ORIGINAL PAPER

NURSES' EXPERIENCE AND ATTITUDES TOWARDS INPATIENT AGGRESSION ON PSYCHIATRIC WARDS

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Abstract

Aim: To determine the incidence rate of forms of inpatient aggression towards nurses who working on psychiatric wards; to identify their attitude to patient aggression, to the factors that condition the occurrence and management of aggression. To determine the differences between nurses in relation to educational training aimed at the issue of patient aggression. *Design:* Quantitative cross-sectional study. *Methods:* Selection of respondents was deliberate. The sample comprised 223 nurses with an average of 21.27 (± 11.41) years of clinical practice. Data collection was implemented by means of the self-assessment scales: Violence and Aggression of Patients Scale (VAPS), Attitude Towards Aggression Scale (ATAS), The Management of Aggression and Violence Attitude Scale-Likert (MAVAS-L). *Results:* 98.58% experienced inpatient aggression in the course of the previous year. Negative attitudes to patient aggression predominated in the sample. Nurses expressed strongest agreement with the idea that internal factors foster patient aggression. Regarding methods of aggression management, nurses expressed strongest agreement with the use of medical therapy and restraints. They held a neutral attitude towards the use of non-physical methods. The age of nurses had an effect on how strongly they agreed with the importance of internal factors in prompting patient aggression and with the use of medical therapy and restraints. *Conclusion:* A high percentage of nurses have had personal experience of various forms of patient aggression. Negative attitudes to aggression predominated in our sample of nurses, emphasizing the influence of internal factors. The attitude of nurses towards patient aggression influences the selection of aggression management strategies.

Keywords: nurses, psychiatric wards, patient aggression, experience, attitude, management of aggression.

Introduction

The incidence of aggression towards health care staff on psychiatric wards, including nurses, is repeatedly depicted as being higher in comparison with the workplaces of other clinical disciplines (Ferri et al., 2011; Ridenour et al., 2015). The incidence of aggression among mentally ill patients is conditioned by a wide spectrum of various predictors such as the psychopathology of disease, incidence of aggression in the patient's history, patient's age, alcohol and substance abuse, general atmosphere on the psychiatric ward, communication between the health care staff and the patients, as well as their approach towards the patients (Jonker et al., 2008; Cornaggia et al., 2011). Duxbury (2002) depicts the internal, external and situational-interaction models through which he explains the reasons for outbreaks of aggression.

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Health care staff use various methods and strategies in the management of patient aggression. Their choice may be related to their attitude towards patient aggression, including their perception and comprehension of the causes of aggressive behaviour (Pulsford et al., 2013). Many of the health care staff consider patient aggression to be a routine part of their profession (Dickens et al., 2013). Considering the nature of their work, it is the nurses, in comparison with other health care professions, who are confronted with the patient aggression most frequently. Patients' aggressive behaviour can have serious consequences for the nurses in many areas. Stevenson et al. (2015) summarize the consequences in psychosocial terms, such as anger, fear, anxiety, shame, symptoms of post-traumatic stress disorder, experience of guilt and self-blame, decreased job satisfaction, and increased tendency to terminate employment. They rank injuries to nurses causing temporary or permanent disability among the serious physical consequences. At the same time they list the negative consequences of patient aggression at the organizational level (high staff turnover, reduced

work ethic, hostile work environment, more frequent lapses at work, repeated absences and occupational injuries among nurses). Even though research on patient aggression – especially abroad – has been conducted for decades (Infantino et al., 1985; Bowersa et al., 1999), the issue is still topical, repeatedly addressed and discussed. In our study, we state some partial results focusing on analysis of nurses' experience of and attitudes towards patient aggression on psychiatric wards, established by a nationwide study: Incidence Identification and Analysis of Patient Aggression towards Nurses.

Aim

The aim of our study was to determine the incidence rate of the constituent forms of inpatient aggression towards nurses working on psychiatric inpatient wards during the period of the previous year. At the same time, our aim was to identify their attitude to patient aggression, as well as their attitude to the factors that condition the occurrence and management of aggression. Within the study, we determined the differences in the assessed parameters between the nurses who, in the past, had completed educational training focused on the issue of patient aggression, and those who had not received such training.

Methods

Design

The study had a quantitative cross-sectional design.

