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Situational dynamics associated with an increased risk of violence in nursing homes: a qualitative sub-study

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Abstract

Background

Violence in nursing homes is a complex and often under-recognised phenomenon affecting residents, relatives, and care staff. This issue is particularly relevant in the care of people with dementia, where challenging behaviours and unmet needs may lead to difficult interactions. While previous research has mainly focused on individual risk factors, less attention has been given to the situational dynamics and system dynamics underlying violent interactions in everyday care. This study aimed to explore the dynamics and risk factors of violence between care staff and residents in nursing homes.

Methods

This exploratory qualitative sub-study examined the situational dynamics of violence in nursing homes from multiple perspectives. 34 interviews and 5 case-based focus groups with care staff, relatives, and experts took place in nursing homes in Switzerland and Liechtenstein. Thematic analysis was complemented by system dynamics modelling with causal loop diagrams.

Results

The analysis showed that violence in nursing homes emerges from complex situational dynamics shaped by interactions between residents, care staff, relatives, and organisational conditions. A key finding was the normalisation of violence in everyday care practices, which functions as a central mechanism sustaining escalation dynamics. From a system dynamics perspective, violent situations develop through interacting feedback loops involving residents' unmet needs, staff workload, communication patterns, and institutional responses. The resulting causal loop model demonstrates how these dynamics can reinforce escalation but may also be mitigated through supportive leadership, adequate resources, and person-centred care practices.

Conclusions

Violence in nursing homes should be understood as a systemic phenomenon shaped by situational and organisational dynamics rather than isolated incidents. The findings highlight the importance of person-centred care, staff training, supportive leadership, and organisational support. Proactive and multi-level strategies may help promote safety, staff well-being, and quality of care.

Trial registration:

Clinical trial number: not applicable. This study is an exploratory qualitative study and therefore does not fall under clinical trial registration requirements. Ethical approval was obtained from the responsible local ethics committee (Ostschweizer Ethikkommission; BASEC No.: 2023 – 00605).

Background

Violence in nursing homes is a serious and often taboo phenomenon that affects residents, care staff, and relatives alike [1, 2]. It has far-reaching physical, psychological, and social consequences for the persons involved [3, 4]. Existing research often focuses on specific perpetrator-victim constellations, such as violence by care staff against residents or vice versa. However, there is a lack of comprehensive analysis concerning the dynamics of violent situations.

To clarify the concept of violence used in this study, the World Health Organisation (WHO) defines violence as the *intentional use of physical force or coercion against a person or group that has the potential to cause injury, death, psychological harm or deprivation* [5]. This definition encompasses a broad spectrum of behaviour ranging from physical aggression to psychological and emotional abuse. In the context of nursing homes, violence is often described in terms of *aggressive behaviour* or *aggression*. It is difficult to draw a clear distinction between these terms. [6] Particularly relevant forms of violence in nursing homes include physical violence (e.g. hitting, inappropriate use of medication), psychological violence (e.g. threats, isolation) and sexual violence (e.g. unwanted sexual touching) [3,

4, 7]. Violence can be perpetrated by both care staff and residents. It has serious health and psychological consequences for the victims [8, 9].

The reported prevalence of violence in nursing homes varies depending on study design, definitions, and offender-victim constellations. Violence by care staff against residents ranges from 0% to 93% [2]. One study found that 82% of carers experienced violence from residents in the past year [10].

Research to date has often focused on specific constellations, such as violence by or against care staff, or between residents [2, 11–13]. However, these perspectives fall short, as perpetrator and victim roles are often fluid [3], shaped by long-term relationships and institutional factors like culture, infrastructure, and staffing [9, 14–16].

Violence in nursing homes has negative effects on everyone involved. These effects are not limited to physical injuries. Psychological violence in particular leaves traces that are difficult to measure. It often leads to serious health and social problems [17]. Affected persons experience a deterioration of their quality of life and functionality. This is reflected in reduced enjoyment of life, isolation and increased mortality rates [8, 15, 16]. In addition, experiences of violence significantly increase the rates of depression and anxiety. Social isolation and withdrawal are frequent consequences, which further aggravate the mental state of affected persons [18]. Carers compare their experiences to a “horror film” [19]. The mental stress caused by scarce resources and the challenges of caring contributes to burnout, role conflicts and, in some cases, violence [20, 21].

Violence in nursing homes has also economic consequences. Increased treatment costs, staff absences due to sick leave, and high turnover rates are direct results of violent incidents [8]. In Switzerland, an estimated 300,000 to 500,000 people over the age of 60 experience abuse each year, some of them in nursing homes [22].

Various risk factors at the micro, meso, exo and macro levels contribute to the development of violence in nursing homes. At the micro level, individual factors such as age, gender and state of health of residents play a role. Personal characteristics of nurses are also relevant [8, 23]. These factors not only increase the likelihood of violence but also shape the experiences and perceptions of the persons involved.

Nurses who have used violence or have been victims of violence often perceive themselves as victims of a system that favours the emergence of violence [24].

People with dementia are particularly at risk due to their physical and cognitive impairments [25]. Institutional factors such as working conditions, high levels of stress and inadequate staffing also contribute to increased risk [6, 16, 19, 24].

