significant correlations between public housing residency and mental health outcomes, such as depression and

anxiety, they are unable to establish causality. While some investigations have employed longitudinal data (Ejima et al., 2016), few have comprehensively addressed the evolving nature of factors like housing affordability, neighborhood characteristics, physical health, and the housing environment, with the notable exception of Kalousová and Evangelist [25]. These elements are intrinsically linked to overall well-being and quality of life, thus making them critical determinants of mental health [16]. This gap underscores the need for more longitudinal studies that can trace these dynamic interactions over time to provide a more definitive understanding of the causal relationships impacting mental health in the context of public housing.

There is a notable scarcity of scholarly inquiry into the direct correlation between residence in public housing and mental health outcomes, particularly anxiety and depression, in relation to improved housing affordability and the rent-to-income ratio (RIR). Furthermore, methodological limitations of existing research in this area are considerable. Further research is required to ascertain whether the financial relief provided by reduced housing costs in public housing allows households to allocate a greater proportion of their resources towards health-related expenditures, such as medical consultations and health screenings, which could potentially enhance residents' mental health. A study conducted by Bentley et al. [13] revealed that individuals residing long-term in publicly supported housing reported poorer mental health outcomes on average compared to individuals in private housing markets and those benefiting from voucher-supported rental units. Conversely, research conducted by Fenelon et al. [14] and Fenelon et al. [24] indicates that public housing with subsidized rent has a positive influence on mental health in both children and adults. This effect is likely attributable to the concentration of social support systems and resources that are prevalent in densely populated public housing communities.

The existing literature on the relationship between housing assistance and mental health presents a landscape of finding that are, at this point, inconclusive. Kalousová and Evangelist [25] found no significant differences in mental health outcomes among individuals who received housing vouchers (Section 8), utilized publicly assisted private rentals (Project-Based Section 8), and were eligible for assistance but did not receive it. In contrast, research conducted by Garg et al. [26] provided evidence supporting the hypothesis that housing voucher users experience improved mental health outcomes. Fenelon et al. [14] recommend further investigation into the determinants of these varied outcomes, suggesting factors such as access to balanced nutrition, physical activity, reduced family stress, health insurance and services, and social opportunities as potential influencers. Notwithstanding these contradictory findings, there is a consensus among scholars that homeownership has a beneficial impact on mental health. This positive effect is attributed to various factors, including housing stability, financial well-being, a sense of control, and future investment [27]. These disparate results suggest a complex relationship between public housing affordability and individual well-being, underscoring the need for a more nuanced understanding of the underlying mechanisms.

2.2. Determinants and mechanisms of mental health

This section presents a review of the existing literature on the relationship between residential circumstances and mental health outcomes, with a particular focus on depression and suicide ideation. It examines the influence of independent variables, including housing quality, social support, and residential satisfaction, on these mental health outcomes.

2.2.1. The impacts of the residential environment on depression

In examining the etiological theories of depression, Seligman's learned helplessness theory [28] offers a pertinent perspective, particularly in the context of housing. This theory postulates that repeated exposure to an inescapable and uncontrollable environment, which causes discomfort and distress, cultivates a sense of helplessness in individuals, thereby precipitating depression. The application of this theory to the context of housing is particularly relevant. In light of the significant financial burden that housing often entails, individuals often view their living conditions as an unalterable aspect of their existence rather than a malleable circumstance. This perception, particularly in the context of substandard housing conditions, can contribute to the development of a state of learned helplessness. In addition to representing a physical challenge, poor housing conditions may also serve as a potential psychological precursor to depressive states, as postulated by Seligman's theory.

The extant body of scholarly work has conducted a comprehensive investigation into the interrelationship between depression and a range of housing-related factors, including the duration of residence, the affordability of housing costs, the residential context, and the overall quality of housing. A consistent finding in the literature is the correlation between length of residence and unaffordable housing costs and the prevalence of depression [7,9]. It has been observed that homeowners tend to report superior mental health outcomes compared to renters, although this is not a universal finding. Those who are homeowners and are burdened with high mortgage interest payments have been observed to exhibit increased levels of depressive symptoms [29]. The impact of homeownership on mental health appears to diminish with age. However, for older adults, the presence of a significant financial burden continues to be a contributing factor to higher rates of depressive symptoms [30].

The impact of the neighborhood context on depression has been the subject of considerable research, with a particular emphasis on the role of socio-economic characteristics [31]. Nevertheless, establishing causality in this domain has proven to be challenging, as evidenced by the inconsistent results from cross-sectional studies, a common methodology in mental health research [32]. A correlation has been identified between neighborhood social conditions, such as crime rates and perceptions of safety, and the incidence of depression. In contrast, the physical aspects of neighborhoods, including the accessibility of amenities and walkability, have not demonstrated a significant relationship with depression [33,34]. These findings suggest that while neighborhood characteristics do play a role, they are generally less predictive of depression compared to individual socio-demographic factors [35].

Empirical research has demonstrated that deficiencies in both the functional and structural aspects of residential environments can have a considerable detrimental impact on psychological well-being and the prevalence of depressive disorders [7,36]. While the

magnitude of this impact may be relatively modest, the extant literature indicates that environmental stressors, such as noise pollution, inadequate lighting, exposure to air pollutants, overcrowding, and structural flaws, have demonstrable and significant effects on mental health. These findings underscore the significance of incorporating the physical characteristics of housing into the examination of mental health outcomes.

