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Nursing methods to support complexly traumatized children and their families

A Literature review

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Abstract

The aim of this study was to examine what kinds of nursing care methods can be used when supporting complexly traumatized children and their families during the hospital period. The purpose of the study was to collect information for nurses so that they could to develop and justify their work with the help of evidence-based information.

The study was carried out as a literature review. After defining the inclusion criteria, the literature search was conducted in several databases (Academic Search Elite, Cinahl, Elsevier Science Direct, Medic and PubMed). A total of fifteen articles conformed to the inclusion criteria and had relevant content. These articles were analyzed by using inductive content analysis.

According to the results, a variety of different nursing methods can be used with complexly traumatized children. These methods were divided into seven categories: individual focused, interactional, occupational, family-focused, pharmacological and other physiological interventions and guidance.

Keywords/tags (subjects)

nursing, family nursing, children, complex trauma

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Kompleksisesti traumatisoituneen lapsen ja hänen perheensä tukeminen hoitotyön keinoin

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Tiivistelmä

Tämän opinnäytetyön tavoitteena oli selvittää, millaisia hoitotyön keinoja voidaan käyttää kompleksisesti traumatisoituneiden lasten ja heidän perheidensä tukemisessa lapsen osastohoidon aikana. Tutkimuksen tarkoituksena oli kerätä tietoa hoitajien käyttöön, jotta he voisivat kehittää ja perustella työtään näyttöön perustuvan tiedon avulla.

Opinnäytetyö toteutettiin kirjallisuuskatsauksena. Sisäänottokriteerien määrittelemisen jälkeen, kirjallisuushaku toteutettiin useista tietokannoista (Academic Search Elite, Cinahl, Elsevier Science Direct, Medic and PubMed). Yhteensä viisitoista artikkelia vastasivat sisäänottokriteerejä ja olivat sopivia sisällöltään. Valitut artikkelit analysoitiin induktiivisella sisällönanalyysilla.

Tulosten mukaan kompleksisesti traumatisoituneiden lasten hoidossa voidaan käyttää laajaa kirjoa erilaisia hoitomenetelmiä. Opinnäytetyössä eri hoitotyönkeinot jaettiin seitsemään luokkaan: yksilökeskeiset-, vuorovaikutukselliset-, toiminnalliset-, perhekeskeiset-, ympäristöön kohdistuvat-, lääkehoidolliset ja muut fysiologiset interventiot sekä ohjaus.

Avainsanat (asiasanat)

hoitotyö, perhehoitotyö, lapset, kompleksinen trauma,

Muut tiedot

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1 Introduction

Traumatic experiences are common in children as even every fourth child experiences serious psychological trauma before adulthood (Viheriälä & Rutanen 2010). Trauma can cause lot of suffering to a child and his family especially if it is not treated properly and its influence can extend even to adulthood (Streeck-Fischer & van der Kolk 2000, 906). The prevalence of trauma experiences and their negative and long-term consequences to health and wellbeing underline the importance of research focused on childhood trauma treatment.

Some children can handle the trauma with minimal help but other will need a lot of support such as treatment in a child psychiatric ward. It is also common that many children treated in psychiatric ward have history of trauma experiences. In the wards nurses have a big role in treating children because they are present in ward´s daily routines. (Friis, Seppänen & Mannonen 2006, 151.) Nowadays the importance of family is also highlighted and the perspective of family and social network has become central part of nursing care in children psychiatry (Friis et al. 2006,7).

In this bachelor thesis the focus is on the treatment of complex traumas in children. Complex trauma often happens within child´s caregiver system. Trauma is prolonged, it has early onset and it is usually interpersonal and the child is exposed to developmentally detrimental events. (Elzy, Clark, Dollard & Hummer 2013, 763.) According to Lawson and Quinn (2013, 498) the research of complex trauma and its treatment is considered as preliminary. There is lack of best practice guidelines for nursing care of complexly traumatized children and issues related to childhood trauma has been paid too little attention in nursing education and practice (Mulvihill 2007, 16). So

there is need for development of scientific base for treatment of complexly traumatized children and their families from the vantage point of nursing practice.

Aforementioned issues were considered when the topic of this thesis was selected and the aim and purpose of the thesis were considered. The aim of this study is to examine what kinds of nursing care methods can be used when supporting complexly traumatized children and their families during the hospital period. The purpose of the study is to collect information for nurses so that they could to develop and justify their work with the help of evidence-based information. The focus of this thesis is from preschooler aged children to children in their early puberty.

2 Concepts and theoretical background

2.1 Psychological trauma

Traumatic events are surprising, unwanted and exceptional life events that are beyond the normal experiences of human life (Tamminen 2004, 428). Traumatic events are characterized by death, serious injury or some other threat to individual´s physical wellbeing. It is also called traumatic event if person sees death, injury or threat to other persons´ physical wellbeing or gets information of death or injury of a family member or a close friend. (Gil 2009, 19.) Traumatic event can happen to an individual or to a whole group, family or community. The experience activates psychophysiological arousal system, causes secretion of stress hormones and changes the activity of autonomous nervous system. (Tamminen 2004, 430.)

Traumatic experience has many effects on individual´s mental processing, behavior and psychological wellbeing. Trauma is an experience which exceeds person´s psychic processing ability. It prevents the creation of mental images and memories of what happened. (Brummer 2005, 247.) Trauma events differ from other daily experiences in a way they are stored in a memory. They are stored partly in non-verbal forms as visual images, smells, feelings, voices and in kinaesthetic form. (Traumaterapiakeskus 2016.)