Sample

Selection of the respondents for our research study was deliberate, based on pre-defined criteria: nurses who, for a minimum period of one year, have worked on psychiatric inpatient wards in selected hospitals in the Slovak Republic. The sample comprised 223 nurses, 196 of whom were female and 27 male. The average age of the entire sample was 42.25 (± 10.07) years and the average length of clinical practice 21.27 (± 11.41) years. 146 nurses (66%) had completed secondary education, 77 nurses (34%) were university graduates. Most nurses worked in three-shift operation (n = 166; 74%). Educational training (seminars, workshops, courses, etc.) focusing on the issue of aggression and its management had been attended by 55 nurses (25%). The nurses worked in the psychiatric wards of the University Hospital in Bratislava, the University Hospital in Nitra, the Faculty Hospital in Trenčín, the University Hospital in Trnava, the University Hospital with healthcentre in Žilina, Martin University Hospital, Profesor Matulay Psychiatric Hospital in Kremnica, F. D. Roosevelt University Hospital with healthcentre in Banská Bystrica, J. A. Reiman University Hospital with healthcentre in Prešov, and Louis Pasteur University Hospital in Košice.

Data collection

Data was collected by means of three self-assessment scales. The nurses evaluated the occurrence of aggression in patients by using the Violence and Aggression of Patients Scale (VAPS) by Lepiešová et al. (2012). VAPS consists of 11 items representing different forms of aggression which – based on the factor analysis – are divided into subscales titled: verbal attack (VS) (defamations, unsubstantiated accusations, insults, rebukes, intimidation, threats, and sexual remarks); physical aggression without the use of a weapon (VT1) (spitting, biting, scratching, pinching, shoving, the throwing of objects, slaps, punches, and kicks); physical aggression with the use of a weapon and contact forms of sexual aggression (VT2) (choking holds, assaults with a sharp object, stabbings, shootings, physical contact of a sexual nature without actual physical harm, sexual assault involving actual physical harm (Lepiešová et al., 2012). On a six-point frequency scale (from one indicating "never" to six, "always"), the nurses indicated how often they had become the object of the given forms of patient aggression in the course of the previous year of work. The higher the VAPS score, the more frequently the nurses reported the occurrence of aggressive incidents involving patients aimed at their person. In our sample, Cronbach's alpha of VAPS was 0.81.

We surveyed the nurses' attitude towards patient aggression via the Attitude Towards Aggression Scale (ATAS), by the authors Jansen et al. (2005). It consists of five subscales/domains with 18 items representing five types of attitude towards patient aggression against nurses: offensive (AO) evaluates aggression as harmful, unpleasant and unacceptable behaviour that also involves verbal aggression; destructive (AD) evaluates aggression as an act causing actual physical harm or the threat of such an act; intrusive (AI) considers aggression to be an expression of the intent to harm or injure others; communicative (AC) considers aggression to be a signal stemming from patients' sense of helplessness with the aim of supporting the therapeutic relationship; protective (AP) considers aggression to be self-protection or self-defence of patients' physical and emotional space. Nurses expressed their agreement or disagreement using the Likert-type scale from one to five (one indicating strong disagreement to five indicating strong

agreement). Cronbach's alpha for the individual subscales ranged from 0.41 to 0.82.

To assess nurses' attitude to the causes of patient aggression as well as to strategies for aggression management, we used The Management of Aggression and Violence Attitude Scale-Likert (MAVAS-L) (Duxbury et al., 2008; Pulsford et al., 2013). MAVAS-L focuses on the interpretation of causes for patients' aggressive behaviour and its management. It contains 24 items that reflect three explanatory models of aggression: internal (IF) accentuates the associations between aggression and the internal characteristics of an aggressor such as age, gender and disorder. External (EF) recognizes the interaction of environmental factors in the occurrence of aggression, e.g., degree of privacy and adequate space; schedule of care; environmental comfort, from both physical and psychosocial points of view; and the question of liberty: independence, freedom of movement, and restrictions and the use of restraints. Situational-interaction (FSI) focuses on the nurse – patient relationship, the means of communication and the level of patient involvement in decision-making. The tool also detects nurses' opinion of the management of patient aggression in the following subscales: use of medication (MED), restraint (R) and non-physical methods (NPM) (Duxbury, 2002; Duxbury, 2003; Duxbury, Whittington, 2005). With the author's consent, the MAVAS-L tool (Duxbury et al., 2008; Pulsford et al., 2013) was reduced off three items which included the ways of patients' isolation that are not implemented in clinical practice in the Slovak Republic. Nurses express their attitude to the constituent statements via a five-point Likert-type scale from one (strongly disagree) to five (totally agree). Cronbach's alpha of individual subscales ranged from 0.42 to 0.57. Empirical data collection was conducted from November 2014 to April 2015.