The mental health of low-income households is shaped by a complex interplay between neighborhood characteristics and housing quality [11]. The extant literature establishes a correlation between inadequate housing maintenance, low social cohesion within neighborhoods, and an increase in depressive symptoms. This underscores the role of residential environments in influencing mental health. Kalousová and Evangelist [25] have provided empirical evidence that a higher quality of neighborhood has a positive impact on depression, which can be attributed in part to a reduction in exposure to disorder and violence. Moreover, Casciano and Massey [12] discovered that individuals residing in public housing in middle-income neighborhoods demonstrated lower anxiety levels in comparison to their counterparts in lower-income areas. The introduction of Section 8 vouchers in the United States represents an effort to enhance the overall quality of life and well-being of low-income households by providing them with greater choice in housing and neighborhood. However, Freeman and Li [37] advise that the advantages of housing subsidies and vouchers on mental health may not be as substantial as anticipated. Moreover, empirical studies indicate that discriminatory practices by landlords often impede voucher recipients from accessing housing in preferred neighborhoods, suggesting that such discrimination is a critical factor affecting the mental health of housing subsidy and voucher recipients. Therefore, any analysis of the mental health impacts of housing subsidy and voucher programs should incorporate models that account for both national and local factors in housing conditions to provide a more comprehensive understanding of these dynamics.

2.2.2. *The influence of the residential environment on suicide*

It has been demonstrated through research that a number of factors, including depression, poor health, chronic illness, relative deprivation, and unemployment, play a significant role in suicidal behavior [38]. Nevertheless, there is a notable dearth of research focusing on the environmental determinants of suicidal behavior. Recent studies have begun to recognize neighborhood and residential environments as potential risk factors for suicide, with a particular emphasis on the role of neighborhood socioeconomic status and social ties. Investigations into suicidal behavior have consistently identified a robust association between neighborhood characteristics and suicide, linking it with factors such as socio-economic status, the availability of social support, and the strength of social ties within communities [39,40]. Furthermore, empirical evidence indicates that neighborhoods with a higher incidence of suicide-related emergency calls often correlate with variables such as the educational level of residents, population density, the prevalence of single-person households, and the proportion of older adults [41]. This body of research highlights the importance of considering environmental and social factors in order to gain a deeper understanding of, and to develop more effective strategies for, addressing the complex issue of suicide in residential settings.

The extant literature identifies length of residence and residential stability as critical predictors of suicidal behavior. It is noteworthy that the prevalence of suicidal ideation and actual suicide rates are disproportionately higher among renters compared to homeowners, which highlights the role of housing insecurity in mental health vulnerabilities [6]. Additionally, the apprehension associated with potential eviction and the consequent loss of housing has been identified as a significant explanatory factor in suicidal behavior [42]. However, the extant literature presents a more complex picture regarding the relationship between mortgage-related financial stress and suicide rates. The results of studies conducted in large U.S. metropolitan areas have been inconclusive, with some failing to identify a significant correlation between mortgage stress and suicide rates [43]. This divergence in findings highlights the necessity for a more nuanced understanding of the multifaceted relationships between various aspects of residential stability and mental health outcomes, particularly in the context of suicidal behaviors.

In particular, regions with a concentration of low-income collective housing, such as permanent rental housing complexes and shantytowns in South Korea, have been identified as areas of significant concern with regard to suicide rates [44]. These areas require detailed examination concerning the residential psychology, socio-economic status, and social relationships of their inhabitants. The mental health of residents in permanent rental housing has emerged as a significant concern in recent years. Studies conducted in the Korean context have underscored the challenges faced by these residents, including social isolation and elevated suicide rates [3,7]. The negative perception of permanent rental housing, which is often stigmatized as a housing option for impoverished populations, further exacerbates social issues. Factors such as prevalent alcohol-related problems, weak neighborhood networks, lack of resident engagement, and poor environmental conditions have been identified as contributing to this negative perception. These environmental stressors are expected to further intensify the prevalence of suicide in these communities [45,46]. Moreover, the socioeconomic profile of these areas is frequently characterized by a high concentration of basic welfare recipients, elderly individuals, single-person households, medical assistance beneficiaries, and veterans, the majority of whom belong to the lowest quintile of the urban poor. This can intensify social exclusion and generate negative externalities, which in turn have a detrimental impact on the mental health and well-being of these communities. The distinctive socio-cultural and economic factors in Korea require targeted research to develop effective interventions.

2.2.3. *The relationships between household and individual characteristics and mental health*

While there is an increasing recognition of the potential association between housing conditions and mental health, research examining the gender-specific impacts remains limited. Nevertheless, existing studies indicate notable gender differences in responses to residential environments. For example, overcrowding has been linked to increased levels of depression and a diminished sense of home among women, while it has been correlated with heightened aggression in men [47,48]. Other research suggests that improvements in housing quality and homeownership have a positive effect on men's sense of masculinity, self-esteem, and sociability,

which in turn enhances familial relationships [49]. Furthermore, psychological studies indicate that gender differences in the perception of sensory experiences, such as smell, noise, and sight, as well as in sensory pain, influence how men and women differently perceive and respond to environmental stimuli [50]. In the context of mental health, the higher prevalence of depression among women has been partially attributed to these gender-specific differences in housing quality, environmental perception, and response [51].