Although the need for prevention has been recognised, to date only few authors have developed effective measures. A scoping review on the prevention of violence against residents identified only four relevant studies [26]. Most interventions focus on a specific offender-victim constellation without capturing the overall situational dynamics [27]. In response, the Swiss Federal Council recommends measures to impart knowledge and raise awareness, based on a comprehensive study on elder abuse [22]. Further research is therefore needed, particularly in German-speaking countries, to develop comprehensive and applicable prevention strategies.

Preventing violence in Swiss nursing homes requires a deeper understanding of risk factors and dynamics. A comprehensive definition of violence, considering all offender-victim constellations, enables targeted prevention. Tailored measures for carers and residents can foster effective interventions to reduce violence.

To address this research gap, the present qualitative study aims to explore the dynamics of violence in nursing homes using qualitative data from German-speaking regions of Switzerland and Liechtenstein.

Methods

The aims

The research project aims to describe situations with an increased risk of violence in nursing homes in terms of their characteristics and dynamics to understand the conditions under which violence occurs or is prevented. We are investigating which situations carers associate with violence and how they recognise and experience them. In doing so, we look at violence originating from care staff or

residents and affecting the other group. Differences, similarities and correlations are examined from the perspective of care staff, relatives and experts.

Research Questions

The following questions are guiding:

1. How do participants describe situations with an increased risk of violence in nursing homes?
2. How do interactions with an increased risk of violence arise in nursing homes and how do they develop?
3. How do participants experience situations with an increased risk of violence?
4. How do people act in situations with an increased risk of violence in nursing homes?

Design

This study follows an exploratory qualitative design, recognizing that violence in nursing homes is under-researched and influenced by taboos and social desirability. Thematic analysis, guided by Braun and Clarke's framework [28], was complemented by system dynamics modelling [29] to understand the dynamic structures leading to violent situations.

We refined the study design and methodology in collaboration with an advisory board to ensure that the approach was both rigorous and sensitive to the complexity of the topic. The advisory board contributed expertise on ethical, methodological, and practical aspects that guided the development of tools and strategies for effective data collection. This article focuses exclusively on the qualitative sub-study as the foundation for the subsequent quantitative phase. By integrating thematic analysis with system dynamics modelling, we aim to uncover the systemic structures underlying violence in nursing homes and to identify potential levers for intervention.

Theoretical Framework

The theoretical framework of this study is based on the ecological model of risk factors for institutional abuse of older adults developed by Schiamberg et. al (2011). This model offers a comprehensive approach to analysing and understanding abuse in nursing homes by emphasising the interactions between different levels of influencing factors. In the following, we briefly characterize these levels.

Individual level

This level considers residents' and care staff's characteristics that may increase the risk of abuse. For residents, these include cognitive impairment or aggressive behaviour. For care staff, stress, overload or lack of training are considered risk factors.

Relationship level

This level refers to the dynamics between residents and care staff, including conflicts, dependency relationships or other interactions that can foster abuse. The quality and stability of these relationships play a central role.

Institutional level

This level takes into account organisational factors that shape the care environment, for example, staffing ratios, management styles, communication structures and the general work culture in nursing homes.

Societal level

This level encompasses the broader societal conditions that influence the quality of care. These include attitudes towards ageing and caregiving, legal and political frameworks, and the financing of the healthcare system.

The model emphasises the complexity of the causes for violence and abuse in nursing homes. It provides a structured basis for developing prevention measures that consider all relevant influencing factors. This multidimensional approach can be helpful to identify both individual and structural measures for reducing the risk of abuse and improving the quality of care. [30]

Setting of the study

The study focused on nursing homes in the German-speaking regions of Switzerland and Liechtenstein, chosen for their unique socio-cultural and political frameworks influencing violence in care settings. Limited research on violence in these regions prompted the exploration of local characteristics shaping the experiences of care staff, residents, and families.

This cross-regional setting is marked by diverse caregiving roles, significant multiculturalism, and multilingualism. Residents often have Italian-speaking or migrant backgrounds. Care staff also have various cultural contexts. Additionally, the localized cultural identities of Switzerland and Liechtenstein, shaped by cantonal, urban, and national traditions, influence interactions and responses to violence in nursing homes.

Recruitment and participants

We used a variety of recruitment channels to ensure a heterogeneous selection of participants – with the aim of capturing diverse experiences and perspectives of care staff, relatives, and experts. We recruited care staff through nursing homes in German-speaking Switzerland and in the Principality of Liechtenstein. Additionally, recruitment was supported through flyers and advertisements in nursing-specific media, such as the newsletter of the Swiss Professional Association of Nurses (SBK), and through social media.

Recruitment in nursing homes was facilitated by managers who shared project information and contact details of the project team with care staff. Interested persons could voluntarily contact LA and AZ without their employers' knowledge. Detailed project information was provided, and verbal and written consent obtained for participation.

Focus group interviews with reference to case analyses were conducted by project staff and a trainer from the Eastern Switzerland University of Applied Sciences. AZ contacted nursing home directors, who informed staff and obtained consent forms. Persons who declined to participate could still join the case analyses. However, their input was excluded from data analysis.

Recruitment took place via advertisements on social media (Facebook, Instagram), SBK newsletter, and flyers at the SBK Congress 2023. These materials included a brief project description and a link to a secure homepage, where interested persons could submit contact details. The project group provided further information, scheduled interviews, and obtained consent.