The measuring tools were distributed to the nurses through the nursing management.

Data analysis

Empirical data were given codes and then transferred to electronic form in MS Excel 2010. For statistical analysis, Statistica 8.0. was used. Statistical analysis was implemented with the use of descriptive and inductive statistics. We examined the mean score of individual items, subscales, or, alternatively, the full range; standard deviation (SD); and relative frequency. The linear dependence of the selected variables was ascertained by means of Spearman's correlation coefficient (r_s). The interpretation of correlations was as follows: correlation below 0.1 is negligible, from 0.1 to 0.29 small, from 0.3 to 0.49 medium, from 0.5 to 0.69 significant, from 0.7 to 0.89 very significant, 0.9 and more almost total (Rimarčík, 2007). To detect the differences between the groups of nurses, we used the non-parametric Mann-Whitney U Test. The result of analysis was considered statistically significant if the p-value of the test was lower than 0.05 $(p < 0.05)$.

Results

As many as 98.58% of nurses working on psychiatric wards experienced inpatient aggression in the course of the previous year. From among the surveyed forms of aggression, nurses in clinical practice experienced verbal forms of aggression most commonly. A statistically significant difference in the perception of patient aggression was detected between the groups of nurses who took part in educational training focusing on patient aggression, and the group of nurses who did not attend any educational training; namely, in cases of physical aggression without the use of a weapon subscale and in the total score. In both cases, the nurses who had completed some educational training reported occurrences of aggression more frequently (Table 1).

Table 1 The frequency of incidence of patient aggression towards nurses

VAPS scale*	n = 223 mean ± SD	n$_1$ = 55 mean ± SD	n$_2$ = 168 mean ± SD	p (M-W)
verbal aggression (VS)	3.27 ± 1.04	3.48 ± 0.88	3.21 ± 1.06	0.077
physical aggression without the use of a weapon (VT1)	2.61 ± 1.11	3.04 ± 1.06	2.47 ± 1.09	**0.000**
physical aggression with the use of a weapon and contact forms of sexual aggression (VT2)	1.32 ± 0.60	1.39 ± 0.63	1.31 ± 0.59	0.129
total score	2.55 ± 0.78	2.78 ± 0.69	2.48 ± 0.79	**0.006**

six-point frequency scale: 1 – never; 2 – rarely; 3 – occasionally; 4 – often; 5 – very often; 6 – always; SD – standard deviation

Within the survey of nurses' attitudes to patient aggression, the highest score was achieved in the subscales representing nurses' negative attitude towards patient aggression (Offensive, Destructive, Intrusive). The scores achieved in Communicative and Protective attitudes express nurses' tendency to disagree with these attitudes towards patient aggression. We did not detect any statistically significant differences between the group of nurses who had completed educational training aimed at patient aggression and the group of nurses without such an educational training (Table 2).

Table 2 Attitude of psychiatric nurses to patient aggression

ATAS scale*	n = 223 mean ± SD	n₁ = 55 mean ± SD	n₂ = 168 mean ± SD	p (M-W)
offensive attitudes (AO)	4.09 ± 0.80	4.00 ± 0.82	4.13 ± 0.78	0.389
destructive attitudes (AD)	4.26 ± 0.85	4.26 ± 0.82	4.28 ± 0.85	0.763
intrusive attitudes (AI)	3.82 ± 0.92	3.75 ± 1.09	3.84 ± 0.86	0.949
communicative attitudes (AC)	2.72 ± 0.96	2.64 ± 0.97	2.74 ± 0.96	0.596
protective attitudes (AP)	2.98 ± 1.07	2.93 ± 1.04	3.01 ± 1.07	0.648

