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The Use of Seclusion and Mechanical Restraint in Psychiatry

A Persistent Challenge over Time

ACADEMIC DISSERTATION
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Cover
Drawing by patient S-M.M.:

”Mulla oli siivet, joilla lentää pois.
En vain tiennyt, kummalla puolella kaltereita olen.”

”I had wings to soar away.
I just didn't know on which side of the bars I am.”

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Abstract

Coercive measures, such as seclusion and mechanical restraint, have a long history in dealing with mental illness. Both the ethical and legal frameworks for using coercive measures acknowledge that the use of them is, at times, indispensable, but they should only be considered at the last resort, as a safety measure.

In this thesis, the use of coercive measures in psychiatry is studied at the level of international and national statistics as well as at the level of the individual patients. The international meta-analysis of published, unpublished and ongoing research regarding the use of coercive measures (mechanical restraint, seclusion, physical restraint) between 2000 and 2008 comprised databases from twelve countries in and beyond Europe. The Finnish nationwide study regarding the use of seclusion and mechanical restraint was conducted in a specific week in 1990, 1991, 1994, 1998 and 2004. The material was collected from two sources: The Survey Data covered all Finnish psychiatric hospitals, and comprised 671 working-age secluded or mechanically restrained patients. The Register Data covered all hospitalised working-age psychiatric inpatients during the study period (N = 28 064). The interview study was composed of the baseline interviews of 106 secluded patients at the two forensic psychiatric hospitals and at the psychiatric inpatient units of two hospital districts in Finland. A follow-up interview was completed by 83 of the participants.

The present study indicates that coercive measures are in general use in Western psychiatry, but the type and the quantity vary considerably across countries. Initiatives to curtail the use of coercive measures already exist in a few European countries. Finland stood at the average point on the preliminary international statistics in the use of seclusion and mechanical restraint. Despite the tendency of official policies towards the least restrictive psychiatric treatment in our country during the last two decades, national statistics of the present study indicate, that legislation solely can not change the use of coercive measures. The risk for being secluded had not changed, while the risk for being mechanically restrained decreased slightly, but not linearly, during this timeframe. Furthermore, the duration of mechanical restraint remained the same, and the duration of seclusion increased even three-fold. A rather well-entrenched establishment of seclusion and mechanical restraint seems to prevail in clinical practice. These measures were used mainly among the most clinically disturbed patients. Patient agitation or disorientation with no accompanying signs of actual or threatening violence was the most frequent clinical indication for the use of these measures. Psychiatric patients equate seclusion with prolonged, negative connotations, independent of the type of hospital where the treatment is administered. The only difference detected between the secluded patients in the forensic psychiatric hospitals and the general psychiatric in-patient units was that the forensic patients even more frequently viewed seclusion as a form of punishment. From the viewpoint of the secluded patients, both psychological and physical conditions under which coercive measures are implemented in everyday clinical practice are deficient.

Fundamental human considerations demand that the least intrusive practices be achieved and improved upon in order to reduce the use of coercive measures. This thesis indicates that almost no changes toward the reduced use of seclusion and mechanical restraint have taken place over the years, which confirms previous suggestions that deep-rooted treatment traditions and attitudes at least as much as safety requirements or patients` rights determine the use of coercive measures. The shared intention should be to find the best practices to moderate the use of these measures, or when they are really indicated, how they can be implemented in a more benevolent manner. Special attention should be directed toward duration and indications for seclusion and mechanical restraint. Physical conditions and psychological needs of the secluded or mechanically restrained patient must be more scrupulously taken into account.

Tiivistelmä

Mielisairaisiin kohdistuvilla pakkotoimenpiteillä, kuten huoneeseen tai lepositeisiin eristämisellä, on pitkä historia. Nykykäsityksen mukaan pakkotoimenpiteitä pitäisi käyttää psykiatriassa ainoastaan viimeisenä keinona silloin, kun se on välttämätöntä potilaan tai muiden turvallisuuden kannalta.

Tutkimuksessa tarkastellaan huone-eristyksen ja lepositeiden käyttöä sekä kansainvälisellä, kansallisella että yksilötasolla. Kansainvälisessä meta-analyyttiseen menetelmään perustuvassa tutkimuksessa käytiin läpi julkaistut, julkaisemattomat ja meneillään olevat pakkotoimenpiteiden käyttöön liittyvät tutkimushankkeet vuosien 2000–2008 ajalta. Tutkimuksessa vertailtiin huone-eristyksen, lepositeiden ja fyysisen kiinnipidon käyttöä kahdentoista maan välillä. Valtakunnallinen huone-eristyksen ja lepositeiden käyttöön liittyvä kyselylomake- ja rekisteritutkimus toteutettiin tietyn viikon ajalta vuosina 1990, 1991, 1994, 1998 ja 2004. Jokaisesta suomalaisesta psykiatrisesta sairaalasta kyselylomakkein kerätty aineisto muodostui 671 työikäisestä huone- tai leposide-eristetystä potilaasta. Rekisteriaineisto puolestaan kattoi kaikki työikäiset psykiatriset potilaat ko. tutkimusajanjaksolta (N = 28 064). Eristettyjen potilaiden kokemuksia koskevaan haastattelututkimukseen osallistui 106 potilasta kahdesta valtion psykiatrisesta sairaalasta ja kahden sairaanhoitopiirin psykiatrisesta yksiköstä Suomessa. Seurantahaastatteluun osallistui 83 potilasta.

