Qualitative study of the agitation states and their characterization, and the interventions used to attend them

María Rubio-Valera*[1,2,3]
Elena Huerta Ramos*[1,4,5]
Luisa Baladón[4]
Ignacio Aznar-Lou[1]
José M. Ortiz-Moreno[4]
Juan V. Luciano[1,2,6]
Pere N. Roset-Arisso[7]
Luis Salvador-Carulla[8]
José M. Villagrán[9]
Fermín Mayoral[10]
Alfredo Gracia[7]
Antoni Serrano-Blanco[2,4]

[1] Fundació Sant Joan de Déu. Esplugues de Llobregat, Spain
[2] Red de Investigación en Actividades Preventivas y Promoción de la Salud (RedIAPP). Barcelona, Spain
[3] Facultad de Farmacia, Universitat de Barcelona. Barcelona, Spain
[4] Parc Sanitari Sant Joan de Déu. Sant Boi de Llobregat, Spain
[5] Instituto de Salud Carlos III, Centro de Investigación en Red de Salud Mental (CIBERSAM). Madrid, Spain
[6] Universitat Oberta de Catalunya (UOC). Barcelona, Spain
[7] Área científica, Ferrer. Barcelona, Spain
[8] Centre for Disability Research and Policy, Faculty of Health Sciences, and Mental Health Policy Unit, Brain and Mind Research Institute, University of Sydney. Sydney, Australia
[9] Unidad de gestión clínica de Salud Mental. Área de gestión sanitaria Norte de Cádiz. Servicio Andaluz de Salud. Hospital de Jerez de la Frontera. Cádiz, Spain
[10] UGC salud Mental Regional de Málaga. Instituto Biosanitario de Málaga (IBIMA). Málaga, Spain

Introduction. Agitation is a common problem in psychiatric care with serious clinical and economic consequences.

Methodology. The aim of the study was to define and characterize the agitation states present in usual medical practice in the acute and emergency units of a psychiatric hospital. Two nominal groups, one with 7 nurses and the other with 10 psychiatrists from the Parc Sanitari Sant Joan de Déu, were established.

Results. The nurses described two main states forming the endpoints of a spectrum: from mild (pre-agitation) to severe (agitation). A third state was outlined in which agitation was characterized by disorganized behavior problems. Various care packages were described for each agitation state. The care packages were divided into first, second and third line approaches. The first line approaches (i.e., verbal containment) were used on every (pre)agitated patient. If the first line approach was not effective, the second and third line approaches were implemented, culminating with physical restraint. The psychiatrists described 3 states: a mild initial state (anxiety and irritability), moderate (pre-agitation without aggressiveness) and a severe state of agitation with aggressiveness and/or violence.

Conclusions. In order to avoid progression to a severely agitated state, both groups agreed on the importance of appropriate verbal containment for all states. This would be followed by environmental measures, medication and mechanical restrain depending on the severity of the state.

Keywords: Agitation, Intervention techniques, Psychiatry, Qualitative research

*These authors contributed equally to the article and are first authors.

Correspondence:
Elena Huerta Ramos
Unidad de Investigación y Desarrollo
Parc Sanitari Sant Joan de Déu
C/ Dr. Antoni Pujadas 42
08830 Sant Boi de Llobregat, Barcelona, Spain
Tel.: 9306406350 ext (1)2347
E-mail: mehuerta@pssjd.org

Actas Esp Psiquiatr 2016;44(5):166-77

Estudio cualitativo sobre los estados de agitación y su caracterización, y los procedimientos de atención utilizados en su contención

Introducción. La agitación es un problema común en la atención psiquiátrica con graves consecuencias clínicas y económicas.

Metodología. El objetivo del estudio fue definir y caracterizar los estados de agitación en la práctica habitual en una unidad de Psiquiatría de Agudos y urgencias psiquiátricas, y describir los paquetes de atención típicos. Se establecieron dos grupos nominales, uno con 7 profesionales de enfermería y otro con 10 de psiquiatría (urgencias y psiquiatría de agudos del Parc Sanitari Sant Joan de Déu).

Resultados. El equipo de enfermería describió dos estados principales que formaban los extremos de un espectro que iba de leve (pre-agitación) a grave (agitación). Se describió un tercer estado que se caracterizaba por un comportamiento desorganizado. Diversos paquetes de atención fueron descritos para cada estado de agitación que se dividían en paquetes de primera, segunda y tercera línea. La primera línea (contención verbal) se aplicaba en todos los estados de agitación. Si no fuese eficaz, se implementaban los de segunda y tercera línea, llegando hasta la contención mecánica. El equipo de psiquiatras describió tres estados de agitación: un estado inicial leve (ansiedad e irritabilidad), un estado moderado (pre-agitación sin agresividad) y un estado severo de agitación con agresividad y/o violencia.

