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**Cultures of psychiatry and the professional
socialization process: the case of containment
methods for disturbed patients**

Len Bowers* RMN PhD
Professor of Psychiatric Nursing

Jane Alexander RMN BA(Hons) MA
Research Assistant

Alan Simpson RMN BA(Hons) PGDip
Research Fellow

Carl Ryan RMN Cert Ed BA(Hons)
PhD Student

Paola Carr-Walker MPsych(Foren)
Research Assistant

Address for correspondence:

Dr Len Bowers
Professor of Psychiatric Nursing
St Bartholomew School of Nursing and Midwifery
City University
Philpot Street
London E1 2EA

Tel: 020 7040 5824
Fax: 020 7040 5811
E Mail: L.Bowers@city.ac.uk

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Cultures of psychiatry and the professional socialization process: the case of containment methods for disturbed patients

Acute mental disorder necessitating admission to hospital is often accompanied by disturbed behaviour that threatens the health of the person concerned or that of those around them. A range of containment methods are used by psychiatric professionals to keep patients and staff safe. These strategies are strongly emotive and attract strong moral valuations, yet differ sharply between countries. This paper reports a study to investigate the relationship between attitudes to these containment methods, and exposure to psychiatric education and practice. It was hypothesized that the culture of psychiatry in the study country would socialise students' views towards the locally dominant pattern of relative evaluations. Nine cohorts of student psychiatric nurses at different stages of their training at one UK University were asked to complete ratings on 11 containment methods. Containment methods fell into five groups, with Mechanical Restraint and Net Beds attracting the most severe disapproval. Neither the relative evaluation of methods, nor the intensity of those evaluations, changed systematically with duration of training. The findings support the interpretation that the relative evaluations of psychiatric containment methods are a property of wider national cultures, rather than an isolated tradition of professional psychiatric practice.

Keywords: Psychiatry, violence, self-harm, containment, seclusion, observation, restraint, medication, intensive care.

Cultures of psychiatry and the professional socialization process: the case of containment methods for disturbed patients

Introduction

Acute mental disorder is often accompanied by severe distress and disturbed behaviour. Those admitted in crisis to psychiatric wards, for their own safety or the safety of others, may be actively hallucinating, deluded, agitated, irritable, overactive, elated or depressed, etc. In the UK, about 15% of such admissions to hospital are on a compulsory basis (Sainsbury Centre for Mental Health 1998), because the patients concerned have no insight to their condition, or reject treatment on a voluntary basis. Not surprisingly, the treatment and management of such patients on acute psychiatric wards can pose great difficulties. The main burden of managing disturbed behaviour, in ways that prevent injury and maintain patients dignity, falls upon psychiatric nurses. When patients are so confused or angry so as to be imminently in danger of assaulting another patient or member of staff (or of harming themselves), and cannot be verbally calmed, a range of different containment methods are used to prevent untoward outcomes. The danger of such outcomes is real. Previous research has shown that aggressive incidents may occur on such wards daily, and that 2% are severe, resulting in injuries to staff or patients (Nijman et al 1997). They can also cause Post Traumatic Stress Disorder for the staff (Whittington and Wykes 1992), and lost resource to the hospital from sick leave (Hunter and Carmel 1992).

Eleven containment methods commonly used by psychiatric professionals in different European countries are defined and depicted in Table 1. Little is known about how nurses choose which containment methods in what circumstances. In addition there is

a shortage of empirical evidence about which are to be preferred, combined with emotive ethical debate about their use. To date, what research has been conducted has been about usage rates (e.g. Shugar and Rehaluk 1990), characteristics of patients subject to them (e.g. Citrome et al 1994), and staff or patient views about them (e.g. Jones et al 2000). That research has typically been about single containment methods, e.g. Bornstein (1985) on mechanical restraint, or Muir-Cochrane and Harrison (1996) on seclusion. No previous work appears to have attempted any form of comparison between all methods.