Traumatic experience causes unusually powerful reactions that disturbs normal life. The person feels strong fear, horror and helplessness and cannot survive from the experience in usual way. (Tamminen 2004, 430.) Uncontrollable and frightening sensations might invade their mind and traumatized individual might see what happened as a stream of visual images and live the moments of horror again and again in a precise manner (Suokas-Cunliffe 2006, 19).

Traumatic experience threatens believing system and victims´ world begin to seem unpredictable. The value of humanity and the meaning of life are often vanished. Trauma is also about losing something. After trauma individual loses his loved one, values, self-image, worldview or sense of security. (Traumaterapiakeskus 2016.) It affects all parts of emotional life (Brummer 2005, 247) and experiencing only a single, extremely forceful trauma can cause the change in the way one sees world and human life (Traumaterapiakeskus 2016).

There are two types of traumatic event. Single, short-term traumatic event causes type I-trauma (Traumaterapiakeskus 2016). Examples of the causes of this kind of trauma are accidents, nature disasters or a sudden death of a family member (Poijula 2016, 41). Repeated and continuous traumatizing events such as incest or domestic violence cause type II-trauma (Traumaterapiakeskus 2016.) which is also called complex trauma or developmental trauma (Becker-Weirdman 2009, 137). In this bachelor thesis, the focus is on type II-traumas and the concept complex trauma is used.

2.2 Childhood complex trauma

The exact prevalence of childhood complex trauma is difficult to determine because prevalence of physical and sexual abuse is often hidden (Mulvihill 2007, 16) but it is estimated that trauma experiences are relative common among children and even 2/3 of every child will experience some kind of trauma before the age of sixteen (Poijula 2004, 39) and even every fourth child will experience serious trauma before adulthood (Viheriälä & Rutanen 2010). Girls are in higher risk for sexual abuse while boys have greater risk for serious injury from the abuse and are more likely to be emotionally neglected (Streeck-Fischer & van der Kolk 2000, 904). The childhood complex trauma has some special characteristics compared to trauma experienced later in life. The age of the child, his phase of development, dependency on parents and his own injuries influence on how the child experiences the trauma. (Viheriälä & Rutanen 2010.)

Serious trauma experience can be seen in many aspect of child life. Chronically abused children often experience developmental delays across a broad spectrum and they will display disturbances with a variety of different presentations and symptoms. (Streeck-Fischer & van der Kolk 2000, 905.) Traumatic events cause unusual reactions that disrupt normal life. The child can be overactive and remember the event all the time in detail. After traumatic experience the child might learn to interpret previously neutral stimuli as a sign of danger. If the child perceives this kind of stimuli in his environment, traumatic reactions can be activated again. (Poijula 2016, 32.) After trauma experience the child might try to avoid things that resemble it. They

might refuse to speak or think about trauma, avoid stimuli that resembles of trauma or withdraw from social interactions. Avoidance might happen without any processing of painful feelings and this can be harmful for a child. However, it is better not to pressurize the child to speak about his painful experiences, if they don't feel ready for it. (Gil 2009, 24-25.)

Because of developmental reasons babies and children are extremely sensitive to traumatic experiences. The younger the child the stronger the trauma will affect. Stress hormones influence developing brains strongly and the prolonged stress causes permanent changes in child´s brain structures. Traumatic experiences will stay in body´s memory and predispose illnesses later in life. Young children are not protected from trauma because of their lack of understanding. Their unawareness of the finality of death, for example, cannot protect them from the effects of trauma. (Viheriälä & Rutanen 2010.)

The family is a central factor when thinking about childhood complex trauma. Children who had experienced the trauma are depended on adults around them. The younger the child the harder it is to see his distress and assess the seriousness of the trauma. It is not unusual that child is not supported or helped when he meets traumatic event especially if adults around him has also experienced the trauma or has caused it to the child. Untreated trauma can cause developmental and psychiatric disturbances in children and the consequences of it can be lifelong. (Tamminen 2010, 428.) Because certain areas in children´s brain are not developed, children are depended on their parents´ ability to help them integrate the event into their life. In order to survive from traumatic event, the event should be experienced as personal experience with certain time and place. (Suokas-Cunliffe 2006, 20.) The child need lot of support in order to process trauma experience and to form coherent and organized understanding of what happened. The younger the child the more he needs adult´s help in processing the trauma. (Sinkkonen & Kalland 2005, 158.)

In the case of complex trauma happened in the caregiver system, the support from parents might be missing. Especially because the majority of people responsible for child maltreatment and abuse are child´s own parents. (Streeck-Fischer & van der Kolk 2000, 904.) It is possible that traumatic experiences transfer over several generations and parent´s own early trauma experiences can be harmful for the child. Parent´s experiences might be activated in relationship with the child and parent might be forced to repeat his childhood tragedy in his relationship to the child as a verbal, physical or sexual violence. (Aronen & Sourander 2014.) If the parents are perpetrators the child might be threatened to conceal the abuse creating even more conflict and guilt (Lawson & Quinn 2013, 498.) and the secure attachment to parents will be compromised (Aronen & Sourander 2014).

2.3 Causes of childhood complex trauma

Child maltreatment is a typical reason for complex trauma (Gil 2009, 20). It is a concept that comprises all forms of physical and psychic abuses, sexual abuse and neglect which have harmful effect on child´s health, development, life and human dignity. Usually different forms of maltreatment do not appear one at time but together and polyvictimization is common. (Söderholm & Kivitie-Kallio 2012, 16.) Child maltreatment happens always in a wider context where might be also other risk factors such as drug use, poverty or social oppression (Gil 2009, 20).