A recent empirical study by Lee [52] demonstrated that functional problems, such as noise, poor ventilation, inadequate lighting, and insufficient heating, have a significant impact on depression in younger women and older men. Structural issues, including the use of temporary buildings and the incorporation of inferior building materials, were found to affect depression across all age groups and genders, with a pronounced effect on older men. Additionally, the study indicated that residing in basements and susceptibility to natural disasters are substantial risk factors for depression among older adults in Korea. Moreover, functional deficiencies were demonstrated to elevate the probability of suicidal ideation, particularly among middle-aged men. These findings underscore the varying impact of substandard housing conditions on mental health across diverse age and gender groups, emphasizing the necessity for tailored housing policies that address the specific needs of these heterogeneous populations.

2.3. Theoretical framework

The mechanisms through which characteristics of residential environments impact mental health remain an area with considerable gaps in knowledge. In a study focusing on older adults, Phillips et al. [53] proposed that the influence of the residential environment on mental health is not direct; rather, the degree of residential satisfaction serves as a mediating factor. This conceptualization proposes that individual appraisals of the residential environment are associated with residential satisfaction, which in turn is linked to mental health outcomes. A number of studies have supported the notion that evaluations of residential circumstances are of paramount importance in determining residential satisfaction [54], with the objective attributes of residential settings being significant determinants [55]. Although the direct relationship between residential satisfaction and depression has not been extensively investigated, the available evidence suggests a negative correlation between the two, indicating that residential satisfaction may serve as a mediator between the characteristics of the residential setting and depression [56]. To gain a more comprehensive understanding of these relationships, it is essential to employ an integrated model that analyzes the interplay between residential satisfaction and mental health, as well as the link between the quality of the residential environment and residential satisfaction [Fig. 1].

A review of the existing research corpus reveals that the formulation of public housing policies has often been based on an incomplete evidentiary base. It is therefore imperative that more comprehensive research initiatives be undertaken with the aim of amassing robust empirical evidence concerning the interplay between public housing conditions and the mental health of its residents. This study aims to elucidate the associative and causative dynamics between depression and suicidal ideation, employing an analytical model that integrates personal characteristics—such as household composition, age, and gender—with elements of the residential environment, including satisfaction with social relationships and housing itself. The majority of studies examining the impact of residential environments on depression have focused on high-rise apartments or public housing sectors [57]. These studies have frequently relied on cross-sectional data sets, which constrains the ability to infer causation. While certain housing features—such as

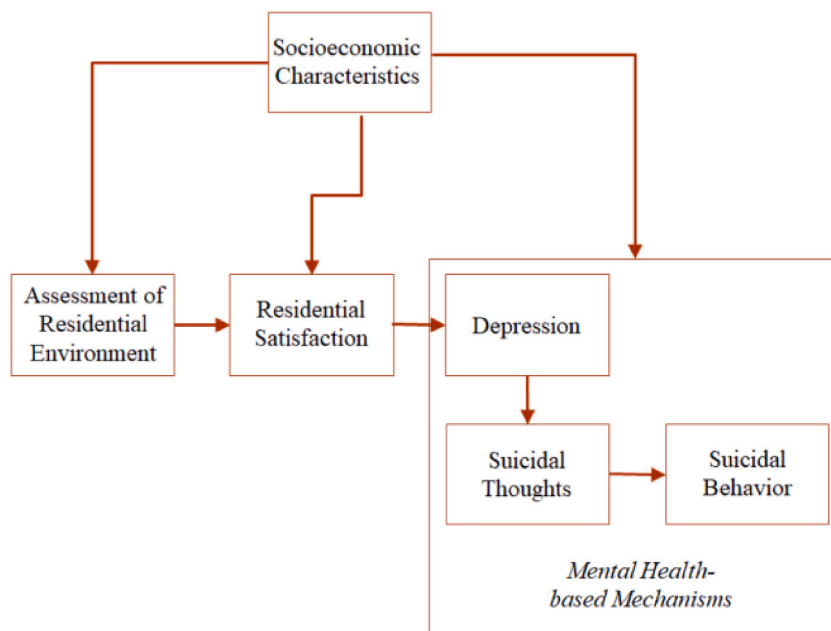


Fig. 1. Theoretical framework of the study.

noise levels, ventilation quality, air pollution, and density—have been linked to suicidal behaviors, there is a notable absence of research exploring these attributes within the context of permanent rental housing. It is therefore essential to expand this emerging body of knowledge by investigating the causal pathways and underlying mechanisms through which the residential environment may influence suicidal ideation within the context of permanent rental housing. The following research questions are to be addressed in this study: 1) What are the key demographic factors associated with increased vulnerability to mental health issues in permanent rental housing? 2) What is the impact of residential settings on the prevalence of depression and suicide ideation among the residents? 3) What intervention strategies can be developed to effectively address mental health challenges and reduce suicide risk in permanent rental housing communities?

