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Research paper

Self-Neglect among Empty-Nester Elderly in China: Status and Influencing Factors

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Abstract

In China, empty nester elderly refers to older adults whose children have left home and who live alone or only with a spouse. With the country's rapidly aging population, this group is expanding, posing new challenges for public health and social care. Self-neglect, which is defined as the intentional or unintentional failure to maintain adequate self-care and health management, leading to risks in medical care, hygiene, and safety, is a critical but underexplored issue. This study examined the prevalence and predictors of self-neglect in an urban Chinese sample. Using a descriptive-correlational survey, 184 empty-nestr elderly were randomly selected. Data on demographic characteristics, self-care ability, social support, and self-neglect were collected using standardized scales. Analyses included descriptive statistics and stepwise multiple regression. Findings show that the participants were predominantly female, aged 60–70 years, with junior high school education, married, and retired from farming. Most had 1–2 children, monthly per capita incomes of 1,000–2,000 CNY (≈139–278 USD), and received weekly visits from children. Social support was mainly from acquaintances and friends, with limited family support. Self-neglect levels were relatively high, particularly in healthcare behaviors and living environment hygiene. Regression analysis showed that lower income, less frequent children's visits (every two weeks vs. weekly), enterprise occupation, unmarried status, and higher self-care ability scores were associated with greater self-neglect, while having 1–2 chronic diseases predicted lower self-neglect. The model explained 37.4% of the variance. These findings underscore the need for targeted health promotion and wellness programs for empty nester elderly, emphasizing social support, economic stability, and proactive monitoring by geriatric care professionals.

Keywords: *Empty Nester Elderly; Self-Neglect; Social Support; Older Adults in China; Geriatric Health Promotion.*

1. Introduction

China's population is aging rapidly, bringing distinct social and health challenges (Luk et al., 2021; Xu et al., 2025; Zhu et al., 2025). National statistics indicate that people aged 60 and above constituted 18.70% of the population in 2020, and those aged 65 and above accounted for 13.50% (Li et al., 2022). As population aging accelerates, the proportion of empty nester elderly, older adults whose children have left home and who live alone or only with a spouse (Feng & Phillips, 2024), has risen markedly, with reports suggesting rates exceeding 30% among all older households and over 40% in urban areas (Yang et al., 2016; Zhang et al., 2018). With advancing age, empty nesters face cumulative risks from declining physical function, chronic conditions, and limited family contact, heightening vulnerability to psychosocial stressors such as loneliness, anxiety, and depression (Huang et al., 2020; Song et al., 2023).

Self-neglect is defined as the intentional or unintentional failure to maintain adequate self-care and health management, thereby increasing risks in medical care, hygiene, and safety, which is a serious public health concern among older adults (Dong, 2017; Zhang & Zhang, 2025). Prior studies link self-neglect to diminished quality of life and even mortality (İlhan et al., 2020; Mazzotti et al., 2022), as well as deficits in personal hygiene, living conditions, self-care, health status, cognition, and receptivity to help (Abada et al., 2017; Touza & Prado, 2019). Self-neglect is also associated with greater readmissions, emergency visits, and hospitalizations, increasing healthcare costs and burdening caregivers and communities (Dahl et al., 2020; Pärna et al., 2019). Reported prevalence is actually quite high and has been observed across community-dwelling, rural, and hospitalized older adults (İlhan et al., 2020; Zawisza et al., 2020). However, findings are heterogeneous,

reflecting regional differences, study designs, and measurement tools. Yet, research explicitly focusing on older adults living alone remains limited, particularly regarding how self-care ability and social support jointly shape self-neglect in this group.

This study is guided by Orem's *Self-Care Deficit Theory* (Orem, 1995; Tanaka, 2022) and the *Risk-Vulnerability Model of Self-Neglect* (Paveza et al., 2008; Wang et al., 2019). Orem posits that individuals possess the capacity for self-care, but when this capacity is limited or disrupted, self-care deficits arise and nursing care becomes necessary; the framework helps clinicians identify factors impeding self-care and design targeted interventions (Khademian et al., 2020; Yip, 2021). Complementing this, the –Risk-Vulnerability Model conceptualizes self-neglect as the product of interacting endogenous (e.g., functional and cognitive status) and exogenous (e.g., social and environmental) factors (Paveza et al., 2008). Empirical applications in healthcare settings show these models are useful for assessing self-neglect and informing intervention planning.

By centering on empty-nesters, this study addresses a documented gap in the literature and extends prior work on self-care ability and social support to a high-risk subgroup. Conceptually, it integrates individual capacities and social resources within established nursing and gerontological frameworks (Orem; Risk-Vulnerability), thereby enriching theory-informed understanding of self-neglect. Practically, it provides an evidence base to guide health promotion and wellness programs for empty nesters, supporting frontline geriatric personnel and community stakeholders in designing context-appropriate strategies that reduce preventable risks and advance healthy aging.

This study aims to determine the status and influencing factors of self-neglect among older adults living alone. Specifically, it seeks to profile participants' demographic characteristics, including gender, age, educational attainment, marital status, occupation, source of income, family per capita monthly income, number of children, frequency of children's visits, and number of chronic diseases. It also aims to assess the levels of self-care ability, social support, and self-neglect in this population. Furthermore, the study intends to identify the most parsimonious combination of demographic variables, self-care ability, and social support that predicts self-neglect through stepwise multiple regression analysis.

2. Literature Review

2.1. Empty nester elderly

The phenomenon of empty nester elderly, older adults whose children have left home and who live alone or only with a spouse, has become increasingly prominent in China (Huang et al., 2020; Song et al., 2023). This group often exhibits demographic characteristics such as higher representation of females, rural residency, and relatively reduced social support, despite some level of economic independence (Feng & Phillips, 2024; Xie et al., 2010). Reliance on family assistance is gradually decreasing, while pension coverage has expanded (Du, 2013). These shifts in family structure and support networks form a critical backdrop for examining vulnerability to self-neglect in this population (Jia et al., 2024b).