One form of maltreatment is **neglect** which is defined as a situation where the parents repeatedly neglect their child´s basic needs. It is most commonly presented in infants and preschoolers and it is also most harmful for these age groups. Neglecting is multifaceted phenomenon which can take different forms, has varied causes or it

can be temporary or chronic. Also the seriousness and duration of neglect varies. Neglecting is divided as physical, emotional, health care and educational neglect. (Söderholm & Politi 2012, 77-80.)

Physical neglecting means parents´ inability to take care of child´s physical needs such as nutrition, health, hygiene, housing, clothing and protection. Caregiver´s lack of supervision might lead repeatedly in situations where the child has risk to get into physically dangerous situation and fall or get drug intoxication. Caring of the child can be inadequate already from infancy. The child might live in environment where parents do not notice, understand or defend the basic needs of the child. Physical neglecting can be seen as inadequate nutrition or living in an unhygienic environment. (Söderholm & Politi 2012, 80.)

Emotional neglecting can appear alone or together with other forms of maltreatment. Emotional neglecting can be unintentional (neglect) or intentional (abuse). It can turn up as repeated verbal assaults, humiliation, scaring or segregation. It makes the child feel worthless and non-loved. The core of the emotional maltreatment is caregivers´ inability to have positive emotional interaction with the child. The parents might be emotionally inavailable, their understanding of their own child is negative, interaction with the child is not appropriate when considering the child´s age or the parent cannot recognize child´s individuality and psychological limits. (Söderholm & Politi 2012, 80-81.)

Parents can also neglect child´s health care or education. Neglecting of health care can involve neglecting of child´s somatic, psychic or dental state. It means, for example, that the child is not taken to hospital even in serious cases of illness or parent does not take care of child´s medicine and therapies. Neglecting of child´s health care might be continuous and cause health problems for the child. Neglecting of child´s

education might be seen in situations where the child is not taken to school or the child refuses to go to school. (Söderholm & Politi 2012, 81-82.)

Physical abuse is a violence that harms the health of the child and causes pain. It can be hitting, kicking, shaking, burning or drugging with chemical substances and it can lead even to death. The child who is given drugging substances or alcohol is physically abused. One example of this is the parent who gives sleeping medicine for crying infant. In Finland corporal punishment is also classified as physical abuse. Corporal punishment is caused by parent who aims to punish the child or control the behavior by causing pain but the parent does not aim to cause physical injuries. (Tupola, Kivitie-Kallio, Kallio & Söderholm 2012, 100-106.)

Serious traumas are caused by **sexual abuse**. It is defined as inappropriate touching of child´s genital area, licking or sexual acting towards child´s mouth, vulva, vagina or anus. Penetration can happen by fingers, an object, tongue or genitals. The child might be forced to watch sexual acts or touch adults´ genitals. Children can be used to produce porn or they can be used as prostitutes. Most of the victims are girls, but also boys can be sexually abused. Sexual abuse is presented in every social class and in all kind of families but the risk for sexual abuse is higher in families where the other forms of maltreatment are also present. (Joki-Erkkilä, Jaarto & Sumia 2012, 132- 134.)

Many children treated in child psychiatric ward has experiences of **family violence** (Kauppi 2012, 125). The family violence is defined as a violence that happens between adults in the family, usually between the parents. Often the different forms of violence (psychic, physical and sexual) are present in the same time. The child can be traumatized even if the violence is not directed toward the child. Only living in the violent environment where the child sees or hears violence is traumatizing because the child feels that his parents are in physical danger and interprets the situation as life threatening. (Oranen 2012, 217-223.)

It is also possible to be traumatized because of **repeated medical procedures**. Traumatizing should be prevented by sufficient pain relief, supporting child´s feelings of basic security and presence of parents in hospital. (Viheriälä & Rutanen 2010.)

2.4 Protective and risk factors

Children react differently when confronted with a trauma partly because of protective and risk factors they have. Children who survive better might have several protective factors which protect them from trauma´s negative effects, whereas other children have only few or none protective factors and they might also have risk factors that expose them to negative effects of trauma. Protective factors can be child´s internal resources or they can be in his environment. Risk factors are personality, previous trauma experiences, family environment and the type of trauma. (Tamminen 2004, 431-433.)

Nature of the trauma

Psychological traumas differ from each other in seriousness and the type of trauma determines its ability to cause physical and mental health problems. The intense and chronic trauma has more pervasive consequences especially if it is caused by other human being compared to situation where trauma is caused by an accident or natural disaster. (Tamminen 2004, 431.) The closer is the relationship between the perpetrator and the child, the greater likelihood is that trauma will have serious consequences (Mulvihill 2007, 18). If the cause of the trauma is physical or sexual violence the risk for psychiatric dysfunction is especially high (Poijula 2016, 43).

Age and characteristics of the child

Developmental age and phase of the child will influence on the way the child reacts to trauma experience. The younger the child, the more pervasive and serious effects trauma has on child´s normal growth and development. (Brummer 2005, 250.) Stress hormones affect more strongly on the development of brain if the traumatized child is very young (Viheriälä & Rutanen 2010). The development phase of thinking and language influence on understanding and remembering of the trauma. The situation is not necessarily as traumatizing if child cannot understand the seriousness of event because of his developmental phase compared to situation where the child understands the dangerousness of the event. (Poijula 2016, 43.) However, the unawareness of the child does not protect from the effects of trauma experience (Viheriälä & Rutanen 2010).