Consideration of containment methods typically arouses strong emotions (Bowers and Heikinnen-Peltonen 1995). One reason might be the close connection to the abhorred past of psychiatry, with mechanical devices, chains, manacles, and the torture of patients in the name of treatment by spinning, ducking, douching, bleeding, purging and primitive surgery on the brain (Scull 1987). Not every method listed in Table 1 is in use in every European country. Those that are not used tend to be regarded as typifying that rejected, archaic, psychiatry. For example, in the UK Mechanical Restraint is not used, and arouses strong negative feelings among nurses, however seclusion is commonly used. One UK psychiatric nurse has written, "Mechanical restraints for me just creates visions of straightjackets and tying someone up like some unfortunate dog. In 8 years of acute nursing I've never felt that tying someone down was necessary. Even thinking about it makes me feel wobbly, it just seems so barbaric." (Dunning, quoted in Bowers 2000). However in Norway, it is Seclusion that is not used, and arouses strong feelings, whereas Mechanical Restraint is accepted practice. In Finland and the Netherlands, it is compulsory medication that arouses those feelings, because it is seen as a more invasive method of control than leather straps or Seclusion. Net Beds are used in Austria and Russia, having recently been

removed from use in Slovenia, and appear very strange to psychiatric professionals in other countries. Although these differences have been remarked upon by others (e.g. Pils 2003), they have not hereto been investigated as a topic in their own right. Their existence raises questions as to where these differences in feelings and practices arise. Are they embedded in the wider cultural values of a country, for instance, or are they representative of country-based cultures of psychiatry? If the latter, then there must be a process of professional socialization that inculcates those beliefs and attitudes. The study reported in this paper addresses these questions.

In the UK, training to become a psychiatric nurse is a specialized three-year University course. In the study location, the first year is largely classroom-based instruction, in which students will attend shared lectures with other type of nurse trainee (e.g. general, paediatric, etc.). In the second and third years supervised practice predominates, and students will work on a range of different wards, and in the community. While working on the wards, they are likely to participate in and assist with some of the containment methods listed in Table 1.

Aim of study

To explore the impact of training and exposure to psychiatric practice on judgements about the relative merits of different containment methods used by psychiatric nurses. Specifically, it was predicted that:

1. Methods would be rated as different at the outset of training.
2. Cultural and ethnic background would be associated with differing views at the outset of training.

3. By the end of training, methods which were in use would be rated as more benevolent and effective than those not in use.

Method

Sample

All student psychiatric nurses attending lectures, between June and September 2002, at one UK University, for a three-year training programme leading to registration as qualified psychiatric nurses. This included groups of students at every stage of the training process and exposure to practice, from new starters through to those nearing final qualification. Ethical approval was obtained from the University Ethics Committee, and permission to approach students to ask for consent to participate was given by the Dean of the School of Nursing. After data collection, time was spent with the student groups debriefing them, and discussing the issues and emotions which had been raised by the research.

Instrument

A new questionnaire was devised, naming and defining each method of containment, and asking respondents to rate that method for acceptability, efficacy, safety for staff, safety for patients, dignified for patients and preparedness of the respondent to use that method. Ratings were via a five point Likert scale, ranging from strongly disagree (1) to strongly agree (5). The methods referred to in the questionnaire were those described in Table 1, in the order presented in Table 1. The presentation of familiar

methods (from a UK point of view) were alternated with less familiar methods, and more severe methods alternated with less severe (in the opinion of the researchers) so as to reduce any tendency towards 'response set'. To accompany the questionnaire a set of two images for each containment method were produced, showing the equipment (e.g. syringe, leather straps, empty room, etc.) and its use. Faces of those pictured were pixelated to prevent any possible communication of emotion, positive or negative. The gender of all models of the patient subject to containment were male, to control for gender influence upon subjects rating. These pictures were incorporated into the questionnaire in smaller black and white versions, and were displayed on a screen via overhead projector, in full colour versions, so that subjects could view them whilst ratings were made.