Tutkimus osoittaa, että pakkotoimenpiteet ovat edelleen yleisesti käytössä länsimaisessa psykiatriassa, mutta niiden valinnassa ja määrissä on huomattavia eroja maiden välillä. Hankkeita pakkotoimenpiteiden käytön rajoittamiseksi on jo meneillään joissakin Euroopan maissa. Suomi asettui tässä preliminäärisessä kansainvälisessä vertailussa lepositeiden ja huone-eristysten käytössä keskivaiheille. Valtakunnallinen tutkimus kuitenkin osoittaa, että huolimatta tarkasteltuun 15 vuoden ajanjaksoon sisältyneistä lainsäädännöllisistä muutoksista sekä potilaan asemassa ja oikeuksissa terveydenhuollossa että tahdosta riippumattomasti toteutettavien toimenpiteiden edellytyksissä psykiatriassa, laisäädäntö ei yksinään riitä olennaisesti vaikuttamaan pakkotoimenpiteiden käyttöön. Riski joutua huone-eristetyksi ei muuttunut ja riski joutua leposide-eristetyksi väheni ainoastaan hieman, mutta ei suoraviivaisesti tarkasteltuna ajanjaksona. Lisäksi havaittiin, että leposide-eristysten kesto pysyi samana, ja huone-eristysten kesto kasvoi jopa kolminkertaiseksi. Tutkimus osoittaa myös tiettyjä vakiintuneita käytäntöjä. Leposide- ja huone-eristyksen käyttö kohdistui pääasiassa kliinisesti kaikkein vaikeimpiin potilaisiin. Agitoitunut ja sekava käyttäytyminen ilman merkkejä toteutuneesta tai uhkaavasta väkivaltaisesta käyttäytymisestä oli tavallisin pakkotoimenpiteen syy koko ajanjakson. Riippumatta siitä, onko kyseessä oikeuspsykiatrinen sairaala vai sairaanhoitopiirin sairaala, huone-eristyksessä oleminen oli potilaille pääosin kielteinen kokemus vielä puolen vuoden jälkeen tapahtuneesta. Ainoa havaittu ero sairaaloiden välillä oli se, että oikeuspsykiatrisissa sairaaloissa hoidossa olevat potilaat kokivat eristämisen vielä useammin rangaistukseksi. Eristettyjen potilaiden näkökulmasta tarkasteltuna huone-eristyksen psykologiset ja fyysiset puitteet ovat nykyisellään puutteelliset.

Tutkimus osoittaa ainoastaan vähäisiä muutoksia pakkotoimien käytön vähenemisessä, mikä tukee aiemmin esitettyjä olettamuksia siitä, että syvään juurtuneet käytännöt ja asenteet määrittävät pakkotoimenpiteiden käyttöä ainakin yhtä vahvasti kuin turvallisuusnäkökohdat ja potilaiden oikeudet. Vaikka joissakin tilanteissa pakkotoimenpiteet ovat välttämättömiä, tavoitteena tulisi olla niiden vähäinen käyttö. Tämä edellyttää yhteisesti hyväksyttyjen toimintatapojen jatkuvaa tarkastelua. Erityisesti pakkotoimenpiteiden käytön syihin ja kestoon on kiinnitettävä huomioita. Pakkotoimenpiteen kohteeksi joutuneen potilaan fyysinen ympäristö ja psykologiset tarpeet on huomioitava nykyistä paremmin.

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Vaasa, January 2010
Alice Keski-Valkama

List of original papers

The present thesis is based on the following original papers, which will be referred to in the text by the Roman numerals I – V.

I Keski-Valkama A, Sailas E, Eronen M, Koivisto A-M, Lönnqvist J & Kaltiala-Heino R (2007) A 15-year national follow-up: legislation is not enough to reduce the use of seclusion and restraint. Social Psychiatry and Psychiatric Epidemiology 42: 747 – 752.

II Keski-Valkama A, Sailas E, Eronen M, Koivisto A-M, Lönnqvist J & Kaltiala-Heino R (2009) The reasons for using restraint and seclusion in psychiatric inpatient care: a nationwide 15-year study. Nordic Journal of Psychiatry, November 2, (Epub ahead of print).

III Keski-Valkama A, Sailas E, Eronen M, Koivisto A-M, Lönnqvist J & Kaltiala-Heino R (2009) Who are the restrained and secluded patients: a 15-year nationwide study. Social Psychiatry and Psychiatric Epidemiology, October 21, (Epub ahead of print).

IV Steinert T, Lepping P, Bernhardsgrutter R, Conca A, Hatling T, Janssen W, Keski-Valkama A, Mayoral F & Whittington R (2009) Incidence of seclusion and restraint in psychiatric hospitals: a literature review and survey of international trends. Social Psychiatry and Psychiatric Epidemiology, September 2, (Epub ahead of print).

V Keski-Valkama A, Koivisto A-M, Eronen M & Kaltiala-Heino R Forensic and general psychiatric patients` view of seclusion: a comparison study. Journal of Forensic Psychiatry and Psychology, accepted for publication on October 28.