The characteristics of the child can predispose or prevent the serious effects of the trauma (Mulvihill 2007, 18). Prognosis of children with good internal resources is better compared to children that do not have good internal resources (Gil 2009, 21). Internal resources can be certain personality traits such as good self-confidence, independence and ability to trust other people (Tamminen 2004, 432-433.) or capability to emotional expression and to seek help (Gil 2009, 7-8). The ability to self-soothe and modulate emotions to reduce stress will lower child´s vulnerability to effects of trauma (Mulvihill 2007, 18). It is also important to have the capability to use imagination, dreams and play to deal with the trauma (Tamminen 2004, 432-433). Neurobiological status of the child, such as level of intelligence influences the surviving of traumatized child (Gil 2009, 7-8). Good coping skills will protect child mental health in the case of complex trauma. If the child uses a lot of approach strategies such as problem solving and social resources, the harmful consequences of trauma will be decreased. But if the child uses avoidance coping it will lead to higher amount of trauma related symptoms. (Elzy et al. 2013, 764.) The personality might be risk factor if the child is introvert and has tendency to ruminate distressing incidents or if the child has been

depressed or anxious before the trauma The risk for serious consequences is also increased if the child has experienced traumas early in life or several simultaneous psychological traumas. (Poijula 2004, 43.)

Characteristics of environment and family

The important protective factors in child´s environment are his family and social network. When dealing with a trauma the child needs a lot of social support from adults around him. Good relationship with at least one adult and popularity in peer group are important. The type of attachment style is also a significant factor when assessing the effect of trauma experience. If the child is securely attached to his parent, it will protect the child from negative life experiences. (Tamminen 2004 , 432-433.)

The risk factors in family are traumatized parents, mental health problems of parents and instability of family system. Parents might deny what happened, openness and communication might be missing. It is harmful if the child has to experience the powerful reactions of parents such as crying. (Tamminen 2004, 431.) The ability of the parent, especially the mother, to survive from trauma experience and capability to parenthood has strong effect on child´s surviving. The child reacts to emotional state of the parent and is able to sense distress of the mother already as an infant. The parent in chaotic state is not able to be sensitive to his child´s needs and sometimes even the basic care and functional daily routines are missing if the parents themselves are seriously traumatized. (Viheriälä & Rutanen 2010.) If child´s own parents have caused the trauma for the child, it is improbable that they could support their child to survive from the experience. Long term psychological consequences are associated with low support and warmth from parents. (Sinkkonen & Kalland 2005, 158.)

Not only parents but also other social environment can be a risk factor when assessing the surviving of the child after trauma experience. Sometimes child´s psychological healing is hindered if workers in school or daycare do not care or cannot accept the reactions of traumatized child. Other risk factors are lack of friends and loneliness. (Tamminen 2004, 431.) Symptoms after trauma depend also on wider social factors such as experiences of poverty and availability of psychological treatment (Gil 2009, 7-8).

2.5 Consequences of complex trauma in children

Experiencing multiple and chronic interpersonal traumas in childhood, referred to as complex trauma, will cause negative impacts on various areas of child´s development (Elzy et al. 2013, 763). Complex trauma is linked to severe mental health problems and increased risk for psychiatric disturbances over lifespan (Kisiel, Fehrenbach, Torgersen, Stolbach, McClelland Griffin & Burkman 2013, 2). The worst consequences will develop if trauma is experienced in a very early age, it happens inside the family and its duration is long (Gil 2009, 7-8). Reactions after trauma varies between individuals and they can be physical, emotional, cognitive and social. They are usually long-lasting and the child reacts usually in a typical manner of his age. (Viheriälä & Rutanen 2010.) According to studies complex trauma has impact on seven domains which are attachment, biology and brain development, affect regulation, behavior control, cognition and learning disabilities, self-conception and dissociation (Knoverek, Briggs, Underwood & Hartman 2013, 655). Furthermore, trauma experiences might cause serious long term health problems and post-traumatic stress disorder (PTSD).

Attachment

The family has great impact on consequences of childhood trauma and the attachment is the important concept when considering the family of a traumatized child.

Attachment is an innate behavioral system which motivates the child to seek closeness to parents particularly in times of distress. The attachment patterns can be divided into four: secure pattern, avoidant pattern, ambivalent pattern and disorganized pattern. The traumatic stress caused by intrafamilial trauma have different impact on children based on their attachment pattern. The greater negative consequences are experienced if the attachment pattern is insecure, particularly if it is disorganized. (Foroughe & Muller 2014, 539-540.) If the trauma is caused by child´s own parent, the normal development of attachment is disturbed and the attachment pattern might develop to insecure or disorganized which are associated with several developmental problems. Insecure attachment causes problems in things like vulnerability to stress and poor skills to regulate emotions and it predisposes to severe trauma related problems. Insecurely attached children distrust other people and they might have difficulties to form meaningful relationships. (Knoverek et al. 2013, 655.) It is also possible that the child will develop traumatic attachment disorder because of traumatizing behavior of the parent (Sinkkonen & Kalland 2005, 157).

Biology and brain development

Complexly traumatized children live in a state of fear which can be seen in their body´s physiology as increased heart rate, muscle tone and rate of respiration. Living in a prolonged traumatic situation will cause long activation of body´s stress-response system and this activation causes changes in neural systems. (Mulvihill, 2007, 18-19.) The development of brain is changed by the amount of stress including both the extremely high or low level of stress. Neglecting the child causes lack of stimulation in brain development and thus the brain gets too little stimulation in order to develop needed skills, whereas abusive environments can be extremely stressful and the prolonged physiological stress reactions harm the development of brain. (Knoverek et al. 2013, 655.) According to studies traumatized children have changes in their brain structures and function, for example their frontal lobe function and the

volume of corpus callosum might be decreased. These biological changes can be seen in the way chronically traumatized children behave and react to environmental stimuli. (Streeck-Fisher & Van der Kolk 2000, 908-909.)