Conclusiones. Para evitar la progresión a un estado de agitación severa, ambos grupos coincidieron en la importancia de la contención verbal, apropiada para todos los esta-

dos. Esto iría seguido de las medidas ambientales y farmacológicas hasta llegar a la contención mecánica dependiendo de la gravedad de la situación.

Palabras clave: Agitación, Técnicas de intervención, Psiquiatría, Investigación cualitativa

INTRODUCTION

Agitation is defined as increased motor activity accompanied by mental tension[1]. In practice, the definition is highly imprecise as agitation manifests itself as a continuum ranging from minimal restlessness to uncoordinated, purposeless motions. At its most severe, it can lead to threats and/or physical auto/heteroaggressiveness. Further, agitation is a syndrome with many possible causes, from organic pathology to a very distressing situation, trauma, drug use, or mental disorder.

Cases of agitation are frequent in ER and psychiatric acute units[2], occasionally with serious consequences which can place a considerable care burden on health personnel[3,4]. It is estimated that between 21% and 26% of health care professionals suffer some type of aggression each year in the ER. Agitation is also associated with longer average stays, more resource use and a greater probability of being readmitted to hospital[5].

To control agitation of a psychiatric nature, the first response is verbal containment, environmental measures of de-escalation and seclusion, and voluntary pharmacological treatment. If these methods are ineffective or cannot be applied, patients must be restrained and medicated against their will[6]. Many episodes of violent agitation end with the patient being physically restrained.

As the etiology is frequently uncertain and the consequences can be serious, a clinical classification is needed that allows flexibility in adapting immediate interventions to reestablish optimum conditions for etiological diagnosis and provision of suitable treatment.

There are countless scales and instruments for measurement and assessment that have come to be used in various contexts and environments, although all serve a specific vision or utility (detection of agitation in dementia patients or those admitted to intensive care, prediction of the risk of aggression in the ER, etc.) and are employed very little in usual clinical practice[7].

On the other hand, the American version of the ICD-10 R codes has recently been published[8]. This contains codes covering behavior associated with agitation (including R45.0 Nervousness; R45.1 Restlessness and agitation; R45.4 Irritability and anger; R45.6 Physical violence; R46.2 Strange and inexplicable behavior; and R46.3 Hyperactivity). As these have been published only recently, it is expected that there will be a time-lag before they become operative in health centers.

This study is part of an investigation that aims to determine the prevalence of episodes of agitation and the interventions used to control them, and examine the associated use of health services. Thus, it is important to have a good definition and classification system for the various agitation states, according to the local context, as well as the approaches taken by health professionals (procedures or care packages). This paper presents the results of a qualitative study conducted in nominal discussion groups conceived to define the types of agitation and care procedures in the real context of our hospital's psychiatric and emergency psychiatric units.

METHODS

This study was carried out from a socioconstructivist perspective, which holds that knowledge is a shared experience produced during the interaction between researcher and participant in which the social context has a key role. Social constructivism promotes the involvement of both health service users and professionals in the process of research[9]. This was an exploratory-descriptive type study.

Our study was carried out in the context of the Parc Sanitari Sant Joan de Déu (PSSJD) general hospital. Historically, the institution was purely a psychiatric hospital which became part of the general health complex in 2010. Institutional culture aims to minimize the use of restrictive measures. Professionals are encouraged to view restraint as a measure of last resort (seclusion and mechanical restraint). To this end, changes made over the last decade include architectonic adaptations, improvements in staff training and the development of new protocols to cover new actions:

1. Environment changes. In 2001, a psychiatric acute unit was built without a separate containment and seclusion unit. Spaces associated with a more restrictive environment disappeared which, in turn, facilitated the application of coercive measures. Currently, the whole unit is equipped with closed-circuit television (CCTV) and the rooms have a double function; they can be used for seclusion if necessary.

2. Mandatory continuous training. Each year, courses on approaches and management of agitation in mental health are conducted with the main aim of providing

workers with the tools and skills (e.g., de-escalation techniques) designed to prevent agitation and resolve issues without the use of seclusion or mechanical restraint.

3. Protocol development for new actions. There are protocols which unify and coordinate professional actions for dealing with agitation. The protocols recommend resolution of situations, without the use of restrictive measures, through a combination of verbal management and pharmacological treatment.