Recent work continues to show that self-neglect in later life is common and shaped by both personal and social factors. A study in western Turkey found about one in three older adults self-neglecting, with higher odds among those living alone, with low income, poorer health, dementia, greater dependence, and less education (Ayaz & Gürsoy, 2024). While in rural Southwest China, harmonious neighborly ties were strongly protective across multiple neglect domains, including medical, hygiene, emotional, safety, and social, highlighting the value of community bonds when family contact is thin (Jia et al., 2024b). Instrument development also advanced: the Chinese version of the self-neglect questionnaire also showed solid reliability and validity for assessing neglect among hospitalized Chinese elders, covering environmental, medical, psychological, safety, social, and nutritional aspects (Qi et al., 2025). Complementing this, a Turkish study linked self-neglect to depression, limited social networks, and low health literacy, with social ties and literacy partly buffering the impact of depressive symptoms (İlhan & Savci, 2025). Pulling the big picture together, a 2025 meta-analysis estimated a global prevalence of around 28%, but with striking variation, with lower in the United States and higher in China, which identified consistent risk factors (older age, poor self-care, depression, cognitive impairment) and protective factors (higher income, stronger social support) (Li et al., 2025).

Together, these post-2023 findings expose two methodological gaps the current study addresses: (*a*) inconsistent operationalization (screeners versus elder-abuse modules versus dedicated scales) that inflates prevalence variance, and (*b*) under-representation of "*family-thin*" urban subgroups, such as empty nesters, in community samples.

2.2. Self-neglect: concept and forms

The concept of self-neglect among older adults has evolved over the decades (O'Brien et al., 1999). Self-neglect in older adults is a multidimensional phenomenon characterized by a failure or unwillingness to maintain adequate self-care, health, hygiene, and living conditions, often despite having the resources or services available to do so (Pavlou & Lachs, 2006). It can manifest in both active and passive forms; arising from personal lifestyle choices, psychological resistance to assistance, or resulting from cognitive and functional decline. Conceptually, it has been examined through clinical, social, and gerontological perspectives and is sometimes considered within the framework of geriatric syndromes due to its multifactorial etiology, overlap with other geriatric syndromes such as cognitive impairment and depression, and its association with functional decline and increased mortality (Pavlou & Lachs, 2006; Yu et al., 2021).

For assessment approaches, such as the *Self-Neglect Severity Scale* (Kelly et al., 2008), underscores the complexity of identifying and measuring the severity of self-neglect, given the absence of caregivers to report and the frequent presence of cognitive deficits. From a clinical and nursing perspective, self-neglect is often identified through observable indicators such as poor nutrition, compromised hygiene, unsafe living environments, and neglect of medical care (Adams & Johnson, 1998). Importantly, systematic reviews highlight that risk factors span socio-demographic (e.g., older age, male gender, low income, low education), health-related (e.g., cognitive impairment, poor physical function, pain), psychological (e.g., depression), and social domains (e.g., isolation, reduced social engagement, weak neighborhood cohesion) (Yu et al., 2021).

The National Center on Elder Abuse classifies self-neglect as a form of elder abuse (Burnett et al., 2006), while the American Association for Adult Protective Services defines it as the inability to perform basic self-care due to physical or mental impairment, or reduced capacity, encompassing failures in hygiene, health care, nutrition, safety, and financial management (Hansen et al., 2016). Overall, the literature distinguishes between active and passive self-neglect (Gibbons, 2009). Active self-neglect arises from lifestyle choices, personality traits, or autonomy preservation, whereas passive self-neglect results from illness, functional decline, cognitive impairment, or psychosocial stressors. From a social psychology lens, it may also reflect a conscious deviation from socially accepted living standards (Lauder et al., 2002). Collectively, this literature positions self-neglect as a prevalent yet under-recognized condition among community-dwelling older adults, warranting early detection and targeted, multifaceted interventions.

2.3. Consequences and risks of self-neglect

As noted earlier, self-neglect is widely recognized as a geriatric public health problem with severe implications for physical, mental, and social well-being. It is associated with functional decline, malnutrition, injury risk, depression, frailty, and increased mortality (Dahl et al., 2020; İlhan et al., 2020; Mazzotti et al., 2022). In clinical contexts, it impairs treatment adherence, reduces intervention effectiveness, and may delay timely care, resulting in higher healthcare costs (Abada et al., 2017; Dong, 2016). Socially, it burdens caregivers, strains community resources, and undermines quality of life in later years (Pärna et al., 2019).

2.4. Measurement of self-neglect

Several assessment instruments have been developed, reflecting different conceptual models. *Gibbons' Comprehensive Diagnostic Scale for Self-Neglect* (Gibbons, 2009) introduced the distinction between active and passive forms. Other tools include the *IM Self-Neglect Questionnaire* (İlhan et al., 2020), the *Elder Self-Neglect Assessment* (Iris et al., 2010), and the *Self-Neglect Measuring Tool* (Day, 2010). In China, validated adaptations such as the *Chinese ESNA* (Wang et al., 2021) has demonstrated strong reliability and applicability. These tools vary in dimensional coverage, ranging from lifestyle and hygiene to environmental safety, and are essential for accurate identification and intervention planning.

2.5. Influencing factors of self-neglect

The *Risk-Vulnerability Model of Self-Neglect* (Paveza et al., 2008) emphasizes the interplay between endogenous factors (e.g., age, gender, health status, cognitive capacity, personality, life events) and exogenous factors (e.g., living arrangements, social support, exposure to abuse). Empirical studies confirm that socio-demographic characteristics, such as male gender, advanced age, unmarried status, lower education, and poorer economic conditions, are linked to higher self-neglect risk (İlhan et al., 2020). Physiological factors, including poor self-rated health, disability, reduced self-care ability, and pain, also contribute (Dong, 2016). Furthermore, mental health concerns, particularly depression and anxiety, have strong associations (Yu et al., 2021). Social support consistently emerges as protective, with higher interaction frequency, supportive neighbor relations, and stronger interpersonal networks linked to lower self-neglect (Burnett et al., 2024; Zhao et al., 2022).