Affect regulation

Complex trauma will change the ability to identify, process, express and modulate emotions (Knoverek et al. 2013, 655). Traumatized children are not able to describe their internal states verbally and they tend to ascribe their own feelings to others. Their unability to regulate emotions tend to scare other children away and they usually do not have playmates because of their tendency to withdraw or bully other children. (Streeck-Fischer & van der Kolk 2000, 905.) Emotions expressed by others may be misinterpreted as danger cues or as negative emotions. Traumatized children frequently are disconnected from their own emotional experience. They lack awareness of body states or cannot connect body states to emotions or experiences. It is common to have difficulties in calming down or they might remain in negative emotional state for an extended period of time. (Kinniburg, Blaustein & Spinazzola 2005, 427-428.) Traumatized children often have tendency to feel shame and guilt (Brummer 2005, 253).

Behavioral control

Behavioral and social problems are typical among complexly traumatized children. The child can have conduct problems, aggression or difficulties in understanding and following rules. They may re-enact their traumatic experiences such as verbal and physical aggression and inappropriate sexual behavior. (Knoverek et al. 2013, 655.) They often have difficulties to be in good relationship with other children. (Brummer 2005, 253). Because traumatized children have problems in behavioral control, they might medicate themselves with drugs, starving and binging or with self-injurious behavior (Streeck-Fischer & van der Kolk 2000, 910).

Cognition and learning disabilities

Cognitive abilities are often affected if repeated traumas are experienced early in life. Maltreated children have often lower cognitive capabilities compared to other children. Examples of typical cognitive problems are learning difficulties, deficits in language development, in perception and in executive functions. (Knoverek et al 2013, 656.) Also problems with hyperactivity and attention are common (Kisiel et al. 2013, 2). Traumatized children have attentional problems because they cannot distinguish relevant and irrelevant information from each other and because they might misinterpret harmless stimuli as traumatic one. Because of misinterpreting they might become extremely physiologically aroused when faced with new information and have not interest to explore the world. It is difficult for them to maintain secure state which is necessary for learning. (Streeck-Fischer & van der Kolk 2000, 912.)

Self-conception

Developing child should achieve certain skills and developmental competencies which are often derailed because of trauma experience. Exposure to trauma impairs the development of interpersonal competencies such as positive peer relationships, intrapersonal competencies such as realistic assessment of self-competencies, cognitive competencies such as school performance and emotional competencies. Because developmental competencies are not well developed the child cannot form sense of efficacy. The competency of traumatized child is often impaired and self-concept might be negative. (Kinniburg et al. 2005, 429-430.) Competency and self-esteem are also negatively affected because of toxic family environment. The trauma experience prevents the development of predictable sense of self. (Knoverek et al 2013, 656.) It also causes difficulties to child in understanding who he is and self-conception might develop vague (Streeck-Fischer & van der Kolk 2000, 905).

Dissociation

Complexly traumatized children are especially susceptible to a condition called dissociation. Dissociation can be defined as lack of integration between memory, identity and consciousness. Dissociation can be seen as varied somatic symptoms which do not have any medical explanation or strong psychic symptoms, such as hearing voices or losing memory. (Suokas-Cunliffe & van der Hart 2006, 2001.) Because of dissociation traumatic events are stored in memory partly in non-verbal form. The child cannot recall his experiences consciously but triggering stimuli bring non-verbal memories to consciousness. The child´s trauma related memories are vague and he cannot understand his trauma related reactions. (Tamminen 2004, 430.)

Dissociation is triggered as a defense mechanism in response to a traumatic stimuli or an overwhelming event. Dissociation is fairly common among children with complex trauma histories. Children suffering from dissociation might appear lost in thought, experience altered consciousness or realities and have complete loss of memory during particular periods of time. (Knoverek et al. 2013, 656.)

Post-traumatic stress disorder

Complexly traumatized children may develop a disorder called post-traumatic stress disorder (PTSD). PTSD has three symptom clusters which are avoidance of trauma reminders, re-experiencing the trauma and physiological arousal.

The child suffering from PTSD tries to avoid trauma reminders such as people, places and situations which may cause psychological distress. Avoidance of trauma reminders can be seen as avoidance of discussing about trauma, incapability to recall important aspects of trauma event, decreased interest in previously enjoyed activities, withdrawing from others, restricted emotion and a foreshortened future. The second symptom cluster is re-experiencing the trauma and it can be seen as recurrent nightmares (Cohen, Buckstein, Heather, Scott, Allen, Farchione, Hamilton, Ceable, Kinlon, Schoettle, Siegal & Stock 2010, 416.) and flashbacks. Even small children can have

flashbacks after traumatic events (Friis et al. 2006, 121.) The traumatized child might see the event happen again and again both awake and asleep (Elzy et al. 2013, 763-764). Flashbacks can come in any situation and they cause abnormal behavior (Räsänen 2004 ,235).

