PHYSICAL RESTRAINT USE IN ICU: PERCEPTIONS OF PATIENTS AND THEIR FAMILIES

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Immobilization of patients using restraints is a controversial issue. Martin, 2002; Hine, 2007 claim that it has no scientific basis and that the benefits have not been proven.

Several studies have reported that the use of restraints has caused both psychological and physical harm to patients and has even caused death [JBI, 2002; Evans et al, 2003; Saufl, 2004; Fariña et al, 2009].

The use of such systems has ethical and legal implications as their use may threaten patients’ freedom, dignity and autonomy [Saufl, 2004; Bray et al, 2004; Mohr, 2010].
INTRODUCTION

- Based on the JCAHO, a physical restraint is defined as ‘any physical method of restricting a person’s freedom of movement, physical activity, or normal access to his or her body’.

- In recent decades, several programmes have been implemented to reduce their use, especially in geriatric and psychiatric settings based on the training of professionals so that:
  - They are aware of the practical implications of restraint use.
  - Evaluate in each individual patient the risks and benefits of these measures.
  - Periodically verify the adequate placement of the restraints.
  - Hourly evaluate if the indication for their use continues to be valid.
INTRODUCTION

- In Intensive Care Units physical restraints are also commonly used.

- Indications [Maccioli et al, 2003; Demir, 2007; Hofsø & Coyer, 2007]:
  - To reduce the risk of what is called “interference with treatment”, as in the case of an intubated patient, with the aim of avoiding accidental extubation.
  - To protect agitated patients from injuring themselves or others.
RESTRAINTS: PREVALENCE IN ICU

- In USA, physical restraint use varies between 13% and 50% [Martin & Mathisen, 2005].

- A survey administered in 34 general ICUs, in 8 European countries and Israel (PRICE - The Physical Restraint in Intensive Care in Europe Project, 2010) found a wide variation among countries:
  - Italy 100%; Spain, Switzerland and France 45%; Finland, Greece and Israel < 30%; United Kingdom and Portugal, 0%.

- United Kingdom and Norway use high levels of sedation [Martin 2002; Martin & Mathisen, 2005] which represents a chemical restraint. This is how medication is considered when it is used specifically to restrict the movement of patients and not as a standard treatment for a medical or psychiatric condition [Martin, 2002].
PERCEPTION OF PATIENTS AND FAMILY MEMBERS

- Several studies have been carried out with this objective in geriatric settings.
- In ICU we only found the study of Minnick et al, 2001:
  - 6 patients, over 59 years of age.
  - Reported they felt no discomfort from the restraints.
  - Accepted them as a necessity as they understood there were no alternatives.
- Other studies, whose objective was to record the experience of patients who had been on mechanical ventilation, provide some data on what patients remembered about restraints. Some reported that they had been uncomfortable and others that restraints had been used because of their age [Jablonski, 1994; Wunderlich et al, 1999; Rotondi et al 2002, Thomas, 2003,].
AIMS

- To analyze the prevalence and use of physical restraints in a general adult ICU.
- To know the perceptions of patients who experienced use of physical restraints.
- To know the perceptions of relatives of patients who had received physical restraints.
DESIGN AND SAMPLE

- **Descriptive study**, quantitative and qualitative methods.
- **Setting**: 12- beds, general adult ICU in a teaching hospital in Spain.
- **Patients with physical restraints**: 101, in a period of 2.5 months.
- **Interviewed**: 30 patients and 30 relatives.
- **Inclusion criteria**:
  - **Patients**: had to remember having used the restraints and that they remained at normal levels of consciousness, had no psychiatric disorders.
  - **Family members**: had to have seen their loved one with the on-going restraints.
  - In both cases all those interviewed met the criteria of being able to describe their experience, provide valid and complete data (Sandelowski, 2000), and be able to speak and understand Spanish.
DATA RECORDED

- **Patients:** age, sex, diagnosis.

**Daily:**

- Indication of physical restraint.
- Type of restraint (side rails excluded).
- Shift and length restraints.
- Ramsay/Glasgow Coma Scale score (coma patients).
- Reason for removing the restraint.
- Self-removal of invasive lines during restraint use.

- **Family members:** sex and relationship with the patient.
INTERVIEWS

- **Semi-structured interviews** were carried out by the research team members.
- Using the **interview guidelines** established by Strumpf & Evans (*Subjective Experience of Being Restrained -SEBR-, 1988*), as modified by Hardin in 1993. These were translated from English into Spanish using reverse translation.
  - **Patients**: 11 open questions.
  - **Family members**: 7 open questions.
- The interviews were fully transcribed as they took place.
- All those interviewed were guaranteed anonymity, confidentiality of the data and that the recordings would be destroyed once the research was completed.
  - Ethical approval by the Hospital’s Research Ethical Committee was obtained.
QUALITATIVE ANALYSIS
(Hsieh & Shannon, 2005)

Reading each transcription to obtain general sense of the whole

Reread them in order to identify

MEANING UNITS

Units of meaning coded and grouped by common meanings are transformed into the language of the discipline

STATEMENTS OF MEANING

THEMES

Throughout the process consensus was established among researchers
Results and Discussion

- **Patients:** 101, 64 men, 37 women.
- **Mean age:** 62.7 (min. 29 – máx. 90).
- **Cause of admission:** surgical 75.2%, medical 24.8%.
- **Prevalence of restraint:** 43.9%.
- **Indication:**
  - The risk of interference with treatment: 94% (intubated patients).
  - Agitation and risk of self-injury: 6%.
- **Length:** 59% (1-6h), 13% (7-12h), 12% (13-24h), 16% (>24h).
- The use of restraints by shifts was similar.
- **Sedation:** light 83p, deep 10p; en coma 8p.
- **Restraining system:** only wrist strap.
- **Cause of restriction removal:** no longer necessary or exitus.
- **Incidents recorded:** 2 self-extubations and 2 removals of NG tube.
Acceptance of the restraint conditioned by beliefs and information provided.