2.6. Prevention and intervention

Despite its recognized harms, self-neglect remains difficult to address due to affected individuals' frequent refusal of services, creating ethical challenges in balancing autonomy with safety. Proposed strategies include establishing robust reporting systems, multidisciplinary case management, community-based health education, and targeted visits to high-risk individuals (Martineau et al., 2021). Capacity-building for clinicians, community workers, and nursing professionals is critical for early identification and timely intervention (Band-Winterstein, 2016). However, most studies to date focus on rural, community-dwelling, or hospitalized elderly, with limited attention to empty-nesters, underscoring the need for targeted research in this subgroup.

2.7. Synthesis

The reviewed literature consistently frames self-neglect among empty nester elderly as a multidimensional and complex public health concern. Demographic shifts in China, particularly the rising proportion of older adults living alone or only with a spouse, have reshaped familial and community support systems, leaving many empty nesters more vulnerable despite improvements in pension coverage. Research highlights that self-neglect is not merely a matter of personal choice or individual decline; rather, it emerges from the interplay of individual vulnerabilities, health status, psychological factors, and social environments. From a definitional standpoint, self-neglect encompasses both active forms, wherein individuals consciously deviate from societal care norms to preserve autonomy, and passive forms, wherein functional decline, cognitive impairment, or psychosocial stressors impede self-care. This duality underscores the need for nuanced assessment tools, such as the Elder Self-Neglect Assessment and the Chinese ESNA, which capture lifestyle, hygiene, safety, and environmental dimensions. Consequences are far-reaching, spanning physical deterioration (malnutrition, frailty, injury), mental health decline (depression, anxiety), and social strain (caregiver burden, increased healthcare costs). Framing these findings within Orem's Self-Care Deficit Theory noted that self-neglect reflects a breakdown in the individual's ability to meet essential self-care requisites. For empty nesters, diminished physical or cognitive function, alongside inadequate environmental supports, creates a self-care deficit that necessitates nursing or community-based intervention. This framework directs attention to identifying which self-care requisites are compromised, whether health maintenance, safety, or psychosocial well-being, and guides the development of targeted care strategies.

Importantly, the Risk-Vulnerability Model of Self-Neglect complements Orem's perspective by situating these deficits within a broader interplay of endogenous and exogenous risk factors. Endogenous risks include age-related decline, chronic illness, and cognitive impairment, while exogenous risks encompass social isolation, reduced community engagement, and environmental hazards. This dual-lens approach explains why some empty nesters with similar health profiles maintain adequate self-care, while others exhibit severe neglect; differences often lie in the strength of protective factors such as social support and community connectivity.

Together, these frameworks provide a coherent basis for the study: Orem's theory pinpoints the nature and scope of self-care deficits requiring intervention, while the Risk-Vulnerability Model clarifies the interaction of personal vulnerabilities and environmental conditions that give rise to those deficits. This integrated perspective supports the need for early detection, multidimensional assessment, and tailored interventions for empty nester elderly, with nursing practice and community resources aligned to address both the immediate self-care gaps and the underlying risk structures.

3. Method

3.1. Study design

This study employed a descriptive–correlational research design to determine the status and influencing factors of self-neglect among empty nester elderly. Descriptive–correlational research aims to provide a detailed description of variables and examine the relationships

between them without manipulating the variables or inferring causality (Creswell, 2009). In this context, the primary focus was on observing and measuring the extent of self-neglect and exploring its associations with selected characteristics of empty nester elderly. The design does not seek to establish causal relationships; rather, it aims to explain patterns of association between two or more variables as they naturally occur (Cohen et al., 2007). A survey method was adopted for data collection, given its suitability for obtaining comprehensive information on the study population. A survey, in research terms, is a methodical process of collecting information about a particular aspect of a research subject to achieve a defined purpose (Cohen et al., 2007). This involves a systematic plan for gathering diverse materials and synthesizing them to conclude. Specifically, the questionnaire survey method was used, which entails designing and administering a standardized, structured questionnaire based on research objectives and hypotheses. The process included questionnaire design, pre-testing, revision, and formal administration, following a consistent data collection protocol. This approach enabled the acquisition of a large volume of data within a relatively short period, making it well-suited to the study's aim of capturing both the current status of self-neglect and the factors influencing it among empty nester elderly.

3.2. Participants of the study

A total of 184 empty nester elderly residing in a city were selected as study participants through random sampling. The required sample size was determined using G*Power 3.1 (Faul et al., 2009), based on a multiple linear regression analysis with 12 predictors, a small effect size ($f^2 = 0.15$), statistical power of .95, and a significance level of .05, yielding a minimum of 184 participants. Inclusion criteria were: aged 60 years and above; having no children or children who were not living with them; living alone, with a spouse, or widowed; providing informed consent; voluntarily participating; and being able to read independently or complete the survey with assistance from the investigator. Individuals with diagnosed mental disorders or a history of mental illness were excluded. Eligible participants were identified and randomly selected from the sampling frame to ensure representativeness and to provide sufficient data to examine the status and influencing factors of self-neglect among empty nester elderly.