We informed relatives about the study through interest groups and announcements on social media. To disseminate project details via meetings, newsletters, or online platforms, we contacted group leaders. Interested persons could directly reach out to LA or AZ for further information. After initial contact, they received detailed study information. We obtained verbal and written informed consent prior to participation.

To ensure diverse perspectives, we were recruited experts through multiple channels. The Swiss Network for Aggression Management in Healthcare and Social Services (NAGS) played a key role by disseminating calls for participation in its newsletter and by identifying potential participants. Additionally, the project team directly approached experts with relevant experience in violence prevention through existing professional contacts.

Further recruitment efforts included collaboration with NAGS managers and with the Independent Complaints Centre for the Elderly (UBA). They helped identify suitable candidates. Interested experts either responded to calls for participation or were referred through these networks. They could contact the project team (LA or AZ) for further details. Afterwards we obtained verbal and written informed consent.

Inclusion and exclusion criteria

Inclusion and exclusion criteria served to ensure a suitable and relevant selection of participants for the qualitative study. Care staff were included if they (a) had experienced situations with an increased risk of violence in their professional context in a nursing home, (b) were willing to openly discuss these experiences, (c) had a good command of German, and (d) were employed in German-speaking Switzerland or in the Principality of Liechtenstein. To facilitate efficient discussions, focus groups centred on case analyses comprised care staff from different nursing homes thereby ensuring that participants discussed various experiences.

Relatives of care home residents were included if they (a) had either personally experienced or learned about situations with an increased risk of violence in a nursing home and (b) had a good knowledge of German.

Experts were recruited through NAGS and UBA. Inclusion was possible under the following conditions: Experts (a) had professional experience in an educational or counselling role on the topic of violence in nursing homes, (b) had insights into various institutions and constellations of violence risks, (c) and possessed relevant knowledge in the context of German-speaking Switzerland or the Principality of Liechtenstein.

Data collection

For data collection, we used semi-structured individual interviews and focus group discussions. The interview guides were developed specifically for this study. Separate guides were designed for each participant group (care staff, experts, relatives, and residents), as well as for the case analysis. The English versions of the interview guides are provided in a supplementary file (Supplementary file 1).

The interview guides were informed by existing literature on violence in nursing homes and were tailored to explore situations associated with an increased risk of violence. The guides covered topics such as definitions and perceptions of violence, characteristics of high-risk situations, experiences of residents and care staff, as well as strategies for coping with these situations. The interviews followed a problem-centred approach, allowing for narrative responses, and were guided by a flexible framework covering key problem-related topics.

LA and AZ conducted individual interviews with care staff, relatives, and experts. Care staff and relatives were asked to share personal experiences and perceptions of violent incidents or situations with a high risk of violence involving residents aged 65 years and older, particularly those living with dementia. Experts provided insights based on their expertise in caring for this population.

Residents themselves were not systematically included in the study due to ethical considerations related to potential burden in a vulnerable population. However, their perspectives are indirectly reflected through relatives and healthcare professionals with regular direct contact with residents.

The interviews lasted between 60 and 90 minutes. Depending on the preference, they took place at the participants' location of choice or virtually. All interviews were digitally recorded and transcribed verbatim according to the transcription rules of Kuckartz and Rädiker [31].

Additionally, we conducted focus group discussions based on cases submitted by groups of carers from nursing homes. The cases discussed in the focus groups referred to residents in nursing homes, particularly people with dementia. The focus groups took place as part of an aggression management training course. They were limited to nine participants to facilitate open discussions while ensuring in-depth exploration of shared experiences. This manageable group size allowed to consider diverse perspectives according to the objectives of the project plan. The focus group sessions lasted 2 to 2.5 hours and followed a structured case analysis model [32]. It included detailed descriptions of specific incidents, group reflections, and exploration of potential interventions. NH recorded and transcribed all focus group discussions. Collected data were anonymised and securely stored for analysis.

Data Analysis

Thematic Analysis

To capture the systemic nature of violence dynamics in nursing homes, we combined thematic analysis with system dynamics modelling. We used key themes identified in the data material to develop causal loop diagrams, identifying feedback mechanisms and systemic interactions.

Data analysis followed a thematic analysis approach based on Braun and Clarke's six-step framework [28]. First, data familiarization involved reading and annotating transcripts. Second, initial coding served to identify patterns relevant to the research questions. Third, we developed themes by grouping related codes, followed by iterative refinement (step four) to ensure consistency and relevance. Fifth, we defined themes and named them with input from an internal expert. Finally, we created a thematic map as the foundation for a conceptual model illustrating violence dynamics in nursing homes.

Developing causal loop diagrams

Building on the thematic analysis, the project team utilized system dynamics[29] to deepen the understanding of the identified themes and their interconnections. To achieve this, we employed causal loop diagrams (CLDs) [33], providing a structured method to identify

and analyse the feedback mechanisms underlying patterns of violence dynamics.

System dynamics modelling

System dynamics modeling analyzes complex system behavior over time by identifying causal relationships and feedback mechanisms within system structures [34].