Contents

1. Introduction

"I felt terribly distressed because I was left alone. I felt like the rest of the world doesn`t even exist anymore. There`s just me and a room like a tiny box, and if I were to look through the window, ashes would be all I`d see..."

The quotation above was uttered by a secluded psychiatric inpatient at the beginning of the 21st century, but the use of coercion in a variety of forms has been associated with the management of mental illness or deviant behaviour throughout the ages. Individual freedom and dignity are fundamental values in the Western world. As Article 1 of the United Nations Universal Declaration of Human Rights proclaimed in 1948, *"All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood."* The enhancement of individual human rights has reflected on health care as a trend away from paternalism towards more patient autonomy and self-determination in the last few decades (Sjöstrand & Helgesson, 2008; Verkerk, 1999). This has presented a continuous ethical challenge in the field of psychiatry, where interference in the patients` autonomy occurs frequently in order to both cure and control the patients (Kaltiala-Heino, 1999; Prinsen & van Delden, 2009; Salize & Dressing, 2005).

On the one hand, it has been suggested that seriously mentally ill patients are vulnerable to the loss of impulse control, to the demands of interpersonal relationships and to sensory input, and thus the use of coercive measures might be therapeutic for them (Gutheil, 1978). On the other hand, the therapeutic effects of coercive measures are questioned because of unexpected cognitive changes due to sensory deprivation, lack of the possibility of normal social interaction, abrupt changes in daily routines, resentment, and restriction of an individual`s right to freedom (Myers, 1990). In biomedical research, different restraint techniques (e.g. plastic tubes, jackets, tethers, harnesses) are used in standard laboratory procedure for studying stress effects in rats (Glavin, Pare, Sandbak, Bakke, & Murison, 1994). The major effect of restraint has been found to induce stress-related physiological pathology as well as to produce reduction in home cage motor activity, habituation and even to cause learned helplessness. In psychiatry, however, the debate, pro and con, continues because controlled studies for assessing the beneficial or harmful effects of coercive measures do not exist (Sailas & Fenton, 2000; Sailas & Wahlbeck, 2005).

Unaware of the doctrinaire debate swirling around him or her, the secluded patient unsuspectingly poses a challenging question:

"... You start to feel sort of disintegrated in the solitude because you can't even hear anything from the outside. I cried a lot and tried to calm myself by singing. It would've been enough if someone had just been there; it wouldn`t matter who it would be or what he

or she talked about. As a professional, do you really consider seclusion an intensive care of a psychiatric patient?"

This question provided the final impetus needed to initiate this study in order to gain a more profound understanding of the use of coercive measures in current psychiatric practice. In order to discover some answers to the challenge thrown down above, a framework involving historical, ethical, and legal issues regarding the use of coercive measures in general as well as empirical literature associated in more detail to the use of seclusion and mechanical restraint is first devised, and then supplemented by this comprehensive research project, which was carried out at the international and national levels as well as at the level of the individual patients. This research project focuses primarily on the use of seclusion and mechanical restraint.

2. Review of the literature

2.1 Definitions

Coercion denotes the action of coercing, constraint, restraint or compulsion to force another to act or assent (to a measure) contrary to the individual`s personal preference. *Coerce* means to constrain or restrain by the application of superior force, or by authority resting on threats of force; to constrain or enforce to compliance or obedience by forcible means; to keep in order by force; to enforce obedience; or to nullify individual will or desire (Brown, 1993; Gove, 1971; Simpson, Weiner, & Oxford University Press., 1989). In psychiatry, coercion as deprivation of liberty is used under special prerequisites to secure a patient´s admission into hospital, to prevent release from hospital or to compel a patient into community treatment. Coercion is also administered during the hospital treatment episode, when it is used to treat (coercive treatments) or to control (coercive measures) the patient (Kaltiala-Heino, 1999). This thesis deals with the latter form of coercion, i.e. the use of coercive measures during the treatment episode. Seclusion, mechanical restraint, physical restraint and chemical restraint are examples of coercive measures used widely in clinical psychiatric practice around the world (Whittington, Baskind, & Paterson, 2006). The emphasis of this thesis is on the use of seclusion and mechanical restraint.

Seclusion denotes the condition or state of being kept apart from society as well as the place in which a person is secluded. *Seclude* means to shut off, to enclose or confine a person in a segregated place, hard to reach or enter, in order to prevent intercourse with, or influence from the outside (Brown, 1993; Gove, 1971; Simpson et al., 1989). In this thesis, seclusion refers to isolating a patient alone in a locked room from which the patient has no free egress.

Restrain means to restrict, limit, confine or deprive of personal liberty or freedom of action, to shut in by material barriers, to draw or bind tightly, restrict movement of (part of the body), hold (a person) down and back. *Restraint* means the action, or an act, of restraining something or someone, by means of deprivation or restriction of liberty or freedom of action or movement (Brown, 1993; Gove, 1971; Simpson et al., 1989). In this thesis, restraint refers to *mechanical restraint*, i.e. to confining the patient to bed by using belts.

