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# Certified nursing assistants' perceptions of and suggestions to prevent elder abuse in residential aged care facilities: a qualitative study in Hunan Province, China

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## Abstract

**Background** Staff-to-resident abuse in institutional settings demands political attention and evidence-based interventions. Certified nursing assistants (CNAs) views and suggestions on preventing elder abuse can offer practical and policy-relevant insights. This study explores CNAs' perceptions and strategies to address elder abuse in institutional care.

**Methods** Sixteen CNAs from residential aged care facilities (RACFs) in Hunan Province, China, were purposively sampled. Semi-structured qualitative interviews were conducted, and transcripts were analysed using content analysis.

**Results** CNAs demonstrated a surface-level understanding of elder abuse, including its types, causes, and interventions. However, they provided detailed suggestions through an ecological-systems lens. At the microsystem level, strengthening staff professionalism and empathy was noted as critical, while the mesosystem involved enhancing institutional management. At the macrosystem level, suggested strategies included boosting social support, such as developing the senior care sector, increasing senior benefits, and strengthening legal safeguards.

**Conclusion** This study highlights CNAs' limited understanding of elder abuse and presents actionable recommendations for policy and practice. The gap between their perceptions and the ability to ensure abuse-free care underlines the need for evidence-based training and standardised reporting systems. Strengthening staffing quality, institutional leadership, and community support within an ecological-systems framework is essential to reduce elder abuse and promote safe, respectful care environments for older adults.

**Keywords** Nursing staff, Elder abuse, Nursing home, Older adults, Mistreatment

## Introduction

Elder abuse is a global public health and human rights issue affecting approximately two in three older adults in institutional settings [1]. The World Health Organization (WHO) estimates that the number of abused older persons will rise to 320 million by 2050 due to population ageing and calls for global action to safeguard the rights of older adults [2]. Elder abuse is defined as "any action or inaction that harms, endangers, or causes distress to an older adult and is done intentionally by someone who

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is known to the victim and in a position of trust" [3]. In China, nearly 70% of older adults in residential aged care facilities (RACFs) reported experiencing abuse in 2021 [4], with the risk for those with cognitive disorders reaching as high as 78.4% [5]. In Norway, 76% of nursing home staff reported witnessing at least one incident of elder abuse in the past year [6]. A review shows that the prevalence of staff-to-resident abuse in nursing homes ranges from 0 to 93%, depending on the type of abuse (e.g., physical abuse, psychological abuse, financial exploitation, and neglect) [7]. Witnessing or experiencing any form of elder abuse can have significant consequences for both older adults and RACFs (e.g., deterioration in the older person's mental and physical health, damage to organisational reputation, and reduced staff productivity) [8]. In the United States alone, the direct medical costs of elder abuse exceed $5.3 billion annually [9]. However, only 4% of abuse cases are reported to social services or legal authorities [10]; those reported represent only a small fraction of actual cases. Although reported prevalence varies widely across settings, the negative social and moral consequences are undeniable [11]; thus, there is an urgent need for policy, legal, and evidence-based responses to combat elder abuse.

Elder abuse in RACFs is a complex, multifaceted issue linked to numerous factors. Previous studies suggest that individual characteristics of both abusers and older adults (e.g., age, gender, marital status, education level, household income, social support, loneliness, mental disorders, and depression) [12] and organisational factors (e.g., safety climate, workplace culture, and leadership) [13] contribute significantly to elder abuse in RACFs. For instance, mobility impairment, dependence, and cognitive decline in older adults are strongly associated with an increased risk of abuse [14, 15]. Moreover, caregiver behaviours such as communication neglect, anger, hostility, care burden, and limited knowledge about abuse can heighten the likelihood of staff-to-resident abuse [16, 17]. Emotional needs and the poor quality of relationships with colleagues and team leaders are among the strongest predictors of caregiver burnout, neglect, and abusive behaviour toward older adults [18]. Chinese researchers argue that elder abuse in RACFs is influenced by extrinsic factors (e.g. ageism, ageing policies, and elder justice) and intrinsic factors (e.g. the age, physical and mental condition of older adults, caregiver's professional identity, and caregiver burden), with intrinsic factors acting as the primary determinants of abusive behaviour [4, 5]. A previous review [19] categorised elder abuse risk factors as either static—variables unlikely to change (e.g. history of violence, criminal activity, or abuse)—or dynamic—variables that can be addressed through short- or long-term interventions (e.g. substance misuse, social support). Identifying these factors can support the development of interventions targeting the root causes of elder abuse.

The WHO has emphasised the need for evidence-based interventions to address elder abuse. In 2023, Bolkan et al. [20] proposed prevention and intervention methods based on an ecological model, identifying opportunities for research, practice, and policy at the individual, relational, community, and societal levels. In 2024, Atkinson et al. [21] conducted a systematic review of tertiary prevention measures, including the development and evaluation of screening tools and the provision of support and resources. Another systematic review [22] recommended supportive practices, such as implementing strategies at the community level (e.g. cultural norms) and societal level (e.g. policies and social norms) and targeting the perpetrator–victim dyad with a multidisciplinary, multidimensional approach to prevention. However, most existing intervention strategies are drawn from literature reviews, underscoring the need for more empirical research to optimise prevention efforts.