CLDs visualize system behavior by connecting variables through arrows representing causal relationships. Each arrow carries a polarity: a positive (+) polarity indicates that an increase (or decrease) in one variable leads to a change in the same direction in another variable, thereby reinforcing or amplifying system behavior. A negative (−) polarity signifies an inverse relationship, where an increase in one variable causes a decrease in another (or vice versa), thus balancing or counteracting system dynamics. When variables connect to form closed cycles, they create feedback loops, which significantly influence system behavior. Reinforcing loops (positive loops) intensify initial changes, leading to growth or escalation, while balancing loops (negative loops) dampen or regulate changes, driving the system towards stability or equilibrium. By clearly identifying and analyzing these feedback loops, CLDs help illustrate how interconnected variables collectively shape the dynamic behavior of complex systems. [33]

Violence in nursing homes results from interacting individual, relational, and organizational factors that form complex, non-linear feedback mechanisms. CLDs model these dynamics by mapping how aversive actions (e.g., sanctioning) and affirmative actions (e.g., de-escalation) influence and counteract each other. In this study, CLDs were used to illustrate systemic interactions between key variables such as staff behavior, organizational support, resident characteristics, and resource availability. Aversive actions by staff, residents, or relatives can trigger reinforcing loops that escalate violence, while affirmative actions (e.g., empathy, institutional support) create balancing loops that mitigate risk.

The model was developed collaboratively within the project team and refined through iterative discussions. Figure 1 (in the results section) shows the model *Situational dynamics associated with an increased risk of violence in nursing homes.* It visualises interactions between aversive and affirmative actions and the underlying reinforcing and balancing mechanisms.

Ethical considerations

Informed consent

to participate was obtained from all participants. Due to the topic's sensitivity, privacy and confidentiality were ensured through anonymization, removal of identifying data, and restricted access. An advisory board with experts in law, aggression management, psychology, and nursing science ensured ethical standards, supported instrument development, and addressed legal and ethical issues. Psychological support was available for participants recalling violence-related experiences. To reduce social desirability bias, confidentiality was emphasized, and participation had no impact on professional standing.

Rigor and reflexivity

To ensure trustworthiness, we followed established qualitative research criteria: credibility, dependability, confirmability, and transferability [35]. Credibility was enhanced through team triangulation, iterative data collection, and external validation by an experienced qualitative researcher. Regular discussions enabled critical reflection and ensured that the findings remained relevant.

Dependability was maintained through a comprehensive audit trail, documenting key decisions and methodological adjustments for transparency. Confirmability was strengthened by independent coding, collaborative resolution of discrepancies, and reflexive journaling – with the aim to minimize bias.

For transferability, we provided detailed descriptions of the research context, participant characteristics, and recruitment process. Continuous self-reflection helped to mitigate potential biases. NH provided valuable practice-based insights. Due to the topic's sensitivity, we fostered a supportive interview environment to encourage open discussion and minimize social desirability bias.

Results

Characteristics of participants

We conducted a total of 34 individual interviews: twenty-two with care staff, seven with experts in the field of violence prevention in nursing homes, and five with relatives. Additionally, five focus groups with a total of 35 professional (four to nine participants per group) took place as part of case analyses. Detailed participant characteristics are summarized in Table 1.

Table 1
Categorized sociodemographic and professional characteristics of care staff (individual interviews and focus groups)

Professional title	**Individual interviews (n = 22)**	**Focus groups (n = 35)**
Registered Nurse, Advanced Federal Diploma of Higher Education[a], n	**18**	**6**
Healthcare Assistant, Federal Diploma of Vocational Education and Training[b], n	**3**	**7**
Certified Health Care Asistant[c], n	**1**	**21**
Others:	**0**	**1**
		(Registered Activation Specialist, Advanced Federal Diploma of Higher Education)
Professional experience in nursing in years: range (median)	3–50 (21)	0.5–40 (15.5)
Professional experience with the current employer in years: range (median)	0.5–25 (2)	225 0.5–18 (3)
Age in years: range (median)	18–73 (40.5)	22–63 (44)

[a] *Higher vocational school for nursing with a training period of three years. Prerequisite is a completed three-year vocational training as a healthcare professional (FaGe) or another vocational qualification with a Federal Certificate of Competence (EFZ). The training qualifies for comprehensive nursing tasks and extended areas of responsibility.*

[b] *A three-year vocational training programme to become a healthcare professional, focusing on basic care and support.*

[c] *A basic training course with the Swiss Red Cross (SRC) lasting between three and six months, specialising in supportive care.*

Of the 18 registered professionals interviewed individually, eleven have an additional role or further qualification: five participants work in management roles, three in education and training, and three have a Bachelor's or Master's degree.

Table 2 shows the sociodemographic data of the seven participating experts.

Table 2
Categorized sociodemographic and professional characteristics of the experts (individual interviews)

Individual interviews (n = 7)	**Range (median)**
Professional experience in nursing in years	13–50 (40)
Professional experience with the current employer in years[a]	1–16 (6.5)
Age in years	38–77 (59)
[a] Data from one participant is missing	

Six of the seven experts are trained healthcare professionals, one is a physician. Their tasks mainly include training, professional development and training in aggression management. The majority report that they regularly have direct contact with residents.