3.3. Study instrument

Data were collected using a structured questionnaire composed of four parts:
General Situation Questionnaire - Developed by the researchers, this section gathered demographic and background information, including gender, age, educational attainment, marital status, occupation, source of income, family per capita monthly income, number of children, frequency of visits from children, and number of chronic diseases, among other relevant characteristics.
Barthel Index – This index was developed by Mahoney and Barthel (1965), assesses the degree of functional impairment in self-care ability among older adults. It consists of 10 items evaluating activities of daily living such as eating, dressing, and bathing. The Chinese version has been validated for reliability and validity and is widely used in community and clinical assessments (Leung et al., 2007; Zhang et al., 2022). Scores range from 0 to 100, with higher scores indicating greater independence: 100 = fully independent; 65–95 = slight disability; 45–60 = moderate disability; ≤40 = severe disability.
Perceived Social Support Scale (PSSS) - The PSSS, originally developed by Blumenthal et al. (1987) and revised and validated into Chinese by several scholars, which measures perceived support from three sources: family, friends, and significant others (e.g., teachers, relatives, classmates) (Chou, 2000; Yang et al., 2024). The scale used contains 12 items rated on a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree). Higher scores indicate greater perceived social support. The Chinese version has demonstrated good reliability with Cronbach's (1951) $\alpha = .88$ and has been effectively applied in studies of community-dwelling elderly populations.
Elder Self-Neglect Assessment (ESNA) - The ESNA, originally developed by Iris et al. (2010), was adapted and validated into a Chinese version by numerous scholars (Qi et al., 2025; Xu et al., 2023; Yu & Qian, 2022). The scale used includes 24 items across three dimensions: lifestyle/conditions, health care behaviors, and living environment hygiene. Response options are scored as follows: yes = 2 points, suspected yes = 1 point, no/unclear/not applicable = 0 points. Total scores range from 0 to 48, with higher scores reflecting greater levels of self-neglect. The Chinese version has demonstrated high internal consistency with Cronbach's $\alpha = .92$ and test–retest reliability (.89) in studies involving older adults.

3.4. Data gathering procedure

Ethical clearance for this study was obtained from the Research Ethics and Review Committee of the Research Ethics and Review Office, USLS, and the corresponding ethics body in China. All research activities adhered to the principles of informed consent, non-maleficence, respect, and confidentiality. Written informed consent was secured from all participants before data collection. One public community in Chengde City, Hebei Province, was randomly selected as the research site. Before the survey, the researcher coordinated with community staff to obtain institutional support, signed agency consent, and obtained a list of all empty nester elderly in the community. Those meeting the inclusion criteria were invited to participate, and appointments for interviews were scheduled with the assistance of the community staff. Data collection was conducted in a private, quiet, and comfortable studio provided by the community to ensure participant privacy and safety. The community staff facilitated the survey process, from obtaining consent to providing logistical support during administration. Data were collected through face-to-face interviews using the structured questionnaire. Before each session, the researcher explained the study's purpose, methods, and procedures, emphasizing voluntary participation and the right to withdraw at any time. Surveys lasted approximately 10 minutes per participant. Depending on preference and ability, elderly participants either completed the questionnaire themselves or responded orally while the researcher recorded their answers, offering clarification for any unclear items. Only one participant (or, if applicable, one participant accompanied by a family member) was present in the studio at a time to maintain confidentiality. All questionnaires were distributed and collected on the spot, with immediate review for completeness. Questionnaires with missing key items, patterned responses, or inconsistencies were excluded, considering the cognitive characteristics of older adults to minimize misclassification.

3.5. Statistical treatment and data analysis

Data were processed using the Statistical Package for the Social Sciences (SPSS) software. Appropriate statistical techniques were applied according to each research objective. For Objective 1 (participants' demographic profile), frequency counts and percentages were computed. For Objectives 2–4 (self-care ability, degree of social support, and level of self-neglect), descriptive statistics: mean and standard deviation were used to summarize the data. For Objective 5 (identifying the parsimonious combination of demographic profile, self-care ability, and

social support variables that influence self-neglect), stepwise multiple regression analysis was employed. Lastly, in order to mitigate self-report bias, trained interviewers used standardized prompts, offered item clarifications without leading, and conducted privacy-assured, one-on-one sessions; when needed, they recorded oral responses to reduce literacy barriers (Johnson et al., 2021). Consistency checks (e.g., verifying discordant Activities of Daily Living; ADL as compared to ESNA patterns) were applied at point-of-survey, and suspected cognitive issues triggered short breaks or re-explanations to minimize satisficing (Streiner & Kottner, 2014).

4. Results and Discussions

4.1. Sociodemographic profile of participants

The study included a total of 184 empty nester elderly participants residing in an urban area of China. Table 1 presents the demographic characteristics of the sample. For Gender and Age, the majority of participants were female (62.5%), while 37.5% were male. Most respondents (62.5%) were aged 60–69 years, followed by those aged 70–79 (18.5%) and 80 years and above (19.0%). These findings align with prior research indicating a higher proportion of women among elderly populations, particularly among empty nesters (Feng & Phillips, 2024; Huang et al., 2020). From a theoretical standpoint, Orem's Self-Care Deficit Theory suggests that aging-related functional decline, which is more prevalent among women due to greater longevity, can compromise self-care ability, necessitating external support systems. The Risk-Vulnerability Model further emphasizes how increasing age heightens susceptibility to self-neglect through physical frailty and cumulative health risks (Paveza et al., 2008).

For *Educational Attainment*, nearly half of the participants (45.1%) attained junior high school education, followed by primary education or below (18.5%), high school or technical education (15.2%), and college or above (21.2%). Lower educational attainment is often associated with reduced health literacy and lower capacity to manage chronic illness or access health services (Yu et al., 2021). This highlights a potential risk factor for poor self-care behaviors and neglect of health maintenance routines. Those with limited formal education may also face barriers in navigating healthcare systems, compounding the self-neglect problem.

For *Marital Status*, most participants were married (60.9%), while 19.6% were widowed, 13.0% divorced, and 6.5% single. Although being married is often considered a protective factor, it does not always guarantee adequate care, particularly if both spouses are aging and have limited mobility or income. Consistent with the literature, unmarried status has been linked to greater vulnerability to self-neglect due to diminished emotional and instrumental support (İlhan et al., 2020; Zhao et al., 2022). In Orem's terms, the absence of a supportive partner may signify the lack of a compensatory mechanism for declining self-care capacity.