3. Factors influencing depression and suicidal ideation in permanent rental housing populations

This study addresses the existing gaps in the scholarly literature on the factors influencing depression and suicidal ideation within permanent rental housing demographics. This study employs quantitative analysis to examine factors such as household composition and the age of residents, who may be particularly susceptible to mental health challenges. Utilizing data obtained from the Housing Management Corporation, this investigation examined the prevalence of suicide over a recent three-year period (2020–2022), stratified by age and household size, thereby identifying demographic segments with elevated risk profiles for suicide. Furthermore, panel data from the Korea Welfare Panel Survey (KOWEPS) enabled a comparative evaluation of mental health outcomes across diverse age groups and household types. A longitudinal regression analysis was employed to isolate and examine the factors contributing to depression and suicidal ideation, thereby providing a refined understanding of the complex interrelationships at play.

3.1. The epidemiology of suicide in permanent rental housing: insights from the housing management corporation

The empirical data curated by the Housing Management Corporation, an entity overseeing permanent rental housing, indicates a pronounced incidence of suicides, particularly among the elderly and individuals residing in single-person households. The objective of this study is to construct an analytical model that investigates the susceptibility of specific demographic segments—namely older adults and single-person household residents—to mental health adversities. An examination of the suicide occurrences within the public rental housing sector, as managed by the Housing Management Corporation over a three-year span (2020–2022), revealed that out of 121 total incidents, a significant proportion, 74 cases (61.1 %), involved individuals aged 60 and above [Table 2]. Furthermore, single-person households accounted for 65 cases, constituting 53.7 % of the overall suicide events [Table 3]. These findings underscore the critical need to explore the mental health vulnerabilities inherent within these demographic cohorts in the context of permanent rental housing.

The empirical foundation of this study is predicated on panel data derived from the Korea Welfare Panel Survey (KOWEPS), which encompasses 17 waves of data collection spanning from 2005 to 2021, facilitating the construction of a comprehensive longitudinal analysis model [Table 4]. The KOWEPS was designed to assess the quality of life among low-income demographics, and thus intentionally oversamples this group, allocating approximately 50 % of its respondents to households earning below 60 % of the national median income. The distribution of sampled households is geographically diverse, encompassing 17 provinces and 243 municipalities across the country [58]. The survey includes an item that queries suicidal ideation among those who reside in permanent rental housing. Respondents are asked whether they had seriously considered suicide in the preceding year. For analytical purposes, the total number of affirmative and negative responses to this item was calculated. It is noteworthy that while the KOWEPS includes queries regarding suicide attempts, the relatively small number of responses precluded their utility for this analysis. Furthermore, actual suicide data was not available, and thus the focus was on suicidal ideation as a limitation. The presence of depressive symptoms was assessed using the 11-item Center for Epidemiological Studies Depression Scale (CES-D), as formulated by Kohout et al. [59]. While the CES-D comprehensively addresses various facets of depressive symptoms across 20 items, the abbreviated 11-item version employed by KOWEPS is particularly advantageous for including elderly or frail individuals who may face constraints in survey participation time. Furthermore, self-esteem was evaluated through the aggregation of responses to the 10 items of Rosenberg's Self-Esteem Scale [60], with higher composite scores indicative of elevated self-esteem.

In this study, a comprehensive array of variables pertinent to residential circumstances was subjected to rigorous scrutiny. These variables encompassed participants' residential satisfaction, the quality of their social relationships, and their geographical location, differentiated as metropolitan or non-metropolitan. In addition, a comprehensive set of individual characteristics was incorporated into the analysis, including gender, disability status, educational attainment, employment status, average monthly personal disposable

Table 2

Age-specific incidence of suicides in public rental housing in South Korea(2020–2022).

(Unit: Case)				
Age Group	2020	2021	2022	Total
Under 40	3	5	6	14
40 to 59	10	9	14	33
60 or older	20	26	28	74
Total	33	40	48	121

Source: Compiled by the author based on internal data from the Korea Housing Management Corporation

Table 3
Suicides in public rental housing by household composition (2020–2022).

(Unit: Case)				
Household Composition	2020	2021	2022	Total
Single-person Household	16	22	27	65
Two-person Household	13	11	13	37
Three-person household	4	7	8	19
Total	33	40	48	121

Source: Compiled by the author based on internal data from the Korea Housing Management Corporation

Table 4
Operationalization of variables based on survey questions.