The child might also play repetitively and express themes of trauma in his play. The child might re-enact his trauma experiences such as model violent behavior seen in home. The third symptoms cluster is physiological arousal and it is seen in as irritability or angry outburst and difficulty in concentrating. (Cohen et al. 2010, 416.) Young children also manifest decreased interest toward important daily and developmental tasks. Children might regress in their developmental stage and for example lose interest in toilet training or even lose their ability to speak. (Saari 2003, 79.) The child might also have somatic symptoms such as stomach ache or headache (Friis et al. 2006, 121), difficulties to trust other or they might behave in suicidal way (Räsänen 2004 ,235-236).

Long term health effects

The health consequences of trauma can extend even to adulthood if there is no early intervention. As adults traumatized children have increased risk for several physical disorders such as cancer, heart disease and diabetes and also risk for several psychological disorders such as personality disorder, depression, anxiety or eating disorder. (Streeck-Fischer & van der Kolk 2000, 906.) They also have increased risk to die prematurely (Elzy et al. 2013, 763).

2.6 Nursing practices in child psychiatric ward

Nurses are part of the professional team when helping traumatized children in psychiatric wards. Children psychiatric care comprises of relationship with named nurse, community of children and adults and teachers in a hospital school. Other participants in child´s treatment are his family and other important parts of child´s social network such as school and social services. (Friis et al. 2006, 151.)

In a child psychiatric ward, the aim is to enable the life that matches child´s age and developmental stage. Children can play in a ward and through play they can process difficult experiences. The child practices different skills by doing daily tasks such as making his own bed and by attending hospital school. The ward tries to give a safe environment for a child. Regular daily schedule and routines are important. The key principles of care in child psychiatric ward are individuality, safety, continuity and communality. (Friis et al. 2006, 151-152.)

One of the most important aspects of care in child psychiatric ward is to break the negative circle caused by many failures and give compensatory emotional experiences. In order to live a healthy life, children need emotionally significant and lasting relationships. The developing of a therapeutic relationship between the child and a named nurse might be slow because children in ward often have negative experiences of significant relationships. The key element in nursing practice is to get the child´s trust by spending time with him. Positive experiences from this relationship gives a new chance for the child to create confidential relationships. (Friis et al. 2006, 150-154.)

A named nurse co-operates with the family by listening them and discussing with them. The nurse observes the family´s operations models, their emotions and surviving. The family has a right to get information and support during child´s treatment in a ward and the family should also be given a possibility to take part in planning the

child´s treatment. Objectives of the treatment should be set in cooperation with the family. It is better for a child if his family takes part of his care. Child needs his parents "permission" for being in a ward and receiving care. Understanding, accepting and appreciating child and his family are central in a ward care. (Friis et al. 2006, 151-153.)

The adults around traumatized children should be honest and open about trauma. Many adults have false belief that children will survive easily from traumas and they will forget trauma if it is not discussed. In order to survive from trauma, the child should know the facts and meet the reality. Children need safety, support and possibilities to talk about what happened. Parents as well as adults outside the family should support the child in forming coherent understanding of trauma experience. (Poijula 2016, 11-13.)

3 Purpose, aim and research question

The aim of this study was to examine what kinds of nursing care methods can be used when supporting complexly traumatized children and their families during the hospital period. The purpose of the study was to collect information for nurses so that they could to develop and justify their work with the help of evidence-based information.

The idea for this thesis came up from the own interests of the researcher of this thesis toward children psychiatric care and especially treatment of traumatized children. In order to achieve the aforementioned aim and purpose the next study question was set: How to support complexly traumatized children and their families with methods that can be used in ward settings by a nurse?

4 Research methodology

4.1 Defining literature review

Literature review is a written document of existing knowledge on a particular topic. It is a research method that gathers, appraises, synthesizes and analyzes patterns of the data from various sources. (Jesson, Matheson & Laces 2011, 74 ; Machi & McEvoy 2009, 82.) Literature reviews´ contribution in the field of health care is considerable. Health care professionals are assumed to work in evidence-based manner and keep track on ongoing research in their field. But there is a growing amount of evidence in the health care sector and it has become impossible to read all studies on a particular topic. Because literature reviews summarize a large body of knowledge, the reader does not need to read all studies separately so the literature reviews have practical benefits for health care professionals. (Aveyard 2010, 6.)

Considering the aim, the purpose and the research question, the literature review was selected as a suitable research method for this thesis. The chosen method enables collecting and condensing the large amount of evidence based knowledge for nurses to use. When doing a literature review there should be research plan, clear stated purpose, defined study question, proper keywords and inclusion and exclusion criteria. The methodology should be transparent so that review can be replicated. (Jesson et al. 2011, 108.) The literature review is a process that is done in an ordered way and it proceeds through certain phases. The phases are selecting a topic, searching the literature, surveying the literature, criticizing the literature and writing the review. (Machi & McEvoy 2009, 5.)

The process began when the researcher of this thesis identified her research interest and formed a study question. After that researcher clarified and narrowed this question into a clearly defined research topic. In addition to selected topic, the researcher selected a vantage point from which to view the topic. The aim and the purpose of the thesis were also considered. Clearly defined study question directed literature search and helped to select suitable material to be reviewed. The search began by quickly scanning the literature and identifying potentially useful works. After scanning, the potential literature was skimmed and suitable material was selected by evaluating its´ contribution to the thesis (Machi & McEvoy 2009, 2-49). The researcher sought key aspects of articles and made a synthesis. It means that new themes, categories and connections between parts were created. The aim was to present data so that results of study are summarized in a meaningful way. (Jesson et al. 2011, 123: Machi & McEvoy 2009, 60.)

