

Prevalence of violence and its relation to caregivers' demographics and emotional reactions – an explorative study of caregivers working in group homes for persons with learning disabilities

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Prevalence of violence and its relation to caregivers' demographics and emotional reactions – an explorative study of caregivers working in group homes for persons with learning disabilities

The aim of the study was to investigate the prevalence of violence directed towards caregivers working in group homes for persons with learning disabilities, and to examine the relation between violent incidents and caregivers' demographics such as gender, age, years in service, years at the present workplace and education, as well as emotional reactions to violence expressed by the caregivers. A questionnaire was distributed to all caregivers, i.e. Registered Nurses, assistant nurses and nurse's aides, working in group homes for persons with learning disabilities. The results showed that 31% of the caregivers

(n = 120) had been exposed to violence during the preceding year with physical violence being the most common type of violence. All categories of caregivers were exposed to violence and emotional reactions were common. Weak relations were found between reported exposure to violence and various demographics among caregivers, such as age and education. Daytime work was the only independent factor in a regression model predicting violence towards the caregivers. Feelings of powerlessness, insufficiency and anger were the most frequently reported emotional reactions elicited by violent situations.

Keywords: caregivers, emotional reactions, group homes, learning disability, residential care, violence.

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Introduction

Caring for persons with learning disabilities necessitates close contact between the resident and the caregiver. This contact requires a high-quality relationship often characterized by affection and warmth between the persons involved. However, in specific situations, residents direct aggression and violence towards their caregivers. Persons with learning disability are one group of clients, along with psychiatric patients and persons with dementia, who are most often involved in violent actions towards caregivers (1– 5).

According to Gillberg and Soderstrom (6), the term 'learning disability' refers to the condition of persons who

because of their insufficient intellectual capacity, with limitations in self-care abilities have lifelong needs for support and interventions. Persons with learning disabilities often exhibit both communicative and physical difficulties as well as limited impulse control and low ability to manage their daily living. These limitations become manifest before the age of 18 years (7, 8). Both the reduced behavioural capacities and the specific emotional vulnerability of these persons are risk factors for violent behaviour towards caregivers. Low IQ, especially low verbal IQ, is common among violent offenders (6). Various authors suggest that persons with learning disabilities tend to have specific characteristics related to the occurrence of violence (9– 11). Emerson et al. (12) report that violence may be caused or exacerbated by a coexisting psychiatric disorder.

The prevalence of violence in care and services for persons with learning disabilities varies (9). Studies analysing problematic behaviour within hospital populations of persons with learning disabilities have estimated that between 30% and 40% of residents display such behaviour

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(13, 14). A recent Swedish study (15) reports that 61% of the caregivers working in service for adult person with learning disabilities had been exposed to violence during the last year.

The caregiver's ability to encounter risk situations and cope adequately has been suggested to be closely related to the caregiver's personal characteristics (16, 17). There have also been studies demonstrating an association between caregiver's self-reported burnout and negative emotional reactions to challenging behaviour (17). Several studies have found that caregivers who are assaulted experience both short-term and long-term emotional reactions, including anger, sadness, frustration, anxiety, irritability, fear, apathy, self-blame and helplessness (16– 18). Caregivers might also experience guilt and insufficiency in violent situations and might feel ambivalent about whether the violent behaviour was intentional (19). At the same time, they attempt to understand and advocate the client (20). This strain, related to violence, is probably a risk both for the caregivers working in group homes as well as for the quality of service for the residents. To meet both caregivers' and the residents' needs, and to include a base for practical framework to anticipate and recognize risk situations and introduce supervisory procedures for those exposed to violence (21– 23), further knowledge is needed.

The aim was, therefore, to investigate the prevalence of violence towards caregivers working in group homes for persons with learning disabilities, and to examine the relation between violent incidents and caregivers' demographics such as gender, age, years in service, years at the present workplace and education, as well as emotional reactions expressed by the caregivers.

Methods

Adult persons with learning disabilities in this study lived in various types of staffed housing. Some group homes consisted of separate apartments, connected to jointly used facilities while other group homes housed up to seven persons in one big apartment, where they had their own rooms. The group homes were located in an urban area representing half of a mid-sized town in northern Sweden, corresponding to approximately 30 000 inhabitants. In each group home, the residents differed in needs for support and service. The residents ($n = 65$) were diagnosed as having moderate to severe learning disability and the most frequent diagnoses were Down's syndrome and autism. A few of the residents ($n = 6$) had an additional diagnosis of a psychiatric condition such as schizophrenia. The residents ranged in age from 28 to 80 years.