Two nominal discussion groups were formed; one of nursing professionals and the other of psychiatrists, with the goal of defining the types of crisis through consideration of symptoms and key determinant factors. The groups also reached consensus on which care procedures would be most applicable for each agitation state.

The groups were led by a postdoctoral researcher, experienced in qualitative methodology. The researcher had no direct professional relationship with the nurses in the nominal group, although there had been previous contact with two participants from the psychiatrists' group.

Study population

Nurses and psychiatrists from the PSSJD with experience in psychiatric acute and emergency units were invited to take part. They were professionals who had direct contact with agitated patients and experience in the use of containment techniques. Intentional convenience sampling was used.

Two gatekeepers were contacted for sampling; the Acute Unit Nursing Supervisor, and the Coordinator of the ER, Acute Units and Partial Hospitalisation at PSSJD. The Acute Unit was created more than thirty years ago and serves a population of approximately 628,000 people. It currently has 69 psychiatric beds (until 2010 there were 75) and discharges more than more than 1,200 patients each year. The emergency psychiatric service at PSSJD carries out more than 4,500 patient consultations annually.

The gatekeepers contacted the participants who, having given their voluntary, verbal consent, received an e-mail from a researcher setting up the nominal group. All participants were informed about the aims of the study and scheduled a meeting. Before establishing the groups, all those taking part filled out a form collecting sociodemographic data, and provided signed, informed consent. The Coordinator and the Supervisor were not permitted to join the groups to ensure free expression and avoid any suggestion of influence.

Information gathering techniques

Between February and March, 2014, two nominal groups were set up and scheduled to meet at a convenient time in one of the hospital rooms. The room had a round table to facilitate discussion and a whiteboard to take note of the ideas as they emerged from the group. The room was in a familiar but private location to avoid interruptions and ensure the free expression of opinions. Only the moderator and participants were present in the groups. Although the nominal groups functioned as a consensus-building technique not requiring a narrative analysis[9,10], audio recordings were made in case subsequent consultation was required.

The moderator began the discussion by detailing the study aims and then explaining that the group was seeking deep knowledge of the types of agitation states as they appear in the context of their work to define and differentiate them so they could be identified and quantified. Participants were also asked to describe the usual clinical approach used for each of the states to measure the relative burden on the health system. The moderator then asked those taking part to write down their thoughts with respect to the main aim on a piece of paper (card). Once completed, the cards were put on the board and the moderator read them out loud to the group. Similar responses were then grouped together. In the next step, the group was asked to discuss the contents of the cards, bearing in mind any discrepancies between group members. After one round of discussion, new blank cards were handed out where the participants recorded their opinions once more. Following this second round, the cards were put on the board and the relative importance of the ideas generated was discussed until consensus was reached. This method was used for each of the aims.

To ensure the rigor of the results obtained from the nominal groups, the moderator drew up a detailed report which was then sent to all group participants for them to review and make comments or corrections.

RESULTS

Participants

Table 1 shows the characteristics or the nurses' and psychiatrists' groups. The nurses' group met for a total of 6 hours (divided into three sessions) until all the study aims were achieved. Of all the active professionals at the time of the study in PSSJDD (8 psychiatrists in the acute service, 2 psychiatrists in the emergency service, 26 nurses in the acute service and 5 nurses in the emergency service), 7 nurses from the acute service, 7 psychiatrists from the acute

Table 1 Characteristics of the participants in the nursing and psychiatry groups

	Gender	Age	Service	Years' of nursing experience	Years' experience in acute units-emergency
Nursing group					
E1	Man	25	Acute unit	4	4
E2	Man	32	Acute unit	9	4
E3	Woman	32	EU	10	7
E4	Woman	32	Acute unit	6	4
E5	Woman	32	Acute unit	6	4
E6	Woman	35	Acute unit	6	6
E7	Woman	37	Acute unit	10	10
Psychiatry group					
P1	Man	36	Acute unit	11	11
P2	Man	35	Acute unit	9	5
P3	Man	38	Acute unit	13	14
P4	Woman	42	Acute unit	16	16
P5	Woman	46	Acute unit	20	14
P6	Woman	26	Acute unit	1	1
P7	Woman	47	Acute unit	16	10
P8	Woman	29	Acute unit and EU	4	4
P9	Woman	39	Acute unit and EU	14	14
P10	Woman	33	EU	8	4

EU: Emergency unit

service and one psychiatrist from the emergency service took part. The psychiatrists met for a total of 3 hours in a single session.

Some 70% of participants were women, most of whom were working in the acute service at the time the interviews were conducted (Table 1). The majority had more than 6 years' experience as nurses or psychiatrists, and 4 had worked as nurses or psychiatrists in psychiatric emergency or acute services in PSSJD or other institutions.