For *Occupation and Source of Income*, over half of the participants were former farmers (51.1%), followed by public sector workers (20.1%), self-employed individuals (17.4%), enterprise employees (6.5%), and others (4.9%). Income sources were diverse: retirement salary (29.3%), children's allowance (13.9%), support from relatives and friends (16.8%), government relief (10.3%), and pension insurance (12.5%). Former occupation reflects life-course socioeconomic status, which shapes financial security in old age. Farmers and informal workers often lack robust pension coverage, potentially leading to economic insecurity and insufficient healthcare access, such as critical contributors to self-neglect, as noted by Pavlou and Lachs (2006) and Dong (2017). Furthermore, reliance on children's allowance or government relief may indicate financial vulnerability, reinforcing exogenous risk factors in the Risk-Vulnerability framework.

For *Family Income*, a large proportion (42.9%) of participants reported family per capita monthly incomes between 1,000 and 2,000 CNY (approximately $139–278 USD), with 27.2% earning below 1,000 CNY, and only 21.2% reporting over 3,000 CNY. Economic hardship is a recurring theme in self-neglect literature. Limited income constrains access to nutritious food, medical care, and safe housing, thus increasing risk for neglectful behaviors. As the Risk-Vulnerability Model suggests, financial deprivation constitutes a significant exogenous stressor influencing personal health decisions.

For the *Number of Children* and *Frequency of Visits*, most participants had 1–2 children (50.0%) or 3–5 children (28.3%), while 9.2% were childless. Regarding contact frequency, nearly half (47.3%) received weekly visits, while 28.8% saw their children biweekly and 23.9% only once a month. These findings reflect an erosion of traditional intergenerational caregiving norms. Though many older adults have children, the frequency of contact remains limited. In Orem's model, this weakening of familial networks can impair external support mechanisms necessary to offset self-care deficits. The protective function of social support is emphasized by multiple studies (Burnett et al., 2024; Yu et al., 2021) is thus inconsistently realized in practice. Regular family visits, particularly weekly or more, serve not only to meet emotional needs but also help detect early signs of self-neglect and prompt intervention.

Lastly, as for the *Number of Chronic Diseases*, more than two-thirds of participants reported one or more chronic diseases: 44.6% had 1–2 chronic conditions, and 31.0% had 3 or more, while only 24.5% reported no chronic diseases. Chronic illness is a key endogenous risk factor in self-neglect models. It affects energy levels, mood, mobility, and overall ability to maintain self-care routines (İlhan et al., 2020). Interestingly, as will be discussed further in the regression results, those with 1–2 chronic illnesses in this study reported lower self-neglect, which is possibly due to increased interaction with the healthcare system and greater self-monitoring, reinforcing Orem's concept of self-care agency when coupled with medical guidance.

Table 1: Demographic Profile of the Participants

Demographics	Frequency (N = 184)	%
Gender		
Male	69	37.5
Female	115	62.5
Age		
60-69 years old	115	62.5
70-79 years old	34	18.5
80 and above	35	19.0
Educational Attainment		
Primary school and below	34	18.5
Junior high school	83	45.1
High school/Technical school	28	15.2
College or above	39	21.2
Marital Status		
Single	12	6.5
Married	112	60.9
Widowed	36	19.6

Divorced	24	13.0
Occupation		
Public institutions/Civil servants	37	20.1
Self-employed businessmen	32	17.4
Enterprises	12	6.5
Farmer	94	51.1
Others	9	4.9
Source of Income		
Retirement salary	54	29.3
Children's allowance	44	13.9
Subsidy from relatives and friends	31	16.8
Government relief	19	10.3
Pension insurance	23	12.5
Family's Per Capita Monthly Income (in CNY)		
Below 1,000	50	27.2
1,000 - 2,000	79	42.9
2,000 - 3,000	16	8.7
More than 3,000	39	21.2
Number of Children		
None	17	9.2
1 – 2	92	50.0
3 – 5	52	28.3
More than 5	23	12.5
Frequency of Visits from Children		
Once a week	87	47.3
Once every two weeks	53	28.8
Once a month	44	23.9
Number of Chronic Diseases		
0	45	24.5
1 – 2	82	44.6
3 or more	57	31.0

Note. N=total number of participants.

4.2. The self-care ability among the empty-nest elderly

Table 2 presents the self-care ability of participants as measured by the Barthel Index. The majority of the respondents were classified as having mild disability (54.9%), followed by those who were completely independent in performing activities of daily living (32.6%). A smaller proportion exhibited moderate disability (4.9%) or severe disability (7.6%). These findings suggest that while a sizable portion of the sample retains a high level of independence, a substantial proportion, nearly two-thirds, experience at least some degree of functional limitation. This is consistent with prior research indicating that physical functioning tends to decline with age, especially among elderly individuals living without direct caregiving support (Orem, 1995; Zhang et al., 2022).

From the lens of Orem's Self-Care Deficit Theory, mild to moderate disability signifies a partial erosion of self-care agency. In cases of mild disability, individuals may still perform most tasks independently but might struggle with more complex routines such as cooking, managing medications, or maintaining household cleanliness, such as areas that are closely associated with self-neglect behaviors (Dong, 2016). As functional capacity weakens, the gap between health maintenance needs and the ability to meet them widens, requiring compensatory support from family, community, or healthcare providers. Interestingly, a relatively large subgroup (32.6%) remained completely independent, which may suggest resilience among some older adults. However, this independence can also mask latent risks if not accompanied by regular social monitoring. As noted in the Risk-Vulnerability Model, self-neglect does not always arise from incapacity alone; it often emerges from the interaction of limited support, economic hardship, and psychosocial vulnerabilities, even among those with preserved physical functioning (Paveza et al., 2008; Wang et al., 2019).

Moreover, individuals with severe disability (7.6%) represent a particularly vulnerable subgroup. Without immediate caregivers at home, such individuals are at high risk for passive self-neglect, where basic self-care activities such as bathing, dressing, or toileting may be compromised. The absence of formal caregiving or family involvement can exacerbate these deficits, especially when coupled with comorbidities or cognitive decline. Comparing these findings to national trends, the proportion of mild disability in this study is higher than typically observed in broader elderly populations, possibly due to the unique social structure of empty nesters who lack intergenerational caregiving. This reinforces the need for targeted monitoring systems within urban community health settings to identify functional decline early and provide community-based interventions that can prolong autonomy and reduce preventable deterioration.

