

Experiences of patients and healthcare professionals with freedom-restrictive measures within the ZGT hospital

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Abstract

The use of freedom-restrictive interventions has several negative consequences for patients and healthcare professionals. Therefore it is important to prevent the use of those interventions as much as possible, how that should be done is described in a guideline of Verzorgenden & Verpleegkundigen Nederland (V&VN). Within the ZGT hospital a crisis respond team was founded in order to prevent the use of freedom-restrictive interventions. However, there is no insight within the ZGT on experiences of healthcare professionals and patients with the crisis response team. In addition to that, the hospital does not meet the guideline of the V&VN regarding aftercare. Aftercare for patients after the use of freedom-restrictive measures is not arranged within the ZGT hospital. This study aims to provide insight in experiences of patients and healthcare professionals regarding the VIT and how to fill in aftercare after the use of freedom-restrictive measures.

This study has a qualitative design. The first part of the data was collected through semi structured interviews based on the Personal Construct Theory. This theory describes how people make sense of experiences based on constructs. The second part of the data, regarding the aftercare, was collected by four semi structured open questions.

During the data collection it appeared that patients were not able to participate and therefore family was interviewed. Family of patients need more information about the situation of the patient and what to expect. The freedom-restriction was not the problem, but the condition of the patient was what worries the family the most. The worst element of fixation was humiliation. Healthcare professionals mentioned causal relationships between aspects of fixation and that separation could have a calming effect on patients. Aftercare should include provision of information through debriefing with the consultative geriatric nurse. A follow-up should be a part of aftercare too. Healthcare professionals indicated that this could be feasible in the hospital.

This study has a small population and therefore it could be that data is not complete. The advice is to do another study with a quantitative design and a short questionnaire in order to burden the patients/family and the healthcare professionals a little as possible.

Content

Abstract	1
1. Introduction	4
1.1. Aim	5
1.2. Research questions	5
2. Background information	6
2.1. Forms of freedom-restricting interventions	6
2.2. Risk behaviour and preventive interventions	7
2.3. Consequences of freedom-restrictive measures	9
2.4. Freedom restriction within the ZGT hospital	9
2.4.1. The VIT	. 10
2.5. Experience	. 10
3. Theoretical framework	. 11
3.1. Personal construct theory	. 11
3.1.2. Personal constructs and values	. 12
3.2. Soll-ist model and gap analysis	. 13
4. Method	. 14
4.1. Design	. 14
4.1.1. Population	. 14
4.2. Data collection	. 14
4.3. Data analysis	. 16
4.3.1. Process analysis	. 16
4.3.2. Eyeball analysis	. 17
4.3.3. Construct characterisation	. 17
4.3.4. Relationships between elements	. 18
4.3.5. Gap analysis	. 18
5. Results	. 19
5.1. Experiences of the patients	. 20
5.2. Experiences of the healthcare professionals	. 22
5.3. Aftercare after freedom-restrictive measures	. 24
5.3.1. Current situation of aftercare after fixation	. 24
5.3.2. Expectations of aftercare after fixation	. 24
5.3.3. Need for aftercare after fixation	. 25
5.3.4. Feasibility of aftercare after fixation	. 25
5.3.5. Gap analysis	. 26
6. Discussion	. 27
6.1. Research questions	. 27
6.2. Methodological strengths and limitations	. 28

6.3. Recommendations for the ZGT hospital and further research	30
7. Conclusions	31
8. References	32
Appendix 1	36
Appendix 2	37
Appendix 3	38
Appendix 4	39
Appendix 5	40
Appendix 6	41

1. Introduction

In the Netherlands, 5% to 10% of patients admitted to a general hospital come in contact with freedom-restrictive measures (1, 2). Freedom-restrictive measures are measures or interventions that restrict the individual freedom, autonomy and behaviour of the patient (1, 3, 4). These interventions or measures are freedom-restrictive when the patient is unable to remove the measure or intervention independently. Freedom-restrictive measures include many different interventions and are classified into different levels of severity. These interventions can vary from the use of side rails of the beds to prevent the patient from getting out and the use of medication that influences behaviour to physical fixation and seclusion (1, 4).

Freedom-restrictive measures are used to protect patients from harming themselves and those around them (5). Several types of behaviour are classified as risk behaviour (4). Common reasons reported for utilizing freedom-restrictive measures are: violent behaviour, agitation and/or verbal threats (6, 7). When patients come in contact with freedom-restrictive interventions, this causes negative patient perception of care. Freedom-restrictive interventions are often experienced as stressful, humiliating and traumatic (8-14). In addition to that, the way that patients are treated affects their perception towards freedom-restrictive measures as well (15). The use of multiple freedom-restrictive interventions at the same time causes more distress than the use of an single intervention (5) and seclusion even increases the length of stay in the hospital of patients (16, 17).

The use of freedom-restrictive measures on patients also affects nurses and other healthcare professionals. Nurses experience various negative feelings when they have to use freedom-restrictive measures on patients. In general, nurses have a negative attitude towards freedom restriction on patients (15, 18) and fear that the use of these measures influences their professional relationship with the patients in a negative way. Nurses think that the trust patients have in the nursing staff decreases when freedom-restrictive measures are used. Nurses expressed the need of preventing the use of freedom-restrictive measures to enhance quality of care (18).

Therefore, prevention of freedom-restrictive measures is important to patients and healthcare professionals in order to avoid negative consequences and to maintain quality of care. In 2013 the Verpleegkundigen & Verzorgenden Nederland (V&VN) (4), a professional association of nurses and nursing assistants, published a guideline for freedom-restrictive measures. These guidelines describe risk behaviour, types of freedom-restrictive measures and how to apply them correctly, alternative interventions and how to prevent using freedom-restrictive measures. The objective of this guideline is to prevent the use of freedom-restrictive measures and/or use alternative interventions (e.g. the use of a night lamp, family participation or leaving the room door open). When these alternatives appear to be not sufficient, freedom-restrictive measures can be used as a final intervention.

Within the Ziekenhuisgroep Twente (ZGT) hospital a crisis response team, the VIT (Vrijheidsbeperkende Interventies Team, freedom-restrictive intervention team) was founded in June 2017. This crisis response team executes and coordinates all the activities that relate to freedom-restrictive interventions (19). The foundation of the VIT is a result of not having a clear policy on freedom-restrictive measures, the inability of to keep all nurses within the ZGT hospital competent in the application of freedom-restrictive measures and not meeting the guideline of the V&VN (20). When

the condition of a patient requires physical freedom-restrictive measures, according to the nurse who is responsible for that particular patient, the VIT will be called upon. Since the founding (21) of the VIT the number of freedom-restrictive measures decreased from 122 interventions in 2017, 111 interventions in 2018 to 35 in the first six months of 2019.

In the guideline of the V&VN (4) aftercare is described as an important aspect to support patients after their experience with freedom-restrictive measures. In literature (22) debriefing of patients after a freedom-restrictive measure is mentioned as a technique to reduce emotional impact, to enable patients to process the experience and to help patients understand the restraint events and the reasons why freedom-restrictive measures were applied. Within the ZGT hospital it is not clear if and how aftercare is executed in clinical practice. The policy among freedom-restrictive interventions within the hospital (23) describes that the responsible specialist should discuss the freedom-restrictive measures with the patient during the final interview before discharge.

1.1. Aim

The VIT was founded in order to lower the use of freedom-restrictive interventions. However, it is unclear what the experiences of patients are after they came in contact with freedom-restrictive measures within the ZGT hospital. In addition to that, there is nothing known about how the healthcare professionals of the VIT experience their tasks. Experiences of patients and healthcare professionals could help to improve the proper use and prevention of freedom-restrictive measures. The ZGT hospital intends to follow the guideline of the V&VN. However, the aftercare process within the hospital does not meet the guideline.

This study aims to gain insight in experiences from patients and healthcare professionals regarding the VIT and to provide an advice for the ZGT hospital how to fill in aftercare. With the insights on patient's experiences, healthcare professionals will be enabled to take the values that are important to patients into account when they perform freedom restrictive measures on patients. With the insights on the experiences of healthcare professionals, the hospital could be enabled to improve the care for patients regarding freedom-restrictive interventions When the hospital knows what kind of aftercare is needed, the hospital can start with implementing aftercare and will eventually meet the guideline of the V&VN.

1.2. Research questions

In order to provide insight in experiences from patients and healthcare professionals, the following research questions were composed. The last research question aims to gain insight on how to fill in aftercare within the hospital before a patient is discharged home.

