

# Aggressive Interactions in Hospital Emergency Units

Blatier, C., El Methni, M., Carpentier, F., Abdellaoui, S. Kock, C., Maillard, M.

**Abstract**—International literature emphasises on the concern regarding the phenomenon of aggression in hospital. This paper focuses on the reality of aggressive interactions reigning within an emergency triage involving three chaps of protagonists: the professionals, the patients and their carers.

The data collection was made from a grid of observation, in which the various variables exposed in the literature were integrated. They observations took place around the clock, for three weeks, at the rate of one week a month.

In this research, 331 aggressive interactions have been listed and analyzed by means of the software SPSS.

This research is one of the very few continuous observation surveys in the literature. It shows the various human factors at play in the emergence of aggressive interaction. The data may be used both for taking steps in primary prevention, thanks to the analysis of interaction modes, and in secondary prevention by integrating the useful results in situational prevention.

**Keywords**—Aggressive interaction, emergency unit, observational study.

## I. INTRODUCTION

HEALTH care professionals consider violence as an occupational risk [1]-[3]. Acceptance of aggression and violence are considered an integral part of the workplace [4], [5]. All health professionals are at risk of violence, however, those working in psychiatric wards or emergency services are the most vulnerable [6]-[9], and epidemiological studies [10] have identified the emergency department as a place with a high risk of violence to staff. In the emergency service, the main site at risk concerns the reception zone [10], especially the waiting areas and the emergency reception area where 98% of assaults are perpetrated [11].

The specific context of the emergency reception zone appears to be conducive to the emergence of violence and

C. Blatier is with the Laboratory of Psychology - Personality, Cognition and Social Change, LIP, University of Grenoble-Alpes, Campus Universitaire de St Martin d'Hères, 1251 Avenue Centrale, 38040 GRENOBLE CEDEX 9, FRANCE (corresponding author to provide phone: 33(0)4.76.82.58.87; e-mail: Catherine.Blatier@upmf-grenoble.fr).

M. El Methni is with the Laboratory AGIM FRE 3405 CNRS, Campus Universitaire de St Martin d'Hères, 1251 Avenue Centrale, 38040 GRENOBLE CEDEX 9, FRANCE (e-mail: Mohamed.Elmethni@upmf-grenoble.fr).

F. Carpentier is with Grenoble University Hospital, Emergency Unit Chief Boulevard de la Chantourne, 38700 La Tronche (e-mail: fcarpentier@chu-grenoble.fr).

S. Abdellaoui is with the Laboratory of Psychology INTERPSY, Université de Lorraine, Campus Lettres et Sciences Humaines et Sociales, 23 Bd Albert Ier, 54015 Nancy cedex, France (e-mail: siduniversite@yahoo.fr).

C. Kock and M. Maillard are Psychologists with the University of Grenoble-Alpes, Campus Universitaire de St Martin d'Hères, 1251 Avenue Centrale, 38040 GRENOBLE CEDEX 9, FRANCE (e-mail: c.kock@hotmail.fr, maillard\_m@yahoo.fr).

aggression [12], due to the presence of a variety of pathologies, and because of the presence nearby. For Gates et al. [10], the receptionist is first in line to cope with all the accumulated tensions such as pain, anxiety, medical and psychosocial problems. Moreover, the unexpected nature of traumatic events will reduce the sense of security and increase an individual's vulnerability by giving the impression of living in an uncontrollable environment [13], [14].

Aggressive manifestations are not expressed in the same way in emergency services. It could be a strong demand for attention from patients and their carers [15], which could be generated or exacerbated by a state of psycho-social crisis [16]. Studies of aggression in the emergency services are almost exclusively made from interviews with staff and there are very few observational studies up to now. The subject of this study is to examine the dynamics of aggressive and violent events more objectively.

## II. AIM OF STUDY

This study sought to identify the frequency of violent and aggressive behavior in an emergency service in order to obtain concrete data about situations involving patients and caregivers. To better understand the violence, identifying the characteristics of victims and perpetrators was important, as well as the identification of contextual or environmental variables. In addition, it seemed useful to highlight the factors that favor the emergence of such violence and aggression.