Certified nursing assistants (CNAs), as the primary caregivers in RACFs [23], are well-positioned to provide valuable insights into the challenges and possible solutions for preventing elder abuse. Their perceptions and suggestions can help guide the development of practical and culturally relevant interventions. Most previous studies have employed cross-sectional surveys to investigate the prevalence and risk factors of elder abuse in RACFs [18, 24, 25]. However, few have specifically examined CNAs' perceptions, attitudes, and suggestions regarding prevention. This study adopted a descriptive qualitative approach to explore CNAs' perspectives on elder abuse and their recommendations for its prevention. Face-to-face in-depth interviews were conducted to gather insights that could contribute to the development of effective strategies.

### Theoretical framework

The ecological-systems framework was used to interpret CNAs' perceptions and suggestions about elder abuse and to structure the study findings. This theory, proposed by Urie Bronfenbrenner [26], conceptualises human development as occurring within a series of nested environmental systems, including the microsystem, mesosystem, exosystem, macrosystem, and chronosystem [27]. Bronfenbrenner's theory has been widely used to explain the causes of elder abuse [28, 29] and to develop related interventions [30, 31]. It has also guided the design of quantitative, qualitative, and mixed-methods research. The microsystem refers to an individual's personal context, including physiological, psychological, and other systems that have direct influence. The mesosystem encompasses small-scale groups associated with

the individual, such as family, community, and social networks. The macrosystem includes broader societal structures beyond immediate groups, such as organisational settings, policies, legal frameworks, and cultural norms. This study explored CNAs' perceptions and suggestions for preventing elder abuse through the lens of the microsystem, mesosystem, and macrosystem.

## Materials and methods

### Study design

This study employed a qualitative descriptive design, which is commonly used to capture and report individuals' experiences, feelings, behaviours, and perspectives [32] and the significance of these phenomena within specific social and cultural contexts. The results are reported in accordance with the Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist guidelines [33].

### Participants

Purposeful sampling was used to recruit participants (CNAs) from 15 RACFs in Hunan Province (Chenzhou, Yueyang, Yongzhou, Zhangjiajie, and Yiyang). The inclusion criteria were as follows: ① provides care for individuals aged ≥ 60 years; ② has a professional qualification as a nursing assistant; ③ has worked in RACFs for ≥ 1 year; ④ provided informed consent to participate voluntarily in this study. Relatives of older adults being cared for and informal nursing staff were excluded. The sample size was determined based on data saturation (no new themes emerged during data analysis) and feasibility [34]. Data saturation was reached with 16 participants.

### Data collection

Face-to-face, in-depth, semi-structured interviews were conducted with participants in the institutional conference room between 25 January and 22 April 2024, following consent from RACF administrators. The interviews were conducted by a nursing faculty member with extensive qualitative research experience (who conducted the interviews) and a student assistant (who was responsible for transcription and recording) during relatively quiet working periods (i.e. 9:00–11:00 or 15:00–17:00). Before each interview, the interviewer informed participants of the study's objective, research process, potential risks, and voice recording procedures; obtained written consent; and collected demographic information, including age, education level, and marital status. A comprehensive review of existing literature on elder abuse—particularly regarding its prevalence, causes, and consequences in RACFs—was carried out to develop the preliminary interview guide. An interdisciplinary panel of experts in gerontology, nursing, and public health critically reviewed the guide to improve the cultural relevance of the questions. Pilot interviews were conducted with two CNAs (who did not participate in the formal study) to help finalise the guide (Table 1). The formal interview guide primarily addressed participants' perceptions and attitudes toward elder abuse and their perceived strategies for prevention and response (Supplementary Material 1). During the formal interviews, participants were encouraged to fully express their thoughts and experiences. Probing prompts, such as 'Can you elaborate on that?', were used to deepen responses. Participants' key viewpoints and non-verbal cues, including tone of voice, pace of speech, and physical behaviours, were also observed and recorded. Interviews ranged from 11 to 48 min in duration (mean 23 ± 11.69 min).

### Ethical considerations

Written informed consent was obtained from all participants prior to the interviews. The purpose of the study, process, potential benefits and risks for CNAs, and interview duration were outlined in the informed consent form. This study was approved by the Medical Ethics Committee of Xiangnan University (No. 2024YXLL004) and conducted in accordance with the principles of the Helsinki Declaration of 1995 (revised in Edinburgh in 2000). To ensure confidentiality, anonymous codes (e.g. p1 and p2) were used in place

**Table 1** Open questions used to guide in-depth interviews

| Contents | Open questions |
|---|---|
| Concepts | (1) How do you understand the term 'elder abuse'? (types, signs, consequences)<br>(2) What is the first thing that comes to mind when elder abuse is mentioned? |
| Risk factors | (3) Have you witnessed elder abuse by staff in the current institutional setting? (when, where, why)<br>(4) In your opinion, what causes the phenomenon of staff-to-resident abuse? |
| Prevention strategies | (5) What do you think should be done if you witness an older person being abused in an institution?<br>(6) What do you think the government (organisations, individuals) should do to reduce the risk of elder abuse? |

of names in the audio recordings and transcripts. All interview materials were stored on a password-protected computer, and printed transcripts were securely retained for a minimum of three years.