4.2 Literature search and article selection

The data was collected from electronic databases provided through JAMK (Jyväskylä University of Applied Sciences) library. Databases used for this literature review were Academic Search Elite (Ebsco), Elsevier Science Direct, Cinahl, Medic and Pubmed. The data search was done in April to July in 2016. In the beginning different key words were tested in the selected databases. The Boolean logic to frame database search was used and the best combination of key words was selected. The best combination of keywords was able to pick out articles about desired topic and the list of results was large enough but not too large. In this review the following keywords were used: childhood, trauma or psychological trauma and treatment or nursing in

databases using English and keywords: lapsi, trauma and hoito were used in data-based using Finnish. Inclusion criteria were selected in order to find high-quality studies from databases. Article inclusion criteria are represented in the table 1.

Table 1. Inclusion criteria

- peer-reviewed academic journal article from specific journal database
- English or Finnish
- published between 2000-2016
- free full text access for JAMK students
- abstract included
- focus of research in children (infants and teenagers excluded)
- found with defined key words
- the article should respond to research question

The search results were scanned by reading the titles and abstracts of the articles. A total of twenty-eight articles were chosen on the basis of titles and abstracts. After scanning the chosen articles were read through and the final selection was made with the help of predetermined inclusion criteria. Articles that could not answer the research question were excluded. The quality of studies was critically appraised by assessing the research methodology and selecting only the latest articles from peer-reviewed journals. The whole research process was documented in order it to be replicable. The results of the literature search, searched databases and key words are presented in the table 2.

Table 2. Results of the literature search

Database	Keyterms	Results	Chosen on the basis of title and abstract	Relevant Studies
Academic Search Elite (Ebsco)	childhood AND trauma AND treatment	159	10	5
	childhood AND trauma AND nursing	60	2	1
Cinahl	childhood AND trauma AND treatment	83	7	4
	childhood AND trauma AND nursing	38	1	1
Elsevier Science Direct	childhood AND trauma AND treatment	159	4	3
	childhood AND trauma AND nursing	63	1	0
Medic	trauma AND lapsi AND hoito	3	1	0
Pubmed	childhood AND psychological trauma AND treatment	47	2	1

A total of fifteen articles were selected for this literature review and thirteen articles were excluded because they could not fulfill inclusion criteria. The research methods of chosen articles varied a lot. There were six literature reviews, one randomized controlled study, two case studies and six academic articles. The authors, the journals, the titles, publishing times, aims, participants, data collection and analysis methods and results are presented in appendix 1.

4.3 Data analyses

In this study the research material was analyzed by using content analysis. Content analysis is a qualitative method used to analyze verbal or written material. In the content analysis gathered research material is summed up in a way that the research phenomenon can be represent shortly in general level or relations between different phenomena are clearly presented. (Latvala & Vanhanen-Nuutinen 2001, 21-23.)

Content analysis can be either deductive or inductive. Deductive analysis begins from the theory or theoretical concepts and the results from the material either support or oppose the theory. Inductive content analysis relies on inductive reasoning. The material is examined repeatedly in order to develop theoretical concepts or theory. (Latvala & Vanhanen-Nuutinen 2001, 24) In this thesis inductive content analysis was used and theoretical concepts were derived from the selected articles by using inductive reasoning.

The phases of inductive content analysis are reduction, clustering and abstraction of the data and in this thesis all the three phases of analysis were went through. At the beginning of the analysis the good understanding of the content of selected articles was obtained. The chosen articles were read through for a few times. In the reduc-

tion phase the analyses units were chosen. The words, word combinations, sentences and phrases presented in the text which were able to answer to the study question were searched and marked. These analyses units were gathered into separate document for further inspection. After the reduction of study material, the data was clustered. The researcher inspected similarities and differences between chosen analyses units. Similar analyses units were combined into one group and each group was named according to its content. The third phase of content analysis was abstraction. The groups that have similar content were combined to form themes. The suitability and the accuracy of each theme was considered. (Latvala & Vanhanen-Nuutinen 2001, 26-30.) The formed themes, examples of subcategories and analyzed units are seen in appendix 2.

5. Results

According to analyzed material treatment of complexly traumatized children can be divided into seven themes which are individual-focused interventions, interactional interventions, occupational interventions, guidance, environmental interventions, pharmacological and other physiological interventions and family-focused interventions. The themes and their subcategories are presented more exactly in the figure 1.