## III. PROCEDURE

The study was conducted in a Hospital University Centre in the South East of France bringing together most of the clinical centers and an adult emergency department (SAU). Upon arrival, the patients make contact with the nursing reception team (CAE) where they are oriented according to the degree of urgency of care. After that they dealt with administrative staff to fill out their case. If patients are not able to communicate (due to pain or because they are on a stretcher), the accompanying person (a member of their family or emergency personnel) can carry out these steps. Then the patients return to the nurse with their reports. After that they are accompanied by a caregiver in one of the emergency services. At this time, it must be explained to the family that it is not possible for them to follow the patient in the service (except when the patient is a minor) and they can either go home and ring in for news or wait in the waiting room and regularly ask the reception service for information.

#### IV. METHOD

In a study based on questionnaires, reference [15] recommends using an observation grid in future research in order to minimize bias due to oral reports of the facts.

After an initial two-week observation and a pre-test phase, an observation grid was compiled. The observations were performed round the clock for three weeks in February, March and April. These weeks of observation were chosen according to different studied variables including a period during the school holidays. Two observers, both Master in clinical psychology students, who had co-built the grid in association with the first author, alternated in staying behind the reception desk to have a wide view of the reception hall. During the phases of data collection, the interactions were quoted according to the grid and simultaneously the time of the interaction between the protagonists was recorded with four timers (nurses, auxiliaries, administrative staff, the last stopwatch measured the time of aggressive interactions). A statement of the time was then determined by time slots 12 a.m. to 6 a.m. (late night), 6 a.m. - 12 p.m. (morning), 12 p.m. - 6 p.m. (afternoon) and 6 p.m. - 12 a.m. (early night). An interaction was considered when people used verbal or nonverbal communication (mutual eye contact or physical contact). Informal communication between professionals was not considered, but patient-caregiver interaction, caregiver-accompanying adult, caregiver- external stakeholder was considered. Afterwards the interactions were referred to the time spent by each staff member at the reception.

#### V. RESULTS

During the three weeks of observation at the reception desk, 331 aggressive interactions were identified and studied. The total time of aggressive interactions collected is 5 hours and 21 minutes (321 minutes) for a total interaction time of 323 hours and 38 minutes (19,418 minutes). The percentage of aggressive interactions is thus 1.65%. In addition, the average time observed aggressive interactions is 58 seconds. Data were entered and analyzed using SPSS software. The level of significance chosen was  $p < .05$ .

##### A. The Victims

More than half of the aggressive interaction victims are female professionals, aged 35-50 years. 22.8% are male professionals also aged 35 to 50 years, paramedics and firefighters. Professionals who work in the morning (6 a.m. - 2 p.m.) experience an average of three 3-minutes of aggressive interactions. Personnel working in the afternoon (2 p.m. - 10 p.m.), and two at night undergo four aggressive interactions (mean time = 3 min 30 sec and 3 min. 13 sec. respectively). There are no more aggressive interactions at the weekend than on weekdays (46.3% vs. 53.7%). Football matches, Labor Day, school holidays, full moons or sunny days do not trigger more aggressive interactions.

One hypothesis that has been verified was that there were more aggressive interactions from carers during the day and at

night by patients (15.1% vs. 11.5%,  $\chi^2 = 5.79$ ,  $p < .05$ ).

##### B. The Initiators

The result is counter-intuitive because those who appear to initiate an aggressive interaction (qualified for the research needs of "initiators" of the aggressive interaction) are 51.7% professionals and 26.6% carers. Indeed we have observed that it is the nurse who appears to be the initiator of aggressive behavior towards the patient (for example when repeating that they should not get up from the stretcher) when they have to intervene and ask them with a certain firmness so that the patient complies. So this term initiator when referring to caregivers was held to mean that in a problem situation, the caregiver is obliged to "heckle" the patient or his family and, in fact, they appear to be the one who generates an interaction that can be seen as aggressive because neither the patient nor the family can see what the problem is. Regarding staff it is nurses (53.2%) and administrative staff (26.4%), other (20.4% stretcher-bearers, externs, ...).

Patients represent 21.8% of the initiators. Taking into account the time of aggressive interactions, it is possible to observe that nurses are the initiators in 32.4% of the total time of aggressive interactions and 0.84% of their time interaction. As members of the administration, they would be initiating aggressive interactions in 7.5% of the total time of aggressive interactions and 0.53% of their time of interaction.

Professionals are also the principal victims of aggressive interactions in 64% of cases (52% nurses and 21% administrative staff), followed by patients (20.8%). In addition, 59.4% of professionals have been victims of assault at least once during the observation period. Time of aggressive interactions of staff was related to their presence at the reception. For almost all professionals the percentage of time they are victims is between 0 and 0.5%.