### Data analysis

Within 24 h, recordings were transcribed by an assistant and checked by the first author before being imported into NVivo12 Plus qualitative research software for analysis. Content analysis was applied to interpret the qualitative data [35]. The specific steps included: (1) Decontextualisation – reading each transcript repeatedly and thoroughly to grasp the full meaning; (2) Recontextualisation – analysing the text line by line to identify meaningful statements, which were then coded; (3) Categorisation – grouping recurring statements into categories based on the codes; (4) Compilation – identifying connections between categories to generate themes; (5) This process was repeated until data saturation was reached and no new themes emerged. Researchers and assistants read and reread the transcripts attentively, avoiding subjective assumptions and immersing themselves in participants' accounts to understand their perceptions. Statements were coded in relation to the research question until saturation was confirmed. Codes were refined into themes through repeated verification. During analysis, the research team discussed differing interpretations, which contributed to the final study findings.

### Rigour

To ensure rigour, the study followed four criteria: credibility, dependability, transferability, and confirmability [36]. (1) Credibility: All transcripts were double-checked, and data were analysed independently by two researchers. Result consistency was reviewed and discussed by the research team. (2) Dependability: Participant demographics, research setting, interview procedures, data collection, and data analysis were clearly described. Transcripts were quoted verbatim, and thematic categories were detailed. (3) Transferability: The study maximised sample heterogeneity by including CNAs from 15 RACFs across five municipalities. (4) Confirmability: Analysis of each interview—including verbatim transcription, repeated checking, review of field notes, and coding—was conducted using rigorous procedures. An audit trail was maintained in NVivo12 Plus, and external reviewers validated the findings. Results were also returned to participants for verification.

## Results

### Demographic profile of participants

Sixteen CNAs (2 men and 14 women) were interviewed in this study. Participants' ages ranged from 24 to 58 years (50.19 ± 7.98 years). Most had a secondary level of education, were married, earned a monthly income between 3000 and 3999 RMB yuan, had been employed for 1 to 3 years, and worked in private RACFs. The demographic profile of participants is presented in Table 2.

### CNAs' perceptions of and suggestions to prevent elder abuse

Themes were derived from the transcripts of 16 participants using the ecological-systems framework. At the microsystem level, the themes of holding a superficial perspective on elder abuse and enhancing the nursing staff's professionalism and empathy were identified. At the mesosystem level, the theme of strengthening institutional management capacity emerged. Finally, at the macrosystem level, the theme of enhancing social support was developed, as shown in Table 3.

## Microsystem level

The ecological-systems framework defines the microsystem as the immediate environment in which individuals interact directly and develop their perceptions and behaviours. At this level, two themes were identified: holding a superficial perspective on elder abuse and enhancing the nursing staff's professionalism and

**Table 2** Demographic characteristics of the participants

| Characteristics | | Number of Participants N (%) |
|---|---|---|
| Gender | Female | 14(87.50) |
| | Male | 2(12.50) |
| Education Level | Elementary school | 1(6.25) |
| | Secondary school | 11(68.75) |
| | Senior school | 3(18.75) |
| | Diploma | 1(6.25) |
| Marital status | Unmarried | 1(6.25) |
| | Married | 14(87.50) |
| | Widowhood | 1(6.25) |
| Monthly income (RMB yuan) | 2000–2999 | 2(12.50) |
| | 3000–3999 | 10(62.50) |
| | 4000–4999 | 4(25.00) |
| Working experience (years) | 1–3 | 9(56.25) |
| | 4–5 | 3(18.75) |
| | > 5 | 4(25.00) |
| RACF' ownership | Public | 6(37.50) |
| | Private | 10(62.50) |

**Table 3** Themes and categories in the interviews

| System based on ecological-systems framework | Themes | Categories | Examples of codings |
|---|---|---|---|
| Microsystem level | Holding a superficial perspective on elder abuse | Denying the existence of self-related elder abuse | No observed abuse, only heard but not witnessed |
| | | Insufficient understanding of the types | Refusing to feed, forced medication, hitting, verbal conflict |
| | | Confusion about potential causes | Communication barriers, stubborn personalities, irrational behaviour of elders |
| | | Limited knowledge of professional interventions | Separating parties, communication, and persuasion |
| | Enhancing nursing staff's professionalism and empathy | Improving job competence | Communication skills, professional care skills, psychological support skills, safety protection skills |
| | | Practising empathy care | Standing in older adults' shoes, listening and understanding, building trust |
| | | Developing professional identity | Sense of responsibility, career commitment, job satisfaction |
| | | Fostering psychological resilience | Positive mindset, adaptability, emotional regulation |
| Mesosystem level | Strengthening institutional management capacity | Conducting professional training | Training content: advanced technical skills, communication skills, and problem-solving abilities<br>Types of training: formal training programmes (workshops or online courses), informal learning opportunities (mentorship or peer learning) |
| | | Setting rational work schedules | Fair rotation schedules, balanced workload distribution, and adaptive scheduling needs |
| | | Formulating reasonable rules and regulations | Clear contractual agreements, zero-tolerance policy for abuse, trial periods for new staff, regular monitoring and reporting mechanisms, identification and emergency protocols |
| | | Raising wages and benefits | Motivation through financial incentives, performance-based bonuses, linking wages to workload and responsibility, recognition through non-monetary benefits |
| | | Creating a favourable physical environment | Comfortable and well-ventilated rooms, visibility and surveillance |
| Macrosystem level | Enhancing the social support | Strengthening social attention | Regular social visits, volunteer activities, intergenerational involvement |
| | | Promoting the development of the senior care industry | Strengthening workforce development needs policy and regulatory support |
| | | Increasing seniors' allowances | Economic independence for seniors, affordability of care services |
| | | Enhancing oversight and legal protection | Strengthening regular inspections, improving legal frameworks for elder protection |

empathy. These themes illustrate the microsystem's pivotal role in shaping responses to elder abuse.