Additionally, we interviewed five relatives of residents. In three cases, these were spouses, and in two cases a daughter or son. The relatives were aged between 52 and 81 years. One of the interviews was conducted jointly with a resident (aged over 80 years) and his daughter.

Situational dynamics associated with an increased risk of violence

The analysis of the qualitative data yielded the model *Situational dynamics associated with an increased risk of violence* (Fig. 1).

[PLEASE INSERT HERE FIGURE 1]

Figure 1: Situational dynamics associated with an increased risk of violence

The findings indicate that violence in nursing homes often becomes normalised within everyday care practices. This normalisation creates conditions in which escalation dynamics can emerge and stabilise over time.

The model illustrates how violence evolves through interacting actions, structures, and resources. Five reinforcing loops (R1–R5) describe escalation dynamics, while one balancing loop (B1) shows potential for de-escalation.

In the following, we describe the individual loops in detail. The central loop – (R1) *everyday nature of interpersonal violence dynamics* – is presented first as the model's core. Each subsequent loop builds on this, illustrating its influence and highlighting systemic interactions. Quotes and practical examples from interviews serve to enhance clarity and to ground the model in real-world experience.

(R1) Everyday nature of interpersonal violence dynamics

This central loop reflects cyclical interactions between residents and care staff.

Aversive staff actions, such as sanctioning, distancing, or addressing symptoms instead of causes, leave residents' needs unmet. This increases their arousal and triggers aversive responses. In turn, these responses influence staff behaviour and reinforce a cycle of escalating interactions. This dynamic is self-reinforcing: rising resident arousal and aversive staff responses continuously intensify each other. Unmet needs create persistent tension, embedding such interactions into daily routines and lowering the threshold for escalation.

The following two quotes illustrate how they experience this everyday nature of violence:

"*We always had to use force. We had to hold him. Or we had to lock all the doors in this residential group so that he wouldn't wake up the other residents.*" (C13, Pos. 8)

"*Why is this woman fixated in the dining room for so long? They were afraid she would fall over. To protect her and because they were stressed, they tied her to the wheelchair and she was totally peaceful*" (C22, Pos. 4)

These examples show how violence becomes part of daily routines – often justified by safety concerns or institutional constraints. Breaking these loops requires a deeper understanding of the underlying dynamics.

(R2) Interpersonal dynamics of violence

Building on the central loop, this loop shows how aversive resident actions (e.g., aggression or resistance) can escalate tensions and affect staff responses. These behaviours may reduce staff self-efficacy, triggering feelings of powerlessness, ambivalence, and overload. In turn, this increases arousal and sustains violence dynamics. A humanistic value system and professional competence can intensify this inner conflict, as staff struggle to reconcile ideals with aversive actions.

A carer described a resident being force-fed after repeatedly throwing objects or hitting staff. While she understood the need to protect colleagues, the intervention conflicted with her interpretation of humanistic values and caused emotional distress:

"*I had to go back to work after that. I really wasn't feeling well. I still remember coming to the place and feeling like I was going to lose my breath. Even though the resident wasn't there anymore.*" (C12, Pos. 55)

In contrast, a less humanistic approach may lessen these feelings due to a lack of awareness of ethical conflicts.

The following typology of carers strongly influences the response:

- Conformists often follow institutional norms. Depending on the group dynamic, this may lead to violence. Carers tend to avoid conflict within the team and refrain from voicing criticism. One participant said:

"*And afterwards I thought: How do I address this [observed act of violence] now? I was responsible for quality.*" (C4, pos. 6)

- Resigned care staff have low tolerance for violence and are more likely to respond with aversive actions, thereby escalating the cycle. A participant described opting for medication instead of engaging in dialogue to de-escalate the situation:

I got him the wine and was able to smuggle a sedative into it ...

(C13, Pos. 52)

- Engaged care staff are reflective and committed to change, with the lowest likelihood of reinforcing violence dynamics. A participant described actively intervening in a violent situation to de-escalate it and to take over the interaction:

"I had just been helping another resident, when I observed it [a violent situation] and intervened relatively quickly. I said to my colleague: I'll take over. I could take over to try to stop the violent situation." (C18, Pos. 6)

This loop highlights the key role of care staff. While resigned and conformist staff tend to perpetuate the cycle, engaged staff can interrupt it through de-escalation and affirmative action.

(R3) Erosion of resources

This loop shows how low self-efficacy fuels staff turnover, disrupts team stability and reinforces the sense of not meeting residents' needs. Since turnover reduces resources (staff, time, and support), carers struggle to meet expectations. This further lowers self-efficacy and intensifies feelings of powerlessness, ambivalence, and overburdening. However, nursing expertise can counteract this by effectively expanding available resources. In contrast, limited knowledge and experience increase insecurity and hinder adequate care. Low resources reduce the expectation of meeting care needs, especially with highly dependent residents, and further weakens self-efficacy.

The importance of professional development at various levels in preventing escalating situations was emphasized by one expert:

"*Employees need to learn about the context. (…) I also think it's about attitude, where you need to educate.*" (E1, Pos. 94)

This cycle accelerates resource erosion, as unstable teams and declining professional confidence widen the gap between expected and actual care quality. Breaking it requires targeted investment in training, retention, and professional competence to strengthen staff self-efficacy and stability.

(R4) Institution as catalyst

This loop shows how institutional values and leadership shape staff behaviour.