Procedure

One lecture hour was booked with each group of students attending the University between June and September 2002. On entering each class, the researcher read out a standard explanation of the purpose and procedure of the research. Subjects were free to choose whether to participate in the study or not. Questionnaires were then be distributed, and following the completion of demographic items, each containment method was presented in turn by the reading of the definition for the method, and the presentation of the images via overhead projector. The order of presentation was the same for all groups. Following completion of the questionnaires and their collection, there was time for open discussion and questions, followed by information on local services' use of these containment methods.

Data analysis

For each containment method, ratings of overall approval were obtained by summing an individual's ratings of its acceptability, efficacy, etc., producing 11 method-specific scores in total. Overall ratings of containment as a whole (i.e. all methods together) were obtained by summing all scores for efficacy to produce an efficacy score, all for acceptability to produce an acceptability score, etc., producing 6 types of approval score. One-way ANOVA was then used to explore the overall relationship of these scores comparing scores by different cohorts of student nurses, and scores for different containment methods. The nature of this latter analysis was within-subjects, however, a between groups ANOVA was used as a more conservative test, and to allow polynomial trend analysis. Ten of these 17 variables were significantly non-normal by the Kolmogorov-Smirnov test, and could not be substantially improved by any transformation. In addition, Levene's test for homogeneity of variance was significant for one out the 17 variables by cohort, and for all 6 types of approval variables by method of containment. Given these violations of ANOVA assumptions, Kruskal-Wallis nonparametric tests were also performed as a more conservative check upon the findings. The REGWQ procedure was used to control for Type 1 error in ANOVA post hoc tests (Turner and Thayer 2001, Howell 2002). Independent samples t tests were used to compare subjects of differing demographic characteristics, and equal variances were not assumed where Levene's test was significant.

Results

A total of 114 (out of a potential 250) students from nine cohorts participated in the study. The modal age group was under 30 years, and 61% were female. The pattern of recruitment to training at this University meant that 72% of the subjects were of a Black African ethnic background (largely from Zimbabwe), 13% white European, and 15% from a range of six other ethnic backgrounds.

The means and standard deviations of the attitude to containment scores are provided in Table 2. PRN Medication and Intermittent Observation are the measures which receive the highest method-specific approval ratings, while Mechanical Restraint and Net Beds receive the lowest. Scores with the greatest variability are of IM Medication and Constant Observation.

No gender differences on attitudes to containment methods were found. Only one significant age difference was found, with a greater approval of PRN Medication in the 50 – 59 years of age group ($F_{(3,108)} = 4.35, p = 0.006$; Kruskal-Wallis chi square = 3.2, $df = 3, p = 0.36$), however only five subjects fell into this category. When contrasted with other ethnic groups, the white European subjects were less likely to consider containment methods safe for patients ($t = 2.47, df = 109, p = 0.015$), or to express preparedness to use them ($t = 2.52, df = 110, p = 0.013$).

When total method-specific approval scores were compared, five partially overlapping subsets could be identified ($F_{(10,1231)} = 61.25, p < 0.0005$; Kruskal-Wallis chi square = 400.87, $df = 10, p < 0.0005$). These are shown in Table 3 and Chart 1. However when individual methods were separately compared for efficacy, acceptability, etc., one variation appeared. As displayed in Chart 2, Seclusion fell into the group considered most safe for staff, compared to Open Area Seclusion and Constant Observation the

least safe, despite their opposed ratings for overall approval ($F_{(10,1216)} = 20.49$, $p < 0.0005$; Kruskal-Wallis chi square = 170.64, $df = 10$, $p < 0.0005$).

Overall approval ratings for containment methods were compared by cohort of subjects, to give an indication of change in opinions over the duration of nurse training. Only two methods showed significant differences between cohorts: Mechanical Restraint ($F_{(8,103)} = 3.06$, $p = 0.004$), and Net Bed ($F_{(8,104)} = 2.17$, $p = 0.036$). However means plots showed no obvious pattern, and polynomial tests for linear or quadratic trends were not significant. The hypothesis that views would change systematically with exposure to training and practice was not supported.