#### Holding a superficial perspective on elder abuse

When discussing elder abuse, CNAs were hesitant to mention any incidents that may involve themselves or their institutions, often referring only to extreme cases seen online. Additionally, participants showed a superficial understanding of elder abuse, particularly in relation to its types, signs, causes, and immediate interventions. This theme included four categories: denial of self-related elder abuse, insufficient understanding of abuse types,

confusion about potential causes, and limited knowledge of interventions.

#### Denying the existence of self-related elder abuse

Incidents of elder abuse can harm both individuals and the reputation of RACFs. Participants in this study expressed unequivocal denial of any involvement in elder abuse within their own workplaces.

> *'There won't be, absolutely not (any elder abuse). It has never happened… I've been doing this for so long, and it has never occurred.' (P13)*

> *'But I've also heard about it online. Well, we all wonder why this could happen. If you treat them badly and injure one older resident, who knows what kind of older clients will come next?' (P7).*

#### Insufficient understanding of the types

Some participants exhibited a one-sided understanding of elder abuse, describing it as involving hitting and scolding older adults, depriving them of food, and forcing them to take medication without referring to neglect, sexual abuse, or financial abuse.

*'I don't think it's a big deal, as long as you don't confront them, there's no abuse, you just can't hit them.' (P16).*

*'They (older adults) are all very obedient…… As long as we help them with about seventy to eighty percent, it's okay if a little isn't done. Even their children at home can't do as well like us.' (P13).*

#### Confusion about potential causes

Interviewees expressed uncertainty about the potential causes of elder abuse, attributing it to communication barriers, the stubborn personalities of older adults, and irrational behaviour without acknowledging any factors related to caregivers or their institutions.

> *'I don't think there's any particular reason leading to elder abuse. With patients who have dementia, it's impossible to communicate clearly; it's because their minds have lost rationality and are no longer clear.' (P11).*

> *'Now their ears can't hear clearly, and there are cognitive disorders affecting their minds, making communication very difficult. If you speak softly, they won't hear you; if you speak loudly, older adults might think you're being aggressive towards them.' (P14).*

#### Limited knowledge of professional interventions

The CNAs in this study addressed instances of elder abuse or conflict only by separating from the individuals involved, without taking any additional measures such as incident reporting.

> *'First, you have to intervene to stop the abuse behaviour, of course you have to pull the caregiver away, you can't let the caregiver continue like that.' (P12).*

> *'Negotiate with him, you control him, speak nicely to him, and then pull him away. Sometimes, once you pull him away, he'll be fine by himself.' (P11).*

### Enhancing nursing staff's professionalism and empathy

At the individual level, participants provided detailed descriptions of enhancing nursing staff's professionalism and empathy, including improving job competencies, practising empathetic care, developing a professional identity and sense of responsibility, and fostering psychological resilience.

#### Improving job competence

CNAs stated that strengthening caregivers' job competencies—such as communication skills, professional care abilities, psychological support techniques, and safety protection measures—could improve not only awareness of abuse prevention but also patient safety protocols, ethical decision-making, and best practices in geriatric care.

> *'Establishing a level of trust with older adults makes them more willing to share their needs and feelings. This openness allows us to better understand them and prevent any situations that might make them feel neglected or abused.' (P2).*

> *'Basically, there are about 2–3 formal trainings per year. However, we often frequently engage in peer-to-peer coaching sessions — like demonstrating techniques for repositioning residents, changing clothes, and safely transferring patients between beds and wheelchairs across different wards. We even organise mini-training sessions within our own departments! (chuckles).' (P13).*

#### Practising empathy care

Respondents observed that demonstrating patience and empathy towards older adults—for example, putting themselves in the residents' position and treating those in their care as family members—could help reduce the likelihood of abuse.

> *'Patience and love are key for building meaningful relationships with older adults; if you approach them (older adults) with these qualities, you can establish a deep, spiritual connection with them.*

*They can sense your friendliness, even when they have cognitive impairments. A kind treatment and a warm smile can effectively convey your sincerity, helping to build trust and a positive connection.' (P5).*

*'Do not scold or hit older adults. If they have cognitive impairments, it is essential to patiently guide and support them. In the process of caring for older adults, I believe we must demonstrate kindness, love, and patience to ensure their well-being and dignity.' (P6).*

*'When you grow older, if you reside in a nursing home, you surely hope that the staff are amiable and friendly towards you. I treat them as if they are my future self. (Smiling)." (P3).*

#### Developing professional identity

Participants believed that cultivating a strong sense of professional identity, responsibility, career commitment, and job satisfaction among caregivers could play a significant role in preventing elder abuse.