Participants

Data was collected by questionnaires completed by Registered Nurses, assistant nurses and nurse's aides

($n = 149$) in care and services for persons with learning disabilities. The caregivers worked in 10 group homes housing between five and seven residents each. Caregivers who were employed in the group homes but who were not direct caregivers, e.g. paramedical staff, administrators, cleaners and kitchen staff, were excluded from the study.

Questionnaire

Violence towards caregivers during the preceding year was assessed by a semi-structured questionnaire including both multiple-choice and open-ended questions. The questionnaire comprises background variables, e.g. gender, age, education, years in service and years at the present workplace, as well as frequency and types of incidents, and respondents' emotional reactions and management of violent incidents. The caregivers were asked to report exposure to violence from residents. Originally, the questionnaire was developed to investigate violence in community-based care for elderly and has previously been used by Saveman et al. (24) Åström et al. (25) and Strand et al (15).

The caregivers were encouraged to report all incidents they had perceived as violent or harmful. In the questionnaire, violence was defined as actions of (a) a physical nature, e.g. pinching, kicking; (b) a psychological nature, e.g. spitting, yelling, accusing the caregiver of having stolen something; or (c) a sexual nature, e.g. grabbing and/or pinching an intimate part of the caregiver, leading to experiences of harm or to an increased risk of harm, e.g. pain, antipathy, fear or guilt.

Procedure

The researchers coordinated the research plan with the managers at each group home. The managers distributed the questionnaires to all caregivers and collected them 3 weeks later. The questionnaires were anonymously completed and sent to the first author. A database was then prepared from the data, for further analysis.

Ethics

The present study was approved by the Ethics Committee at the Faculty of Medicine, Umeå University, Umeå, Sweden (registration No. 98–195).

Information about the aim of the study, including procedures for performing the study, was given to the caregivers at meetings held in their workplace/group home. The definition of violence was presented and the importance of reporting violence from the residents was discussed. The caregivers were assured that their participation was voluntary and that all information they gave would be treated with strict confidentiality. They

were told that they could withdraw from the study at any time.

Analyses

Descriptive statistics were calculated in terms of frequency distributions and percentages related to the exposure to violence. One hundred and twenty completed questionnaires were received, i.e. the external dropout rate was 28%. The internal dropout was <3% for the analysed variables. High internal dropouts of the questions concerning preventive strategies (15–30%) limited the possibilities for plausible interpretation and were, therefore, excluded from the analysis.

Relationships between variables were analysed by Independent t-test, Pearson's chi-squared test and logistic regression analysis (26).

Logistic regression analysis was used to identify factors predicting exposure to violence. The dependent variable was exposure to violence and three categorical variables, age below or over 40 years, education and work shift were used as independent. $p < 0.05$ was considered statistically significant. The statistical software used for the analyses was SPSS for Windows, version 12.0 (SPSS Inc., Chicago, IL, USA) (27).

Results

The response rate of the study was 81% ($n = 120$). All dropouts were among nurse's aides (22%). Especially male nurse's aides relinquished participation (27%). On the contrary, Registered Nurses and assistant nurses had a response rate of 100%. The total number of caregivers in the study working full-time and part-time was comparable, viz. 58 (48%) and 62 (52%) respectively. A large proportion, 99 (82.5%), of the caregivers were daytime workers. The male caregivers had on average been working in care and service for 8 years (± 6.9) and females 9 years (± 8.4). Female respondents were highly over-represented (72.5%; $n = 87$) in the study.

During the preceding year, 37 (31%) of the respondents had been exposed to violence, 26 females (30% of all female caregivers) and 11 males (33% of male caregivers). All, except one of the respondents, who reported violent incidents were daytime workers. There was a significant difference in age between caregivers exposed to violence and those not exposed ($t = 2.053$, $df = 118$, $p = 0.042$, two-tailed). Caregivers aged lesser than 40 years (39%; $n = 59$) were more frequently exposed to violence than were caregivers 40 years and older (23%; $n = 59$, $\chi^2 = 3.61$; $p = 0.057$). Those from the youngest (19–24 years) age group (63%; $n = 10$ of 16) and in the age group of 60 years and older (38%; $n = 3$ of 8) were proportionally more often exposed to violence than were the others. Violence towards caregivers was reported more frequently

(44%; $n = 10$) among those who had been in service for 3–5 years while those who had worked for 9–11 years displayed the lowest frequency (19%; $n = 3$). More assistant nurses (62%; $n = 8$) than nurse's aides (28%; $n = 28$) and Registered Nurses (17%; $n = 1$) reported exposure to violence ($\chi^2 = 6.77$; $p = 0.034$) (Table 1).