Opinions on containment methods were further explored by analysing the data from the students in their first year of training who had not yet completed substantial psychiatric placements ($n = 43$). At this stage in their training, nearly all education had taken place in the classroom. As with the whole sample, ANOVA revealed significant differences between methods, and these differences paralleled those of the whole sample. For example, total approval by method showed similar groupings to those depicted in Table 3, with the exception that group 2 (Constant Observation and Open Area Seclusion) was not separately identifiable ($F_{(10,462)} = 20.74$, $p < 0.0005$; Kruskal-Wallis chi square = 140.23, $df = 10$, $p < 0.0005$).

Discussion

Some caution must be expressed about the representativeness and durability of the findings. Only half the sample pool of student nurses participated in the study (mainly

due to non or late attendance at classes, rather than through refusal to participate), and there may be a degree of non-response bias in the results. In addition, the sample was drawn at one University only, and therefore may not be representative of student nurses in the UK in general. Some of the variables did not meet the necessary requirements for ANOVA. However most of the findings were strong, and were confirmed by nonparametric analysis. A reasonable degree of confidence in the findings is therefore mandated.

No evidence was found in this study for the idea that student nurses are socialized, over the course of their education, into particular evaluations about containment methods. Students starting their training, prior to sustained exposure to psychiatric practice, already evaluated Mechanical Restraint and Net Beds as less safe and desirable than other methods. In fact, the same patterned hierarchy of evaluations was visible at the outset and the end of training. It is possible that such change does occur over the years of nurse education, but was not detected by this study. Significant differences between cohorts of students were found, and it is possible that this variation concealed any underlying trend. Follow up of cohorts of students over the three years of their training, with repeated measures, might provide a more sensitive analysis.

However the absence of a detectable trend was contrary to the researchers' expectations. We had supposed that ignorance of psychiatric practice would make all methods of containment appear equally undesirable, and this was not the case. Moreover, we had also thought that the negative evaluation of Mechanical Restraint would increase during the professional socialization process. Mechanical Restraint is widely used throughout Europe, but not in the UK or the Republic of Ireland. This

may be a result of the UK non-restraint movement of the 19th Century, headed by John Connolly (Scull 1993), which was perhaps much more influential in the UK than elsewhere. However instead of identifying a strong 'culture of psychiatry' carrying a disapproval of Mechanical Restraint, the negative view proved to be present at the outset of training, and remained unchanged. In addition, the dislike of Mechanical Restraint was held just as intensely by students from Zimbabwe and a range of other Commonwealth countries.

These findings raise an interesting question: is a more intense disapproval of Mechanical Restraint an innate and natural human reaction? If so, then perhaps it is the psychiatric professional socialization process in other countries that changes an initial abhorrence into an acceptance of the practice. Such an interpretation is comforting for the UK practitioner, as it would support his or her scale of values, but it has a suspiciously ethnocentric ring to it. Instead, we might suppose that dislike of Mechanical Restraint may be a property of the wider UK culture, which is then expressed in the pattern of psychiatric containment practice. If this is the case, then it is tempting to speculate about a possible longstanding impact of libertarian ethics upon UK society, which may be expressed in a number of additional ways both within and outside the healthcare system.

The hypothesis that containment methods not in use would be evaluated more negatively was only partially supported. Mechanical Restraint and Net Beds are not used in the UK, and were disliked by subjects. However Open Area Seclusion is not used in the UK either, yet this was fairly positive evaluated. The reasons why the Net Bed was the most disliked containment method is obscure, but may be due to its similarity to a cage. However unlike Mechanical or Physical Restraint, it allows some

freedom of movement. Perhaps in this case the sheer unfamiliarity of the equipment affected evaluations. Most people will have seen Mechanical Restraint before, as it has been depicted in several highly popular Hollywood films. The use of Net Beds, however, is less widely known.

Judgements of the efficacy, acceptability, dignity, safety for patients and preparedness to use the different containment methods tended to run together, displaying the same hierarchy of approval. Only judgements of the safety of these procedures for staff showed any difference, with Seclusion being rather disapproved of but considered highly safe for staff, and Constant Observation the reverse. The direction of these evaluations gives an indication that staff may be willing to set their own safety partially to one side when making decisions about which methods to use.