Variables	Survey Question(s)	Response Options and Coding Scheme
Suicidal Ideation	Have you seriously thought about killing yourself at any time in the past year?	No=0, Yes=1
Depression Index	In the past week, how often have you felt: 1) not wanting to eat and having no appetite, 2) relatively well, 3) quite depressed, 4) everything seemed hard, 5) sleepless (didn't sleep well), 6) felt alone in the world, 7) had no major complaints, 8) felt like people were cold to me, 9) felt sad, 10) felt like people didn't like me, 11) couldn't get anything done.	Rarely (less than 1 day a week) = 1, sometimes (1–2 days a week) = 2, often (3–4 days a week) = 3, most of the time (5 or more days a week) = 4. Sum of 11 items (min=11 to max=44), Higher values indicate higher depression
Self-Esteem Index	Please circle where you feel closest to each statement that asks how you feel about yourself at the time of the survey. 1) I am a valuable person, 2) I have a good character, 3) I feel like a failure, 4) I can do things just as well as other people, 5) I don't have much to be proud of, 6) I have a positive attitude, 7) I am generally satisfied, 8) I wish I could respect myself, 9) I feel like I am worthless, 10) I think I am not a good person.	Not usually=1, Usually=2, Most of the time=3, Always=4 Sum of 10 items (minimum=10, maximum=40), Higher values indicate higher self-esteem
Household type ^a	Marital status, relationship to household head, number of household members, household type	Single-person household=0, Single-parents, Multi-member household (no spouse, 2 or more household members)=1, Couple household (spouse, 2 household members, head of household or spouse)=2, Couple-child household (spouse, 3 or more household members)=3
Age group	Year of birth, month	Older adults (60+)=0, Young adults (19–39)=1, Middle-aged adults (40–59)=2
Sex	Sex	Female=0, Male=1
Satisfaction with Family Relationship	How satisfied are you with your family relationships?	Very dissatisfied=1, Somewhat dissatisfied=2, So-so=3, Somewhat satisfied=4, Very satisfied=5
Satisfaction with Social Relationship	How satisfied are you with your social relationships?	Very dissatisfied=1, Somewhat dissatisfied=2, Fairly satisfied=3, Somewhat satisfied=4, Very satisfied=5
Residential Satisfaction	How satisfied are you with your residential situation?	Very dissatisfied=1, Somewhat dissatisfied=2, Fairly satisfied=3, Somewhat satisfied=4, Very satisfied=5
Health Status	Health status as of December 31st of last year	Very unhealthy=1, Unhealthy=2, Fair=3, Healthy=4, Very healthy=5
Region	Regional division by 7 regions	Seoul Metropolitan area=0, Other areas=1
Disability Status	Disability type	Non-disabled=0, Disabled=1
Education Level	Education Level	Elementary school or less=0, Middle school education through high school=1, College education or more=2
Employment Status	Employment type	Not employed=0, Employed and working=1
Average Monthly Personal Disposable Income	Annual disposable income, household size	Monthly disposable income/household size
Alcohol Consumption	At the time of the survey, how often do you drink alcohol?	Never drink=0, Once a month or less=1, 2–4 times a month=2, 2–3 times a week=3, 4 or more times a week=4

^a The study employs a systematic classification of household types, utilizing variables that encapsulate marital status, the relationship to the household head, the aggregate number of household members, and distinctions between single-person and grandparent-led households. Accordingly, households are categorized as follows: 'single-person households' consist of a lone household head without a spouse; 'single-parents, multi-member household' include a single head of household with children and additional members but no spouse; 'couple household' is defined by the presence of a spouse and one other member, totaling two persons; and 'couple-child household' comprises a spouse and a minimum of three members, indicating a larger family unit

Source: Constructed by the author using data from the Korea Welfare Panel questionnaire and coding guide.

income, self-esteem levels, satisfaction with family relationships, overall health status, and frequency of alcohol consumption. The selection of these control variables was informed by a comprehensive review of the empirical literature, which identified a number of factors commonly associated with mental health challenges. With regard to age categorization, participants were divided into three distinct groups: young adults (19–39 years old), middle-aged adults (40–59 years old), and older adults (60 years and above). This

aligns with the widely recognized age classification delineated by the Encyclopedia Britannica for defining middle age (40–60 years old).

This study employed a paired *t*-test analysis to discern variations in mental health across different household types within specific age demographics of permanent rental housing residents. Additionally, a longitudinal data analysis approach was employed to evaluate the influence of the housing environment on mental health outcomes. One of the primary advantages of longitudinal studies is their ability to track the same individuals over an extended period, which allows for the investigation of temporal changes that are not possible with cross-sectional research methodologies. In this context, the analysis employed panel data to construct a random-effects regression model for depression and a random-effects logit model for examining suicidal ideation. The selection of a random effects model over a fixed effects model was a deliberate decision; the latter primarily examines within-individual variance, thereby discounting between-individual variations. Therefore, panelists who demonstrated consistent values for the dependent variables over the specified time period were excluded from the analysis. Moreover, as the fixed effects model is unable to effectively capture the influence of time-invariant factors such as gender, the random effects model was deemed a more suitable approach for this research.

Table 5 presents a comprehensive summary of the sample characteristics (N = 3064). The analysis yielded a noteworthy finding: the prevalence of suicidal ideation and depression increases with age, reaching its peak among older adult cohorts. Notably, the prevalence of suicidal ideation in older adults was found to be approximately twice that observed in younger adults. Concurrently, the Self-Esteem Index indicated an inverse age-related pattern, with younger adults exhibiting higher levels of self-esteem, and the lowest levels observed in the elderly. Similarly, younger adults exhibited markedly higher levels of satisfaction with family and social relationships, as well as perceived health status, which diminished progressively with age. These age-related differences were found to be statistically significant. In contrast, residential satisfaction demonstrated an upward trajectory with age, with younger adults reporting significantly lower levels of satisfaction compared to older age groups. With regard to the average monthly personal disposable income, a notable discrepancy was evident, with the elderly reporting approximately KRW 770,000, a figure that was considerably lower than that reported by their younger counterparts. However, the income disparity between young adults (approximately KRW 980,000) and middle-aged to older adults (approximately KRW 990,000) did not reach statistical significance.

The analysis of the elderly demographic within permanent rental housing revealed a notable prevalence of single-person and couple households, which contrasts with the higher proportion of single-person households among young adults compared to couple-

Table 5
Comparative analysis of subject characteristics across age groups in permanent rental housing.