**Statements of meaning:**

- No previous experience.
- No negative predisposition towards their use.
- Acceptance on understanding the information by viewing the restrain as a safety measure and having confidence in the healthcare staff.
- Belief that restraints are used in psychiatric patients did not condition acceptance.
- Non acceptance of restraint due to no or misinformation, beliefs and negative feelings.
‘If hadn’t had the restraints, instinctively I would have tried to take the tube out, even though I understand that the tube was good for me - well, I just would have ripped it out’

Patient 10
PATIENTS’ INTERVIEWS: THEME I

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PATIENTS’ INTERVIEWS: THEME II

Feelings and sensations caused by the use of the restraint.

- **Statements of meaning**
  - No real perception of the time they had used restraints.
  - Did not represent any type of limitation, given that, as patients said, they had nothing to do.
  - Feeling of lack of freedom of movement and of not being able to communicate.
  - Several negative feelings caused by the restraints.
‘I remember being really distressed because I couldn’t even touch my eyes. I was tied down and I couldn’t speak or move’
PATIENTS’ INTERVIEWS: THEME III-IV

T-III: Alternatives proposed to the use of physical restraints.

- **Statements of meaning**
  - Insufficient knowledge to provide alternatives.
  - Belief that the physical restraint was the only way to achieve immobilization.
  - Sedation or holding directly performed by healthcare staff.

T-IV: Future repercussions.

- **Statements of meaning**
  - No repercussion over time as use was not remembered or more importance was given to other aspects.
  - Certain repercussion due to not understanding the use of the restraint or not being able to erase the memory.
‘I still remember it… In an hour or tomorrow or in a year’s time I won’t have forgotten completely. I can’t get it out of my head’

Patient 18
FAMILIES INTERVIEWED

Spouse 47% - Son/Daughter 33% - Brother/Sister 13% - Father/Mother 7%

THEME I
Impressions caused by the use of the restraints.

- **Statements of meaning**:
  - Perception on seeing them or from the information given by the nurse.
  - Ability to describe them and how they were placed.
  - No impression caused as restraints were seen as a safety measure and other aspects appeared more dramatic.
  - Restraints caused certain negative feelings in some family members.
'He was tied down but the gauze was loose, then I said that there can be some movement. It seemed a nice touch that the knot was no directly on the wrist and so he didn’t have his wrist directly against the bed’

Family 7 (sister)
THEME I

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  - Restraints caused certain negative feelings in some family members.
‘When I went in and saw him with the tube, that made quite an impact on me but they had warned me – he’s got a tube! – I said OK, but it hurt me to see that his hands were tied down, I was so sad to see him tied down.’

Family 8 (wife)
FAMILIES’ INTERVIEWS: THEME II

Reasons for accepting or rejecting restraints.

- *Statements of meaning:*
  - Acceptance by seeing the type of restraint as being innocuous or as a safety measure.
  - Acceptance due to confidence in the staff and the information provided.
  - Acceptance by viewing restraint use as relatively less important than other issues.
  - Negative beliefs and experiences did not affect acceptance.
  - Lack of information on indications for use limited acceptance.
‘You don’t worry about the wrist strap, you worry about their general state, if they have to be tied down it’s the same as if they have to be face down’

Family 2 (wife)
Reasons for accepting or rejecting restraints.

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  - Acceptance by viewing restraint use as relatively less important than other issues.
  - Negative beliefs and experiences did not affect acceptance.
  - Lack of information on indications for use limited acceptance.
Alternatives to the use of restraints proposed by the families.

**Statements of meaning**

- No knowledge to suggest alternatives.
- The alternatives proposed paradoxically included other types of physical restraint.
CONCLUSIONS

- Most patients used physical restraints for a short period of time and only the wrist restraint was used.

- Patients who wore physical restraints and their relatives expressed a wide range of feelings and sensations, with no negative future repercussions. In general, they agreed with the use of restraints although more precise information would lead to greater acceptance.

- Determining the prevalence and use of physical restraints in ICUs is essential to be able to establish interventions which reduce their use without compromising the safe care of patients.
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SUBJECTIVE EXPERIENCE OF BEING RESTRAINED (SERB)
Strumpf&Evans 1988, modified by Hardin 1993

PATIENT INTERVIEW GUIDE

1. Do you remember when they put “this” on? (point to or specify the type of restraint).
2. Has someone told you why “it” is put on?
3. Do you agree?
4. What do you think would work as well or better?
5. How do you feel when “this” is put on?
6. After “it” is on for awhile, how do you feel?
7. Does “this” keep you from doing something? (Do you want to do what it keeps you from doing?)
8. How long is “it” left on?
9. When you’re not wearing “it,” do you think about it later and what do you think?
10. Have you ever seen other people wearing “these”? 
11. Is there anything you don’t like about wearing “it”?
SUBJECTIVE EXPERIENCE OF BEING RESTRAINED (SERB) (Hardin 1993)

PATIENT INTERVIEW GUIDE

1. Did any of the nursing staff tell you why the restraint was placed on (patient’s name)?

2. Did you agree that a restraint should be put on (patient’s name)?

3. How did you feel when you saw (patient’s name) wearing a restraint?

4. Is there anything you didn’t like about his wearing it?

5. Do you think other things would have worked as well or better? If so what?

6. In general, do you think patients should be restrained?

7. Do you have any other feelings or comments about restraints you would like to make.