In turn, staff responses influence organisational culture – either reinforcing or mitigating violence cycles.

Aversive organisational responses (e.g. punitive measures) reduce staff self-efficacy and foster powerlessness, ambivalence and overburdening. This heightens arousal, normalises violence and increases the likelihood of aversive staff responses – thereby further escalating tensions. Aversive staff actions also reinforce institutional negativity and create a self-perpetuating cycle.

Institutional aversiveness also undermines residents' self-efficacy, especially for persons with a higher need of care. Disempowered residents experience increased stress and behavioural symptoms. This further intensifies interpersonal tensions and escalates violence.

Conversely, humanistic values at both institutional and individual levels disrupt this cycle. When leadership models empathy, respect, and de-escalation, care staff internalize and apply these principles. This fosters self-efficacy and confidence in managing difficult situations. A non-punitive, supportive work culture strengthens constructive conflict resolution and reduces aversive reactions to resident aggression.

Leadership presence is also crucial. Visible, engaged leaders boost care staff confidence and ability to act. Absence of leadership creates uncertainty and lowers morale, as one relative observed:

"I don't know the right terms, but the leader of this dementia ward had been there for eleven years and now she's gone. Now there's someone who works a lot of night shifts. She's just not present." (R3, Pos. 82)

This interplay of institutional values, leadership, attitude and self-efficacy (of care staff and residents) highlights the crucial role of organizational culture in either reinforcing or preventing violence. Institutions that foster affirmative leadership, staff empowerment, and humanistic care can break violence cycles. They contribute to creating a safer environment for both staff and residents.

(R5) Relatives as catalyst

This section highlights how relatives shape caregiving dynamics through their trust in the institution and through their actions. Thereby they influence the care environment and staff behaviour. A reciprocal relationship exists between relatives' trust in the institution and their perception that the resident's needs are met. If this is the case, relatives develop trust, which reduces direct confrontation or criticism. Conversely, unmet needs are often linked to resident powerlessness and can erode trust. This increases the risk of adverse reactions.

Relatives typically respond in two ways. Some of them increase their presence. They actively address concerns with staff. This may add pressure and provoke aversive responses. Others withdraw, fearing their involvement might worsen the situation by escalating tensions with staff. One of the relatives noted:

"*You really must be very reserved as a relative. If it were up to me, I would have spoken up a bit louder. But you always have to adopt a more reserved approach. It's your mother – and you're at their mercy. You're always afraid.*" (R5, Pos. 230)

This loop highlights the need for institutions to actively involve relatives, to provide clear communication channels and to adjust expectations in order to minimise the risk of adverse interactions. By doing so, institutions can harness the positive potential of relatives as partners in care, rather than as sources of additional strain.

(B1) Brake on escalation

This loop, unlike previous loops, describes a brake rather than a catalyst, slowing escalation dynamics instead of reinforcing them.

An organizational culture rooted in humanistic values plays a key role. When institutions respond non-aversively to challenging behaviour, residents experience greater self-efficacy, and a stronger sense of autonomy. This is also the case for residents with a high level of care needs, who are more likely to feel powerless. More perceived autonomy and control contribute to lower arousal levels. This results in a calmer environment. In turn, this has a positive impact on care staff. They face fewer highly agitated behaviours. They are less likely to respond aversively.

Higher resident self-efficacy lowers arousal levels and results in a calmer environment. Due to this, care staff faces fewer highly agitated behaviour and the likelihood of responding aversively is reduced.

This approach requires a shift in mindset: professionals are encouraged to explore residents' underlying needs and act in a person-centred manner:

"*He always gets angry during showers — do we still need to insist on showering him?*" (C5, Pos. 50)

This loop highlights how a value-driven, non-aversive care culture prevents escalation by enhancing resident self-efficacy and lowering arousal, thereby fostering a calmer, more stable care setting.

Discussion

The findings of the study demonstrate that the emergence of situations with an increased risk of violence in nursing homes is a multifaceted process influenced by numerous factors. The model *Situational dynamics associated with an increased risk of violence* (Fig. 1) demonstrates that a multitude of factors increase the risk of violence, with only a limited number of factors being identified as effective preventative measures.

Based on the model of Schiamberg et al. (2011), we discuss the results of this study and possible prevention measures on four levels: (a) individual, (b) relational,

(c) institutional and (d) societal.

Schiamberg et al. (2011) perceive resident and carer as a dyad. Thereby, they provide a framework concerning the dual nature of risk factors for resident abuse [36]. At the individual and relationship level (a + b), care staff characteristics shape the dynamics of violence. These characteristics comprise, for example, a humanistic perspective, professional competence, and the quality of interactions with residents.

Piirainen et al. (2021) indicate a significant correlation between the competencies of care staff and their ability to cope with challenging situations. They underscore the importance of targeted training and skill development [37]. Resident characteristics like a high level of care needs and cognitive impairment also influence the dynamics of violence. Low self-efficacy and residents' high dependency of care increase agitation and provoke aversive staff responses. Relatives play a role as well. Their trust in the institution and their involvement can de-escalate tensions. In contrast, a lack of relatives' involvement and trust contributes to conflict. Therefore, training in communication, person-centred care, and trust-building strategies are essential. In addition, de-escalation and aggression management training play a key role in mitigating escalation risks. In this context, structured programs such as ProDeMa are relevant [38]. A well-developed competency framework is essential for enabling staff to provide effective person-centred care[37]. A comprehensive understanding of residents' behaviour can improve the quality of care, reduce the burden on relatives and create a supportive, understanding environment for residents [39].