2.2 Historical, ethical and legal framework for using coercive measures in psychiatry

2.2.1 History of coercive measures in managing mental illness

The use of coercive measures has a long history of dealing with mental illness (Brown & Tooke, 1992). The purposes and forms of these measures have varied over time, depending on societal beliefs regarding the nature and curability of mental illness. As far as is known, the earliest recorded use of seclusion can be traced to Ancient times, when it was used in accordance with the spirit of the times for therapeutic purposes on troubled persons. In extreme cases, restraint was also recommended. The Greek physician Soranus of Ephesus wrote in the second century AD (cited by Alty and Mason, 1994, 17–18):

"Have the patient lie in a moderate and slightly warm room. The room should be perfectly quiet, unadorned by paintings… and the bed should be firmly fastened down. It should face away from the entrance to the room so that the patient will not see those who enter. In this way the danger of exciting and aggravating his madness by letting him see many different faces will be avoided."

The earliest explanation for mental illness involved possession by evil spirits and demons, a belief which prevailed even as late as the 16th and 17th centuries (Brown & Tooke, 1992). Mentally ill persons were tortured in an attempt to drive out the demon. Their care was primarily the responsibility of the family and those who wished to achieve merit through charity. Often these persons were confined in cellars and cages. The shift towards the institutional model did not change the treatment of mentally ill persons in the 18th and 19th centuries, when dangerous and other disturbing individuals were isolated from the society in asylums. The pessimistic and punitive views on mental illness still prevailed and coercive measures were primarily used for the management of the most disturbed behaviour (Dix, Betteridge, & Page, 2008; Hyvönen, 2008).

The first basic principles of restraint and seclusion as non-punitive measures were described in "Memoir of Madness" by French physician Philippe Pinel (1745–1826) in 1794 (Weiner, 1992):

"If a madman suddenly experiences an unexpected attack and arms himself with a log, a stick, or a rock, the director – always mindful of his maxim to control the insane without ever permitting them to be hurt – would present himself in the most determined and threatening manner but without carrying any kind of weapon, so as to avoid additional vexation. He speaks with a thundering voice and walks closer toward the maniac in order to catch his eye. At the same time the servants converge on him at a signal, from behind or sideways, each seizing one of the madman's limbs, an arm, a thigh, or a leg. Thus they carry him to his cell while thwarting his efforts and chain him if he is very dangerous or

merely lock him up. That is how one dominates agitated madmen while respecting human rights…But one must avoid any unnecessary constraints and use only enough force to restrain them…Great skill is required to retain the insane locked in their cells only for the necessary length of time and only while they are capable of extreme acts of violence…Grant as much freedom as possible to those madmen who content themselves with mere gesticulations, loud declamations, and acts of extravagance that hurt no one. To lock up this kind of madman on the pretext of maintaining order means to impose needless constraints that provoke his rebellion and violence and render his madness more inveterate and often incurable."

Pinel called this new approach to mental illness moral treatment, i.e. managing mentally ill patients in a psychologically sensitive manner in contrast to harsh physical treatment. As it appears in Pinel`s text, coercive measures were not banned but restricted to certain circumstances after careful consideration.

From the first half of the 19th century, the use of the mechanical restraints (straitjacket, coercion chair, protection bed, hydrotherapy) was included essentially in the asylum psychiatry, especially in the United States, as a form of psychological treatment in order to help patients regain self-control (Colaizzi, 2005). During the same period, a strong anti-restraint movement in Great Britain replaced mechanical restraint interventions by physical restraint in some asylums with success (Belkin, 2002; Haw & Yorston, 2004). A padded seclusion room, a new contrivance by English physician John Conolly (1794–1866), as well as wet packs and tight wrapping sheets were used as a last resort (Angold, 1989; Colaizzi, 2005). Advocates of the mechanical restraints criticised the anti-restraint movement and questioned physical restraint which, in their view, allows personal force against patients. They also questioned seclusion because it left the patient more liable to neglect and social isolation. As a result, the movement of moral treatment declined in the United States.

The use of coercive measures still had a central role in the treatment of mentally disturbed patients at the beginning of the 20th century. In the 20th century, the use of physical therapies (insulin shock, ECT, psychosurgery, sedatives, and especially chlorpromazine at mid-century) were reinforced by the development of a medical model (Brown & Tooke, 1992). Regardless of these innovations, the widespread and unregulated use of coercive measures has been continued up to the present time (Dix et al., 2008).

2.2.2 Ethical issues in using coercive measures

Coercion is used not only to help, treat or cure but also to control the psychiatric patient (Kaltiala-Heino, 1999). These two basic aspects motivate the use of coercive measures, and are intermingled rather than mutually exclusive considerations. Coercive measures as a means of help or protection may prevent suicidal behaviour, or may help the patient regain control over his or her psychiatric symptoms. These measures are used as a method of

control in a situation where a patient's violent, or potentially violent, behaviour threatens the safety of others (Kaltiala-Heino, Tuohimäki, Korkeila, & Lehtinen, 2003). The use of coercive measures presents, however, an ethical dilemma because it involves acting against the patient's autonomy (Bloch & Green, 2006; Katsakou & Priebe, 2007; O'Brien & Golding, 2003; Prinsen & van Delden, 2009).