- 1. What are the experiences of patients who underwent freedom-restrictive interventions with freedom-restriction within the ZGT hospital?
- 2. What are the experiences of the healthcare professionals of the VIT regarding the use of freedom-restrictive interventions on patients within the ZGT hospital?

3. What kind of aftercare is needed prior to discharge for patients who underwent freedomrestrictive interventions according to patients and healthcare professionals of the VIT in the ZGT hospital?

2. Background information

Within the ZGT hospital the guideline of the V&VN is used as general guidance for their policy regarding the use and prevention of freedom-restrictive interventions.

2.1. Forms of freedom-restricting interventions

Freedom-restrictive interventions exist in different forms and differ in severity. The V&VN (4) divides freedom-restrictive interventions based on the severity into five levels of severity. A freedom-restrictive intervention with a score of one is the mildest form and a score of five is the most severe form. In the table below the freedom restrictive interventions per score are displayed.

Table 1: Freedom-restrictive interventions scored based on severit	v accordina to V&VN (4)

SCORE	FREEDOM-RESTRICTIVE MEASURE
1	Alarming mat in bed of next to the bed (bed-exit alarm)
	Moving sensor (Optiscan)
	A low-low bed
	Alarming mat in (wheel)chair (Optiseat)
	An alarm when the patient leaves his/her room
	Half bedrails
2	Acoustic monitoring
3	A freedom-restrictive splint on the arm or leg (Posey sleeve)
	Video monitoring
	Fixating pillows in bed
	Security mitts (Posey mitts)
	A pillow in the (wheel)chair that tilts the patient backwards
4	Bedrails
	Helmet
	Tent bed (Posey bed)
5	Wrist and/or ankle fixation
	Abdominal fixation strap
	Fixation strap in a (wheel)chair
	Table top that cannot be removed by the patient
	Patter cover

Within the ZGT hospital, the guideline of the V&VN (4) is followed with regard to assigning scores of severity to freedom-restrictive interventions. These scores indicate the level of severity of the freedom-restrictive measure, one is the mildest and five is the most severe. This study focusses on patients who came in contact with the following interventions: a tent bed, wrist/ankle fixation, abdominal fixation strap, fixation strap in a (wheel)chair or a table top that cannot be removed by the patient (examples are displayed in Appendix 1). These interventions are the most common freedom-restrictive measures within the ZGT hospital.

The tent bed is a construction that is placed over the bed of the patient to provide a safe, calming and controlled environment (4, 24) for the patient. The objective is to provide the patient a low-stimulus environment.

The most severe freedom-restrictive interventions have a score of five and are used when other (preventive) interventions were not sufficient. These interventions obstruct the patient's freedom the most.

2.2. Risk behaviour and preventive interventions

The V&VN appoints six types of behaviour as risk behaviour (4) for the use of freedom-restrictive interventions: delirious behaviour, tendency to and removal of medical equipment, risk of falling, slipping down in a chair of bed, physical aggression (25) and wandering.

Delirious behaviour

Delirious behaviour (26) can occur in two forms: a hyperactive form and a hypoactive form. The hyperactive form bears the inherent risk for the need of freedom-restrictive interventions, as the patients is restless and possibly aggressive. The hypoactive form causes very calm behaviour and is therefore often not recognized as delirious. Both forms have several underlying causes: high age, dementia or another cognitive disorder, multi morbidity, previous delirium, medication, pain, change of environment, infections and cerebral diseases.

Tendency to and removal of medical equipment

The tendency and removal of medical equipment (27) (e.g. removing catheters) could be caused by a delirium, dementia, pain caused by the equipment and confusion.

Risk of falling

The risk of falling (28) has several underlying causes. These causes can be subdivided into two categories: internal and external factors. Internal factors are poor mobility, vertigo, imbalance, vision problems, fear of falling, dementia and mental confusion. External factors are medication use, alcohol, walking aids, inappropriate footwear and environmental factors (e.g. rugs and lack of lightning).

Slipping down in a chair or bed

Slipping down in a chair or bed could be the result of (4) patients having a higher age, dementia, delirium, neurological diseases or disorders and osteoporosis.

Physical aggression

Physical aggression can be the result of (4, 29) an altered mental status, behavioural problems, withdrawal of medication, pain, dissatisfaction with care, substance abuse/addiction and a lower social economic status (4, 16).

Wandering

Wandering could be caused by an altered mental status, trauma, addiction, fear and boredom.

In the table below the six types of risk behaviour are explained with the suitable preventive interventions.

Table 2: Risk behaviour and interventions to prevent freedom restriction (4)

RISK BEHAVIOUR	INTERVENTIONS TO PREVENT FREEDOM RESTRICTION
DELIRIOUS BEHAVIOUR	Patient-centred attention Bed in the lowest position Placing necessities within reach Promote sleep and wake rhythm Clear communication Family participation Room door open Physical exercise Music Night lighting Nursing examination
THE TENDENCY AND REMOVAL OF MEDICAL EQUIPMENT	Distraction Patient-centred attention Clear communication Family participation Nursing examination Removing unnecessary material Hiding / fixating the material
RISK OF FALLING	Non-slip mats Anti-slip socks / slippers Bed triangle Bed in lowest position Placing necessities within reach Clear communication Family participation Physical exercise Night lighting Optimize environment Patient-centred attention Using standing and walking aids Nursing examination Removing (non) -physical obstacles
SLIPPING DOWN IN A CHAIR OR BED	Bed rail as an aid to pull up Bed triangle Placing necessities within reach Clear communication Family participation Physical exercise Patient-centred attention Nursing examination
PHYSICAL AGGRESSION	Patient-centred attention Placing bed in lowest position Clear communication Family participation Physical exercise Music Nursing examination Remove dangerous objects (glass, sharp objects)
WANDERING	Clear communication Family participation Marked clothing Night lighting Optimising environment Patient-centred attention Nursing examination

In literature other risk factors were found, these factors cannot be directly influenced. When a patient is uncooperative and has a psychological impairment (30), the risk of the need of mechanical restraint is higher than when these factors are not present. Several studies (16, 25, 30, 31) indicate that the kind and severity of a mental and personality disorder are important predictors whether the risk of mechanical restraints is increased.

Additionally, sociodemographic factors have an influence on the risk of using freedom-restrictive measures. Unemployment (16, 31) and/or having an immigrant background (32, 33) increase the risk. The immigrant background increases the risk due to not understanding the language and culture of the other country. Being married and having children decreases the risk of the use of freedom-restrictive measures (31).

2.3. Consequences of freedom-restrictive measures

As described before freedom-restrictive measures have consequences for both the patients and the staff. In general, literature (4, 34, 35) indicates that the use of freedom-restrictive measures, especially mechanical restraint, should be the last option and not be executed before alternative and/or preventive interventions are deployed and appeared to be insufficient.

The more severe freedom-restrictive interventions (score four and five) cause more negative consequences for the patients than the milder forms (4, 35). These negative consequences (4, 35, 36) vary from humiliation, fear, trauma, physical adverse effects (e.g. decubitus, incontinence) and interpersonal separation. Freedom-restrictive measures can even cause post-traumatic stress disorder in patients (35, 37). This makes the minimal use of freedom-restrictive interventions very important.

Freedom-restrictive measures have a negative impact (18) on nurses as well. It causes an ethical dilemma among the nursing staff, because freedom-restrictive measures are seen as negative by them. This causes an internal conflict, because a nurse wants to care for the patient and not harm the patient. Additionally, nurses fear that the professional relationship will be influenced negatively (15, 18) when freedom-restrictive measures are used, because the patient's trust in the nursing staff will decrease.

2.4. Freedom restriction within the ZGT hospital

Within the ZGT hospital the guideline of the V&VN is followed with regard to the scoring of the freedom-restrictive interventions, preventive interventions and the use of those interventions. Within the ZGT hospital the freedom-restrictive measures are executed according to the Medical Treatment Agreement Act (Wet Geneeskundige Behandelingsovereenkomst). The policy of the ZGT hospital (23), regarding freedom-restrictive interventions, aims to reduce the use om freedom restriction to a minimum.

The ZGT has two locations, one in Almelo and one in Hengelo. The hospital in Hengelo is free of freedom-restrictive interventions. However, when a patient in Hengelo needs to be restricted, the patient will be transferred to the hospital in Almelo. When a nurse believes that a patient needs freedom-restrictive measures or a patients shows risk behaviour, the nurse needs to contact the crisis response team of the hospital that is responsible for all the physical freedom restriction within the entire hospital; the VIT.