Nurses' team results

Table 2 shows the types of pre-agitation and agitation and the characteristics of the distinct states described by the nurses' team.

The nurses' team described two states of agitation: one less severe (which they refered to as "pre-agitation" or "sub-agitation", term that will be used throughout the text). The states form a continuum, with pre-agitation states arising from previous milder states that were not controlled. Within each type, various subtypes were differentiated according to the patients' characteristics. The distinctions are relevant as they condition the choice of approach.

A particular situation was identified; behavioral disorganization. When disorganization is not accompanied by a state of pre-agitation and agitation, monitoring, orientation and recommendations are required. In the case of pre-agitation and agitation in a patient with behavioral disorganization, the approach to containment would be different.

Table 2 Types and categorization of states of pre-agitation and agitation according to the nursing group

State	Sub-state	Characteristics
Sub-agitation state	State of nervousness	The patient says that she/he is nervous Slight trembling Slight restlessness/uneasiness
	State of psychomotor restlessness	Difficulty expressing her/himself Unable to concentrate on an activity Moderate restlessness (fidgets, unable to stay still)
	State of distress	Verbalizes an idea that concerns her/him Tense face Trembling Emotional lability Restlessness
	State of anxiety	Sweating Accelerated pulse Accelerated respiration Slight dizziness Nausea/vomiting Slight increase in arterial tension Restlessness/uneasiness
Agitation state	Anxiety crisis state	Anxiety (hyperventilation, palpitations, thoracic pain that may radiate, sweating, dry mouth, trembling, arterial hypertension) Nervousness (internal state) Restlessness (external state, moving) Suspicious attitude or alertness Fear Irritability Psychomotor block (perplexed, inhibited) Difficulty following instructions or performing simple actions
	State of self-heteroaggressiveness	Heightened anxiety (hyperventilation, palpitations, thoracic pain that may radiate, sweating, dry mouth, trembling, arterial hypertension) Nervousness (internal state) Restlessness (external state, moving) Suspicious attitude or alertness Fear Irritability Difficulty following instructions due to psychomotor block Frustration Rage Delusional interpretations or clinical productive psychosis (fear not real) Hopelessness or feelings of disability (more frequent in self aggressiveness) Defiance or resistance to following instructions Behavioral change or quarrelsome attitude: provocation and conflicts with other users (confrontations) Verbal threats (insults, shouting) Hitting objects Self-harm Physical aggression (or attempt at aggression)
	State of psychomotor agitation	Anxiety (hyperventilation, palpitations, thoracic pain that may radiate, sweating, dry mouth, trembling, arterial hypertension) Behavioral change Intense psychomotor restlessness (sudden movements or gestures) Little or no cooperation in following instructions Difficulty in following instructions Patient out of control

Table 2 Continuation

State	Sub-state	Characteristics
Behavioral disorganization	Risk to the patient or environment	Strange or out-of-context behaviour accompanied by a state of agitation or pre-agitation Without intentionality
	Without risk to the patient or environment	Strange or out-of-context behaviour not accompanied by a state of agitation or pre-agitation

Table 3 Types of pre-agitation and agitation states, characterization and care packages according to the nursing group

State	Sub-state	Care package[$]
Sub-agitation state	State of nervousness	**1st line** Control of vital signs (arterial tension, heart rate, ...) Verbal approach (active listening and emotional support) **2nd line** Relaxation techniques (breathing control) **3rd line** Environmental seclusion to reduce stimuli (peaceful environment or safe, quiet, non-restrictive place) Administration of pharmacological treatment (anxiolytic or antipsychotic)* **Following the approach, always** Continuous behavioral observation
	State of psychomotor restlessness	**1st line** Control of vital signs (arterial tension, heart rate, ...) Verbal approach (active listening and emotional support) **2nd line** Environmental seclusion to reduce stimuli (peaceful environment or safe, quiet, non-restrictive place) Administration of pharmacological treatment (usual anxiolytic or antipsychotic)* **Following the approach, always** Continuous behavioral observation
	State of distress	**1st line** Control of vital signs (arterial tension, heart rate, ...) Verbal approach (active listening and emotional support) Environmental seclusion to reduce stimuli (peaceful environment or safe, quiet, non-restrictive place) **2nd line** Infrequent, administration of pharmacological treatment (usual anxiolytic or antipsychotic)* **Following the approach, always** Continuous behavioral observation