5-point Likert-type scale: 1 – strongly disagree; 2 – disagree; 3 – I dont know; 4 – agree; 5 – strongly agree; n_1 – nurses with completed educational training; n_2 – nurses without educational training; SD – standard deviation

When assessing the factors that trigger aggression, nurses expressed the highest level of agreement in the internal factors subscale, which contains statements relating to internal factors that encourage aggressive behaviour in patients. They expressed a lower level of agreement with statements about the impact of situational-interactive factors on the development of aggressive patient behaviour. Nurses took a neutral stance on the impact of external factors on the formation of aggressive patient behaviour. Of the aggression management methods noted in the MAVAS-L, the nurses expressed strongest agreement with the restrictive tools and medication treatment subscales when managing patient aggression. Regarding the non-physical means subscale, we determined a neutral stance. We discovered a statistically significant difference between nurses who had completed educational training on patient aggression and its management and those ones who had not completed any educational training in the use of restraints subscale only. Nurses who had attended educational training reported significantly greater consent to the use of restraints than nurses who had received no training (Table 3).

Table 3 Nurses' attitude to the factors determining the formation of aggression and to aggression management

MAVAS-L scale*	n = 223 mean ± SD	n₁ = 55 mean ± SD	n₂ = 168 mean ± SD	p (M-W)
internal factors (IF)	3.37 ± 0.65	3.34 ± 0.58	3.39 ± 0.68	0.689
external factors (EF)	3.00 ± 0.82	2.97 ± 0.77	3.00 ± 0.84	0.778
situational-interactional factors (SIF)	3.21 ± 0.69	3.19 ± 0.77	3.22 ± 0.67	0.875
management of aggression – use of medication (MED)	3.77 ± 0.77	3.90 ± 0.73	3.74 ± 0.78	0.262
management of aggression – restraint (R)	3.98 ± 0.90	4.21 ± 0.91	3.92 ± 0.89	**0.026**
management of aggression – non-physical methods (NPM)	3.13 ± 0.69	3.05 ± 0.77	3.16 ± 0.67	0.816

5-point Likert-type scale: from 1 – strongly disagree to 5 – strongly agree; n_1 – nurses with completed educational training; n_2 – nurses without educational training; SD – standard deviation

Based on the analysis of correlations between the total score or the subscale scores of individual scales, with regard to age and experience, we can establish that we identified several statistically significant correlations, ranging from small (from 0.14) to significant (up to 0.72) (Statistically significant correlations of individual subscales within a single tool are neither described nor interpreted.) (Table 4). The age of nurses positively correlates with the internal factors (IF), use of medication (MED), and restraint (R) subscales of MAVAS-L. The length of nurses' clinical practice positively correlates with the destructive attitude (AD) subscale and negatively correlates with the communicative attitude (AC) subscale ATAS. The length of nurses' practice and age positively correlate with internal factors (IF), use of medication (MED), and restraint (R) subscales. The final score of VAPS, i.e., the incident rate of patient aggression reported by nurses, positively correlates with the offensive attitude (AO), internal factors (IF), use of medication (MED), and restraint (R) subscales, as well as with the non-physical methods (NPM) subscale. Nurses' negative attitudes (offensive, destructive, intrusive), represented by the subscales of the ATAS, positively correlate with nurses' views on using medication and restraints

in the management of aggression. Likewise, the internal factors (IF) subscale positively correlates with views on using medication and restraint in the management of aggression. At the same time, this subscale also positively correlates with nurses' views on using non-physical methods. The external factors (EF) subscale positively correlates with the

situational-interactional factors (SIF) subscale and the situational-interactional factors subscale positively correlates with the use of non-physical methods in the management of aggression. The use of medication (MED) subscale positively correlates with restraint (R) subscale.