*'Entering this profession necessitates a commitment to professional ethics… From the moment we assume this role, we must comprehend our duty to perform our tasks excellently and to provide the best care for older adults. With a mindset of responsibility towards them, abuse becomes a non-issue.' (P16).*

*'Given that older adults are inherently part of a vulnerable population, it's imperative not to engage in such misconduct (elder abuse). In our profession, we should possess the fundamental professional ethics and a strong sense of job identification.' (P12).*

#### Fostering psychological resilience

Geriatric care inevitably involves complex and demanding scenarios. Participants emphasised the importance of psychological resilience—such as maintaining a positive mindset, adaptability, and emotional regulation—in managing these challenges effectively, preventing emotional deterioration, and avoiding violent behaviour.

*'You need to adjust your own mindset; you can't let negative emotions worsen. Trying to change others is futile; true transformation comes from within. So, I choose to change myself. Once you've chosen this job, self-change is the only option; it's hard to alter the habits of older adults, especially those deeply ingrained over decades.' (P 5).*

*'No matter what, physical violence is never acceptable. It's normal for many older adults to have their quirks… The key lies in the caregiver's attitude. With a variety of older adults, adjusting your mindset is crucial. Retaliating in anger is not the answer; maintaining a balanced mindset is essential.' (P12).*

### Mesosystem level

#### Strengthening institutional management capacity

Institutions, as part of the mesosystem, directly influence both caregivers and the older adults in their care. Effective management of RACFs is essential for maintaining high-quality care and improving quality of life. The theme of strengthening institutional management capacity emerged from the interview transcripts and included five categories: conducting professional training, setting rational work schedules, formulating reasonable rules and regulations, raising wages and benefits, and creating a favourable physical environment. These strategies not only enhance the immediate care setting but also positively influence the broader mesosystem by fostering a supportive atmosphere that benefits all stakeholders in elder care.

#### Conducting professional training

Ongoing education and professional training—through workshops, online courses, mentorship, or peer learning—can strengthen staff members' advanced technical skills, communication abilities, and problem-solving capacity. These approaches were regarded as effective methods for preventing elder abuse.

*'Related institutions can enhance training to boost caregivers' awareness of abuse, elevate their understanding in this critical area, and thereby reduce the incidence of such events (referring to elder abuse).' (P4).*

*'Increased training, which improves the competence of nursing staff, would naturally prevent these incidents (referring to elder abuse) from occurring.' (P12).*

#### Setting rational work schedules

High workloads were frequently raised by CNAs during interviews. Participants suggested that managers should assign reasonable shifts based on staff members' capacities and work experience.

*'Generally, work should be distributed evenly, and caregivers should not be overworked. Overwork can lead to an inability to cope with the tasks, increased emotional stress, and potentially transfer negative emotions onto older adults, thereby increasing the risk of abuse.' (P13).*

*'Well… for those who are new and not very familiar with the job, assign slightly fewer tasks. For skilled staff who are more familiar with the work, assign slightly more. If new employees, who are not yet proficient in their duties, are given too much work, it may lead to feelings of stress and frustration, manifesting in impatience or rough behaviour.' (P15).*

#### Formulating reasonable rules and regulations

Institutional policies and regulations are also essential in preventing staff-to-resident abuse. By establishing and enforcing clear contractual agreements, implementing a zero-tolerance policy for abuse, conducting regular monitoring and reporting, and setting up identification and emergency protocols, institutions can promote an elder-friendly care culture and reduce the incidence of abuse.

*'Institutions must have relevant systems to restrict the behaviour of caregivers. If abuse occurs, the staff are directly dismissed… New caregivers generally have a one-week probation period.' (P4).*

*'We sign the contracts and inform the older adults' family members that their relatives must be aware of their condition; we do not arbitrarily restrain the older adults.' (P16).*

#### Raising wages and benefits

Wages are a fundamental form of motivation. Some respondents suggested that increasing wages and benefits—such as financial incentives, performance-based bonuses, and non-monetary rewards—could encourage caregivers to be more dedicated to their roles, thereby improving the quality of care for older residents.

*'By slightly raising wages and improving other subsidies and benefits (Happily speaking), we acknowledge the exhaustion from a day's work where everything must be attended to. There must be motivation, right? With this, we can more actively engage in our work, caring for each older adults with love and patience.' (P2).*

*'The work is quite strenuous, and I believe the wages could be increased, don't you think? (Laughs cheerfully). When we have better income, we are more likely to provide high-quality nursing services, reducing neglect or improper behaviour due to stress and fatigue.' (P14).*

#### Creating a favourable physical environment

A favourable physical environment—featuring comfortable, well-ventilated rooms, good visibility, and surveillance—was also cited in a few transcripts as a potential factor in preventing elder abuse.

*'We have surveillance in public areas, such as the lobby. Generally, all places are under surveillance, so if you raise your voice, people will know, and you always have to be mindful of your behaviour.' (P5).*

*'The environment here is quite important. A clean and warm environment makes everyone feel comfortable. If the environment is messy, everyone's mood will be bad, and it's easy to get irritable when working, which is not good for older adults.' (P8).*

### Macrosystem level

#### Enhancing the social support

In line with the macrosystem's influence on societal and cultural structures that shape elder care, participants advocated strengthening support from families, communities, and the government. Their suggestions included increasing social attention, promoting the development of the senior care industry, raising older adults' allowances, and enhancing oversight and legal protection. These recommendations reflected the participants' recognition of the need for macro-level changes in policy, regulation, and cultural attitudes to create a more supportive environment for older adults.