The variability of opinions and practice between European countries sharing the same broadly Western-Christian set of values, should lead to caution with respect to criticising or deploring the use of any one containment method. Likewise, although a simplistic championing of the user movement might lead to blanket criticism and rejection of all forms of containment and constraint (e.g. O'Hagan 2004), this should also be avoided as it is clear that they are necessary, at least to some extent, for the protection of patients and staff. However interesting questions remain about the relationship between culture and professional socialisation. For example, how exactly are value systems generated and maintained, and how are particular values built and exchanged between the restricted society of professionals and the wider society at large. In addition, the striking national variability in approaches to psychiatric containment may underline variations in the social construction of mental disorder as a personal predicament within different countries. The degree of variability in

psychiatric services between European countries is seldom attended to or made an issue for study in its own right.

In conclusion, this small study has failed to find evidence for the influence of a professional socialization process in psychiatry that impacts upon evaluations of containment methods. Instead, it would appear to be the wider society and its cultural values that set the context and determine psychiatric practice. The findings further suggest that views and evaluations of psychiatric containment methods have an international and historical context that may explain the current diverse pattern of allegiances, ethical proscriptions, and practices between countries. Further study on other samples, particularly in other countries, is now required to further elucidate these issues. It is hoped that this, and other following studies, will contribute to a growing international debate about best practice in psychiatry.

References

- Bornstein, P. E. (1985) The use of restraints on a general psychiatric unit. *Journal of Clinical Psychiatry* 46(5)175 – 178
- Bowers, L. (Ed) (2000) Mechanical restraint: a psychiatric-nursing list classic thread. http://www.city.ac.uk/barts/psychiatric-nursing/threads/mech_restraint.htm
- Bowers, L. & Heikinnen-Peltonen, R. (1995) Psychiatric Nursing in Finland and the UK Compared. *Nursing Times* 91(20)40-41
- Citrome L., Green L. and Fost R. (1994) Length of stay and recidivism on a psychiatric intensive care unit. *Hospital and Community Psychiatry* 45(1)74-76

- Howell, D.C. (2002) *Statistical Methods for Psychology*. Belmont, CA: Duxbury Press.
- Hunter, M & Carmel, H (1992). The cost of staff injuries from inpatient violence. *Hospital and Community Psychiatry* 43:586-588
- Jones J., Ward M., Wellman N., Hall J., Lowe T. (2000) Psychiatric Inpatients' Experience of Nursing Observation: A United Kingdom Perspective. *Journal of Psychosocial Nursing* 38(12)10-20
- Muir-Cochrane, E. and Harrison, B. (1996) Therapeutic interventions associated with seclusion of acutely disturbed individuals. *Journal of Psychiatric and Mental Health Nursing* 3(5) 319-25
- Nijman, H.L.I., Allertz, W.W.F., Merckelbach, H.L.G.J., à Campo, J.M.L.G.& Ravelli D.P. (1997) Aggressive behaviour on an acute psychiatric admissions ward. *European Journal of Psychiatry* 11:106-114
- O'Hagan, M. (2004) Force in mental health services: international user and survivor perspectives. *Mental Health Practice* 7(5)12-17
- Pols, J. (2003) Enforcing patients rights or improving care? The interference of two modes of doing good in mental health care. *Sociology of Health and Illness* 25(4)320-347
- Sainsbury Centre for Mental Health (1998) *Acute Problems: A Survey of the Quality of Care in Acute Psychiatric Wards*. London: Sainsbury Centre for Mental Health
- Scull, A. (1987) Desperate Remedies: A Gothic Tale of Madness and Modern Medicine. *Psychological Medicine* 17:561-77
- Scull, A. (1993) *The Most Solitary of Afflictions: Madness and Society in Britain, 1700-1900*. New Haven: Yale University Press
- Shugar G, and Rehaluk R (1990) Continuous observation for psychiatric inpatients: a critical evaluation. *Comprehensive Psychiatry* 1:48-55