Category		Young Adults (a)	Middle-aged (b)	Older adults (c)	Difference between two groups		
		n=437	n=850	n=1777	a*b	b*c	c*a
		Mean (standard deviation)	Mean (standard deviation)	Mean (standard deviation)			
Suicidal Ideation (%)		5.49 %	9.41 %	10.52 %	*	NS	**
Depression Index		14.75(5.00)	16.62(5.61)	19.28(6.38)	***	***	***
Self-Esteem Index		22.70(2.92)	21.79(3.14)	21.02(3.12)	***	***	***
Satisfaction with Family Relationships		3.71(0.74)	3.49(0.82)	3.28(0.86)	***	***	***
Satisfaction with Social Relationships		3.62(0.69)	3.38(0.80)	3.27(0.77)	***	***	***
Residential Satisfaction		3.04(0.92)	3.29(0.86)	3.52(0.75)	***	***	***
Health Status		3.87(0.78)	3.06(1.01)	2.51(0.84)	***	***	***
Average Monthly Personal Disposable Income (in thousands Won)		98.26(49.94)	99.59(88.43)	77.30(41.56)	NS	***	***
Household Type	Single-person household(%)	9.38 %	32.47 %	58.53 %			
	Single-parents, Multi-member household(%)	78.26 %	35.88 %	13.56 %			
	Couple household(%)	0.69 %	9.53 %	24.65 %			
	Couple-child household(%)	11.67 %	22.12 %	3.26 %			
Sex	Female(%)	58.35 %	58.94 %	64.27 %			
	Male(%)	41.65 %	41.06 %	35.73 %			
Education Level	Elementary School or Less (%)	0.23 %	18.47 %	65.50 %			
	Middle School to High School (%)	42.79 %	68.59 %	29.71 %			
	Some College or More(%)	56.98 %	12.94 %	4.78 %			
Regiona	Non-metropolitan areas(%)	83.30 %	76.12 %	77.43 %			
	Seoul Metropolitan area(%)	16.70 %	23.88 %	22.57 %			
Disability	Disabled(%)	13.04 %	37.53 %	34.05 %			
	Non-disabled(%)	86.96 %	62.47 %	65.95 %			
Employment Status	Workers(%)	61.78 %	41.65 %	9.45 %			
	Non-workers(%)	38.22 %	58.35 %	90.55 %			
Alcohol Consumption	Never Drink(%)	35.70 %	60.35 %	76.87 %			
	Less than Once per Month(%)	17.16 %	7.18 %	5.46 %			
	2-4 Times per Month (%)	30.21 %	18.35 %	6.64 %			
	2 to 3 Times per Week (%)	11.90 %	8.94 %	4.73 %			
	4 or More Times per Week (%)	5.03 %	5.18 %	6.30 %			

Notes: ***p < 0.001, **p < 0.01, *p < 0.05, NS=not significant.

Data: Korea Welfare Panel Survey (1st through 17th waves).

child households in middle-aged and older adults. It is noteworthy that within the older age group residing in permanent rental housing, there was a marked predominance of women. This group was also distinguished by higher proportions of individuals with less than an elementary school education, lower employment rates, a substantial prevalence of single-person households, and a notable tendency towards abstaining from alcohol. Conversely, the young adult segment was distinguished by a considerable incidence of single-parent households, higher educational attainment (at the college level or above), fewer individuals with disabilities, and a higher rate of employment. Among the middle-aged and older adults, there was a relative increase in the proportion of residents in metropolitan areas and those with disabilities.

Table 6 presents a detailed summary of the impacts of housing environment, individual socio-economic characteristics, and personal perceptions on depression and suicidal ideation among residents of permanent rental housing. The analysis demonstrated a correlation between a decline in self-esteem, family relationship satisfaction, and social relationship satisfaction and an increase in the Depression Index. Additionally, a lower perceived health status and a greater frequency of alcohol consumption (more than twice a week) were found to be associated with higher levels of depression. The data also indicated that individuals residing in single-person households exhibited higher degrees of depression compared to those living in other types of households. Furthermore, older adults exhibited a greater proclivity for depression than their middle-aged counterparts. It is noteworthy that the employment status of the residents emerged as a significant factor, with those who were employed exhibiting lower levels of depression.

The analysis of factors influencing suicidal ideation among permanent rental housing residents identified several key variables, including the Depression Index, household type, age group, residential satisfaction, average monthly personal disposable income, and alcohol consumption patterns. The findings indicated a direct correlation between a higher Depression Index and an increased likelihood of suicidal ideation. Furthermore, a lower level of residential satisfaction and a reduced average monthly disposable income were found to be associated with an increased probability of experiencing suicidal thoughts. Comparative analyses revealed that individuals in single-person households, as opposed to those in single-parent or multi-member households, and middle-aged adults, in contrast to older adults, demonstrated a greater propensity towards considering suicide in the preceding year. Moreover, respondents with a college education or higher were more likely to report suicidal ideation than those with only an elementary school education or less. Furthermore, the study revealed that residents who consumed alcohol on two or more occasions per week exhibited a heightened propensity for suicidal in comparison to those who abstained from drinking.

Table 6
Factors influencing depression and suicidal ideation among permanent rental housing residents.