Taken together, the data highlight the gradual erosion of self-care capacity among empty nester elderly, a key pathway through which self-neglect manifests. Nursing professionals and community health workers must treat early signs of mild disability as warning indicators, not simply natural aging, and integrate preventive strategies such as home visits, functional assessments, and mobility support programs.

Table 2: Self-Care Ability Scores of Empty Nester Elderly People

Items	Frequency (N = 184)	Percentage
Completely independent	60	32.6
Mild disability	101	54.9
Moderate disability	9	4.9
Severe disability	14	7.6

Note. N=total number of participants.

4.3. Degree of social support among the empty nester elderly

Table 3 presents the social support scores of empty nester elderly based on the PSSS. The total perceived social support score averaged 57.36 (Standard Deviation; SD = 16.58) out of a possible 84, with a corresponding average item score of 4.78 (SD = 1.38) on a 7-point Likert scale. This indicates a moderate to moderately high level of perceived social support. Among the sub-dimensions:

- Other support (e.g., support from relatives, neighbors, community members, and service providers) had the highest average score: 4.83 (*SD* = 1.49).
- Friends support followed closely with an average score of 4.77 (*SD* = 1.38).
- Family support, while still in the moderate range, had the lowest score among the three, averaging 4.74 (*SD* = 1.42).

These findings are particularly revealing when interpreted through the lens of social aging dynamics in contemporary China. While traditional Confucian norms emphasize filial piety and family caregiving, the reality for many empty nester elderly is a gradual erosion of familial support systems (Feng & Phillips, 2024). The lower perceived family support, compared to friends and others, may reflect changing intergenerational patterns such as adult children moving away for work or shifting social expectations regarding elder care (Song et al., 2023).

In addition, from the standpoint of the Risk-Vulnerability Model, insufficient family-based support constitutes an exogenous risk factor that heightens vulnerability to self-neglect. The model posits that in the absence of strong protective networks, even those with adequate cognitive or functional capacities may experience progressive disengagement from self-care and health maintenance (Burnett et al., 2024). Conversely, the relatively high scores for friends support and other support suggest that many empty nesters are compensating for limited family contact by relying more on peer networks, neighbors, and community actors. This reflects a shift toward community-based social capital as a buffering mechanism. As shown in other studies (Yu et al., 2021; Zhao et al., 2022)Such support can mitigate loneliness, foster routine engagement, and even encourage help-seeking behavior, thereby indirectly reducing the risk of neglectful behavior.

In relation to Orem's Self-Care Deficit Theory, the social support system functions as a compensatory mechanism for unmet self-care needs. When an individual's self-care agency is impaired, such as due to age, illness, or psychosocial strain, external agents (e.g., family, friends, or professionals) can fulfill the role of surrogate caregivers. However, as this study shows, the effectiveness of this support system varies by its source. Support from friends and the community may provide emotional comfort and logistical assistance, but may not fully substitute for the instrumental care and monitoring typically provided by family members, such as help with medications, mobility, or hygiene. Additionally, the standard deviations across all subdomains (ranging from 1.38 to 1.49) suggest considerable variability in social support experiences among respondents. This supports the argument that social support is not uniformly distributed among the elderly and that individual differences, such as in terms of living arrangements, health status, and neighborhood cohesion, likely shape perceived support levels.

From a practical standpoint, these findings reinforce the need to:

- Enhance community-based support systems through volunteer visitation programs and senior engagement centers.
- Strengthen intergenerational ties through policy or educational initiatives that encourage more consistent familial involvement.
- Train community health workers and social workers to recognize low family support as a red flag for early intervention in self-neglect cases.

In summary, while the overall level of social support in this sample appears moderately high, the relative weakness in family-based support underscores the importance of diversifying social care systems for empty nester elderly, especially in urban China, where family structures are rapidly evolving.

Table 3: Social Support Scores of Empty Nester Elderly People

Items	Total Score (*SD*)	Average Score (*SD*)
Family support	18.97 (5.70)	4.74 (1.42)
Friends support	19.08 (5.53)	4.77 (1.38)
Other support	19.30 (5.95)	4.83 (1.49)
Total	57.36 (16.58)	4.78 (1.38)

Note. SD=standard deviation.

4.4. Level of self-neglect among the empty nester elderly

Table 4 displays the self-neglect scores of empty nester elderly across three dimensions: lifestyle/conditions, residential hygiene, and health care behaviors, measured by the ESNA. The total self-neglect score was 17.55 (*SD* = 15.24) out of a possible 48, with a mean item score of 0.73 (*SD* = 0.64), indicating a moderate level of self-neglect overall. Among the subdomains:

- Health care behaviors had the highest average score: 0.75 (*SD* = 0.64),
- followed closely by residential hygiene: 0.74 (*SD* = 0.69),
- and lifestyle/conditions: 0.72 (*SD* = 0.66).

While differences between domains are small, the findings suggest a pattern of generalized self-neglect, with slightly greater risks observed in the healthcare and hygiene dimensions, critical areas directly linked to health outcomes.

The moderate level of self-neglect observed in this sample is consistent with earlier studies in China and internationally, which report that self-neglect is prevalent but often under-identified, particularly among community-dwelling and socially isolated elderly (İlhan et al., 2020; Zawisza et al., 2020). While the elevated scores in health care behaviors suggest lapses in treatment adherence, medication routines, or utilization of medical services, issues that have been linked to increased hospitalizations and mortality (Dahl et al., 2020). In the residential hygiene domain, issues such as clutter, unsanitary conditions, and poor housekeeping may also reflect physical limitations, cognitive decline, or motivational deficits, all of which are outlined in the Risk-Vulnerability Model as key contributors to self-neglect.