Turner, R. and Thayer, J. (2001) *Introduction to analysis of variance: design, analysis and interpretation*. London: Sage Publications

Whittington, R. and Wykes, T. (1992) Staff strain and social support in a psychiatric hospital following assault by a patient. *Journal of Advanced Nursing* 17:480-486

Table 1: Containment Methods in Psychiatry















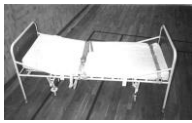







| | | |
|--|--|---|
| <p>1. PRN medication: Medication given at the nurses' discretion in addition to regular doses, by any route, and accepted voluntarily.</p> |  |  |
| <p>2. Physical restraint: Physically holding the patient, preventing movement.</p> |  |  |
| <p>3. Intermittent observation: An increased level of observation, of greater intensity than that which any patient generally receives, coupled with allocation of responsibility to an individual nurse or other worker. Periodic checks at intervals.</p> |  |  |
| <p>4. Seclusion: Isolated in a locked room.</p> |  |  |
| <p>5. Time out: Patient asked to stay in room or area for period of time, without the door being locked.</p> |  |  |
| <p>6. IM medication: Intramuscular injection of sedating drugs given without consent.</p> |  |  |
| <p>7. PICU: Transfer to a specialist locked ward for disturbed patients.</p> |  |  |
| <p>8. Mechanical restraint: The use of restraining straps, belts or other equipment to restrict movement.</p> |  |  |
| <p>9. Constant observation: An increased level of observation, of greater intensity than that which any patient generally receives, coupled with allocation of responsibility to an individual nurse or other worker. Constant: within eyesight or arms reach of the observing worker at all times.</p> |  |  |
| <p>10. Net bed: Patient placed in a net bed enclosed by locked nets, which he or she is unable to leave.</p> |  |  |
| <p>11. Open area seclusion: Isolated in a locked area, accompanied by nurses.</p> |  |  |

Table 2 Attitudes to Containment scores, means and standard deviations

| | Efficacy | | Acceptability | | Dignified | | Safe for staff | | Safe for patients | | Prepared to use | | <i>Sum total approval</i> | |
|---------------------------|--------------|-------------|---------------|-------------|--------------|-------------|----------------|-------------|-------------------|-------------|-----------------|-------------|---------------------------|-----------|
| | Mean | Std. Dev. | Mean | Std. Dev. | Mean | Std. Dev. | Mean | Std. Dev. | Mean | Std. Dev. | Mean | Std. Dev. | Mean | Std. Dev. |
| PRN medication | 4.05 | 0.74 | 4.13 | 0.71 | 3.65 | 1.10 | 3.94 | 0.91 | 3.67 | 0.91 | 3.96 | 0.86 | 23.32 | 4.17 |
| Physical restraint | 3.73 | 1.05 | 3.53 | 1.01 | 2.31 | 1.02 | 2.95 | 1.12 | 2.86 | 1.19 | 3.21 | 1.09 | 18.65 | 4.75 |
| Intermittent observation | 4.10 | 0.85 | 4.13 | 0.85 | 3.28 | 1.05 | 3.79 | 0.98 | 3.96 | 1.03 | 3.99 | 0.92 | 23.24 | 4.07 |
| Seclusion | 3.19 | 1.14 | 3.18 | 1.11 | 2.65 | 1.01 | 3.75 | 0.95 | 3.08 | 1.19 | 3.22 | 1.19 | 19.08 | 5.10 |
| Time out | 3.79 | 0.91 | 4.04 | 0.82 | 3.93 | 0.88 | 3.60 | 1.02 | 3.77 | 0.94 | 3.84 | 0.95 | 22.97 | 4.47 |
| IM medication | 3.72 | 1.23 | 3.18 | 1.25 | 2.10 | 0.93 | 3.35 | 1.14 | 3.00 | 1.22 | 3.21 | 1.26 | 18.51 | 5.69 |
| PICU | 4.01 | 0.96 | 3.86 | 1.01 | 3.21 | 1.07 | 3.73 | 0.96 | 3.71 | 1.03 | 3.71 | 0.98 | 22.25 | 4.90 |
| Mechanical restraint | 2.83 | 1.31 | 2.19 | 1.02 | 1.65 | 0.83 | 2.83 | 1.15 | 2.29 | 1.07 | 2.14 | 1.18 | 13.87 | 5.20 |
| Constant observation | 3.93 | 1.06 | 3.89 | 1.01 | 3.01 | 1.28 | 3.15 | 1.25 | 3.77 | 0.99 | 3.65 | 1.09 | 21.42 | 5.52 |
| Net bed | 2.12 | 1.21 | 1.64 | 0.89 | 1.36 | 0.63 | 2.60 | 1.33 | 1.92 | 1.03 | 1.66 | 0.94 | 11.33 | 4.68 |
| Open area seclusion | 3.47 | 1.04 | 3.50 | 1.00 | 3.13 | 1.13 | 2.88 | 1.11 | 3.49 | 1.07 | 3.28 | 1.07 | 19.78 | 5.33 |
| <i>Summed total score</i> | <i>38.94</i> | <i>5.32</i> | <i>37.17</i> | <i>5.75</i> | <i>30.29</i> | <i>5.78</i> | <i>36.41</i> | <i>5.94</i> | <i>35.51</i> | <i>5.84</i> | <i>35.91</i> | <i>6.06</i> | | |