Variables	Model 1	Model 2
	Coefficient (S.E.)	Coefficient (S.E.)
Dependent Variable	Depression Index	Suicidal Ideation
Depression Index	–	0.177*** (0.014)
Self-esteem index	–0.259***(0.031)	–0.022 (0.024)
Household Type (Reference Group=Single-person Household)		
Single-parents, multi-member household	–1.049***(0.308)	–0.499* (0.251)
Couple household	–0.903**(0.321)	0.084 (0.238)
Couple-children household	–1.175**(0.415)	–0.466 (0.358)
Age group (Reference Group=Older Adults)		
Young adults	–0.722(0.453)	0.268 (0.390)
Middle-aged	–0.755*(0.308)	0.565* (0.234)
Sex	–1.638*** (0.266)	–0.163 (0.213)
Satisfaction with Family Relationship	–1.127*** (0.126)	0.008 (0.091)
Satisfaction with Social Relationships	–1.224*** (0.135)	0.052 (0.103)
Residential Satisfaction	–0.107(0.124)	–0.177+ (0.094)
Health Status	–1.460*** (0.118)	–0.130 (0.099)
Region	–0.442(0.275)	–0.071 (0.218)
Disability	–0.249(0.272)	0.024 (0.202)
Educational Attainment (Reference Group=Elementary School or Less)		
Middle School to High School	0.220(0.294)	0.159 (0.221)
College Experience or More	0.772(0.442)	0.301* (0.343)
Employment Status	–0.964*** (0.284)	–0.177 (0.261)
Average Monthly Personal Disposable Income	–0.001(0.002)	–0.004* (0.002)
Alcohol Consumption (Reference Group=Never Drink)		
Less than Once a Month	–0.003(0.367)	0.305 (0.329)
2-4 Times per Month 2–3 Times per Month	–0.331(0.313)	0.390 (0.276)
2-3 Times per Week	1.099*** (0.416)	0.692* (0.316)
4 or More Times per Week	1.232*** (0.462)	0.658+ (0.344)

Notes: ***p < 0.001, **p < 0.01, *p < 0.05, +p < 0.1.

Data: Korea Welfare Panel Survey (Waves 1–17).

4. Conclusions and policy implications

4.1. Conclusion

The objective of this study was to examine the mental health challenges, particularly social isolation and suicide risk, experienced by individuals residing in South Korea's permanent rental housing. The empirical analysis of data from the Housing Management Agency and the Korea Welfare Panel Survey (KOWEPS) revealed the key determinants of these challenges, including age, household composition, financial stress, and housing satisfaction. The study's objectives, which include identifying vulnerable populations, analyzing the relationship between residential environments and mental health outcomes, and proposing intervention strategies, have been addressed in a systematic manner.

The findings indicated that older adults and single-person households are particularly susceptible to depression and suicidal ideation. This is influenced by factors such as self-esteem, social support, and environmental satisfaction. This research has thus achieved its objective of providing evidence-based insights into the demographic and environmental factors influencing mental health in permanent rental housing, thereby establishing a foundation for targeted policy interventions. The study underscores the imperative for public health strategies that prioritize the early identification of mental health risks and the improvement of living conditions for vulnerable residents.

4.2. Policy implications

This study makes a significant contribution to the discourse on social isolation within the context of permanent rental housing by empirically investigating the differential vulnerability of various households to mental health challenges. One of the most significant findings is that the mental health implications of residing in permanent rental housing, along with the mechanisms driving these effects, vary considerably across different household compositions and age demographics. It is noteworthy that a significant proportion of permanent rental housing is occupied by single-person and elderly households, who often face a convergence of social and economic disadvantages. These characteristics, in conjunction with spatial isolation, have been consistently linked to mental health concerns among residents. Despite the increasing prevalence of solitary deaths across regions and the proactive measures taken by housing management corporations and local governments, such as appointing dedicated residential social workers to mitigate suicide risks, comprehensive data on incidents across all permanent rental housing occupants remains lacking. From an academic perspective, the severity of mental health issues among the socially marginalized residents of permanent rental housing has been relatively understudied, underscoring the need for more focused research and policy intervention in this area.

Utilizing the Korea Welfare Panel data, this study undertook a nuanced categorization of permanent rental housing residents by age group and household type, aiming to discern the determinants influencing depression and suicidal ideation. The empirical analysis revealed that single-person households, particularly among the non-elderly and elderly demographics, exhibit heightened susceptibility to mental health challenges. Notably, individuals aged 60 and above were characterized by pronounced levels of depression, diminished self-esteem, reduced satisfaction with family and social relationships, relatively lower average monthly disposable income, and limited educational attainment. These findings highlight the pressing need to address the mental health needs of an aging and increasingly fragmented Korean society. It is imperative that social isolation support programs be developed and reinforced, with particular attention paid to the specific demographic and socio-demographic profiles (including age group, household type, and gender) of those at risk for mental health issues, such as suicide and loneliness.