In this context of appearance, there is a link between the number of people present in the emergency reception hall and the number of aggressive interactions ( $\chi^2 (330.8) = 20.9$ ,  $p = 0.007$ ) (see Fig. 1). However this link is counter-intuitive: the more people present in the hall, the fewer the aggressive interactions. While 42% of aggressive interactions were observed when fewer than 5 people were in the hall, only 1% were committed with 31 to 35 people.

Graph representing percentage of aggressive incidents depending on the number of people in the hall.

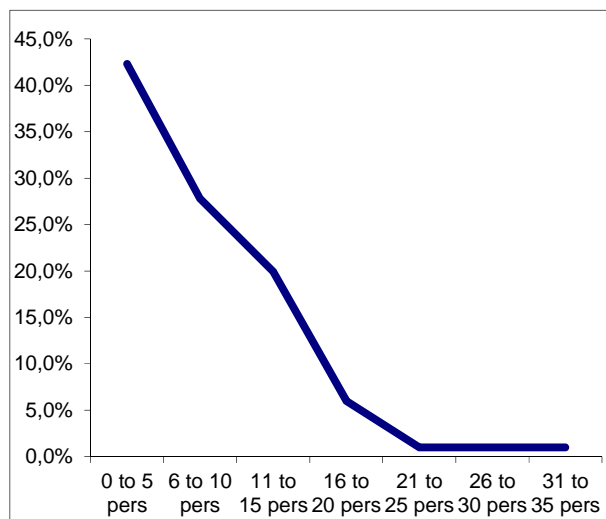


Fig. 1 Percentage of aggressive incidents depending on the number of people in the hall

Violence is verbal abuse (98%), rather than physical 2%. Threats represent 12% of aggressive interactions. Among the verbal abuse, the most common form expressed is dissatisfaction with a significant proportion of offensive and inappropriate comments (19.3%). The threats are not made any more by the carers than by the patients.

The initiator has a facial expression reflecting nervousness in 44.7% of aggressive interactions, the victim has a facial expression that reflects a calm attitude (45%). In 70.1% of cases, the initiator maintains eye contact as does the victim in 67.1% of cases, and in only 9.1% of cases does the victim avoid eye contact.

The initial behavior of aggressive interactions is mainly statements (38.1%) and questions (36.3%). The distal solicitation is the most observed type of demand (73.4% of cases). When the initiator is a professional, the reaction of the victims is mainly one of control (29.9%). ( $\chi^2(330,4) = 3,27$ ;  $p < .001$ ).

One of our hypotheses was that aggressive interactions most often end in a conflict with one of the protagonists leaving. However 60.4% of aggressive interactions end in controlling behavior by one of the protagonists. It is only in 20% of cases that the interaction ends with one of the protagonists leaving while the conflict persists.

The multiple correspondences analysis (MCA) shows that the first three specific axes represent 20.2% of the total inertia (8.05 +6.42 +5.74), which is a good contribution for MCA. On the first two axes, the most significant variables are the triggering context and verbal abuse.

On axis 1, the active variables are the initial behavior ( $R^2 = 0.50$ ,  $p = 0.01$ ), the type of solicitation ( $R^2 = 0.39$ ,  $p = 0.01$ ) and the reaction to this solicitation ( $R^2 = 0.38$ ,  $p = 0.01$ ).

Opposition (refusing care, not accepting a rule) and dissatisfaction (verbal abuse with no consideration of the person, contempt) characterize predominantly the axis 1.

Schedules, especially those of 12 a.m. to 6a.m. ( $R^2 = 0.60$   $p = 0.01$ ), are associated in the construction of this axis. The initial behavior mostly in the form of an injunction ( $R^2 = 0.60$   $p = 0.01$ ) and the triggering context linked to the patient's problem ( $R^2 = 0.54$   $p = 0.01$ ) are signifiers of this axis. The most illustrative variable is the number of people in the lobby ( $r = -0.11$ ,  $p = .04$ ). On axis 1 two types of verbal and distal solicitation are opposed. The first are the initiators and victims over 35 years who use avoidance techniques. The second type are primarily young initiators and victims aged 20 to 35 who have a distal solicitation and who react with controlling techniques, including the final behavior.