The relatively high SDs across all domains indicate wide variation in neglect behaviors, implying that while some elderly individuals maintain acceptable self-care and home hygiene, others show serious lapses, especially when other risk factors (e.g., functional disability or social isolation) are present. From the perspective of Orem's Self-Care Deficit Theory, these findings suggest that many empty nester elderlies are unable to consistently meet basic self-care requisites, particularly in maintaining their health and living environment. Whether due to physical, cognitive, or motivational barriers, this inability signals a breakdown in the individual's capacity for self-care and points to a need for nursing or community-based compensatory interventions.

Furthermore, when linked to findings from Tables 2 and 3, a concerning picture emerges: even though many participants show only mild disability and moderate social support, a significant proportion still exhibit self-neglect. This reinforces the notion, which is central to the Risk-Vulnerability Model, that self-neglect does not result from a single factor, but rather from the interaction between endogenous factors (like health and cognition) and exogenous factors (such as social isolation, infrequent family visits, and financial hardship). For instance, those with poor healthcare behaviors may not necessarily lack awareness, but may instead be constrained by economic limits, low trust in healthcare providers, or an absence of family members who typically prompt appointments and monitor medication use.

Importantly, the high scores in healthcare behaviors and residential hygiene warrant immediate attention in public health planning. Community health workers, geriatric nurses, and social service providers must be trained to: Identify early signs of neglect, conduct in-home assessments to observe hygiene and living conditions directly, offer health education sessions on medication adherence and sanitation, and coordinate with families and neighbors to create low-cost support networks. Furthermore, because healthcare neglect emerged as the most compromised domain, outreach programs could prioritize mobile medical visits, telehealth check-ins, and local clinic follow-ups targeted at empty nester elderly flagged by community staff or social services.

Table 4: Self-Neglect Scores of Empty Nester Elderly People

Items	Total Score (*SD*)	Average Score (*SD*)
Lifestyle/Conditions	9.39 (8.54)	0.72 (0.66)
Residential hygiene	4.42 (4.14)	0.74 (0.69)
Health care behaviors	3.74 (3.17)	0.75 (0.64)
Total	17.55 (15.24)	0 .73 (0.64)

Note. SD=standard deviation.

4.5. Predictors of self-neglect: stepwise regression analysis

Lastly, a stepwise multiple regression analysis was conducted to determine the most parsimonious combination of demographic characteristics, self-care ability, and social support variables that significantly predicted self-neglect among empty nester elderly. Table 5 presents the sequence of variable entry and removal across 13 steps. The final model (Step 13) included nine predictors: having two children, self-care ability score (total), income of 2,000–3,000 CNY, income of more than 3,000 CNY, one to two chronic diseases, frequency of children's visits once every two weeks (versus weekly), income of 1,000–2,000 CNY, and occupation: business. This model was statistically significant, F (9, 174) = 13.13, $p < .001$, explaining 40.4% of the variance in self-neglect scores (Adjusted $R^2 = .374$). The analysis revealed that chronic disease status, family structure, economic resources, functional ability, and social contact patterns were all important in explaining self-neglect. Some variables entered early in the model, such as "three chronic diseases" and "divorced," were later removed as other variables subsumed their explanatory power.

Notably, the direction of the self-care coefficient indicates the multifactorial nature of self-neglect among empty nester elderly, with both endogenous factors (health status, functional capacity) and exogenous factors (economic resources, family composition, frequency of contact, occupation) making significant contributions. This aligns closely with the Risk-Vulnerability Model (Paveza et al., 2008), which conceptualizes self-neglect as the outcome of interacting personal vulnerabilities and environmental conditions. Chronic disease status emerged as a significant factor, but in a diverse way. Those with one to two chronic diseases were included in the final model, whereas having "three chronic diseases" initially entered the model but was later removed. This could suggest that moderate chronic disease burden may prompt more healthcare contact and self-monitoring, while higher burdens may overlap with other vulnerability indicators. In the context of Orem's Self-Care Deficit Theory, chronic illness affects the individual's capacity to meet self-care requisites, but the degree of deficit may vary depending on available support systems and coping strategies.

The number of children (two children) and frequency of children's visits (once every two weeks vs. weekly) were strong predictors. This reflects the changing dynamics of intergenerational support in urban China. Less frequent contact with children likely reduces monitoring, emotional support, and assistance with daily living, increasing vulnerability to neglect. Prior studies (Zhao et al., 2022) have emphasized that reduced family interaction is a critical risk factor for both passive and active forms of self-neglect. While three income categories, such as 1,000–2,000, 2,000–3,000, and more than 3,000 CNY, were retained in the final model. Interestingly, these mid-to-higher income brackets, rather than the lowest income category, were predictive. This may reflect heterogeneity within higher-income groups: some may prioritize autonomy and resist assistance (an indicator of active self-neglect), while others might allocate resources in ways that do not directly support self-care. This finding resonates with literature noting that self-neglect is not exclusively a poverty phenomenon, but may also occur among financially stable individuals due to psychosocial or attitudinal factors (Pavlou & Lachs, 2006).

Self-care ability score was a significant predictor, and notably, higher self-care scores were associated with greater self-neglect in the regression context. This counterintuitive relationship may suggest that some physically capable individuals still neglect healthcare, hygiene, or safety; possibly reflecting active self-neglect rooted in personal choice, denial, or prioritization of independence over accepted health norms. This is consistent with the distinction in the literature between functional incapacity and intentional disengagement (Gibbons, 2009; Lauder et al., 2002). Finally, for the occupation, business was also found to be significant in the final model. This may reflect lifestyle patterns or self-reliance norms developed during working years that persist into later life, potentially leading to reluctance to accept outside help. Such occupational-cultural influences align with the social determinant perspective on aging, where lifelong work roles shape late-life behaviors and attitudes toward care.

An added note, the positive association between higher Barthel scores and greater self-neglect may indicate active rather than passive neglect: physically capable older adults who prioritize autonomy, minimize risk, or resist help can under-utilize medical care and hygiene routines despite intact ADLs. Contemporary intervention papers explicitly distinguish these pathways, aligning with classic "active as compared to passive" formulations and helping explain why functional ability does not uniformly protect against neglect. Practically, this implies screening beyond ADLs, such as: brief health-literacy checks, attitudes toward help-seeking, and care-avoidance items, which can be used to flag high-functioning individuals at risk of choice-driven neglect.