Table 3 Continuation

State	Sub-state	Care package[$]
Sub-agitation state	State of anxiety	**1st line** Control of vital signs (arterial tension, heart rate, ...) Verbal approach (active listening and emotional support, rationalization of symptoms and health education) **2nd line** Environmental seclusion to reduce stimuli (peaceful environment or safe, quiet, non-restrictive place) Relaxation techniques (breathing control) **3rd line** Frequently, administration of pharmacological treatment (usual anxiolytic or antipsychotic)* **Following the approach, always** Continuous behavioral observation
State of agitation[&]	Anxiety crisis state	**1st line** Verbal containment (behavior redirection, setting behavior limits, explanation to the patient of what will happen) Relocation of other patients to isolate them from the episode Request for support from colleagues if necessary **2nd line** Environmental seclusion (space with CCTV and reduced risk to patient's safety [e.g., remove objects that could do harm]) Frequently, administration of oral or intramuscular pharmacological treatment according to degree of cooperation (usual anxiolytic or antipsychotic)* **3rd line** Mechanical restraint with administration of anticoagulants if expected to last 3 or 4 hours Inform the psychiatrist **Following the approach, always** Continuous behavioral observation (CCTV) and hourly visits
	State of auto-heteroaggressiveness	**1st line** Request for support (at least 5 colleagues) Verbal containment (behavior redirection, setting behavior limits, explanation to the patient of what is going to happen) Relocation of other patients to isolate them from the episode Environmental seclusion (space with CCTV and reduced risk to patient's safety [e.g., remove objects that could do harm]) Administration of oral pharmacological treatment if patient cooperates (anxiolytic or antipsychotic)* **2nd line** Physical containment (immobilization) Administration of intramuscular pharmacological treatment (anxiolytic o antipsychotic)* **3rd line** Mechanical restraint with administration of anticoagulants if expected to last 3 or 4 hours Inform the psychiatrist **Following the approach, always** Continuous behavioral observation (CCTV) and hourly visits

Table 3 Continuation

State	Sub-state	Care package[$]
State of agitation[€]	State of psychomotor agitation	**1st line** Request for support (at least 5 colleagues) Physical restraint (immobilization) Give the patient information about what is going to happen Relocation of other patients to isolate them from the episode Administration of intramuscular pharmacological treatment (rarely oral) (anxiolytic or antipsychotic)* Environmental seclusion (space with CCTV and reduced risk to patient's safety [e.g., remove objects]) **2nd line** Mechanical restraint with administration of anticoagulants if expected to last 3 or 4 hours **3rd line** Inform the psychiatrist **Following the approach, always** Continuous behavioral observation (CCTV) and hourly visits
Behavioral disorganization	With risk to patient or environment	**1st line** Verbal re-orientation of patient (redirection of behavior with simple instructions) Exhaustive care **2nd line** Environmental seclusion to ensure patient privacy and avoid conflicts with other users Administration of pharmacological treatment if there is an increase in emotional impact (anxiolytic or antipsychotic)* **3rd line** Mechanical restraint to avoid risk of falls or if agitation is present with administration of anticoagulants if expected to last 3 or 4 hours Inform the psychiatrist **Following the approach, always** Continuous behavioral observation (CCTV) and hourly visits
	Without risk to patient or environment	Verbal re-orientation of patient (redirection of behavior with simple instructions) Exhaustive care

[$] The care packages are divided between first, second, third and fourth lines. The first are always performed and the second, third and fourth when the previous approaches have not resolved the situation
* Only in cases where the psychiatrist has prescribed the medication "if necessary". Otherwise, the psychiatrist would be advised so that the medication can be prescribed.
[€] If there is a serious incident (injury to the patient or other patients, injury to staff, damage to objects, etc.) an incident report is created.

Table 3 shows the usual care procedures for patients presenting differing pre-agitation and agitation states as defined by the nurses' team.

Care procedures are divided into first, second and third line approaches. The first line approaches are always employed, while the second and third are used if previous approaches fail to resolve the situation. Once an episode of pre-agitation and agitation ends, there is a period of continuous behavioral observation.

In the pre-agitation states, management always begins with control of vital signs and a verbal approach, leaving the administration of pharmacological treatment and seclusion as second line approaches. The verbal approach is defined as an approach to the patient characterized by an empathic attitude, showing concern for the patient's motives with the aim of offering alternatives designed to resolve the circumstances that led to the pre-agitation state and/or identifying activities that relax the individual or reduce anxiety. This is an intervention that follows the principles of de-escalation, although the ten-phase system is not always followed.

In contrast to the approach used for pre-agitation states, the first steps for agitation states are to request

assistance from colleagues (at least 5 nurses), move the other patients so that the episode of agitation does not have a negative impact on them, and use the verbal containment approach (this is not expected to bring the episode to an end, but rather to show the patient what steps will be followed to ensure the greatest degree of cooperation).