At the institutional level (c), lack of support and inconsistent leadership can normalize violence. Aversive responses discourage staff and undermine residents' self-efficacy. This leads to an increase of agitation and challenging behaviour. It reinforces a negative cycle. A person-centred culture grounded in humanistic values, empathy, and understanding of behaviour is key to de-escalation and prevention.

Transformational leadership, a supportive work environment, and a strong patient safety culture enhance person-centred care [40]. Key leadership attributes include fostering trust, balancing compliance with person-centred values, and motivating staff [41]. Concepts such as the *Prevco Checklist* underscore leadership as a key factor in aggression management and violence prevention [42].

Our study shows that high staff turnover disrupts team stability, weakens trust and compromises care continuity. New staff often misinterpret resident needs, thereby increasing escalation risks. Overburdened staff may withdraw or respond aversively. As Bratt and Gautun (2018) note, team composition matters. Experienced staff provides stability. A high rate of inexperienced staff increases uncertainty and reduces confidence [43]. To address this, value-based leadership, targeted retention strategies, and a supportive workplace culture are required.

At the societal level (d), Schiamberg et al. highlight social and political conditions influencing the risk of violence in nursing homes. Reducing escalation requires more resources or lower workloads, supported by political action through legislation and funding. Studies show that adequate staffing and a balanced skill-mix are crucial for quality of care and burnout prevention. High workload and staff shortages increase stress, absenteeism, and reduce person-centred care [44–46].

Policymakers can help reduce violence by establishing clear guidelines and quality standards. Prioritizing professional competence in training is essential. Mandatory de-escalation and person-centred care education can strengthen staff self-efficacy.

Enhancing the attractiveness of nursing requires better working conditions and career prospects, particularly in the context of resident complexity and rising rates of persons with dementia as recruitment challenges. The Swiss health strategy

2020–2030 calls for structural reforms, workforce investment, and improved employment conditions to ensure high-quality care [46]. Targeted measures are essential to attract and retain skilled staff in nursing homes [47].

To achieve this, work environments should support professional identity, intrinsic satisfaction (e.g., recognition, growth), and extrinsic benefits (e.g., salary, reduced workload). Strengthening these factors at the societal level promotes a stable, motivated workforce, reduces turnover and ensures continuity of care [42].

Although the societal level is the most distant, it significantly influences the risk of violence in nursing homes. Social awareness and political values can guide the development of effective institutional strategies.[30]

Violence in nursing homes should be addressed at all levels. Strengthening self-efficacy and a person-centred approach reduce escalation risks at the individual and relational level. The institutional level shapes dynamics through value-based leadership and team stability. Societal improvements in staffing, financing, and working conditions are essential. While harder to influence, all stakeholders should foster a safe, appreciative care environment.

Addressing violence in nursing homes requires systemic interventions aligned with person-centred practice development as a continuous, participatory process. Frameworks like the Prevco Checklist [42] (originally developed for psychiatric settings) highlight the importance of leadership, organizational culture, staff competencies, and user participation as key elements for sustainable violence prevention – all equally relevant in nursing homes.

Strengths and limitations

This broad, case-based study integrated perspectives of care staff, relatives, and experts, enabling a nuanced exploration of violence dynamics without a predefined definition. Limitations include selection bias and social desirability due to the topic's sensitivity, as well as limited generalisability from regional focus and sample size. Quantitative studies may address this. Residents were not interviewed; their perspectives would have enriched the study, but ethical concerns and cognitive or physical impairments posed participation challenges and a risk of re-traumatisation.

Recommendations for further research

Future research should focus on practice-oriented violence prevention, emphasizing on-site implementation and adaptation in nursing homes. This includes evaluating how de-escalation training can be sustainably integrated into daily practice through ongoing support, refreshers, and practical application. Further studies should explore how competency frameworks (linking practical, theoretical, and interpersonal skills) can strengthen staff capacity for person-centred care. In addition, tailored prevention concepts should be developed and tested across different institutional settings. Research on implementation is key to ensuring sustainability. Expansion to other care contexts and validation of interventions will quantitatively enhance long-term effectiveness.

Implications for policy and practice

To effectively address violence in nursing homes, future practice implications should focus on systematic interventions at both policy and operational levels. Mandatory training tailored to professional roles and institutional needs should emphasize occupational safety, de-escalation techniques, and person-centred care, thereby enhancing staff skills and confidence. Institutional leaders must foster a supportive culture through affirmative leadership, adequate resources, and transparent incident reporting mechanisms. Strengthening family collaboration through clear communication and involvement in care planning is also crucial for reducing conflicts. Additionally, broader societal efforts aimed at raising awareness of empathy, dignity, and respect in caregiving are recommended. Collectively, these measures will significantly enhance care quality and safety for both residents and caregivers.