While looking at context, in China's rapidly urbanizing families, evolving expectations of filial piety coexist with the geographic dispersion of adult children. This can dilute routine monitoring and instrumental support even when emotional ties remain strong, raising the salience of neighbor networks and community health outreach for empty-nesters (Jia et al., 2024a). What can be done is with the use of low-cost telehealth check-ins and periodic home-environment assessments, which could target the two highest-risk domains identified in the current study: health-care behaviors and residential hygiene, particularly for high-functioning but care-avoidant older adults. Emerging pilots show the feasibility of digital screening and outreach in cognitively vulnerable populations (Abujarad et al., 2025).

For some implications, although conducted in one urban community, the mechanisms identified contact frequency with adult children, economic resources, and functional capacity, which are likely to operate in rural China as well, but with different weights. Recent rural data indicate that social isolation and aging attitudes can directly and indirectly elevate self-neglect among older adults living alone, suggesting that weaker service access may amplify risk outside cities (Jia et al., 2025). While international reviews pointed out the comparable prevalence ranges in diverse regions, but emphasize that community embeddedness (neighbors, local associations) can substitute partially for family support, wherein adult children migrate for work (Ayaz & Gürsoy, 2024). Lastly, for additional cross-country context, elder-abuse meta-analyses showed high overall maltreatment exposure globally; while not specific to self-neglect, they support the salience of social protection and primary care outreach in middle-income settings similar to China's (Kitaw et al., 2025).

Taken together, these patterns strongly support the dual-lens approach outlined in the introduction, wherein Orem's Self-Care Deficit Theory highlights how diminished capacity, due to illness, functional decline, or lack of support, leads to self-care deficits requiring intervention. While producing varying self-neglect profiles. The fact that both functional ability and mid-to-higher income levels predict self-neglect underscores the importance of differentiating between capacity-based deficits (passive self-neglect) and choice-driven behaviors (active self-neglect).

Table 5: Stepwise Regression Model Summary for Predictors of Self-Neglect Among Empty Nester Elderly

Step	Predictors in the Model	*F*	*p*	R^2	Adj. R^2
1	Three chronic diseases	26.28	.000	.126	.121
2	+ two children	19.6-	.000	.178	.169
3	+ self-care ability score (total)	18.65	.000	.237	.224
4	+ divorced	16.05	.000	.264	.248
5	+ income: 2,000 – 3,000	14.22	.000	.285	.265
6	+ income: more than 3,000	13.46	.000	.313	.290
7	+ one to two chronic diseases	13.14	.000	.343	.317
8	+ frequency of children's visits: once every two weeks	12.48	.000	.363	.334
9	- removed: three chronic diseases	13.77	.000	.354	.328
10	+ income: 1,000 to 2,000	13.06	.000	.374	.345
11	+ married	12.44	.000	.392	.360
12	- removed: married	14.00	.000	.390	.362
13	+ occupation: business	13.13	.000	.404	.374

Note. Predictors are listed in the order of entry or removal during stepwise multiple regression. The dependent variable is the total score of self-neglect. Variables marked with "+" were added in the corresponding step; variables marked with "–" were removed. All models are statistically significant at $p < .001$.

5. Conclusion

This study investigated the status and influencing factors of self-neglect among empty-nest elderly in urban China, integrating Orem's Self-Care Deficit Theory and the Risk-Vulnerability Model. Findings revealed a moderate level of self-neglect overall, with healthcare behaviors and residential hygiene emerging as the most affected domains. Stepwise regression identified a multifactorial set of predictors, including number of children, self-care ability score, chronic disease status, income level, frequency of children's visits, and occupational history. These results highlight that self-neglect is not solely a product of physical incapacity but arises from the interaction of personal health, functional ability, economic resources, social contact, and life-course factors. Addressing this complex issue requires a multidimensional approach that simultaneously strengthens self-care capacity, enhances social support, and addresses attitudinal or cultural barriers to accepting help.

In parallel with global trends, our findings imply that the efforts to prevent and reduce self-neglect among empty nester elderly should prioritize both health and social dimensions of care. Community health programs should include routine functional ability assessments and early detection protocols, even for older adults who appear physically independent, to identify those engaging in active self-neglect. Strengthening intergenerational connections, such as through regular visits or communication between adult children and parents, may help to reduce neglect risks. Community-based support networks—including volunteer visitation programs, peer support groups, and neighborhood watch initiatives—can provide emotional reassurance and practical assistance for those with limited family involvement. At the clinical level, interventions should be tailored to individual backgrounds, acknowledging the influence of occupational history, economic status, and health conditions on attitudes toward care. Policymakers should also ensure equitable access to affordable geriatric services, particularly for empty nesters in urban settings who may fall outside traditional family-based caregiving structures.

This study's cross-sectional design limits the ability to infer causal relationships between the identified predictors and self-neglect. The research was conducted in a single urban community, which may reduce the generalizability of results to other settings, particularly rural areas with different socioeconomic and cultural contexts. Data collection relied on self-reported measures, which can be influenced by recall bias, social desirability bias, or underreporting of neglectful behaviors. Additionally, the study did not examine potentially important psychological and cognitive variables, such as depression, dementia, or coping style, which may further explain variations in self-neglect risk. Future research should adopt longitudinal designs, include more diverse geographic samples, and incorporate mental health and community-level factors to develop a more comprehensive understanding of self-neglect among empty nester elderly. Furthermore, studies could triangulate self-reports with brief, validated observational screens or parallel instruments to improve classification accuracy in cognitively vulnerable elders and reduce social-desirability bias.

Declaration of Generative AI and AI-assisted Technology Use in the Writing Process: The authors used Wordtune only to enhance the language and readability of this work. The authors also thoroughly reviewed and refined the content to ensure accuracy, and assume full responsibility for the final published version.

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