2.4.1. The VIT

The VIT (19) consists of nurses, consultative psychiatric nurses, care manager during evenings, nights and weekends and the security team of the hospital. The nurses of the VIT, are the nurses who work on the fourth floor. The fourth floor of ZGT is the floor where the psychiatric wards are located. During office hours, the VIT is coordinated by the consultative psychiatric nurse of the consultative geriatric nurse. At the end of the working day, the consultative psychiatric nurse hands over to the care manager during the evenings, nights and weekends. There are always general nurses of the VIT present, as every nurse of the fourth floor is trained to be member of the VIT. The members of the VIT are trained twice a year. The training consists of: prevention of delirium, awareness of their own attitude and scenario training.

When the VIT receives a request for a consult (19), this consult is communicated according to the rules of SBAR. The SBAR (Situation Background Assessment and Recommendation) is a method that contributes to structured communication about patients between healthcare professionals (38). After that (19), the coordinator and a nurse will assess the patient physically and indicate the needs for interventions. These interventions could be alternative, preventive or freedom-restrictive. When the intervention is freedom-restrictive, the coordinator of the VIT -nurse will execute the intervention together with other healthcare professionals. When a patient is very aggressive, security can be contacted. The VIT-nurse or the coordinator is always responsible for the use of freedom-restrictive interventions. Afterwards, the coordinator reports the intervention and the consult in the dossier of the patient.

2.5. Experience

In literature there are different definitions assigned to "experience" and the definitions differ depending on the purpose. Dewey (39) distinguished experience as "experience" and "an experience", where "experience" is the everyday life experience. Such as activities that are a habit and go unnoticed, like using a smartphone. These unnoticed experiences, may get noticed when these experiences end or when they are no longer a matter of course anymore. "An experience" (39, 40) is an event that has a beginning, middle and end and is therefore self-contained. An event that touches a person's sense of values could lead to an emotional response. This can make a strong impression that is dependent on the attitude and expectations of the person itself. These distinctions are similar to Kahneman's research (40, 41), he distinguishes instant experience and retrospective experience. Where instant experience is the immediate evaluation of experience and retrospective experience the evaluation of the whole experience.

In this study "an experience" will be researched, as the patients and staff will be questioned about past experiences that have already ended.

3. Theoretical framework

3.1. Personal construct theory

This theory describes how a person develops personal constructs after experiencing events and how these constructs influence how a person passes through an experience. Therefore, this theory is relevant to this research, as it aims to provide insight on experiences of patients and healthcare professionals.

The personal construct theory (PCT) (42) is a theory described by George Kelly. This theory states that humans behave like scientists, in a way that they hypothesize and anticipate. Which comes down to the fact that they have expectations. Human beings experiment and encounter, they test their own expectations. Than humans conduct theory building and have a constructive revision. This means that the expectation is revised. After the theory building people hypothesize again. From hypothesizing and theory building personal constructs are founded. These personal constructs encompass expectations, perception and behaviour. Personal constructs are constructed representations or ways of understanding the world and have creative capacity. This creative capacity means that each person lives in his own worldview and can experience the same events as other persons. However, each person will experience that event in a different way. Personal constructs are idiographic, which means that each person has his own unique set of constructs. These personal constructs influence the way people experience events. Kelly describes that a person automatically develops constructs and is free to change his meaning of the world. The PCT is visualised in figure 1, below.



Figure 1: Personal Construct Theory

A personal construct (43) is bipolar and consists of two opposite poles. Some things/events/experiences are seen as the same and some differ from each other. It is a way of discriminating between thing, people and events. A personal construct is an abstraction of how a person makes sense of events and abstracts their own opinion from that. These personal constructs are inseparable from behaviour and feelings.

During the exploration of personal constructs, Kelly summarised the personal construct theory into the fundamental postulate. The processes of a person are internalised by the way this person anticipated on events. These internalised events are organised into *corollaries (44)* or eleven fundamental constructs that people have to make sense of the world around them. The following eleven corollaries together explain how a person interprets information, why each person has different perception of events and how one person influences the perception of one another.

- 1. Construction corollary
- 2. Individuality corollary
- 3. Organization corollary
- 4. Dichotomy corollary
- 5. Choice corollary
- 6. Range corollary
- 7. Experience corollary

The construction system of a person changes after constructing similar events, as displayed in figure 2. Step one is anticipating on what may happen. Then committing or investing in the outcome or experience. After that there is an encounter between the person and the experience/event. When the person is open to what may happen during the encounter, it is able to see if the encountered experience/event





is confirming or disconfirming the anticipation. The final step is to revise the construct system after confirmation or disconfirmation of the anticipation.

- 8. Modulation corollary
- 9. Fragmentation corollary
- 10. Commonality corollary
- 11. Sociality corollary

Within this study only the experience corollary is relevant and therefore the only one with an explanation. This corollary describes how a person copes with experiences.

3.1.2. Personal constructs and values

To determine how to the interviewed person makes sense of experiences and what is the most important to him/her, the most important constructs can be identified. Horley (45) described that there exist different kinds of personal constructs, one of them is a core construct. The core constructs are the most important constructs a person has. Core constructs are in fact values. Core constructs or values are the constructs that define a person's personality and identity by serving as information about who people are and what they represent. George Kelly described core constructs as constructs that 'govern a person's maintenance processes' (45).

Values have an impact on how a person experiences an event or an experience. A study performed on patient's relatives (46) concerning values and dignity describes which values are important to the relatives of a patient and why. This research points out that relatives find overarching values, such as

honesty, seeing the unique individual, dignity of the patient and asking patients how they feel, very important. Relatives think those values are important, because patients are equal to any other person despite their condition or diagnosis.

A study concerning patient's views (47) points out that patients find equity important as well. Furthermore, patients wish to be respected despite their illness or diagnosis and when the patient's dignity is violated, patients think it will also affect oneself. The patients value a good atmosphere on a ward when a patient is admitted as important.

A research concerning healthcare staff's point of view regarding dignity (48) points out that staffs personal values and attitudes have impact on their actions in respect of their patients.

Values determine (49) how a person experiences events and how he reacts on them. Therefore, it is important to find out what the underlying values of patients and healthcare professionals are when studying their experiences regarding the VIT.

3.2. Soll-ist model and gap analysis

The current situation among aftercare is not the situation the hospital desires. Therefore it is necessary to analyse the current situation and the preferred situation and how to transfer from the current to the preferred situation. In order to analyse the situation regarding aftercare, a model to be able to analyse the current situation and the preferred situation will be used. The soll-ist model describes a situation as it is at the moment (ist) and the preferred situation as it should be (soll). When there is a gap between the two situations, this needs to be analysed. There exist (50) five different gaps:

Gap 1: Difference between consumer expectations and management (of the hospital) perceptions of consumer (patient) expectations. This gap arises when the organisation operates on the base of a wrong assumption (perception) and provides a service based on that assumption. Therefore the service (e.g. care) does not meet the expectations of the customer.

Gap 2: This is a gap between rules and policies within an organisation and the actual intention of the company. For example, within the ZGT hospital they want to offer aftercare to patients who underwent freedom-restrictive interventions. However, there is no policy how aftercare should be provided and who is responsible.

Gap 3: Difference between service quality specifications and the service actually delivered. This delivery gap arises if the service is not delivered in accordance with the established standard.

Gap 4: Difference between service delivery and what is communicated about the service to consumers. This gap is a result of promises and other agreements that are not being complied with.

Gap 5: Difference between the consumer's expectation of the service and delivered service. This gap arises when the customer's expectation of the service does not comply with the actual service that is delivered.

After identification of potential gaps and which gap that is at the ZGT hospital, Zeithaml et al. (50) described what the organisation is able to do in order to reduce the gaps.

4. Method

4.1. Design

This study has a qualitative design and is executed through interviews. These interviews existed of two parts: a semi-structured part and an open part. The structure of the semi-structured part is determined by a method that fits the personal construct theory. This method will be described in chapter 4.2.. The second part of the interviews consists of open questions focussed on the aftercare.

4.1.1. Population

The patient population existed of patients (or relatives) who were psychically restraint by means of a tent bed, an abdominal fixation strap or an abdominal fixation strap combined with ankle and wrist bands. Patients who were physically restrained as a result of somatic disorders were included (e.g. delirium). The patients who were physically restrained as a result of a psychiatric disorder were excluded, because there was a higher risk of aggression towards the interviewer.

The population of professionals existed of healthcare professionals who are members of the VIT.

As described before, freedom-restrictive measures are often experienced as negative and therefore the expectation is that the responses of the interviewees will not differ to a great extent. Therefore the expectation (51) was that saturation will be reached in seven to ten interviews. The intention is to reach this amount of interviews equally balanced between the number of patients and the number of healthcare professionals.