Table 4 Correlation analysis

	Age	Practice	VAPS	AO	AD	AI	AC	AP	IF	EF	SIF	MED	R	NPM
VAPS	0. 07	0.1	1											
AO	0.09	0.09	0.16*	1										
AD	0.1	0.14*	0.07	0.69*	1									
AI	0.11	0.12	0.03	0.69*	0.72*	1								
AC	-0.12	-0.17*	0.02	0.09	0.05	0.19*	1							
AP	0.00	0.01	-0.12	0.04	0.12	0.18*	0.41*	1						
IF	0.18*	0.25*	0.39*	0.36*	0.36*	0.24*	-0.06	-0.05	1					
EF	0.00	0.01	0.06	-0.08	-0.03	0.02	0.17*	0.14*	0.14*	1				
SIF	-0.06	-0.04	0.08	-0.04	0.00	0.02	0.09	0.13	0.16*	0.59*	1			
MED	0.23*	0.26*	0.06	0.17*	0.30*	0.16*	-0.12	0.01	0.24*	-0.08	0.01	1		
R	0.15*	0.15*	0.17*	0.18*	0.28*	0.16*	-0.04	0.03	0.20*	-0.05	0.00	0.50*	1	
NPM	0.03	0.04	0.14*	0.09	0.,05	0.04	0.01	-0.01	0.26*	0.19	0.25*	-0.03	-0.14*	1

significant correlation; VAPS – Violence and Aggression of Patients Scale; AO – Attitude offensive; AD – Attitude destructive; AI – Attitude intrusive; AC – Attitude communicative; AP – Attitude protective; IF – Internal factors; EF – External factors; SIF – Situational-interactional factors; MED – Use of medication; R – restraint; NPM – Non-physical methods

Discussion

By means of VAPS, we determined that 98.58% of nurses (n = 223) working on psychiatric wards had experience of various forms of patient aggression directed at them. In comparison with other studies, e.g., Jonker et al. (2008), which identified experience of patient aggression in 76% of psychiatric nurses (n = 113), we recorded a higher incidence of patient aggression reported by nurses. There is a considerable disparity between individual studies that map the occurrence of aggression in hospitalized patients on psychiatric wards. This may be caused by the use of different research methods to survey the occurrence of aggression, by the size of the research sample, and by the difference in periods of monitoring outbreaks of aggression (Cornaggia et al., 2011). Thus, the results of comparison may not necessarily result in an objective conclusion about a higher or lower occurrence of aggression at the assessed workplaces.

Our respondents reported verbal forms of aggression most frequently (Table 1). This fact is well known and described in studies of a similar nature (Lepping et al., 2013; Stevenson et al., 2015). We determined a statistically significant difference in the frequency of experience of patient aggression in nurses who had

completed educational training focusing on patient aggression and its management and those who had not (Table 1). One plausible explanation is greater sensitivity to the manifestations of patient aggression in those nurses who had completed educational training focusing on the issue of patient aggression. The age of nurses and the length of practice did not affect their reported experience of patient aggression in any significant way (Table 4).

We identified a predominance of negative attitudes to patient aggression in our sample of nurses, and within the context of clinical practice in Slovakia, similar findings were also published by Kačmárová et al. (2014). When monitoring nurses' attitudes to patient aggression, we did not determine any disparity between the nurses who had attended and had not attended educational training aimed at patient aggression. In a similar way, Needham et al. (2005) document that educational training (training courses) has no significant effect on nurses' attitudes. Heckemann et al. (2016) specify the effect of educational training (training) for nurses mainly in the area of techniques for preventing and managing patient aggression, but not on attitudes to patient aggression. In our sample of nurses, attitudes to patient aggression significantly correlated with age,

length of practice and frequency of experience of patient aggression. The longer nurses work in clinical practice, the more they favour destructive (negative) attitudes, and the less they favour communicative (positive) attitudes towards patient aggression. More frequent experience of patient aggression correlates with a preference for offensive (negative) attitudes towards aggression (Table 4). Studies state various factors that affect nurses' attitudes, e.g., gender, length of practice, the type of operation (multi-shift, single-shift), experience of patient aggression, and work satisfaction (Jansen et al., 2006; Jansen et al., 2006b; Jonker et al., 2008; Laiho et al., 2014; Gurková et al., 2015). Nurses' attitudes towards patient aggression influence their behaviour towards patients in a significant way (Jansen et al., 2006). McCann et al. (2014) identified a significant relationship between the attitudes of nurses and the interventions that they used to reduce aggressive patient behaviour. Our study points out statistically significant correlations between nurses' attitudes towards aggression and individual methods of managing patient aggression. We identified statistically significant relationships between negative attitudes to patient aggression and views on using medication and restraints in aggressive patients (Table 4). This means that the more nurses express their negative attitude towards patient aggression, the more they consent to using medication therapy and restraints in the management of aggression.