Traditional justification for using coercion and coercive measures in mental health care is derived from paternalism and from the nature of mental illness (Kaltiala-Heino, 1999; O'Brien & Golding, 2003). In their book "Principles of Biomedical Ethics", Beauchamp and Childress (2001, p. 178) defined paternalism as "*the intentional overriding of one person's preferences or actions by another person, where the person who overrides justifies the action by the goal of benefiting or avoiding harm to the person whose preferences or actions are overridden".* Paternalistic justification used in mental health care, i.e. to justify the use of coercion by protecting the patient against his or her own non-autonomous action, is an example of soft paternalism as opposed to strong paternalism where informed, voluntary and autonomous action of the person is restricted for the patient`s self-protection. Due to the mental illness, the person is considered incompetent to make independent decisions and to lack autonomy. Hence, others need to intervene in the interest of the patient (medical paternalism) or in the interest of others who might be affected (social paternalism) (Kjellin & Nilstun, 1993; Sjöstrand & Helgesson, 2008).

The following theoretical justifications for using coercive measures are presented in order to find the balance between soft paternalism and individual rights and autonomy (Wertheimer, 1993): 1) coercive measures may promote and increase the long term autonomy of the patient, 2) the patient's current or irrational preferences may differ from his or her long term, stable or rational preferences, 3) the patient's subsequent acknowledgement of the beneficial aspects of being coerced, 4) the patient who undergoes substantial psychological change (e.g. a result of brain damage, fundamental traumatic experience, Alzheimer's Disease) should not be allowed to harm his or her personal identity. However, although the expressed purpose for using coercive measures is genuine, the risk of their application for punitive purposes or the misuse of power cannot be excluded (Kaltiala-Heino & Välimäki, 2001; Mason, 1993; O'Brien & Golding, 2003). The primary danger of soft paternalism is losing contact with the patient's actual preference (Wertheimer, 1993). The presence of mental illness cannot automatically be considered an indication of total incompetency in every aspect of life (Appelbaum, 2006; Breeze, 1998).

In 1977, the World Psychiatric Association adopted the Declaration of Hawaii, which was the first concerted effort to explicate the ethical principles of respect for autonomy and beneficence in the psychiatric community (Kingdon, Jones, & Lönnqvist, 2004; Okasha, 2003). The Declaration confined the use of any compulsory intervention only to the case of a mental disorder. The Hawaii Declaration was updated in 1993 by the Declaration of Madrid. The Declarations touch on the use of coercion by upholding the principle of "least restrictive interventions", and forbade involuntary acts "*unless withholding treatment would endanger the life of the patient and/or those surrounding him or her*", i.e. the use of coercion is accepted in certain circumstances to the least invasive extent as possible.

Unfortunately, however, ethical problems related to the use of coercive measures are not routinely examined in everyday psychiatric practice. In Finland, only a minority of nurses in acute psychiatry perceived seclusion and mechanical restraint as ethically problematic (Lind, Kaltiala-Heino, Suominen, Leino-Kilpi, & Välimäki, 2004). In everyday practice, the extent to which authority is used to override the patients` will should be decided on a case by case basis (O'Brien & Golding, 2003). Olsen (1998) has prescribed principles for ethical application of the least restrictive measures in clinical practice: 1) A patient's preference overrides the treatment alternative that is considered least restrictive when the patient's preference is safe, feasible, and efficacious enough to justify the use of resources; 2) The restriction should extend only to those behaviours that potentially harm a patient or others; 3) Restriction in one area does not justify restriction in another; 4) Restriction of the patient's capacity to choose is the primary guide to the degree of restrictiveness of particular measures; 5) Any coercion is a form of restriction; 6) Even when the patient's wishes are denied, the patient is entitled to an explanation of the restricted intervention, the legal and ethical justification, and the conditions under which respect for the patient's autonomy will be restored; 7) The actual condition of the restriction should be designated to fit the patient's specific situation; 8) Disagreement with treatment goals should never be the primary or only evidence of patient incompetence.

2.2.3 International recommendations for using coercive measures

Since the 1970s, both the United Nations (UN) and the Council of Europe have enhanced the protection of the dignity, human rights and fundamental freedom of persons with mental illness. Both organisations have paid attention especially to those who are subject to involuntary placement or treatment. In 1978, the Commission on Human Rights of the UN passed a resolution for the protection of those detained on the grounds of mental ill-health. The UN Resolution for the Protection of Persons with Mental Illness and for the Improvement of Mental Health was promulgated more than ten years later, in 1991. In 1977, the Council of Europe adopted a recommendation that identified the need for legal protection of people with a mental illness, followed by a recommendation regarding the rights of a patient detained for involuntary treatment in 1983, a recommendation on psychiatry and human rights in 1994, and the most recent recommendation in 2004 (Jones & Kingdon, 2005). These international recommendations are not legally binding, but they have a moral obligation. Both organisations have given their specific recommendations on the use of restraint and seclusion in psychiatry.

According to Principle 11 of the UN General Assembly: "*Physical restraint or involuntary seclusion of a patient shall not be employed except in accordance with the officially approved procedures of the mental health facility and only when it is the only means available to prevent immediate or imminent harm to the patient or others. It shall not be prolonged beyond the period which is strictly necessary for this purpose. All instances of physical restraint or involuntary seclusion, the reasons for them and their*

nature and extent shall be recorded in the patient's medical record. A patient who is restrained or secluded shall be kept under humane conditions and be under the care and close and regular supervision of qualified members of the staff. A personal representative, if any and if relevant, shall be given prompt notice of any physical restraint or involuntary seclusion of the patient."