4.2. Data collection

Prior to the data collection the interviewee will be informed about the research with a general letter (appendix 2) and the interviewee is asked to sign an informed consent form (appendix 3). The data regarding the experiences is collected through interviews following the structure of the repertory grid technique (RGT). The data that regards the aftercare is collected according to the soll-ist model: open questions regarding the current and preferred situation are asked.

The repertory grid technique (52) is a technique described by George Kelly, which aims to measure and find personal constructs that are self-created. It is an interviewing technique that is based on the personal construct theory and it is used to determine an idiographic measure of personality. The repertory grid technique is a technique for identifying the ways that a person construes, interprets or gives meaning to his or her experiences. This technique enables the interviewer to elicit personal constructs without influencing the interviewee. A repertory grid exists of four components:

- 1. The first component (52) of a repertory grid is the topic of the interview. This is determined by the interviewer of researcher. The topic within this research is the use of freedom-restrictive measures on the patient.
- 2. The second component are the elements. Elements are the objects to which people create their constructs. The elements illustrate the topic, in this research the elements are about freedom-restrictive measures and based on a research of Bergk et al. (36). That research validated a questionnaire that measures the experienced coercion based on 39 stressors of coercive measures. After validation with other known measurements the results of this study

yielded into six factors that explain all the correlations between the researched items. These factors form the elements within this research: *humiliation, physical adverse effects, separation, negative environment, fear and coercion*. These factors are on a higher level in relation to freedom-restrictive measures than emotions. Emotions are superficial and that is the reason that this research works with the six factors, as described before, as elements.

- 3. The third component are the constructs, this is the most important component. The elements were provided to the interviewee three at a time. The interviewee was asked to consider these and to identify a way in which two of the elements might be seen as similar and how these two elements distinct from the third. It is important to identify what the interviewee means with certain words and/or constructs by asking why the interviewee states certain thing and asking further.
- 4. The last component contains ratings. Once the elements and constructs are in place, they are placed in a grid with the elements on top and the constructs down the sides, left and right. Then the interviewee rates every element against each construct according to a five-point Likert scale. An example of a grid that will be used in the interviews is displayed below in figure 3.

These four components together determine the structure of the interview. After informing the interviewee, the interview starts with presenting the elements in eight different compositions (sets) (appendix 4). These sets are presented one by one at the interviewee.

Each time the interviewee is asked to consider the elements in the set and to identify a way in which two of the elements might be seen as similar and how these two elements distinct from the third. The reason why two elements are similar forms one side of the construct. The other side of the construct is formed by the reason why the third element distincts.

When all the constructs are formed, the rating procedure starts as described above.



Figure 3: Grid with the elements on top

After the formation of the repertory grid the open questions regarding aftercare are asked. The open questions are pre-determined in order to be able to analyse the current and preferred situation. The interviewer asks the interviewee three or four open questions about the current situation regarding aftercare, what the interviewee expects of the aftercare and what the interviewee needs regarding the aftercare after fixation. When the interviewee is a patient or relative there will be three questions asked, to measure the current situation and the preferred situation. When a healthcare professional is interviewed, a fourth question will be added. This question relates to the feasibility of aftercare and what he or she thinks is feasible to realise within the ZGT hospital.

When the patient is mentally not well enough in order to participate in the interview, a relative will be asked to participate as second best. The interview with the interviewee will be held after fixation and before discharge of the hospital.

4.3. Data analysis

The repertory grids are analysed in a descriptive way and every grid is analysed individually. The first step is to analyse the process, than an eyeball analysis is performed, the constructs will be characterised and finally the relationships between the constructs are analysed. Furthermore, the current situation and the preferred situation regarding aftercare will be analysed.

4.3.1. Process analysis

The process of obtaining the information needed for the repertory grid is informative in itself. The repertory grid is a specialised form of a dialogue and not a procedure which has to be completed to be enlightening. The process analysis is performed step by step following the four components of a repertory grid.

The topic

The reaction of the interviewee to the introduction of the topic was important to take into account while interviewing the interviewee. This reaction could be emotional or indifferent, this is noted in an observation table (appendix 5).

The elements

The response of the interviewee towards the elements was important to register, as it may give an idea about how the interviewee views the elements. E.g. if the interviewee is extremely emotional about an element this was noted. It was also useful to take notion of the use of the elements, e.g. if one the elements was not used in a construct or not considered relevant. The reason for that needed to be registered as it gives an impression on how that element played a role in the experience of the interviewee. Which elements were placed together and which one was placed separate and the potential emotional response were noted in the observation table (appendix 5).

The constructs

It was useful to register which constructs require more thought than others. The constructs that required more thought may be the constructs that the interviewee did not think of before this interview or did not found it necessary to construe these, as it was not necessary for the interviewee to make sense the experience with freedom-restrictive measures. The interviewee may have difficulties to make distinctions in words between the elements and could have hesitations. The

reasons why are analysed. Outstanding observations of construing constructs are noted in the observation table (appendix 5)

The ratings

If the rating procedure was sufficiently sensible to the interviewee, the results are meaningful. Which means that, when the interviewee can give ratings to the elements and constructs in a natural way, the ratings give a clear view on how the interviewee views the elements and constructs. However, if it is very difficult for the interviewee to rate the elements than the results are meaningless. For example, if the interviewee only rates three (the middle score) no conclusions can be drawn. Ratings are noted on the grid form (figure 3 above).

The process analysis involved a general part as well. The emotions of the interviewee will be taken into account, because this gives an impression on how the interviewee feels about the experience. Comments of the interviewee on the elements will be taken into account for the same reason, these are described in the observation table (appendix 5)

4.3.2. Eyeball analysis

The eyeball analysis consists of a five-step procedure and is a description of what the grid presents. It provides an overview of the grid as a whole and is a simple description of what the grid presents. This part of the data analysis will be performed according to the five steps below:

1. Thoughts and qualifying phrases which the interviewee used during the elicitation of constructs are noted. A thought could be a remark an interview made during the interview or a comment that does not relate to a set of elements in particular. A qualifying phrase is a clear statement that could be made by an interviewee (e.g. "I cannot cope with the situation of the patient.").

2. The way in which the interviewee agrees or disagrees on the elements and how the interviewee represents the topic are described.

3. The constructs that are construed by the interviewee will be analysed and particular distinctions made by the interviewee are noted.

4. The ratings are analysed in general. Anything that stands out is described, e.g. a particular element that was rated with a lot of fives or ones.

5. Conclusions are drawn and the outstanding points are summarized. Emotions that the interviewee showed are taken into account. This provided an accurate overview of the way the interviewee experienced the event of the freedom-restrictive measure.

Per grid/interview these 5 points are shortly described in order to provide a general overview or summary of the meaning of the grid.

4.3.3. Construct characterisation

The constructs will be characterised into different categories (52): core, affective, behavioural, evaluative, attributional, and unremarkable. The characterization is done based on the descriptions Jankowitcz made in his guidebook *"The easy guide to repertory grids"*.

Core constructs are more general in their relevance; they usually have a wide range of convenience. These constructs are comparable to values and are resistant to change. Core constructs could be related to the fundamental believes and values of the interviewee. These are the constructs that matter the most to the interviewee.

- 1. Affective constructs express emotions or feelings.
- 2. Behavioural constructs describe what the elements do or in which way the elements have an important role in the process to which they belong.
- 3. Evaluative constructs offer an opinion or assessment of the element in the particular situation.
- 4. Attributional constructs have incorporated perceived reasons for behaviour.
- 5. Unremarkable constructs are those which make it not possible to draw implications from them. These constructs are often simple, straightforward descriptions of the interviewee.

4.3.4. Relationships between elements

The next step is to identify if the interviewee thinks of one element in the same way as he or she thinks of another element. These relationships (52) between elements are calculated according to the following steps:

- 1. Differences in ratings of the first pair of elements on the first construct will be calculated.
- 2. The remaining constructs will be summed down the page.
- 3. This will be repeated for all pairs of elements.
- 4. The sums of differences, especially the smallest and largest, will be compared
- 5. The relationships with supplied elements, if any, will be examined.

6. To ensure comparability with other grids, the difference scores will be turned into similarity scores.

The similarity scores calculated in step six are calculated to be able to compare grids with different amounts of constructs with one another. This part of the data analysis will be executed in Excel.