According to the nurses' team, the most frequent treatment is the use of drugs, prescribed by a psychiatrist and administered directly into the muscle, although the patient is always offered the option of taking the medication orally. Similarly, physical containment is considered for cases of agitation (immobilization by the nursing team) along with mechanical restraint; the latter accompanied by anticoagulant treatment if the patient is expected to be immobilized for more than 3 or 4 hours. In these cases the patient will be placed in a single room monitored by CCTV and with increased clinical supervision.

In common with the pre-agitation states, in cases of agitation, continual behavioral observation is carried out once the episode has been resolved.

In cases of agitation, it would also be usual to inform the psychiatrist and generate an intra-hospital communication on the incident if it is severe (injury to the patient or other users, injury to staff, damage to hospital property, etc.).

Finally, in cases of behavioral disorganization, containment proceeds by redirecting the patient's behavior with simple instructions and comprehensive care. Where there is an episode of agitation in a patient with behavioral disorganization, staff would proceed with administration of medication and mechanical restraint to avoid the risk of falls and injuries.

Psychiatrists' team results

Table 4 shows the types of pre-agitation and agitation states described by the team of psychiatrists with the characteristics of the various states and care procedures for each one.

The psychiatrists' team described 3 states of agitation: an initial, less severe state ("State of anxiety and irritability"), a state of agitation without aggressiveness ("Sub or pre-agitation") and a state with aggressiveness, ("Agitation with physical aggressiveness") where the aggressiveness could be self-directed (autoagressiveness) or towards other people or objects (heteroagressiveness).

These states form a continuum where the most severe states may be due to complications of previous, more moderate states. As such, the "State of agitation without aggressiveness" presents all the symptoms of the "State of anxiety and irritability" but with greater severity, and a series of new, more severe symptoms (e.g., hostility, defiance or verbal aggressiveness). Finally, the most severe state, "Agitation with physical aggressiveness" is divided into sub-states according to whether the aggressiveness was directed towards objects, the patient him or herself, or towards other people (self/hetero-aggressiveness). The difference is important as it conditions the choice of approach.

Regarding care procedures, for all states verbal containment and the offer of oral or intramuscular pharmacological treatment is made. This is obligatory in cases of "sub or pre-agitation" and "Agitation with aggressiveness". For the "State of anxiety and irritability" environmental measures would also be offered to calm the patient such as use of safe spaces, with CCTV monitoring and nursing supervision. For the most severe states, the assistance of support staff is required (5-6 people) to approach the patient. Pharmacological treatment is only given by nurses in cases where the patient's prescription specifies "if necessary". If this is not specified, there will always be a psychiatrist who can decide which pharmacological treatment to administer. Finally, in cases of "Agitation with aggressiveness", if the state is not resolved using the verbal and pharmacological approach, it may be necessary to use mechanical restraint accompanied by anti-coagulant treatment if restraint is prolonged.

CONCLUSIONS

The present study aims to identify and define the distinct types of agitation as well as the care procedures required for each state. The result is a "pragmatic" classification of agitation states and their care requirements in particular circumstances (ER and the psychiatric hospitalization units) carried out from two distinct but complementary perspectives (nursing/psychiatry). In our opinion, this classification is not in conflict with the traditional classification of mild-moderate-severe agitation or agreed therapeutic strategies (deescalation or deescalation with oral pharmaceutical treatments or deescalation with parenteral pharmacological treatments and coercive measures (seclusion, mechanical restraint), although our examination of agitation underlines the fact that agitation states are form a continuum and examines in greater detail the care procedures.

Thus, it was possible to reach consensus in both nominal groups and improve clarification of the phenomenon. Nevertheless, although there are various points in common, there are certain differences that should be mentioned. Qualitative methodology is based on a comprehensive-naturalistic-interpretive paradigm, where it is understood that multiple realities and knowledge exist with respect to

Table 4 Types of pre-agitation and agitation states, characterization and care packages according to the psychiatry group