Supplementing the Resolution adopted by the UN General Assembly, the World Health Organisation (WHO) published The Resource Book on Mental Health, Human Rights and Legislation in 2005, to provide guidance for mental health legislation around the world. With reference to using seclusion and restraint, the WHO recommends national legislation to ensure that seclusion and restraint are used as a last resort to prevent immediate or imminent harm and danger to self or another, for the shortest period of time, and never as a punishment or for the convenience of the staff. Infrastructure and resources should be arranged so that seclusion is not used as a substitute for an inadequate structure and lack of resources. Seclusion should be allowed only in accredited facilities and seclusion practices should be recorded in a reviewable register.

In accordance with the UN General Assembly, the Council of Europe has introduced the following special article, Article 27, concerning the use of seclusion and restraint in its Recommendation in 2004: *"Seclusion and restraint should only be used in appropriate facilities, and in compliance with the principle of least restriction, to prevent imminent harm to the person concerned or others, and in proportion to the risk entailed. Such measures should only be used under medical supervision, and should be appropriately documented. In addition, the person subject to seclusion or restraint should be regularly monitored; and the reasons for, and duration of, such measures should be recorded in the person's medical records and in a register."* Article 11 concerning professional standards encourages appropriate training of staff on *"measures to avoid the use of restraint and seclusion"* as well as on "*the limited circumstances in which different methods of restraint or seclusion may be justified, taking into account the benefits and risks entailed, and the correct application of such measures"*. Contrary to its earlier recommendations, the Council of Europe has not prohibited using mechanical restraint since 1994 (Kingdon et al., 2004).

In 1987, the European Convention for the Prevention of Torture and Inhuman or Degrading Treatment or Punishment (CPT) was organised by the Council of Europe to prevent violations against human rights, and enforcement of Article 3 of the European Convention on Human Rights which states that *"No one shall be subjected to torture or to inhuman or degrading treatment or punishment"*. The majority of the Council of Europe member states have ratified the CPT, which has the power to visit these states freely. The CPT has shown a particular interest in the use of seclusion and restraint in the clinical practice of psychiatric in-patient treatment (Niveau, 2004). As a result of the CPT visits to member states, violations have been reported in the implementation of the coercive measures in clinical psychiatric practice, which raise the risk of abuse and ill-treatment: imprecise decision making process, inaccurately defined duration of the measure, insufficient recording, and using the measures for punitive reasons.

Overall, although the use of coercion and coercive measures violates human rights ideals expressed in the international recommendations, these recommendations continue to acknowledge that the use of coercive measures is sometimes unavoidable and may be used as a last resort (Høyer et al., 2002).

2.2.4 Legislation in relation to the use of coercive measures

Increasing awareness of the ethical problems related to the use of coercive measures as well as international recommendations has reflected on the mental health legislation with pressure for more detailed regulations. A comprehensive research project regarding the legislation of involuntary placement and treatment of mentally ill patients across the European Union member states was carried out in 2001 (Salize, Dressing, & Peitz, 2002). The study indicated that almost all Member States had reformed their legislation during the 1980s and 1990s, but by the year 2001, only six states (Austria, Denmark, Germany, The Netherlands, Sweden and the UK) have detailed regulations of coercive measures, i.e., physical restraint, seclusion and chemical restraint. Furthermore, regulations among these six states varied: physical restraint was regulated in all of these states, seclusion was regulated in all of these states except Denmark, but chemical restraint was included in mental health legislation only in Denmark and Germany.

In the United States, many states have their own legislation and regulations regarding mechanical restraint and seclusion (Tardiff & Lion, 2008). The situation is complicated by the different standards of the two central health care institutions, the Centers for Medicare and Medicaid Services (CMS) and the Joint Commission on Accreditation of Health Care Organisations (JCAHO), which supervises hospital care receiving federal funding in all the states. Furthermore, the American Psychiatric Association (APA) Revised Task Force Report on seclusion and mechanical restraint has been in the process of preparation since 2003. The function of the APA`s Revised Task Force is to standardise the current practices by determining authorisation, reviewing procedures as well as limiting the duration of seclusion and mechanical restraint more strictly. The new task force, however, will determine the indications for using coercive measures more broadly than CMS and JCAHO, which restricted coercive measures to emergency situations (Tardiff & Lion, 2008).

In spite of these activities, the picture is far from clear regarding the standardised use of coercive measures both in the Europe and in the United States. A recently published study indicated that legislation and clinical practices regarding coercive measures are still heterogeneous, both within and among the 16 European countries studied (Steinert & Lepping, 2009). Even for the experts, it was difficult to reach a clear understanding of standard treatment and practices in their own countries and what the respective legislation does and does not allow.

2.3 Empirical research on the use of seclusion and mechanical restraint in psychiatry

2.3.1 Prevalence of the use of seclusion and mechanical restraint

The use of seclusion and mechanical restraint varies considerably across psychiatric institutions (Brown & Tooke, 1992; Busch & Shore, 2000). Among studies conducted mostly at the individual psychiatric hospital level, the proportion of secluded and mechanically restrained patients has varied from 0–66%, and the average duration of the measures has ranged from 1.5 hours to 50.6 hours (Brown & Tooke, 1992). Across psychiatric hospitals with a comparable admission and discharge policy and identical regulations, the proportion of the secluded or mechanical restrained patients has been found to vary from 0%–48% and the mean duration between 4.9–18 hours (Okin, 1985). Another study, comprising data from 23 psychiatric hospitals which operated under the same policies and procedures, indicated that the proportion of secluded or mechanically restrained patients varied from 0.4%–9.4% (Way & Banks, 1990). In neither of these studies can the differences be explained exclusively by patients' characteristics.