4.3.5. Gap analysis

The current situation and the preferred situation are explored by asking open questions, as described in the data collection section (chapter 4.2.).The answers to the open questions are analysed and the answers together determine which of the five gaps (chapter 3.2.) is relevant to the situation regarding aftercare within the ZGT hospital. During the analysis of the answers to the open questions, at first the various pieces of text were labelled with the topic that piece of interview was about. After this labelling, the labels were placed among categories. The categories are the topics that describe the interviews. These topics were used to write a description of the interviews. During the description the distinction between the current, expected, needed and feasible situation regarding aftercare was made. In addition to that, the potential differences between the situations are the potential gaps that are relevant

5. Results

In this chapter the results of the interviews will be described. First a short description of the patients' backgrounds and the healthcare professionals' profession will be given and then the results of the interviews will be described.

For this study ad seven patients and/or family members and six healthcare professionals were approached. Two patients/relatives were interviewed and three healthcare professionals.

The rest of the patients/relatives did not want to participate. They mentioned several reasons: too busy with arranging the transfer of the patient to a care facility, it does not benefits the patient directly, no need to share the situation with a stranger.

The rest of the healthcare professionals were too busy with their own profession. Several appointments were cancelled at the last moment, because of incidents with patients.

Patient 1

This interview was held with the son and daughter in law of the patient. The patient himself was a male older than 80 years old. He was fixated with an abdominal fixation strap as a result of delirious behaviour when he laid in bed and when he sat in his wheelchair, he was fixated with a fixation strap in the wheelchair. The delirious behaviour was caused by a cerebral disorder.

Patient 2

This interview was held with the brother and sister in law of the patient. The patient was a woman whose age is close to 90. Her closest relative is her brother. This patient was fixated by means of an abdominal strap and later on during her hospitalisation she had to lie in a tent bed. She exhibited delirious behaviour as a result of a cerebral disorder.

The three healthcare professionals that were interviewed had all a different profession. One of the interviews was held with a consultative geriatric nurse. This nurse is responsible for the VIT and coordinates it during office hours. Another interview was held with a care manager during evenings, nights and weekends. This healthcare professional is responsible for the VIT outside office hours. And one of the interviews was held with a psychiatric consultative nurse. This healthcare professional has a lot of experience with fixation and the VIT.

During the first interview with a patient, it appeared that it was very difficult to form constructs out of the set of elements. Rating caused the interview to be very unclear and confusing. After analysing the ratings of the family of patient 1 (appendix 6) no clear conclusion could be drawn from the rating, as most scores given were threes. Which indicates that there was no clear distinction made.

During the interview with the first healthcare professional it also turned out that it was very difficult to construe constructs out of the sets of elements.

Since after the first interviews no ratings were given, only process analyses and partial eyeball analysis could be made.

The interview with the care manager outside office hours went uneasily, because she received a lot of phone calls during the interview.

5.1. Experiences of the patients

Introduction of the topic:

After the introduction of the interview and the topic the family of patient 1 indicated that they understood the purpose of the interview. The family of patient 2 did not understand what the purpose of the interview was. It was explained to them for several times. However, they did not see the necessity of this interview, because it did not have a direct effect on the patient.

Set 1: humiliation, physical adverse effects, separation

The family of patient 1 stated that humiliation and physical adverse effects are the most similar, because it contributed to the vulnerability of the patient. The freedom restriction was not the problem. However, they experienced it as degrading to see their relative in a state like that.

"We do not mind the fixation strap. "However, to see [the patient] in this condition is very disturbing".

Family of patient 2 could not make a difference between the elements. However, the family stated that they found humiliation the worst of these three elements.

Set 2: negative environment, fear, coercion

Within the second set of elements, the family of patient 1 stated that fear and coercion belong the most together. They experienced these two as negative and the negative environment as positive. The family of patient 2 stated that they experienced fear and coercion more than a negative environment, because not being home caused fear and the fact that she had to stay in the hospital to get better was experienced as coercion.

Set 3: humiliation, fear, coercion

Family of patient 1 stated that they did not experience fear when they think back of the situation of the patient. Humiliation and coercion were placed together by the family of patient 1, because the patient would feel himself ashamed that the coercion was needed and would feel humiliated. However, the family did see the necessity of the fixation.

Family of patient 2 stated that they experienced fear and humiliation more than coercion. In their opinion the patient would feel humiliated as a result of her hospitalization and has experienced fear as a result of not being able to get away.

Set 4: physical adverse effects, separation, negative environment

When the fourth set of elements was presented to the family of the patients, family 1 stated that the physical adverse effects and the negative environment have the most in common. The negative environment caused the patient to be restless, because the ward was noisy.

Family 2 did not experience a negative environment and the separation was experienced to be calming.

Set 5: physical adverse effects, fear, coercion

The family of patient 1 stated that they have not experienced fear in any way. Therefore, coercion and physical adverse effects are more applicable on the situation of their relative.

Family of patient 2 stated that fear and coercion have a causal relationship, they fear that the patient experienced was caused by the coercion and not being able to go home.

Set 6: humiliation, physical adverse effects, negative environment

Within the sixth set of elements family 1 stated that they experienced a negative environment less than they experienced physical adverse effects and humiliation. This family found the humiliation and the vulnerability of their relative the worst of the whole hospitalization.

Family 2 could not state which of the elements belong together and which one was different.

Set 7: fear, separation, humiliation

When the seventh set of elements was presented to the family of patient 1, they stated that they did not see separation as a negative aspect of the fixation of their relative. Therefore, they stated that fear and humiliation are more equal to each other. The separation ensured a quiet environment for the patients with only a few incentives.

The family of patient 2 stated that the patient separates herself when she feels anxious. The family could not state why humiliation is different.

Set 8: separation, negative environment, coercion

Family of patient 1 stated that separation and negative environment are more equal to each other, because the negative environment ensured the patient to feel secluded. In addition, the family stated that the coercion would be seen by the patient himself as a necessary intervention. Family of patient 2 placed the same elements together, with the same argumentation.

In the table below a schematic overview of the results is displayed.

SET	FAMILY 1	FAMILY 2
1 HUMILIATION PHYSICAL A. E. SEPARATION	Humiliation - physical adverse effects Condition of the patient is disturbing	No distinction made Humiliation is the worst element
2 NEGATIVE ENVIRONMENT FEAR COERCION	Fear – coercion Negative environment not experienced as negative	Fear – coercion These were experienced more than negative environment
3 HUMILIATION FEAR COERCION	Humiliation – coercion Fear was not experienced at all	Fear – humiliation Were more experienced than coercion
4 PHYSICAL A.E. SEPARATION NEGATIVE ENVIRONMENT	Physical a.e. – negative environment Negative environment caused restlessness	No distinction made. Negative environment was not experienced Separation was calming
5 PHYSICAL A.E. FEAR COERCION	Coercion – physical a.e. Fear was not experienced	No distinction made

Table 3: overview of the patients' experiences

6 HUMILIATION PHYSICAL A.E. NEGATIVE ENVIRONMENT	Physical a.e. – humiliation These were more experienced than negative environment Humiliation and vulnerability worst of all	No distinction made
7 FEAR SEPARATION HUMILIATION	Fear – humiliation Separation was experienced positive	Fear – separation Separates herself when anxious
8 SEPARATION NEGATIVE ENVIRONMENT COERCION	Separation – negative environment Causal relationship Coercion seen a necessary	Separation – negative environment Causal relationship Coercion seen as necessary

5.2. Experiences of the healthcare professionals

Set 1: humiliation, physical adverse effects, separation

When the first set of elements was presented to the healthcare professionals all the three of them found physical adverse effects and humiliation correspond more than separation. Two healthcare professionals stated that they think separation has less to do with fixation that the other two elements:

"When you are fixated as a patient, you are not really separated, because you will be checked upon on a regular base."

Set 2: negative environment, fear, coercion

The second set of elements was interpreted in several ways. The consultative geriatric nurse stated that patients who are fixated for the first time experience the freedom restriction differently than patients who are fixated more than once or longer than 24 hours. However, all the three healthcare professionals stated that fear is a result of coercion.

Set 3: humiliation, fear, coercion

When the set of fear, coercion and humiliation was presented to the healthcare professionals, two of them mentioned the causal relationship between fear and coercion. They all placed fear and coercion together.

Set 4: physical adverse effects, separation, negative environment

Within the fourth set of elements, the negative environment was stated as outsider. The consultative geriatric nurse argumented that the environment can be influenced by the healthcare professional and seclusion and physical adverse effects can be less influenced.

Set 5: physical adverse effects, fear, coercion

Fear and coercion were seen as more equal within the fifth set than physical adverse effects by all the three healthcare professionals. The consultative geriatric nurse mentioned the causal relationship again. The psychiatric nurse stated that fear and coercion are more severe than the physical adverse effects.