#### Strengthening social attention

Respondents proposed that members of society should engage in regular visits, volunteer activities, and intergenerational programmes and raise public awareness to improve care for older adults and help reduce ageism.

*'(Non-profit organisations) could regularly visit them (referring to older adults), letting them know that the government and society still pay high attention to them, making their lives feel more fulfilling…… This makes them more likely to seek help when they encounter abuse or mistreatment.' (P2).*

*'I also hope that young people can increase their attention to older adults, showing that they (young people) care about older adults and provide them with companionship and psychological support, both of which can reduce the risk of harm to older adults.' (P6).*

#### Promoting the development of the senior care industry

Participants noted that RACFs continue to face challenges such as shortages of younger workers and skilled

staff, high turnover, and increasing demand for senior care. Some respondents suggested that promoting the sustainable development of the senior care industry could serve as a potential strategy to prevent elder abuse.

*'Policy incentives can enhance the attractiveness of this industry by improving salary, offering professional training, and providing career development, thereby attracting more caregivers with professional skills and legal awareness, fundamentally preventing abusive behaviour.' (P5).*

*'The government can introduce favourable policies to promote the development of the senior care industry, encouraging more compassionate young people to join this sector....the older residents can receive better care, and their quality of life will improve.' (P10).*

#### Increasing seniors' allowances

An increase in older adults' welfare benefits and economic status may improve their financial independence and ability to afford care services. This was mentioned in a few transcripts as a possible strategy for enhancing care quality and preventing elder abuse.

*'Improving their (referring to older adults) subsidies, if the pensions of older adults are higher, then their standard of living after retirement will certainly be higher. Consequently, their needs and rights are more likely to be respected and protected.' (P2).*

*'Increasing the retirement pensions for older adults, so that they (referring to older adults) can have more money to spend after retirement and can purchase whatever they desire... This reduces the risk of the older residents being manipulated or abused due to financial needs.' (P3).*

#### Enhancing oversight and legal protection

A few participants indicated that relevant government departments should conduct more inspections, monitor RACFs' performance, and improve legal frameworks for elder protection, which may contribute to the prevention of elder abuse.

*'The government employs its own personnel, who should be encouraged to observe more and be more rigorous..... it is crucial for them to visit more frequently, show more concern, and engage more actively. This is the key to better preventing elder abuse.' (P11).*

*'It requires the government to conduct periodic inspections, including safety checks and assessments of the quality of services. They need to verify if the older residents are well cared for and to ensure their safety and well-being.' (P15).*

## Discussion

This study aimed to explore CNAs' perceptions and suggestions regarding elder abuse using the ecological-systems framework. The findings revealed four themes at the microsystem, mesosystem, and macrosystem levels: holding a superficial perspective on elder abuse, enhancing nursing staff's professionalism and empathy, strengthening institutional management capacity, and enhancing social support. We found that nursing staff held a superficial understanding of elder abuse. This suggests limited awareness and the necessity to strengthen their understanding and sensitivity to the issue, recognising that abuse and neglect represent safety concerns in routine care. Nevertheless, CNAs in this study described several potential strategies for preventing elder abuse and emphasised the importance of establishing a zero-tolerance culture toward elder abuse.

Resistance to disclosure and limited understanding of elder abuse among caregivers in RACFs are multifaceted issues, as reflected in studies from various countries [37, 38]. CNAs exhibited avoidance attitudes toward elder abuse, particularly when it concerned their interests or the reputation of RACFs. This denial may function as a defence mechanism to avoid the consequences associated with allegations of elder abuse, such as legal claims, social stigma, and job loss. A study exploring nursing home leaders' perceptions in Norway found that staff-to-resident abuse was considered an 'unthinkable event' [37], revealing a similar reluctance to acknowledge elder abuse within RACF settings. Similarly, a study in Portugal found that while 54.7% of nursing staff reported witnessing abuse over the past 12 months, only 16.7% admitted to perpetrating abuse themselves [39]. This perception contributes to a culture of silence around reporting elder abuse, hindering the ability to address and resolve abuse situations. Notably, while 70% of older adults in RACFs reported experiencing abuse [4], the findings of this study show that most CNAs have limited knowledge of what constitutes abuse. This disparity highlights a significant gap between the experiences of care recipients and the awareness of caregivers, underscoring the urgent need for targeted education and training for CNAs. These microsystemic limitations perpetuate underreporting and misperception, as CNAs' immediate environment often lacks adequate education and institutional support to recognise and respond to abuse effectively. Addressing these attitudes requires a comprehensive approach

involving education, policy reform, and a cultural shift toward transparency and accountability in elder care.