Regarding exposure to violence, the logistic regression model with background variables only showed significant relationship to work shift. Daytime work was showing higher odds for exposure to violence, than night work (OR = 0.06; 95% CI = 0.007–0.524). Regarding the caregivers' education, nurse's aides were less frequently, but not significantly reporting violence than were more trained nursing assistants (OR = 0.44; 95% CI = 0.048–4.053). Furthermore, the significantly lower exposure to violence found in the univariate analysis related to the caregiver's age were not confirmed (OR = 0.47; 95% CI = 0.201–1.109) (Table 2).

The substantial sub-sample of the caregivers who had been exposed to violence (31%; $n = 37$) reported that violent incidents occurred several times a week (41%; $n = 15$) while 24% (7.5% of all caregivers; $n = 9$) reported daily exposure to violence. Physical and psychological violence were reported by 81% ($n = 30$) and 11% ($n = 4$), respectively, for the exposed caregivers. Three caregivers

Table 1 Characteristics of respondents; total number of respondents, number and percentage exposed to violence in the sample

	Total (n)	Exposed, n (%)	p-value
Age (years)	120	37 (31)	0.042
Age grouped			0.057
<40 years	59	23 (39)	
>40 years	61	14 (23)	
Education*			0.034
Registered Nurses	6	1 (17)	
Assistant nurses	13	8 (62)	
Nurse's aides	101	28 (28)	
Gender			0.715
Male	33	11 (33)	
Female	87	26 (30)	
Total time in service			0.564
<3 years	12	4 (33)	
3–5 years	23	10 (44)	
6–8 years	24	7 (29)	
9–11 years	16	3 (19)	
>11 years	45	13 (29)	
Hours of duty			0.218
Full-time work	58	21 (36)	
Part-time work	62	16 (26)	
Work shift			0.004
Daytime work	99	36 (36)	
Night work	21	1 (5)	
Total	120	37 (31)	

Groups were statistically significant with regard to education and exposure to violence at * $p \leq 0.05$.

Table 2 Logistic regression analysis of relationships between caregivers exposure to violence and their background variables

Variables	OR	95.0% CI
Age (years)		
<40	1.00	5
>40	0.47	0.201–1.109
Education		
Assistant nurses	1.00	
Nurse's aides	0.44	0.048–4.053
Registered Nurses	0.07	0.006–1.024
Night work	0.06	0.007–0.524

did not answer that question. The respondents did not report sexual violence. Regarding management of violent incidents 73% (n = 27) of the exposed caregivers reported that the violent incidents were only managed by internal discussions with colleagues. Only two (5.4%) of the exposed caregivers reported personal support from the manager.

Only a few caregivers (11%; n = 4) reported the rest of the problems. One single caregiver reported the need for consultation from health care and no one reported sick leave. However, exposure to violence often resulted in harmful emotional experiences. The most frequently reported types of emotional reactions to violence were feelings of powerlessness (76%; n = 28), insufficiency (62%; n = 23) and anger (57%; n = 21). Shame (5%; n = 2) and guilt (8%; n = 3) were the least frequently reported emotional reactions related to violence (Fig. 1).