"Physical adverse effects are inconvenient, but fear and coercion are more severe."

Set 6: humiliation, physical adverse effects, negative environment

The care manager outside office hours stated that humiliation and the negative environment influence the feelings and emotional state of the patient more than the physical adverse effects do. The other two healthcare professionals stated that physical adverse effects and humiliation are more bounded, as they both influence the autonomy of the patient.

Set 7: fear, separation, humiliation

When the seventh set was presented to the healthcare professionals, the two nurses stated that humiliation and fear are more equal than separation. The psychiatric nurse stated that separation can have a positive effect on the patients, because it ensures that there are fewer incentives. The geriatric nurse stated that separation is experienced when patients are fixated for a longer time.

"The feeling of separation is more experienced when patients are separated longer than 24 hours. Fear and humiliation are experienced more severe in the first moments of fixation."

Set 8: separation, negative environment, coercion

The last set of elements consisted of separation, coercion and negative environment. All the three healthcare professionals shared the same vision: the negative environment can be more influenced than the other two elements. In addition to that, the psychiatric nurse stated that coercion causes separation more or less. The geriatric nurse stated that the longer (longer than 24 hours) the patient is fixated, the feeling of separation increases.

A short schematic overview of the results is displayed in the table below.

SET	CONSULTATIVE GERIATRIC NURSE	CARE MANAGER OUTSIDE OFFICE HOURS	PSYCHIATRIC CONSULTATIVE NURSE
1 HUMILIATION PHYSICAL A. E. SEPARATION	Humiliation – physical a.e.	Humiliation – physical a.e. Separation has less is common with fixation	Humiliation – physical a.e. Separation has less is common with fixation
2 NEGATIVE ENVIRONMENT FEAR COERCION	Fear – coercion Causal relationship First time fixated patients experience it differently	Fear – coercion Causal relationship	Fear – coercion Causal relationship
3 HUMILIATION FEAR COERCION	Fear – coercion Causal relationship	Fear – coercion Causal relationship	Fear – coercion
4 PHYSICAL A.E. SEPARATION NEGATIVE ENVIRONMENT	Physical a.e. – separation Negative environment can be more influenced by the healthcare professional	Negative environment – separation Both elements are about environment of patient	Physical a.e. – separation

Table 4: overview of the healthcare professionals' experiences

5 PHYSICAL A.E. FEAR COERCION	Fear – coercion Causal relationship	Fear – coercion	Fear – coercion These two are more severe than physical a.e.
6 HUMILIATION PHYSICAL A.E. NEGATIVE ENVIRONMENT	Physical a.e. – humiliation Influence the autonomy of patient	Negative environment – humiliation Influence feelings and emotional state more	Physical a.e. – humiliation Influence autonomy of patient
7 FEAR SEPARATION HUMILIATION	Humiliation – fear Separation is experienced more when patients are fixated longer	Fear – separation Causal relationship	Humiliation –fear Separation can be positive for patients
8 SEPARATION NEGATIVE ENVIRONMENT COERCION	Separation – coercion Negative environment can be more influenced The longer the patient is fixated, the bigger the feeling of separation	Separation – coercion Negative environment can be more influenced	Separation – coercion Negative environment can be more influenced

5.3. Aftercare after freedom-restrictive measures

The answers to the open questions will be described one by one, at first the answers of the family of the patients will be described followed by the answers of the healthcare professionals.

5.3.1. Current situation of aftercare after fixation

Family of both patients stated there was no aftercare provided.

The care manager outside office hours and the consultative psychiatric nurse both state that there is no aftercare available for patients after freedom-restrictive interventions. Additionally, the consultative geriatric nurse told that there is no aftercare, but there is bedside communication with the patient and family about the reasons for the use of freedom-restrictive interventions. For the VIT and other nurses involved there is aftercare available. This aftercare for healthcare professionals includes an evaluation of the situation and a follow-up discussion about the case of incident with the involved healthcare professionals.

5.3.2. Expectations of aftercare after fixation

Family of patient 1 stated that they did not expect any aftercare. Family of patient 2 stated that they expect that what is needed will be done.

The care manager stated that aftercare should meet the needs of the patients.

"You should inquire if the patients know what happened to them and how they experienced it. Based on the answers to that questions, aftercare can be filled in."

The consultative geriatric nurse stated that aftercare should be provided on a short term and on the long term.

"Aftercare should be provided about one or two days after fixation in the hospital and on the longer term being fixated could cause trauma. Therefore it is important to see the patient again in the outpatient clinic and to make a plan from there for the patient."

The consultative psychiatric nurse stated that aftercare should meet the needs of patients and their family. They should be enabled to talk about their experiences. In addition to that, the patient and family should be well informed afterwards about how the process went and why the fixation was necessary.

5.3.3. Need for aftercare after fixation

Family of patient 1 stated that they do not need any aftercare for the fixation, but they need more and clearer communication about the process that arises when the patient is discharged.

"We need more and clearer communication about how the situation goes further and what to expect when [the patient] goes home."

Family of patient 2 stated the following:

"I want that what is needed to be done will be done, but I do not know what we need at this moment."

The care manager thinks that patients need explanation about the whole situation around the fixation and why decisions are made.

The consultative geriatric nurse stated that patients need an aftercare interview, where they can talk about their experiences. Additionally this nurse thinks that aftercare should include social and emotional guiding of the patient and family.

The third healthcare professional stated that he/she thinks that the patient needs explanation about the situation.

5.3.4. Feasibility of aftercare after fixation

The question about the feasibility of aftercare within the hospital was asked to the healthcare professionals and not to patients.

The care manager outside office hours thinks that it is feasible to provide aftercare after fixation and before discharge:

"I think it is reasonable to provide aftercare before a patient is discharged. You can discuss with the patient and family about what happened and why and question them about their needs. ... The nurse who takes care of the patient should be responsible for this, because this healthcare professional has the most contact with the patient. When patients are discharged and have a follow-up appointment scheduled, then there should be attention for the experience of fixation during this appointment."

The geriatric nurse stated that it is feasible to provide aftercare before discharge and that the geriatrics department should be responsible for the aftercare:

"The total coordination of fixation is the responsibility of consultative healthcare professionals of the geriatrics department. Therefore it is convenient that they take care of the aftercare after fixation. ... The nurses that are responsible for the care of the patient on the ward should not be burdened with the aftercare conversation. This is another conversation than the discharge interview and they need to be trained to have such a conversation. However, a patient can develop a trauma afterwards and that should be taken into account. When patients do not have the need for aftercare this should be reported. The patients must be advised to seek help when the develop problems as a result of the fixation. In the discharge letter to the general practitioner fixation should be mentioned."

The psychiatric nurse thinks it is feasible to automatically plan a conversation with the patient and family when a patient gets out of fixation.

"The consultative geriatric nurse should be responsible for the aftercare conversation. In this conversation patients and family should be asked about their experiences and their needs for now. On the longer term a follow-up phone call could be scheduled to check in on the patient and to see if any other questions raised."

5.3.5. Gap analysis

Within the ZGT hospital there exist two clear gaps and one to a lower extent. The first gap is the gap between policies and intention. The hospital wants to provide aftercare for patients who underwent fixation. There is, however, no hospital policy on how to provide aftercare after fixation.

The second gap within the hospital is the gap between the guideline of the V&VN, which the hospital wants to meet, and the actual delivered service. What became clear of the interviews with patients and healthcare professionals, is that there is no aftercare available or provided after fixation.

The last gap is a little less outstanding. The expectations of the families of fixated patients were not completely fulfilled. One family did not expect any aftercare and the other family expected that the necessary care is provided. However, the needs for aftercare within the situation of that family are not inquired. Therefore, the expectation of that family was not fulfilled and that causes the gap.

6. Discussion

This study aimed to provide insights in the experiences of patients and healthcare professionals regarding the VIT and how to provide aftercare to patients after the use of freedom-restrictive measures.

6.1. Research questions

What are the experiences of patients who underwent freedom-restrictive interventions within the ZGT hospital?

From the interviewed families of patients a few elements appeared to be the most relevant to them. Humiliation was mentioned as the worst aspect of the freedom restriction. Literature (12) supports the fact that humiliation is one of the most strongest feelings experienced during freedom restriction, because patients feel that their perspective is not taken into account by the nursing staff. From the interviews became clear that separation and the negative environment ensured a more quiet and calming environment for the patients. Literature (22) describes that moving from a room with multiple beds to a single room causes a more calming environment for the patient. The element of fear was named fear times. Literature (53) describes that patients with a delirium often experience fear. This fear is caused by not understanding the situation they are in. This corresponded to the situation of one of the patients.