The use of seclusion and mechanical restraint varies geographically even across hospitals with similar administration and patient characteristics (Betemps, Buncher, & Oden, 1992; Betemps, Somoza, & Buncher, 1993; Korkeila, Tuohimäki, Kaltiala-Heino, Lehtinen, & Joukamaa, 2002). A recently published international review indicated variation in seclusion and mechanical restraint rates which were derived from multi-centre studies conducted in the US, Australia/New Zealand, the UK, Finland, Belgium, Germany, The Netherlands, and Switzerland (Janssen et al., 2008). The number of seclusion and mechanical restraint episodes varied from 3.7–110 per 1000 inpatient days (in the Netherlands and the USA, respectively), and between 1.3–1517 per 1000 admissions (in Australia/New Zealand and Belgium, respectively).

Clinical factors such as demographic characteristics or diagnosis of the treated patients as well as non-clinical factors such as divergent policies, treatment philosophies, staffing resources, attitudes, organisational structure and the climate of psychiatric units have been suggested as explanations for the varied rates (Angold, 1989; Brown & Tooke, 1992; de Cangas, 1993; Fisher, 1994; Larue, Dumais, Ahern, Bernheim, & Mailhot, 2009; Lendemeijer & Shortridge-Baggett, 1997). Furthermore, different methodologies and policies in defining seclusion and restraint and in specifying the patient populations studied make comparing seclusion and restraint rates across studies difficult (Busch & Shore, 2000; Fisher, 1994; Kaltiala-Heino, Korkeila, Tuohimäki, Tuori, & Lehtinen, 2000; Whittington et al., 2006).

2.3.2 Characteristics of the patient being targeted for seclusion and mechanical restraint

Studies on the use of seclusion and mechanical restraint, examining the influence of demographic and clinical factors, such as age, gender, diagnosis and acuteness, have produced contradictory results. Younger patients have been quite consistently found to be restrained and secluded the most frequently (Coutinho, G., Allen, & Adams, 2005; Forquer, Earle, Way, & Banks, 1996; Mason, 1998; Salib, Ahmed, & Cope, 1998; Smith et al., 2005). However, other research has failed to find an association between age and being restrained or secluded (Brown & Tooke, 1992; Kaltiala-Heino et al., 2000). Some research suggests that while younger patients are more likely to be restrained and secluded, older patients are restrained and secluded for a longer period of time (Smith et al., 2005), and that mechanical restraint is more frequently applied to younger patients and seclusion to older ones (Wynn, 2000). Findings regarding gender are inconsistent, with evidence suggesting that the use of mechanical restraint and seclusion is more frequent among female patients (Mason, 1998; Salib et al., 1998; Way & Banks, 1990), and contradictory evidence intimates that male patients are restrained and secluded more frequently (Carpenter, Hannon, McCleery, & Wanderling, 1988; Thompson, 1986), or differences cannot be found at all (Forquer et al., 1996; Hammill, 1987; Kaltiala-Heino et al., 2000; Kasper, Hoge, Feucht-Haviar, Cortina, & Cohen, 1997; Legris, Walters, & Browne, 1999). Higher rates of seclusion and mechanical restraint exist among psychotic patients compared with non-psychotic patients (Mason, 1998), and more precisely, among patients with schizophrenia (Betemps et al., 1993). However, personality disorders (Mason, 1998; Salib et al., 1998), mental retardation (Tardiff, 1981; Way & Banks, 1990), and organic (Kaltiala-Heino et al., 2000; Steinert et al., 2007) or substance use related disorders (Kaltiala-Heino et al., 2000) have also been associated with mechanical restraint and seclusion. Higher mechanical restraint and seclusion rates are reported soon after admission (El-Badri & Mellsop, 2002; Kirkpatrick, 1989; Thompson, 1986), and at hospitals providing acute care compared with hospitals providing chronic care (Crenshaw, Cain, & Francis, 1997). However, some evidence exists that the use of seclusion and mechanical restraint is not necessarily limited to acute patients (Forquer et al., 1996; Way & Banks, 1990). The contradictory results in evaluating clinical factors related to the use of coercive measures can be explained by the fact that studies were carried out in a single or in only a few hospitals or at one time-point only. Selective populations and differences in definitions are also a usual methodological problem in these studies.