Participants' superficial understanding of elder abuse—limited primarily to physical acts and omitting forms such as financial exploitation—is consistent with findings in previous studies, which indicate the definitional challenges of elder abuse within RACF contexts [40, 41]. The literature highlights that elder abuse encompasses physical, psychological, sexual, financial, and neglectful behaviours [3]. CNAs in this study tended to attribute elder abuse to the characteristics of older adults, such as cognitive disorders and communication difficulties, and appeared to rationalise these incidents. These attributions reflect microsystem-level influences, where direct interactions with residents are shaped by personal biases and insufficient organisational support. Elder abuse is likely to be shaped by a combination of personal, environmental, and institutional factors, along with cultural and traditional values [19, 42]. In China, the government has implemented several policies aimed at protecting the rights and well-being of older adults, including the Law on the Protection of the Rights and Interests of the Elderly (2018) [43], the 14 th Five-Year Plan for National Aging Development and Elderly Care Service System [44], and the Opinions on Deepening the Reform and Development of Elderly Care Services [45]. Despite these policy efforts, enforcement and implementation challenges persist due to a shortage of trained nursing staff, weak enforcement of quality standards, and limited monitoring mechanisms [46]. The interview results further indicate that nursing staff lack awareness and competence in addressing and following up on elder abuse, which aligns with their difficulties in identifying and reporting abusive behaviours. This ambiguity in attitude and response has implications for the safety culture within organisations and may ultimately affect care outcomes [47]. These findings underscore the importance of improving CNAs' awareness and capacity to respond to elder abuse and implementing effective prevention strategies to enhance the quality and safety of care for older residents.

Elder abuse requires a multifaceted, collaborative approach involving stakeholders, care facilities, and society to establish an integrated prevention programme. At the microsystem level, interventions must address caregivers' knowledge gaps and empathetic capacities to interrupt the cycle of abuse [48]. First, the enhancement of job competence was identified as a key category in the transcripts. This finding aligns with a Norwegian qualitative study linking elder abuse in nursing homes to low staff competence and inadequate person-centred care [49]. Previous research also indicates that effective communication skills and trust-based relationships are essential for preventing physical abuse of nursing home residents [50]. Nursing staff must continually update their knowledge, skills, and abilities through ongoing education and professional development to ensure the highest standards of aged care. Second, participants highlighted practising empathetic care, which is consistent with previous research. A lack of sensitivity and empathy among nursing staff can cause older residents to feel ignored [51]. Disregard for dignity is frequently observed in non-caring care environments [52]. Additionally, poor relationships and negative attitudes towards older adults have been associated with increased risks of psychological abuse by nursing staff [25, 53]. Institutional managers may consider fostering qualities such as patience, compassion, conscience, and positive attitudes in staff to strengthen their capacity to empathise with older residents. Third, developing a strong professional identity among caregivers emerged as critical in preventing elder abuse. Professional identity encompasses the beliefs, values, ethics, and behaviours essential to high-quality care provision [54]. It is also associated with improved job satisfaction and the ability to support older adults effectively [55]. Therefore, shaping professional identity—through education, positive work experiences, and meaningful interactions with older adults and their families—is vital to cultivating a culture of respect and safety in RACFs. Fourth, fostering psychological resilience also emerged as a key theme from the transcripts, consistent with Kukihara's findings [56]. Psychological resilience contributes to reduced burnout, enhanced mental health, and improved nursing competence [57]. Existing studies indicate that resilient nursing staff are able to draw on internal strengths and external support systems to manage stressful situations [58]. Emotional dissonance and emotionally draining interactions among staff may intensify tendencies towards neglect and abuse [53, 59]. Furthermore, caregivers experiencing mental and psychological distress are more likely to engage in abusive behaviours in institutional care settings [25]. Psychological interventions—such as emotion regulation, relaxation techniques, and self-compassion training—are recommended to build resilience among nursing home staff [60], thereby reducing the risk of elder abuse.

Effective management practices at the mesosystem level—including institutional policies, staff training, and resource allocation—are essential in shaping care quality and preventing elder abuse [61, 62]. The transcripts frequently highlighted professional training and education as the most effective means of abuse prevention. Studies have shown that caregivers who lack care training are more likely to display abusive behaviours [39]. Educational interventions—such as theory-based training, group discussions, and forum theatres—can

significantly improve healthcare providers' awareness of elder abuse [63] and strengthen their ability to identify, report, and manage related cases [64]. Setting rational work schedules, which can reduce staff burnout and enhance job satisfaction [65], was also identified as a potential method for preventing elder abuse. Role ambiguity, role conflict, and burnout may contribute to an increased incidence of abuse by caregivers [18]. Staffing has been identified as an important predictor of staff perceptions of patient safety in nursing homes [47]; however, staffing-related challenges remain a significant concern. Rational scheduling in healthcare involves distributing workloads, supporting work-life balance, and implementing shift rotations. In contrast, improvisational work-life arrangements may be linked to higher risks of negative outcomes, such as pressure ulcer development [66]. Additionally, formulating reasonable rules and regulations has been suggested as a promising intervention to prevent elder abuse, as indicated in a risk management study [67]. A qualitative study from Uruguay revealed that contributing factors to elder abuse in nursing homes include insufficient safety regulations, absence of standardised care models, and lack of regular inspections [68]. RACFs should establish abuse prevention and response protocols, procedures for investigating and managing abuse, and mandatory reporting systems [69, 70]. Raising wages and benefits for nursing staff also contributes to elder abuse prevention, as supported by prior research [39, 71]. Higher wages may improve staff attitudes and productivity [72], both of which are linked to better care quality. Research has shown that a 10% increase in the average hourly wage of direct care staff can result in a 7.1% higher likelihood of nursing homes receiving high-quality ratings [73]. Favourable environmental conditions—such as reduced noise, exposure to natural light, accessible gardens, supportive dining spaces, and resident-centred interior design—positively affect the well-being and psychological health of institutionalised older adults [74]. In line with previous findings [75], interviewees suggested that institutional managers should establish resident-centred care environments, including installing smart surveillance systems to monitor inappropriate behaviours in public areas. The physical environment influences both employee engagement [76] and disparities in exposure to violence risk [77]. However, closed-circuit television cameras and digital recording devices remain limited to public and transitional areas in some RACFs, and abuse occurring in private spaces may remain undetected. At the mesosystem level, interventions must aim to bridge the gap between institutional policies and front-line practices.