By means of MAVAS-L, we identified the greatest agreement among nurses regarding the internal factors acting on patients' in contrast to the external and situational-interactive factors supporting their aggression (Table 3). Nurses' view of the significance of the internal factors that potentiate patient aggression also positively correlates with the use of medication therapy and restraints (Table 4). Psychopharmacological medicaments and restraints are considered to be a traditional restrictive approach to managing patient aggression, aimed at the monitoring and controlling of aggressive patients. According to this approach, the management of aggression is perceived reactively, and the interventions are a response to aggressive patient behaviour (Pulsford et al., 2013). In clinical practice, this approach is considered to be normal in the management of aggression in patients hospitalized on psychiatric wards. It stems from the biomedical understanding of patient aggression, which, in terms of causal factors of aggression, emphasizes particularly the internal characteristics affecting patients, e.g., psychopathological changes (Laiho et al., 2014). Its impact on patient behaviour is

debatable, since it may potentiate further discontent and aggressive incidents (Davies, Janosik, 1991). On the other hand, patients themselves express their consent to the use of physical restraint and isolation so that their own safety can be ensured (Lepiešová et al., 2015), and to the indication of medication as an appropriate strategy for the management of aggression (Pulsford et al., 2013). We determined that increasing age and length of nursing practice affects nurses in such a way that they agree with the opinion on the importance of the internal factors that initiate patient aggression, and with the use of medication treatment and restraints in the management of aggression (Table 4).

At the same time, we identified a statistically significant positive correlation between internal factors and non-physical methods and the situational-interactional factors and non-physical methods MAVAS-L (Table 4). This means that in addition to the use of medication and restraints, nurses also incline towards the use of non-physical methods when managing patient aggression (e.g., the use of verbal and nonverbal communication to reassure the patient). Duxbury (2002) states that the acceptance of non-physical methods of managing aggressive patient behaviour, e.g., effective communication and aggression de-escalation, is the result of perceiving patient aggression as a combination of several factors (internal, external, situational-interactive), not only internal ones. This view represents the so-called interpersonal approach to the management of aggression, which regards non-restrictive interventions as both reactive and preventive, when the patient is not currently aggressive.

Limitations of study

The presented data on patient aggression results from nurses' personal experience interpreted through VAPS, and were not supported by any reports about incidents of patient aggression at individual workplaces. The reliability of some subscales within the ATAS and MAVAS-L is one of the methodological limitations which may also have had some impact on the results of our study. Regarding educational training aimed at the issue of patient aggression, on the basis of which we divided nurses into samples n_1 and n_2, we accepted any possible form of the activity mentioned, regardless of its contents and duration, hence the incompatibility of the contents, which, in addition to educational training, could have affected the results obtained. The results of the study could also have been affected by the size of research sample and the method of respondent selection.

Conclusion

The study results indicate that a high percentage of nurses on psychiatric wards have had personal experience both of verbal and physical forms of aggression from patients. Negative attitudes to this aggression predominated in our sample of nurses, emphasizing the influence of internal factors and patients' characteristics which condition its emergence, and consent to the use of medication and restraints as a legitimate way to manage aggression. This finding confirms the previously published views that nurses' attitudes to patient aggression affect their choice of strategies for the management of this aggression.

Based on our findings, we can recommend research be carried out on a representative sample of nurses working in psychiatric wards. Incidents of patient aggression towards the nurses in clinical practice should be recorded so objective data can be gained and compared with nurses' testimonies. Qualitative research aimed at nurses' experience of aggression should be conducted, which would provide a deeper insight into the interpretation of these forms of violence. Within educational training, it is necessary to focus on reflection and to influence nurses' attitudes to patient aggression.

Ethical aspects and conflict of interest

The study was approved by the Ethical Committee at the Jessenius Faculty of Medicine in Martin, Comenius University in Bratislava. All participants were informed of the purpose of the study and agreed to be included in the research. The authors declare that they have no conflict of interest.

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Author contribution

Conception and design (ML), data analysis and interpretation (MT, JČ, IB), drafting the manuscript (MT, JČ, IB), critical revision of the manuscript (JČ, IB, ML), finalization of the manuscript (IB, MT, JČ).

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