Additionally, two other findings were remarkable. Relatives were not bothered by the fixation. However, they found it really disturbing to see their relative in such a state. The condition of the patient was not caused by the fixation, but by the physical illness of the patient and the fixation was a result of the whole situation. The other remarkable point was that one of the families was not totally aware of the necessity of the fixation and did not understand why their relative was fixated. These findings do not completely correspond to literature. One study (53) pointed out that family's perception towards fixation is slightly negative. However, that same study indicated that patient's family does accept the fixation and that the negative perception is caused by limited knowledge of the need for the freedom-restrictive measures. This points out that communication with family is an important aspect throughout the whole situation of fixation. In this study both patients suffered from a delirium and another study (54) points out that a delirium causes distress for patients and their relatives. Providing information about the condition of the patient could decrease the amount of distress. This needs, however, more research to conclude with certainty.

One of the families indicated that they would have wanted more information about the situation and what to expect after the fixation. The other family could have been more informed about the situation and the reasons why their relative was fixated, then there could have been a possibility that that family was aware of the necessity of the situation and the reasons for the fixation. A literature review (55) states that providing information and support from healthcare professionals to the family member of the delirious patient is essential to reduce their distress. A research of family members of terminally ill patients (56) stated that an information leaflet about delirium is useful for family members of the patient and helps them coping with and understanding of the situation. This corresponds to the findings of the interview with the families of the patients.

What are the experiences of the healthcare professionals of the VIT regarding the fixation of patients within the ZGT hospital?

The healthcare professionals answered the research questions based on situations they experienced with patients, they described how they think the freedom-restrictive measures are experienced by

patients that they cared for in general. The interviewees mentioned causal relationships between the elements. For example, fear is a result of coercion and separation. Which means that fear can be prevented or decreased, when the patients would experience less coercion and separation. No literature was found that describes that fear is a result of those aspects of fixation. However, in delirious patients (53) fear is one of the strongest feelings they experience. Difficulty in making sense of situations, understanding the course of events or hallucinations were the main reasons of experiencing fear.

Separation was not always seen as a bad aspect of fixation. Separation can cause the environment of the patient to be quieter and therefore the negative environment turns into a less negative environment. The negative environment is the element that is the most adjustable, according to the healthcare professionals. This is supported by literature (54, 55). Together with separation, the negative environment was not always seen as a bad aspect of fixation. The environment can be influenced by the healthcare professional who takes care of the patient and therefore the environment could turn into a less negative environment. The separation of a patient causes less incentives and is more calming for the patient, according to the interviewed healthcare professionals. Separation is often experienced positive (22) by patients who stayed on rooms with multiple beds before separation. Therefore the separation is experienced positive by the increased privacy and rest, when moved to a single room. Physical adverse effects and humiliation were often placed together by the interviewees. These two elements influence the autonomy of the patient negatively. No literature could be found regarding the statement of the geriatric nurse that a patient experiences more separation when the patient is fixated longer than 24 hours. However, when a patient is newly fixated a lot of healthcare professionals are involved with the patient to make sure that the patient is as comfortable as possible. Therefore, a newly freedom restricted patient has more contact with healthcare professionals than a patient who is restricted for a longer time and could feel less separated.

What kind of aftercare is needed within the ZGT hospital for patients who underwent freedomrestrictive interventions according to patients and healthcare professionals of the VIT before discharge? In the current situation there is no aftercare provided for patients and their families after the use of freedom-restrictive measures. In addition to that, family 1 did not expect any aftercare and family 2 expects that *"what needs to be done, will be done"*. Which means that they expect that the needs of them and their relative are taken into account and that the appropriate interventions are deployed. The healthcare professionals have a clear view on what they expect of aftercare. It needs to be focussed on the needs of individual patient and should be executed in a form of a debriefing. Several studies (9-11, 57) suggest that debriefing is an important intervention to reduce the emotional impact of the freedom-restrictive measures on the patient. This corresponds to the statements of the healthcare professionals about the needs of the patients. Additionally, another study (58) suggests that fixation causes negative long-term effects. In that particular study, patients who were debriefed in the hospital were interviewed again after one year and the negative impact of fixation was increased. Therefore, the suggestion of the healthcare professionals to do a follow-up and to debrief the general practitioner of the patient seems like a legitimate intervention.

6.2. Methodological strengths and limitations

The number of patients who are freedom-restricted is limited. Moreover, these patients are vulnerable. From this study it became clear that the patients and relatives are a difficult group to

interview. The whole situation around the patient and the freedom-restrictive intervention burdens the patient and their relatives. The patients seemed to be too confused to participate even when they were not fixated anymore. This could be a result of the delirium they suffered from. Therefore, relatives were interviewed, this was the second best option. A positive aspect is that still two families were willing to participate. Despite the limited amount of interviews with relatives their experiences became clear after the interviews and helped to provide an advice for future care.

Healthcare professionals could not always make it to the appointments with the researcher, because patient care was more urgent or an unexpected event popped up. Therefore, it seemed that the workload of the healthcare professionals made it difficult to make time for an interview. Despite that, still three healthcare professionals with different professions could be interviewed. This is a strong aspect because it is important to take different points of views into account, because the use of freedom-restrictive measures involves different disciplines.

The experiences of the healthcare professionals themselves have not become clear within this study. During the interviews, the healthcare professionals applied the elements on situation they experienced with patients, not their own experiences. Despite that, these insights are still valuable. It represents what the healthcare professionals think of how patients experience freedom restriction and what needs to be and could be done.

During the data collection and analysis emotions were registered. This is a subjective aspect of the study and is therefore a limitation. However, the research of Sauter and Fischer (59) suggest that spontaneous emotions can be recognised by other individuals. The age and cultural background of the respondents in that research corresponds to that of the researcher of this study. However, more evidence is needed and it remains a subjective part of this study. This could be made less subjective by naming the registered emotions during the interview or validating the registered emotions with the interviewee afterwards.

In practice the repertory grid technique appeared to be too complex for this study. First of all, the elements were known aspects of fixation. This caused the interviewees to apply the elements on their situation and to what extent they correspond the situation they are in. This did not result into construing constructs, but into explaining why particular elements were relevant to the interviewee. The repertory grid technique assumes that the interviewees are capable of comparing elements. Not all the interviewees were capable of that, because they did not experience every element that was provided to them. This made it difficult to construe the constructs. The difficulty of construing constructs resulted in not being able to give ratings. During the first interview the interviewee tried to make constructs and rate the elements with those constructs. This resulted in an interview that was troubled, vague and unclear. The decision was made to try it one more time with a healthcare professional. This led to the same kind of interview. Therefore, it was decided to let the interviewees compare the elements within the sets and to argue why certain elements are seen as similar and why other elements were the outsider. The rating procedure was eliminated. During this process there was more time and space to ask further and the interviews changed into semi-structured.

The personal construct theory and the repertory grid technique seemed to be suitable for this study, because it limits the influence the researcher has on the interviewee and it measures experiences. In practice, it appeared to complex. To measure the results that were obtained during this study a less complex method could be used. However, in theory this seemed the best option and therefore the choice was made to use this method.

This study has an inductive design, which means that observations (interviews) are used to build a theory. The amount and variety of interviews is important to support the theory. The limited amount of interviews in this study causes the no conclusions can be drawn with certainty. However, the literature that is known about the subject showed that perceptions of patients and healthcare professionals are slightly similar. The results of this study do correspond in a large extend and this makes the results relevant. This study provides in insight in the way in which freedom-restrictive measures are experienced by patients and healthcare professionals and is therefore relevant to other hospitals who want to learn more about these kind of experiences. However, it needs to be taken into account that this study was conducted in one hospital and included two relatives of patients and three healthcare professionals and this makes this study not externally valid.

6.3. Recommendations for the ZGT hospital and further research

This study showed that family of patients wants to be better informed about the situation of the patient. Therefore, the hospital is advised to provide relatives of a delirious and/or fixated patient information about the situation and what to expect. This could be done by a leaflet or an internet page providing the needed information about delirium and/or the freedom-restrictive measures.

The hospital is also advised by the researcher to make the environment as pleasant as possible, this is an aspect of fixation that could be easily adjusted. Most of the interventions to make the environment more pleasant are described in the guideline of the V&VN (e.g. music in the patient's room, using a night lamp or leaving the room door open). These adjustments should fit with the patient's needs and could be discussed with the patient or, when the patient is not capable, with relatives.