Table 3: Total approval score for method
Homogenous subsets in order of decreasing approval

| | |
|----------------|--|
| Group 1 | PRN Medication; Time Out; Intermittent Observation; PICU; Constant observation |
| Group 2 | Constant Observation; Open Area Seclusion |
| Group 3 | Open Area Seclusion; Seclusion; Physical Restraint; IM Medication |
| Group 4 | Mechanical Restraint |
| Group 5 | Net bed |

Chart 1: Mean scores for total approval by method

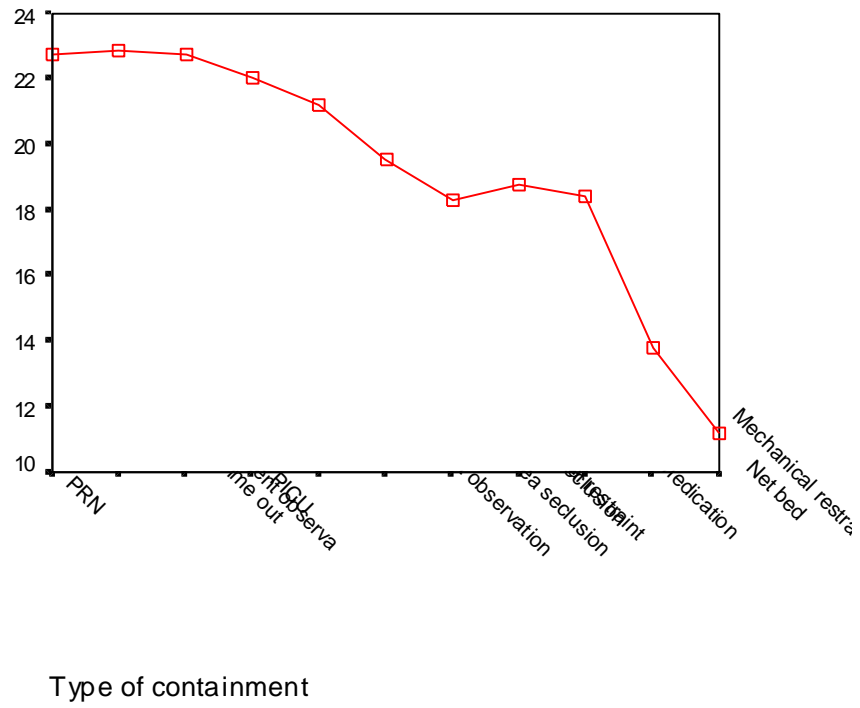


Chart 2: Mean scores for safety for staff by method