Another theme related to elder abuse prevention is the enhancement of social support. Strengthening social attention (e.g., enhancing public engagement and awareness in caring for older adults) was among the most important suggestions provided by CNAs. Insufficient or uneven social support systems may increase vulnerability among older adults [78]. Ageism can also contribute to a higher incidence of elder abuse [79–81]; this issue is deeply embedded in the macrosystem through pervasive cultural stereotypes and institutionalised discrimination against older adults. Studies have demonstrated that low levels of social support [82] and social isolation [83] are associated with elder abuse in nursing homes. Participants also discussed the importance of promoting the development of the senior care industry, which could help improve care standards, wages, and benefits for nursing home staff [84, 85]. Although China's senior care sector shows strong potential, it continues to face significant challenges, including a shortage of trained nursing staff, limited intelligent application, and insufficient funding [46]. Similarly, geriatric care in Ghana is hindered by restrictive legislation, a lack of healthcare personnel, and limited government investment in healthcare financing [86]. These systemic barriers highlight the extent to which macrosystem level factors—including legislation, resource allocation, and workforce planning—directly affect the quality of elder care and the effectiveness of abuse prevention. To address these challenges, the industry requires robust standards for senior care that enhance service quality and efficiency and uphold the dignity and quality of life of older adults. Increasing seniors' allowances was another category identified within this theme. Older adults with low economic status or financial dependence are at heightened risk of abuse [87–89]. Higher allowances can help meet their basic material and social needs, thereby offering protection against abuse and neglect. Enhancing oversight and legal protection is another critical strategy for addressing elder abuse. However, current evidence suggests that the effectiveness of official contract monitoring in accurately assessing care quality and detecting abuse is limited [90]. Even care homes rated as 'good' by the Care Quality Commission have reported substantial numbers of elder abuse cases [91]. As such, increasing unannounced inspections and stakeholder monitoring is recommended to help reduce the incidence of elder abuse. These societal interventions reflect the broader macrosystem level efforts required to address elder abuse comprehensively.

### Limitations

This study involved face-to-face interviews with a small sample of 16 CNAs, which may limit the generalisability of the findings. However, participants were recruited from 15 RACFs to enrich the data. Qualitative research is inherently subject to certain limitations, including subjectivity in data analysis. Nonetheless, the study findings were validated by participants. Although a pilot test was conducted with two CNAs and reviewed by the research team, the interview guide was not verified by external experts, which may have introduced potential bias. The interviews focused on CNAs' perceptions and suggestions regarding elder abuse. Future research could explore the perspectives of managers, older residents, and other stakeholders to offer further insight into the prevention and intervention of elder abuse.

## Conclusion

This study explored CNAs' perceptions of elder abuse and identified potential prevention strategies. The findings offer practical implications for researchers, practitioners, and policymakers seeking to develop more effective practices in RACFs to prevent elder abuse. First, CNAs require improved training to enhance their awareness and sensitivity to elder abuse, professionalism, and empathy through mandatory educational programmes. Second, RACFs should adopt integrated management strategies, including staff development programmes, optimised work schedules, standardised protocols, competitive remuneration, and improved physical environments. Third, broader societal and governmental efforts must target ageism, strengthen elder care systems, increase financial support for older adults, and ensure robust oversight with legal protections. These multilevel interventions align with the ecological-systems framework by addressing elder abuse prevention at the microsystem (individual caregiver), mesosystem (institutional management), and macrosystem (societal policy) levels. Future studies should assess the implementation and effectiveness of these strategies in geriatric care settings.

## Supplementary Information

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Supplementary Material 1

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#### Authors' contributions

Chunhong Shi was responsible for conceptualisation, project investigation, data analysis, manuscript writing, and funding acquisition. Xiya Li, Ming Chen, Yu Li, and Sirui Fu conducted data collection, applied software, performed data analysis and validation, and prepared the initial draft. Yinhua Zhang contributed to conceptualisation, project administration, research supervision, and manuscript review and editing.

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#### Data availability

The datasets used and/or analyzed during the current study are available from the corresponding author upon reasonable request.

## Declarations

#### Ethics approval and consent to participate

This study was approved by the Medical Ethics Committee of Xiangnan University (No. 2024YXLL004) and conducted in accordance with the principles of the Declaration of Helsinki. All participants provided written informed consent prior to participation.

#### Consent for publication

Not applicable.

#### Competing interests

The authors declare no competing interests.

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