2.3.3 Clinical indications for using seclusion and mechanical restraint

Empirical studies indicate that reasons for using seclusion and mechanical restraint varied in clinical practice. In many studies, actual violence has been identified as the most

frequent reason for seclusion and mechanical restraint, accounting for 20.8%–44% of the reasons for seclusion and mechanical restraint (Morrison & Lehane, 1996; Salib et al., 1998; Smith & Humphreys, 1997; Soloff & Turner, 1981; Thompson, 1986). Other evidence suggests that merely threatening violence accounts for 33%–62% of the reason, and is the most common determinant of seclusion and mechanical restraint (El-Badri & Mellsop, 2002; Swett, 1994; Way, 1986). And finally, some studies find that actual and threatening violence are equally important motivations for using seclusion and mechanical restraint (Oldham, Russakoff, & Prusnofsky, 1983). Curiously, some studies indicate that non-violent reasons are the most prominent motivation of seclusion and mechanical restraint. Disorientation or agitation has been reported to be a motivation in 21.1%–43.6% of seclusion or mechanical restraint episodes (Kaltiala-Heino, Tuohimäki et al., 2003; Mattson & Sacks, 1978; Oldham et al., 1983; Plutchik, Karasu, Conte, Siegel, & Jerrett, 1978). Furthermore, it is important to acknowledge that rather than associating the use of coercive measures exclusively with the behaviour of patients, the motivation for using these measures may be associated with other factors as well (Brown & Tooke, 1992; Fisher, 1994; Holzworth & Wills, 1999). Staff have reported, e.g., overcrowding, lack of privacy in the unit, as well as the presence of noisy patients as important factors in the use of seclusion (de Cangas, 1993).

2.3.4 Initiatives to reduce the use of seclusion and mechanical restraint

Since the beginning of the 21st century, successful initiatives to reduce the use of seclusion and mechanical restraint have started to emerge at the individual hospital level, mostly reported from the United States (Gaskin, Elsom, & Happell, 2007). Programmes contain individually planned influential factors, which have been systematically targeted to produce changes at different levels of organisation. Common factors typically included in these programmes comprise emphasising the impact of leadership on the organisational change, systematic and rigorous monitoring of the use of coercive measures, staff education and changing the therapeutic environment. Reduction efforts may be accompanied by an increase in violent incident rates, if the staff have not been given specific training or experience in the management of violent patients except by using seclusion or mechanical restraint (Khadivi, Patel, Atkinson, & Levine, 2004; McCue, Urcuyo, Lilu, Tobias, & Chambers, 2004). Evidence however indicates that reduction in the use of seclusion and mechanical restraint is possible without increasing assaults by the patients (Forster, Cavness, & Phelps, 1999; Hellerstein, Staub, & Lequesne, 2007; Kaltiala-Heino, Berg, Selander, Työläjärvi, & Kahila, 2007; Steinert et al., 2008; Sullivan et al., 2005).

2.3.5 The use of seclusion and mechanical restraint from patients` and professionals` perspectives

A majority of secluded patients view seclusion and mechanical restraint as negative intervention (e.g. Hoekstra, Lendemeijer, & Jansen, 2004; Holmes, Kennedy, & Perron, 2004; Meehan, Bergen, & Fjeldsoe, 2004; Wynn, 2004) and as a form of punishment (e.g. Holmes et al., 2004; Meehan et al., 2004), or even as a form of torture (Veltkamp et al., 2008). The opinions of mechanically restrained patients tended to be even more negative (Wynn, 2004). Patients in varying degree are, however, capable of discerning some positive aspects of seclusion (e.g. Meehan, Vermeer, & Windsor, 2000). These patients have reported that seclusion had a calming effect on them and they had found that seclusion was a protective environment made them feel safe. However, despite the calming effects experienced during seclusion, these same patients unanimously described strong negative feelings towards seclusion such as anger, disgust, helplessness, retribution and depression. Accordingly, when the patients were asked their opinions about curative aspects in a Finnish forensic hospital, they cited more disadvantages than advantages from restrictions and seclusion which, nevertheless, were considered helpful by one third of the patients (Vartiainen, Vuorio, Halonen, & Hakola, 1995).

Seclusion tends to remain a significant and negative experience in the minds of patients even after their discharge from hospital. In one study from the 1970s, patients' art renditions of their illness and treatment were derived from three distinct art therapy sessions: the first, two or three weeks after admission, the second, two to three weeks before discharge and, the final, one year after discharge (Wadeson & Carpenter, 1976). Patients were not specifically requested to produce the material associated with seclusion, but over one third of the secluded patients did so. Even one year after discharge, patients described that their experience of being secluded symbolised, for them, their entire mental illness. In another study, data from an extensive mail survey of former patients in New York State facilities were gathered (Ray, Myers, & Rappaport, 1996). Most of those respondents who reported being secluded or mechanically restrained during at least one treatment episode, recalled negative experiences associated with the measures. Being subjected to coercive measures tended to be associated with a more negative assessment of the overall hospitalisation stay, even two years after discharge.

The use of coercive measures is emotionally distressing and conflicting for the staff as well. Shame, fear and distress as well as concern over abusing patients` rights were associated with using seclusion and mechanical restraint in reports by the staff (Bonner, Lowe, Rawcliffe, & Wellman, 2002). However, the majority of psychiatric professionals tended to believe that coercive measures are used correctly (Wynn, 2003), which may reflect attitudinal adjustment to prevailing practices (Bowers, Alexander, Simpson, Ryan, & Carr-Walker, 2004; Bowers et al., 2007; Whittington, Bowers, Nolan, Simpson, & Neil, 2009). The staff assert that coercive measures are not only necessary for safety, but that they also have therapeutic value devoid of punitive connotation; whereas patients consider mechanical restraint and seclusion forms of punishment and of little therapeutic value