The most significant variables are the triggering context and verbal abuse which are correlated to the first two axes.

Axis 2 is characterized by the relationship between the duration of the intervention ( $r = 0.13$   $p = 0.02$ ), the number of patients in the service ( $r = -0.21$   $p = 0.01$ ) and in the lobby ( $r = -0.34$   $p = 0.01$ ). A percentage of explanation ( $\eta^2$ ) can be calculated for this axis: the time ( $\eta^2 = 0.35$ ), the mode (0-6h), verbal abuse ( $\eta^2 = 0.35$ ) (dissatisfaction), the triggering context ( $\eta^2 = 0.35$ ) particularly if the waiting time was considered too long, the most significant day being Wednesday ( $\eta^2 = 0.28$ ).

Additional variables (such as caregiver, accompanying adult, woman, man, age of caregivers, etc.) do not add anything to axis 1 or axis 2. Thus it seems that situational variables are more important than those related to people.

The same illustrative variables are present in the three axes: the number of patients in the reception area ( $r = -0.27$   $p = 0.01$ ), in the lobby ( $r = -0.32$   $p = 0.01$ ), and the number of people in the waiting room ( $r = -0.33$   $p = 0.01$ ) were correlated.

The triggering context and week day are both important (both with  $R^2 = 0.32$   $p = 0.01$ ) with a confrontation ( $r = 0.36$   $p = 0.01$ ), with the opposition ( $r = 0.31$   $p = 0.01$ ) and with contempt ( $r = 0.35$   $p = 0.01$ ).

## VI. DISCUSSION

Once again the aim of study was to report an observation of aggressive interactions prevailing in emergency service reception areas. In this sample 331 aggressive interactions were recorded, that is an aggressive interaction average of 15 per day. If the number of aggressive interactions is significant, their duration is short, with a mean time of 58 seconds. By adaptive effect, it is not surprising that staff tend to accept this phenomenon as part of their work. However, this repetition can only lead to a level of work-related stress for caregivers, who are forced to intervene in an often assertive or controlling mode so that the service can run smoothly.

According to reference [15] findings show that the most common abuse is verbal abuse and it represents 98% of the violence. This type of aggression is the one most often expressed among verbal abuse (51.2%).

Threats represent a significant number in Emergency Reception Services (12%). This form of violence is common

for the patients as well for the carers (45% and 45%). Some initiators address these threats as verbal abuse and others use them as psychological violence. It seems that the impact depends on the nature of the abuse and may be considered as psychological threats when addressed directly towards the person.

Patients as well as accompanying personnel use threats that could be considered psychological violence ("I'll be waiting for you outside"). Carers also use personal threats of repercussions (like a threat to complain to their manager). Hence it is usually families that would complain of poor management or a failure to take account of the pain.

Physical violence is not common in the emergency reception area, its prevalence is 2% in the study. It can be due to alcoholic patients, hampered by the police or by sedative medication.

## VII. CONCLUSION

This study performed in the reception of a hospital's emergency service shows the extent of aggressive interactions to which hospital staffs are submitted. Not only do they have to manage the opposition of patients (refusal of care, refusal to follow rules) and their dissatisfaction, they must intervene by injunction in order to carry out their work in a triggering context related to the patient's problem.

Various factors influence the onset of such interactions, specific to different actors or within the context, such as the waiting time considered too long, certain days like Wednesday (but perhaps patients and their families are less patient that day). The number of patients in the service, in the lobby or the waiting room is also a factor of certain attitudes of verbal confrontation, opposition and contempt. Situational variables are more important than for those that concern people in the original role of aggressive interactions.

It will never be possible to completely prevent the occurrence of unpredictable aggressive interactions in emergency service. It remains possible to consider preventive measures, which are already implemented in this hospital.

Primary prevention may consist in minimizing environmental factors that can trigger aggressive interactions and maximizing those factors enabling people to feel good. These would include a suitable service architecture. In the recommendations of reference [17], it is possible to find "Never neutral architecture has a direct influence on the users and staff of emergency services and must fulfill two requirements: firstly a safe environment and the need for someone to listen, functionality, technique, speed and efficiency for the latter". Secondary prevention may be to assist staff in the detection and management of aggressive interactions and violence to continue to give them the keys to react when they occur. Thus, it would also avoid the repetition of stressors that can lead to burnout [18], [19].