Discussion

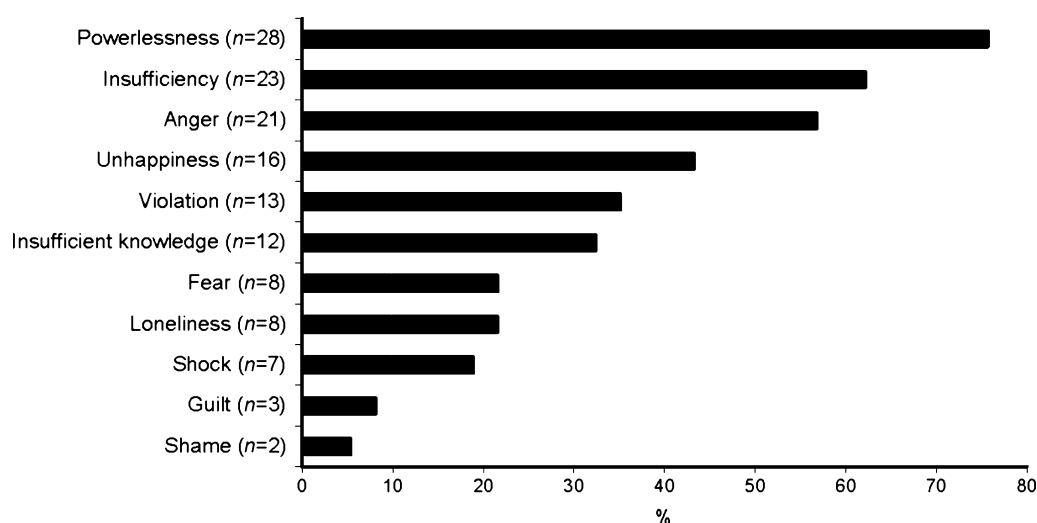
The choice of definition of violence was based on the fact that the purpose of the study was to investigate all types of

violent behaviour displayed towards caregivers, i.e. not only physical violence interpreted as serious. Results from an earlier study by Larkin et al. (28) pointed out that violent acts could be serious, irrespective of whether or not the incident resulted in injury. Rippon (29) states that the lack of clear definitions of violence has plagued researchers and suggests that before further research can be conducted, a clear definition of aggression and violence must be agreed upon. By contrast, in their study Arnetz et al. (30) intentionally did not define violence, not only leaving the interpretation open to individual discretion but also, making no distinction between abusive language, threats and actual physical assaults, or between violence and aggression.

Initially, there was a sceptical attitude among the caregivers to complete the questionnaire as they regarded the information as delicate. Thus, all information about the caregivers and the residents were collected anonymously and we could not remind each respondent personally. The external dropout could possibly be explained by the lack of motivation to complete the questionnaire among caregivers not exposed to violence. This could have influenced the relative frequencies of exposure.

Significant relations have been found between exposure to violence and various characteristics of the caregivers. However, these findings should be interpreted with caution. Limitations in the study, such as the small sample, and the fact that all the caregivers were selected from a low number of group homes in the same town in Sweden, makes it difficult to draw conclusions regarding exposure to violence towards caregivers and investigated relations.

In the present study, 31% of the caregivers had been exposed to violence during the preceding year. This figure is analogous with results from other studies (10, 11). Studies performed in geriatric and acute care found that

**Figure 1** Caregivers' emotional reactions (more than one) in relation to exposure to violence.

33–70% of caregivers reported exposure to violence during the preceding year (31, 32). The results regarding frequencies of violent incidents could be compared with results from two Swedish studies (15, 31) in service and care for persons with learning disabilities. Strand et al. (15) describe that 12% of the caregivers reported that they were exposed to violence daily and 19% were exposed a few times a week. Menckel and Viitasara (31) revealed that 9% of exposed caregivers in care and service for persons with learning disabilities reported daily incidents of violence while 67% reported several incidents a month.

One possible reason for the inconsistency in the findings in the literature concerning frequency of violence could be cultural differences regarding the caregivers' inclination to report violent incidents in care and services (32). Another reason could be the tendency among caregivers to take responsibility for the violent act as the residents obviously are not functionally able to take such responsibility. To blame oneself and to look at the violent act as self-inflicted is, therefore, another possible way for caregivers to cope with violence. This could also influence the caregivers' inclination to report violence. Differences in caring conditions within group homes, such as caregivers' education, number of caregivers in relation to residents and level of functions among the residents, could also affect the different figures of caregivers exposed to violence.

Results indicate that the caregivers' age, education and time working in service for persons with learning disabilities could be important determinants of exposure to violence. Among the caregivers reporting violence, young persons, i.e. persons aged 19–24 years, and persons with only a few years' experience in care and services were most frequently exposed to violence. This trend has also been reported among caregivers in psychiatric care (1, 33). The results could be explained by the young caregivers' shorter work experience, which may affect their ability to manage difficult care situations and critical behaviour of residents. However, an equally plausible explanation could be the younger caregivers' willingness to describe their work in greater detail by more frequently reporting incidents of violence. Out from our result, the need for support for young and more unexpired caregivers seems to be obvious.