State	Characteristics	Care package
Anxiety and irritability	Vegetative, psychological or physical symptoms of anxiety: Sweating Hyperventilation-feeling of suffocating Trembling Palpitations Feeling of tightness in the chest Subjective feeling of distress Irritability Physical-muscular tension Passive lack of cooperation (defiance) Expresses physical or emotional distress Insistent, repetitive speech in a high tone of voice	+ Containment interview with the nurse or psychiatrist + Offer of oral or intramuscular treatment from the nurse (if treatment is prescribed) or psychiatrist + Offer of environmental measures
Sub or pre-agitation (agitation without aggressiveness)	Very high anxiety (sweating, hyperventilation-feeling of suffocating, trembling, palpitations, feeling of tightness in the chest and subjective feeling of distress) Hostility-dysphoria Defiance Psychomotor restlessness Insistent, repetitive, vociferous speech Verbal aggressiveness (insults and/or threats) Fractious attitude	+ Verbal containment by nurse or psychiatrist with support personnel (5-6 people) + Pharmacological treatment (oral is offered although it is frequently intramuscular) by the nurse (if the treatment is prescribed) or psychiatrist ± Environmental measures
Agitation with physical aggressiveness: -towards objects -towards people (auto or hetero)	Exacerbated sub or pre-agitation symptoms Accompanied by aggressiveness towards objects Accompanied by aggressiveness towards other people or oneself	+ Verbal containment by nurse or psychiatrist with support personnel (5-6 people) + Pharmacological treatment (oral is offered although it is frequently intramuscular) by the nurse (if the treatment is prescribed) or psychiatrist + Environmental measures ± Mechanical restraint (± anticoagulant treatment) (more frequent in physical aggressiveness towards people)

an issue, and that these realities are contextual and may be influenced by social, cultural or political factors[9].

The nurses and psychiatrists who took part in our study agreed that agitation states from a continuum, and both groups of professionals identified a pre-agitation state where symptoms of anxiety agitation prodromes can be detected. All agreed that the initial response to milder states of agitation should be verbal containment in conjunction with other strategies, and that mechanical restraint be used in the most severe cases. In the latter cases, the presence of 5-6 professionals and pharmacological treatment is necessary. Both groups agreed that more severe agitation states arose from failure to control previous milder states.

The sub-agitation state was defined by the groups as a milder state than agitation although it did not mean the same to both groups of professionals. For the nurses' group, sub-agitation refers to a milder condition related to anxiety, moderate restlessness or nervousness, while, for the psychiatrists' group, anxiety would be more acute with somatic symptoms which could lead to verbal aggressiveness.

The nurses' team suggested a third state related to agitation called "behavioral disorganization". This state may present with sub-agitation or agitation and is not equivalent to any of the states defined by the psychiatrists' group.

On the other hand, the psychiatrists' team, within their care procedures, even for the mildest states, offered the possibility of pharmacological treatment, while the nurses' team would tend to leave this for more heightened states of agitation (2nd line care procedures) and offer stimulus or relaxation control measures instead.

It should be emphasized that the participants in this study were not familiar with the content of the ICD-10 R

codes. Nevertheless, many of the ICD-10 R codes were identified by the nominal groups. Thus, the codes under the R45 heading that describe the signs and symptoms involved in the emotional state, contain the categories R45.0 (Nervousness), R45.1 (Restlessness and agitation), R45.4 (Irritability and anger), R45.5 (Hostility) and R45.6 (Physical violence), all of which were identified in this study. The same occurred to a lesser extent with R46 codes that identify signs and symptoms related to appearance and behavior, such as R46.2 (Strange and inexplicable behavior) or R46.3 (Hyperactivity).

As study limitations, we should point out that the study was carried out in one hospital center and, consequently, some of the terminology may have a strong local cultural component. This would make it complicated to extrapolate the results to other institutions or countries. On the other hand, most of the members of the groups had worked or been trained in other hospitals in Spain, which could lessen the impact of this limitation. A further possible limitation could be that the classifications described are not etiological and neither nominal group mentioned causality in agitation; the patient's underlying diagnosis. As such, it should be mentioned that the procedures described are behavioral conduct containment, and at no time were other measures designed to identify the cause of the agitation put in place. It could be considered that, on occasions, to identify the cause of the agitation, the first step would be to address the behavior so that the patient is in condition to be examined and questioned in depth. As such, the measures described do not seek sedation of the patient but rather to return the behavior to a non-agitated state as soon as possible so that a causal approach can be made, especially if there is an organic cause which put could the patient' life a risk. No mention was made of the possible age of the patients as factors specific to some sub-types. The International Psychogeriatric Association has developed, by consensus, its own definition of agitation in the person with cognitive deficits[11] that coincide with the identification of characteristic symptoms (excessive motor activity, and verbal and physical aggressiveness). Despite these limitations, the researchers in our study are aware that the International Classification of Health Interventions (ICHI)[12] is developing descriptions of care procedures for agitation and we hope that such studies can shed some light on the issue.