We conclude with a sentence of Karli [20]: "Better management of conflicts by de-dramatizing them, positively confronting aggression, confronting stress without damage

presupposes an evolution of representations, norms and values, and to sum up, the culture of the hospital world". Many hospitals have taken this step, which can significantly limit the damage, although much remains to be done, perhaps by also educating patients and carers.

## REFERENCES

- [1] C.M.B. Fernandes, F. Bouthillette, and J.M. Raboud, "Violence in the emergency department: a survey of health care workers", *Emergency Department Violence*, 1999;161, vol. 10, pp. 1245-1248.
- [2] S. Hahn, A., Zeller, I. Needham, G. Kok, T. Dassen, and R. Halfens, R., "Patient and visitor in general hospitals: A systematic review of the literature", *Aggression and Violent Behavior*, 2008, vol.13, pp. 431-441.
- [3] S. Winstanley, and R. Whittington, "Violence in a general hospital: A comparison of assailant and other assault, related factors on accident and emergency and inpatient wards", 2002, *Acta Psychiatrica Scandinavia*, 106, pp.144-147.
- [4] T. Ferns, and D. He, "Violence in the accident and emergency department, an international perspective", *Accident and Emergency Nursing*, 2005, vol.13, pp. 180-185.
- [5] *International Council of Nurses* (2006). Position statement : Abuse and violence against nursing personnel .Ann. Conf.Geneva,Switzerland.
- [6] F. S. Ergun, and A. Karadakovan, "Violence towards nursing staff in emergency department in one Turkish city". *International Nursing of Nurses*, 2005, vol. 52, pp.154-160.
- [7] D. Ryan, and J. Maguire, "Aggression and violence : A problem in Irish Accident and Emergency departments ?" *Journal of Nursing Management*, 2006, vol. 14, pp. 106-115.
- [8] V. Schneiden, and U. Marren-Bell, "Violence in the accident and emergency department". *Accident and emergency journal*. 1995, vol 3, pp.74-78.
- [9] S. Winstanley, and R. Whittington, "Aggressive encounters between patients and general hospital staff : Staff perceptions of the context and assailant's levels of cognitive processing". *Aggressive Behaviour*, 2004, vol.30, pp. 534-543.
- [10] D.Gates, C.S. Ross, and L. McQueen, "Violence against emergency department workers". *The Journal of Emergency Medicine*, 2006, vol.31 (3), pp. 331-337.
- [11] D. Pateron, " Urgence et sécurité". Paris XIII University, [http://www.afmha.fr/pdf/jn\\_25/pateron.pdf](http://www.afmha.fr/pdf/jn_25/pateron.pdf)
- [12] J.M. Elchardus, Y. Gansel, Y. and J.Grisson-Curiner, "Violence et urgence", 2005, *Annales Médico-Psychologiques*, vol. 163(8), pp.664-667.
- [13] G.Bains, "Explanations and the need for control", In M. Hewstone (Ed.), *Attribution theory: social and functional extensions*, 1983, Oxford, Blackwell.
- [14] J.Pich, M.Hazelton, D. Sundin and A. Kable, "Patient-related violence at triage: A qualitative descriptive study". *International Emergency Nursing*, 2011, January, vol.19(1), pp.12-19.
- [15] J.Crilly, W. Chaboyer, W. and D. Creedy, " Violence towards emergency department nurses by patients", *Accident and Emergency Nursing*, 2004, vol.12, pp. 67-73.
- [16] N. Sands, "An ABC approach to assessing the risk of violence at triage". *Australasian Emergency Nursing Journal*, 2007, vol.10, pp. 107-109.
- [17] C. Vidy, "*La violence aux urgences : comprendre pour faire évoluer la culture hospitalière*", 2006, Report, Institut de Formation des Cadres de Santé, Grenoble.
- [18] C.A. Lindquist, and J.T. Whitehead, "Burnout, job stress and job satisfaction among southern correctional officers: Perceptions and causal factors". *Journal of Offender Counseling, services & Rehabilitation*, 1986, 10(4), 5-25.
- [19] M. Lourel, K. Gana, V. Prud'homme and A. Cerclé, " Le burn-out chez les personnels des maisons d'arrêt: Test du modèle "demande-contrôle" de Karasek", 2004, *L'Encéphale*, vol.30, pp.557-563.
- [20] P. Karli, "*L'homme agressif*", 1987, Paris: Odile Jacob.