The study identified several key determinants influencing depression, a critical aspect of mental health, among residents of permanent rental housing. Notably, self-esteem was identified as a potential mitigating factor against suicidal ideation. Furthermore, the findings indicated that robust social support networks, encompassing family and friends, serve as a buffer against social isolation and alleviate depressive symptoms. The loss of social roles was also strongly correlated with depression, which highlights the potential benefits of enhancing resident employment opportunities and participation in community activities, such as laundry and sanitation services within housing complexes. These initiatives could positively impact feelings of loneliness, role loss, and mental health challenges. Additionally, the study revealed that excessive alcohol consumption can adversely affect the safety and health of residents, as well as the overall mental well-being within permanent rental housing complexes. It is therefore imperative that dedicated management teams, supported by local or national governments, be established to conduct comprehensive surveys on mental illnesses and psychological conditions. Such endeavors are vital to accurately assess the current situation and address the mental health needs of residents in these housing complexes.

This study establishes a clear and significant correlation between depression and the propensity for suicidal ideation among residents of permanent rental housing. While varying degrees of depression are observed among these residents, the transition from depressive states to suicidal thoughts is contingent upon their specific living conditions. In particular, older individuals who reside alone are at an elevated risk of social isolation from family and friends, which increases their susceptibility to psychosocial adversities. In light of these considerations, it becomes imperative to develop targeted support mechanisms that leverage social networks to assist these vulnerable groups. The establishment of a perceived sense of security within these social ties can play a crucial role in mitigating feelings of spatial exclusion and isolation, thereby enhancing the overall quality of life for these residents.

The relationship between the living environment of permanent rental housing and the emergence of suicidal ideation represents a relatively uncharted domain within academic research. The longitudinal analysis conducted in this study underscores the pivotal role of depression management in this context. In recognition of the necessity for an integrated care system that encompasses rental management, housing administration, and residential welfare, the Housing Management Corporation has initiated the operation of My

Home Centers across various regional bases, with a continued effort to increase the number of dedicated residential welfare workers. However, as of 2023, the average housing manager is responsible for 1285.2 households, a workload that severely limits the capacity for additional responsibilities such as suicide and loneliness prevention. Therefore, this study proposes an expansion in the deployment of mental health social workers within community welfare centers located in these housing complexes as a means of enhancing the mental health outcomes for residents of permanent rental housing. Such a measure would facilitate the early identification, counseling, and case management of families that are particularly susceptible to social isolation and mental health crises. The pilot program is currently being implemented in select social welfare centers managed by the Housing Management Corporation and the Seoul Metropolitan Government. Based on the success of this initiative, there is a need to extend it to all permanent rental housing complexes nationwide. Furthermore, for residents with a history of mental health issues, there is a necessity to implement a system for continuous medication management and, if required, referral to mental health welfare centers and medical institutions. Moreover, it is essential to formulate a framework for the intensive care of households experiencing mental health crises, potentially involving a committee of psychiatrists and other mental health professionals.

In addressing the challenges of social isolation and exclusion within the context of permanent rental housing, it is of equal importance to enhance the physical infrastructure of these aging facilities. The Korea Land and Housing Corporation (LH) and various local urban corporations are actively engaged in green renovation initiatives with the objective of enhancing the energy efficiency of permanent rental housing structures that are over 15 years old and upgrading the overall living environment. Projects such as Change-Up are oriented towards reinforcement of community spaces, the revitalization of the image of public rental housing, and the incorporation of cognitive health design principles. In light of the deleterious impact of substandard housing conditions on residents' motivation, well-being, and mental health, it is imperative that urgent improvements be made in areas such as elevator systems, communal plumbing, and shared facility amenities. Furthermore, it is essential to implement consistent enhancement and follow-up management strategies, particularly for households grappling with hoarding issues. It is imperative to continue implementing initiatives that foster community cohesions and enhance living standards. This includes the creation of village gardens and therapeutic playgrounds, among other measures. Moreover, the provision of institutional support for the reconstruction of outdated permanent rental housing units is vital to facilitate long-term improvements in the living environment.

4.3. Study limitations and future research

This study is constrained by several limitations, including its reliance on secondary data, which inherently limits the scope of variables considered in the analysis. Other critical factors that may impact depression and suicidal ideation, such as personal or familial history of depression, previous instances of suicide within the family, past experiences of suboptimal housing conditions, and environmental aspects like landscaping or green spaces, were not included in the model. Moreover, the methodological decision to conduct a longitudinal analysis using panel data, while effective for examining causality, restricts the exploration of more intricate mediating effects of depression between permanent rental housing conditions and suicidal ideation. Furthermore, it is important to acknowledge the limitations imposed by the scope and size of the sample, as well as the constraints related to the specific geographical area under study. The lack of comprehensive and up-to-date data further complicates the analysis.

It would be beneficial for future research to expand to include a comparative analysis with other types of public rental housing in Korea in order to gain a broader understanding of the findings' applicability. Furthermore, while this study proposes suicide prevention strategies and underscores the significance of mental health enhancement in permanent rental housing in Korea, future research should examine the long-term consequences of recent housing policies on mental health outcomes to inform future policy decisions.

Notwithstanding these limitations, the principal objective of this study was to identify the factors influencing the mental health of individuals residing in permanent rental housing, particularly in the context of an aging population and the growth in single-person households. The findings highlight the necessity for targeted counseling and case management, adapted to specific demographic groups and household types, as a means of identifying and addressing mental health risks. The study advocates for the expansion of public health interventions and residential environment improvement strategies, emphasizing their potential to mitigate depression and suicidal ideation among this vulnerable population.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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