It is clear that to be able to offer all patients the best care in an agitation crisis, it is essential to standardize the diagnostic and management criteria, as has been done by the American Society for Emergency Psychiatry with the BETA Project (Best Practices for Evaluation and Treatment of Agitated Patients)[13]. In our working environment, recommendations and protocols have been published on management of the agitated patient and the application of the most appropriate therapeutic measures[14-19], but no global consensus has been reached[20].

As we have seen, agitation and its care are relevant phenomena in psychiatric clinical practice. Description and classification should guide clinicians and managers to better understanding and approaches. Further studies will help us to describe and classify in a suitable way with the aim of providing the safest, most efficient care to our patients.

ACKNOWLEDGEMENTS

This study was funded by Ferrer, although it did not participate in the drafting of the study protocol, the performance of the study or analysis of the results.

We would like to express our gratitude to the nursing and psychiatric teams in the emergency and acute units at PSSJD for their cooperation.

CONFLICT OF INTEREST

The authors have no conflict of interest.

REFERENCES

1. Battaglia J. Pharmacological management of acute agitation. Drugs. 2005;65:1207-22.
2. Sadowsky CH, Galvin JE. Guidelines for the management of cognitive and behavioral problems in dementia. J Am Board Fam Med. 2012;25:350-66.
3. Flood C, Bowers L, Parkin D. Estimating the costs of conflict and containment on adult acute inpatient psychiatric wards. Nurs Econ. 2008;26:325-30.
4. Fernandez Gallego V, Murcia Pérez E, Sinisterra Aquilino JA, Casal Angulo C GEM. Manejo inicial del paciente agitado. Emergencias. 2009;21:121-32.
5. Rubio-Valera M, Luciano JV, Ortiz JM, Salvador-Carulla L, Gracia A, Serrano-Blanco A. Health service use and costs associated with aggressiveness or agitation and containment in adult psychiatric care: a systematic review of the evidence. BMC Psychiatry. 2015;15(1):35.
6. Mavrogiorgou P, Brüne M JG. The management of psychiatric emergencies. Dtsch Arztebl Int. 2011;108(13):222-30.
7. Zeller SL, Rhoades RW. Systematic reviews of assessment measures and pharmacologic treatments for agitation. Clin Ther. 2010;32(3):403-25.
8. World Health Organization. Available at: http://www.who.int/classifications/icd/en/. Accessed April 21, 2015.
9. Pope C, Halford S, Turnbull J, Prichard J, Calestani M, May C. Using computer decision support systems in NHS emergency and urgent care: ethnographic study using normalisation process theory. BMC Health Serv Res. 2013;13:111.
10. Vázquez Navarrete ML. Introducción a Las Técnicas Cualitativas de Investigación Aplicadas En La Salud. Barcelona: UAB; 2006.
11. Cummings J, Mintzer J, Brodaty H, et al. Agitation in cognitive disorders: International Psychogeriatric Association provisional consensus clinical and research definition. Int Psychogeriatr. 2015;27(1):7-17.
12. World Health Organization. Available at: http://www.who.int/

classifications/ichi/en/. Accessed April 21, 2015.
13. Holloman GH, Zeller SL. Overview of Project BETA: Best practices in Evaluation and Treatment of Agitation. West J Emerg Med. 2012;13(1):1-2.
14. Bernal Pérez F, Bustamante Pujadas C, Hernández Ariza MC, Nieves Montero J. Revista científica de enfermeria RECIEN. 2013;(6):1-18.
15. González Muriana A, Vergara Olivares JM DGM. Protocolos Clínico Terapéuticos en Urgencias Extrahospitalarias. Madrid; 2013.
16. Guzman-Parra J, Garcia-Sanchez JA, Pino-Benitez I, Alba-Vallejo M, Mayoral-Cleries F. Effects of a Regulatory Protocol for Mechanical Restraint and Coercion in a Spanish Psychiatric Ward. Perspect Psychiatr Care. 2015 Oct;51(4):260-7.
17. Manso MG. El paciente agitado: Planificación de cuidados. Nure Investig. 2004;(6).
18. Sociedad Española de Enfermería de Urgencias y Emergencias. El Paciente Agitado. Recomendación Científica 10/01/09 de 25 de Junio de 2009 de la Sociedad Española de Enfermería de Urgencias y Emergencias; 2009.
19. Ramos Brieva J. Contención Mecánica, Restricción de Movimientos y Aislamiento. Barcelona: Masson; 1999.
20. Jiménez Busselo MT, Aragó Domingo J, Nuño Ballesteros A, Loño Capote J, Ochando Perales G. Atención al paciente agitado, violento o psicótico en urgencias: un protocolo pendiente para una patología en aumento. An Pediatría. 2005;63:526-36.