Conclusions

This study underscores the complexity of violence in nursing homes and the importance of addressing underlying needs to prevent escalation. The *Situations with an increased risk of violence – dynamics* model illustrates how care staff actions can either reinforce or interrupt cycles of violence. Most identified feedback loops are endogenously driven and reinforcing; only one balancing loop offers potential for de-escalation. This highlights the difficulty of achieving change from within and the need for targeted external impulses - such as training, leadership, and resource allocation - to support a non-violent care culture. The findings offer a foundation for practical, needs-oriented prevention strategies.

Abbreviations

CLDs
causal loop diagrams
EFZ
Federal Certificate of Competence
FaGe
Fachperson Gesundheit (Healthcare Professional)
NAGS
Network Aggression Management in Health and Social Services Switzerland
SBK
Swiss Professional Association of Nurses
SRC
Swiss Red Cross
UBA
Independent Complaints Centre for the Elderly
WHO

World Health Organization

Declarations

Ethics approval and consent to participate

Ethics approval for this study was obtained from the Ethics Committee of Eastern Switzerland (Ostschweizer Ethikkommission) (BASEC No. 2023-00605).

All procedures performed in this study involving human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki Declaration and its later amendments.

Informed consent to participate was obtained from all participants prior to data collection. Participants were informed about the study's aims, procedures, and their rights, including the option to withdraw at any time without consequences.

Consent for publication

Not applicable.

Availability of data and materials

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

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

LA and AZ conceptualized the study. LA and AZ conducted interviews and focus groups. LA led the formal analysis with contributions from NH, AZ and DK. NH led the drafting of the manuscript. LA, AZ, and DK contributed to reviewing and editing the manuscript. AZ supervised the project. All authors read and approved the final manuscript.

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Figures

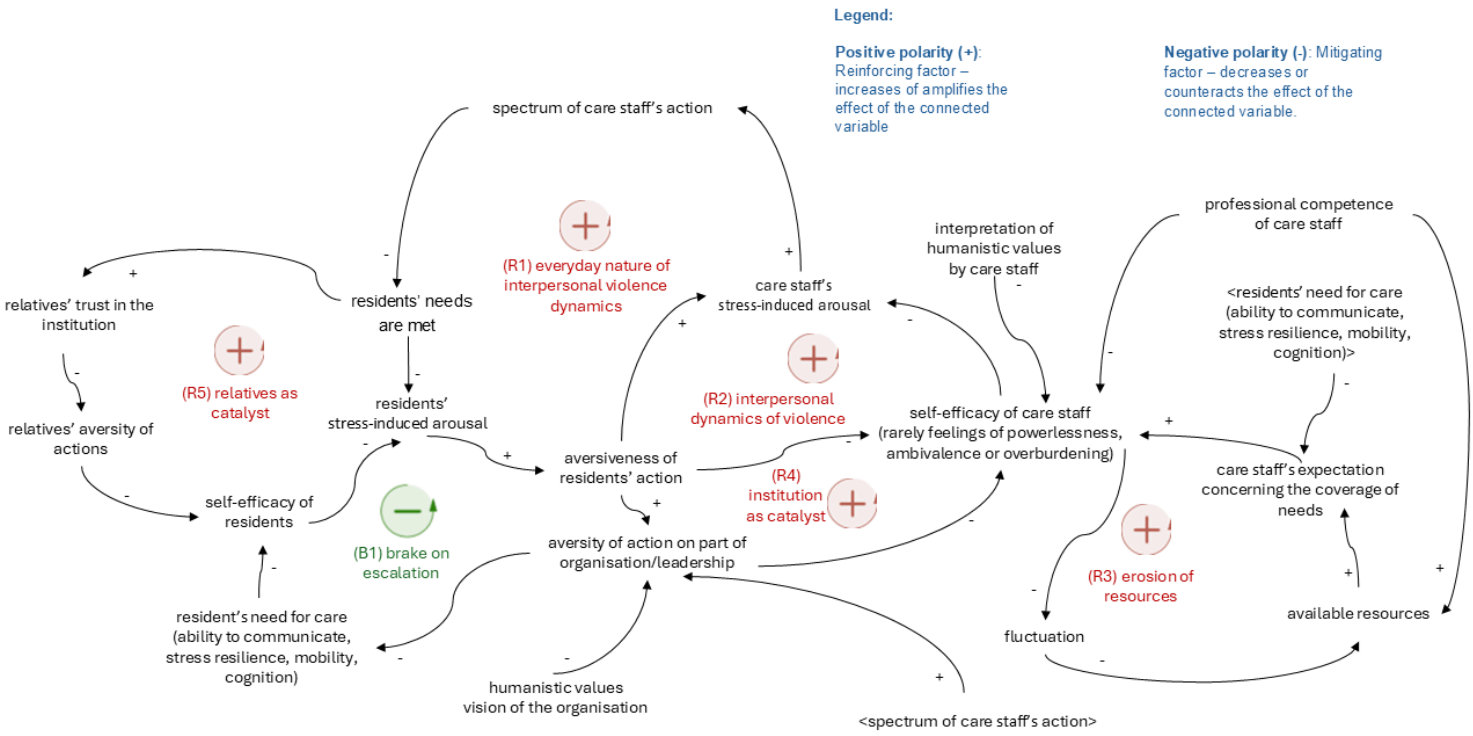


Figure 1

Situational dynamics associated with an increased risk of violence

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