The experiences of the healthcare professionals themselves have not become clear within this research, because during the interviews the healthcare professionals applied the elements on situation they experienced with patients not their own experiences. The hospital is advised to conduct a research among the healthcare professionals who are involved with the VIT and the healthcare professionals who work on wards and have contact with the VIT. The experiences of all these professionals are important, because there is no insight in the ZGT hospital how they think of the VIT and applying freedom-restrictive measures could be a burden for the healthcare professionals (18). The advice is to conduct a quantitative research with a short questionnaire. With a short questionnaire that could be filled out on paper or digitally, the burden is low and the chance is higher that they participate. This is important, because they already have a high workload.

For the fixated patients it is a burden to participate in a study too. The coercion experience scale (36) is a valid method to measure the perceived coercion. However, the patients who come out of fixation are not always capable to fill out a long questionnaire. In Spain (60) this scale was shortened and validated. In future research it is recommended to study the longer term experiences of patients, because freedom-restrictive measures could cause trauma on the longer term. The shortened questionnaire should be translated and could be an appropriate instrument to measure perceived coercion during the debriefing in the hospital and on the longer term.

The ZGT hospital is advised to research the implementation of aftercare. From this study it became clear that aftercare should include debriefing of patients and family during the hospitalization. However, on the longer term the patient could experience more or more severe negative aspects of

the fixation and therefore it is important to take that into account. The advice is to perform an aftercare conversation before discharge and after fixation with the patient, relatives and the consultative geriatric nurse and to do a follow-up. The follow-up could be conducted during an outpatient visit or by phone. The follow-up should be conducted at least after one month, because after one month there can be determined if the patient suffers on the longer term (61). Within both these conversations the 6 factors of freedom restriction (36) should be discussed and the needs of the patients should be asked for. However, the fact that the research population of this study was limited should be taken into account. This could mean that this advice is not complete, because not all important aspects were found after conducting this study.

Additionally, organizational (e.g. financing, time, space) aspects should be arranged before implementing the aftercare.

7. Conclusions

This study provided insight in the experiences of patients and healthcare professionals with the VIT within the ZGT hospital and gained insight in the kind of aftercare that is needed within the hospital. Interviews with the patient's relatives showed that there is a need for more communication about the whole situation of the patient. The results gained from the patients' relatives indicate that the fixation was not the core problem; the illness of the patient and the lack of communication seemed to be the problems that bothered the relatives. The hospital is advised to provide more information about the situation of the patient to their relatives. Interviews with the healthcare professionals showed that they are aware of the negative aspects of freedom-restrictive measures and how these are experiences by patients. Regarding aftercare the hospital is advised to arrange an aftercare conversation held by the consultative geriatric nurse and to include follow-up within in the aftercare.

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Tent bed



Wrist fixation



Ankle fixation



Abdominal fixation

Geachte lezer,

In deze brief wil ik u graag informeren over het onderzoek waaraan u gaat deelnemen. Het interview vindt plaats op ______, in het ZGT in Almelo. In het voorgestelde onderzoek, getiteld 'De ervaringen van patiënten en zorgprofessionals met het VIT binnen het ZGT', wordt u geïnterviewd over fixatie.

U wordt gevraagd om verschillende aspecten over fixatie met elkaar te vergelijken en te beschrijven waarom deze wel of niet bij elkaar passen. Hierna worden u drie à vier vragen gesteld over nazorg met betrekking tot fixatie.

Het onderzoek kan bijdragen aan het inzichtelijk maken van de ervaringen van patiënten en zorgprofessionals. Door inzicht in deze ervaringen, kan er tijdens de zorg meer rekening gehouden worden met wat er als wel en niet prettig wordt ervaren. Ook kan het onderzoek bijdragen aan betere nazorg na de fixatie van een patiënt.

In het onderzoek zijn er een aantal belangrijke aspecten waar u zich van bewust moet zijn. Ten eerste, omdat het over fixatie gaat, kan het zijn dat u zich hier ongemakkelijk door gaat voelen, omdat dit meestal geen prettige ervaring is.

Ten tweede, u ontvangt voor deelname aan dit onderzoek geen vergoeding.

Ten derde, deelname aan dit onderzoek zal ongeveer 30 minuten in beslag nemen.

Deelname is vrijwillig en u kunt op elk gewenst moment tijdens het interview stoppen zonder dat u een reden hoeft te geven. Binnen 24 uur na het interview kunt u nog besluiten om uw gegevens niet te laten gebruiken voor het onderzoek.

Uw gegevens worden vertrouwelijk behandeld, de anonimiteit van uw gegevens is gegarandeerd en uw gegevens zullen nooit zonder uw toestemming aan derden worden bekendgemaakt.

Aan het einde van het gehele onderzoek, kunt u, indien u dat wenst, worden geïnformeerd over de resultaten verkregen door middel van een e-mail met een samenvatting van de resultaten.

Met vriendelijke groeten,

Eline Verkerk

Student Health Sciences aan de Universiteit Twente

Informed Consent

'Ik verklaar hierbij dat ik op een voor mij duidelijke manier ben geïnformeerd over de aard en de methode van de onderzoek zoals beschreven in de eerder genoemde informatiebrief. Mijn vragen zijn beantwoord naar mijn tevredenheid.

Ik ga uit vrije wil akkoord om deel te nemen aan dit onderzoek. Ik behoud het recht om mijn toestemming in te trekken zonder de reden op te geven en ik ben me ervan bewust dat ik me op elk moment uit het interview kan terugtrekken.

Als mijn onderzoeksresultaten worden gebruikt in wetenschappelijke publicaties of op een andere manier openbaar worden gemaakt, dan zullen ze volledig anoniem worden gemaakt. Mijn persoonlijke gegevens worden niet aan derden verstrekt zonder mijn uitdrukkelijke toestemming. Als ik meer informatie over het onderzoek wil, nu of in de toekomst, kan ik contact opnemen met Eline Verkerk.'

Als u klachten heeft over dit onderzoek, kunt u deze richten aan de secretaris van de Ethische Commissie van de Faculteit Elektrotechniek, Wiskunde en Informatica aan de Universiteit Twente, dr. ir. J.F.C. Verberne, P.O. Box 217, 7500 AE Enschede (NL), telefoon: +31 (0) 53 489 3700; e-mail: j.f.c.verberne@utwente.nl).

In tweevoud ondertekend:

.....

Naam Handtekening

Ik heb toelichting gegeven over het onderzoek. Ik verklaar mezelf bereid zo goed mogelijk te antwoorden op eventuele vragen die nog steeds kunnen rijzen over het onderzoek.

Eline Verkerk

Naam onderzoeker Handtekening

(1) Vernedering (1) Fysieke ongemakken (1) Afzondering

(2) Negatieve/onprettige omgeving

(2) Angst

(2) Dwang

(3) Vernedering
(3) Angst
(3) Dwang

(4) Fysieke ongemakken

(4) Afzondering

(4) Negatieve/onprettige omgeving

- (5) Fysieke ongemakken (5) Angst (5) Dwang
 - (6) Vernedering
- (6) Fysieke ongemakken
- (6) Negatieve/onprettige omgeving
 - (7) Angst
 - (7) Afzondering
 - (7) Vernedering

Afzondering

(8)

(8) Negatieve/onprettige omgeving

(8) Dwang

Арреник э	1 - ·		1	1
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interventies				
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Algemene		1		1
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Elements \rightarrow															
Constructs \downarrow	Score 1	A	В	С	D	E	F	Score 5							
	Pool 1	Vernedering	Fysieke ongemakken	Afzondering	Negatieve/onprettige omgeving	Angst	Dwang	Pool 2	1						
1	Kwetsbaarheid	2	2	1	. 3	3		3 Zelfstandigheid		1					
2	Schaamte	5	3	3	3	3		3 Zelfvertrouwen	1	2					
3	Onrust	3	3	3	3 3	3		3 Rust		3					
4	Spanning							Rust	4	1					
5	Gedwongen	3	3	3	3	3		3 Eigen keuze hebben	ţ	5					
Construct ↓	AB	AC	AD	AE	AF	BC	BD	BE	BF	CD	CE	CF	DE	DF	EF
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5	0	0	0	3)	0	0 3	(5	0	3	0	3	0
	2	3	3	13	3	3	1	1 11	. :	1	2 1	0	2	12	0 1
Similarity scores (%)	Vernedering	Fysieke ongemakken	Afzondering	Negatieve/onprettige omgeving	Angst	Dwang									
Vernedering	-	90	85	85	35	5 8	5								
Fysieke ongemakken		-	95	95	5 45	5 9	5								
Afzondering			-	90	50) 9	0								
Negatieve/onprettige omgeving				-	40	10	0								
Angst					-	4	0								
Dwang						-									