In this study, male and female caregivers reported exposure to violence at similar levels (33% and 30% respectively). Studies with similar results have been found in investigations in the field of psychiatric and geriatric care (33, 34). However, there are studies with partly conflicting results in relation to gender, in which both men (25, 35) and women (36) have been found to be more exposed to violence. Inconsistent figures reported in the literature could be related to various factors, e.g. differences in type of care, type of care organization and caregiver education.

Comparable proportions of full-time and part-time workers reported exposure to violence. Both categories of

caregivers share a great deal of their working time assisting the residents and may, therefore, often be involved in difficult care situations which represent a risk of exposure to violence. This interpretation is in accordance with that of another study of caregivers caring for inpatients with learning disabilities, which showed that most injuries reported by the caregivers were minor and occurred in close contact with the residents (37).

All reported incidents, except one, occurred during daytime. The result seems logical as most connections between persons with learning disabilities and their caregivers are related to daily activities such as bathing, dressing and eating. This interpretation is in accordance with results from other studies showing that persons with learning disabilities are at risk of psychological stress, because of difficulties in appraising and processing information and because of the need for a structured environment as well as their limited behaviour repertoire (38, 39). Another explanation for the finding that the violent situations in our study were exclusively reported by daytime workers could be that most residents are asleep during the night and interactions, therefore, are limited.

The results from logistic regression analysis showed weak relationships between exposure to violence and the caregivers' background variables. Daytime work was the only independent variable predicting exposure to violence. In interpreting the results concerning exposure to violence, it could be considered that violence may be related to factors besides those addressed in this study.

Physical violence was reported much more frequently as was psychological violence. This result could be compared with figures from a study conducted by Goodridge et al. (40) who found that 70% of the reported incidents of violence were of physical character.

Assistant nurses reported violence more often than nurse's aides. A plausible interpretation could be that education is an important variable to be aware of violence as a problem in the interaction with persons with learning disabilities. Results from an observational study by Whittington and Wykes (34) on nurses' behaviour and violence in psychiatric hospitals underpin this assumption. These authors found evidences for role characterization, and type and quality of interaction as important factors related to violence towards caregivers.

In this study, exposure to violence often resulted in harmful experiences, such as increased fear, anxiety, antipathy against the resident, anger, guilt and shame. Similar results are found in other studies reporting caregivers' feelings of anger, anxiety, helplessness, loss of control and increased irritability and fatigue as the most frequent experiences (34, 41). These feelings probably have significant impact on caregivers and may result in problems adapting to work-related strain, difficulty in managing critical situations and risk of experiences of burnout. They may also negatively affect the quality of the

interaction and the quality of care and service (42, 43). The lack of support from the organization to cope with challenging caring situations in daily work is another finding from the study. Similar findings have been described in an earlier study of violence towards caregivers in geriatric settings (44). There is a need to develop clear strategies, well known by all the caregivers, about how to cope with violent situation. There is also a need for improved support from managers especially for vulnerable caregivers.

The effects of violence on caregivers caring for persons with learning disabilities indicate that further studies are needed to investigate the relationship between exposure to violence and emotional reactions. Additional factors, such as caregiver characteristics and environmental factors, e.g. working climate, may also affect the occurrence of violence towards caregivers either individually or environmentally. Further studies examining such factors could shed light upon additional intervening variables connected to the occurrence of violence towards caregivers caring for persons with learning disabilities.

Conclusions

The results clearly show that violence towards caregivers is frequently occurring in daily work with persons with learning disability. Further, the results point to the necessity to regard violence towards caregivers as a phenomenon that can seriously affect the caregivers' daily work and that violence consequently represents a stress factor. The results also indicate the importance of recognizing the caregivers' difficulties in their daily work in settings for persons with learning disabilities as well as their need for support from managers and professional supervision. The importance of variables such as caregivers' education, age, and daytime work as possible determinants of exposure to violence could be more at focus in further research.

Development of preventive strategies, such as specific working procedures in daily contact with persons with learning disabilities, staffing, and caregivers' competence regarding communication and interaction, as well as suitable management of violent situations, might lower the risk of exposure to violence among caregivers. However, further research is needed to discover the aetiology of violence and vulnerability associated with victimization.

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Author contribution

All authors participated in the conception and design of the study. Mats Lundström analysed the data and with Sture Åström drafted the manuscript and sought funding for the project. Sture Åström also collected the data used in the study and supervised the project as a whole. Martin Eisemann gave his statistical expertise and with Britt-Inger Saveman provided critical revision of the manuscript.

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