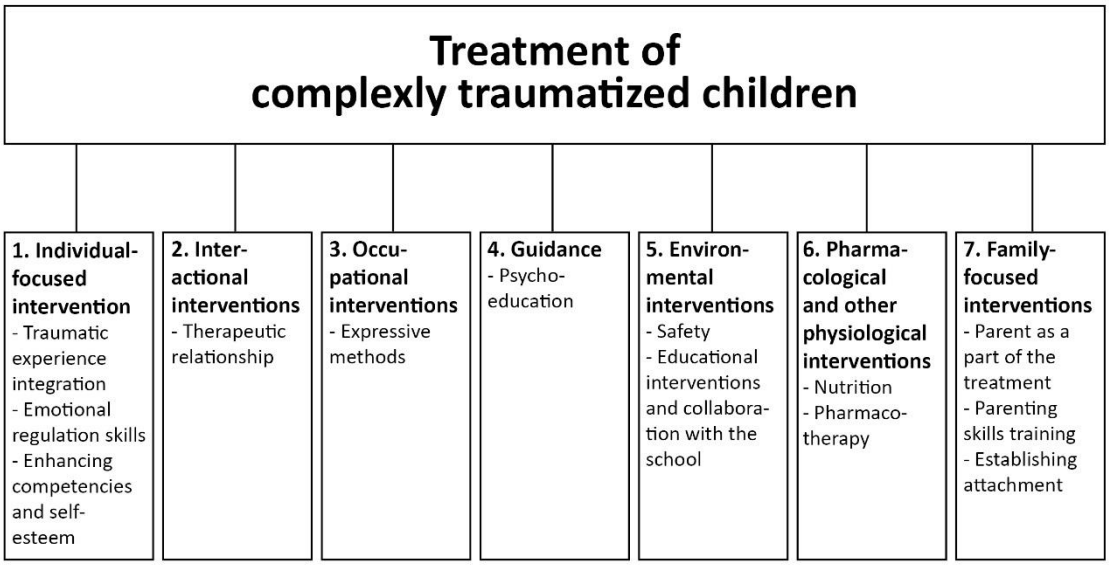

Figure 1. Results of the literature review

5.1 Individual-focused interventions

In psychiatric care the treatment has always individual aspect and many interventions described in the data has the individual in their focus. According to data the treatment can be directed to help child in the processing of trauma experience. Also interventions can be directed in self-regulation skills such as identifying emotions and enhancing child´s competence and self-esteem.

Traumatic experience integration

According to studies one of the most effective treatment methods is the processing of trauma experience (Knoverek et al. 2013, 660). The child should form a consistent understanding of what happened, integrate the experience into his life and accept it as a part of his life story (Mulvihill 2007 ,23-24). The processing and integration of trauma can be done by discussion and by creating a trauma narrative with the child, by using non-verbal communication and expressive methods as facilitators. Before

initiating therapeutic discussion or creating the narrative, the nurse should consider whether the child is ready to process his trauma experiences or not and in the case of complexly traumatized children it should be decided which of the several traumatic experiences to process. (Knoverek et al. 2013, 660.)

The discussion is the main method to process traumatic experience if the child is able to participate in it. Through discussion a nurse helps the child to express his feelings, to gain understanding and some distance from the traumatic event in the presence of reliable adult. During the discussion a nurse observes that the child will not be overpowered by difficult feelings and support the child when the child shows signs of distress. (Mulvihill 2007, 23-24.) The nature of discussion can facilitate the processing of trauma and a nurse should keep the discussion relaxed, for example the tone of the voice should not change more serious when discussing about traumatic events because it might detach the child from the discussion. The child should have an active role in the conversation. (Becker-Weidman & Hughes 2008, 331.) The discussion, imaging and visualization of the traumatic event can serve as an exposure to the traumatic event (Leenarts, Diehle, Jansma & Lindauer 2013).

The non-verbal part of the interaction can be utilized when trying to facilitate the processing of the trauma memory. A nurse should be aware of the fact that non-verbal body language such as nurse´s eye contact, facial expressions, posture and gestures can be used to help to develop a new understanding of the trauma. Non-verbal expressions are especially important to traumatized children because some trauma events might have happened in a pre-verbal stage when the child did not have any words to describe his experiences and thus they do not have explicit memory. Non-verbal expressions are used also because some trauma related experiences such as abusive looks and voice were experienced non-verbally. (Becker-Weidman & Hughes 2008, 331.)

Sometimes the processing of trauma through discussion is too difficult for the child. Then paint or crayons might help the child to express his trauma-related thoughts and feelings. After the child has painted the event, he can usually talk more easily about what happened. The nurse can facilitate the discussion by asking questions about the drawing, such as what happened before the event, or where it happened. (Mulvihill 2007, 23-24.) The idea is that a nurse gives words for the child, because traumatized children cannot often connect the trauma to words. Expressive methods facilitate the integration of the trauma experiences but they are used only when the child can maintain feeling of psychological safety during the exploration of his story. In addition to art, traumatic experience integration can be facilitated by using stuffed animals, children´s books, roleplaying, reading of historical documents such as police reports (Becker-Weidman & Hughes, 2008, 332-334.) and by using family photographs. (Kerig, Sink, Cuellar, Vanderzee, & Elfström 2010, 713).

One way to process the traumatic event is to create a trauma narrative which is created from the basis of child´s trauma memories and placed in the context of child´s whole life (Cohen et al. 2010, 424). Trauma narrative is description of what happened during the child´s trauma experiences (Cohen, Mannarino, Murray & Igelman 2006, 741-742). The narrative can also be shared with parents (Cohen et al. 2010, 424.) and the child should be encouraged to share the narrative orally or in writing or by drawing. (Knoverek et al. 2013, 660). The trauma narrative help to separate thoughts from painful emotions, to process cognitive distortions and to predispose the child to trauma reminders (Kerig et al. 2010, 713).

Emotional regulation skills

Besides of the integration of trauma experience, one goal of the treatment is to help the child to regulate his emotions. This kind of intervention is focused to change indi-

vidual child´s inner way to process and express his inner states. According to analyzed articles the emotion regulation skills are divided into three parts: identifying, modifying and expressing emotions. In this section it is more precisely discussed what the nurse can do to help the child to regulate emotions in more adaptive way. (Kinniburgh et al. 2005, 428.)

There are various methods how to help the child to identify his emotions. When practicing the **identification**, the child should practice to expand awareness of emotions, naming of the emotions and self-monitoring of his changing emotional states. The child should also be able to connect behavior, experiences and physical sensations to emotions. Awareness of emotions can be expanded by using feeling cards, different games or by creating a space tied to theme of emotion such as bulletin board in the ward. Connecting emotions to behavior and experience can be practiced by using stories or television and film characters. Body drawings, role play or physical modeling can be used when practicing to connect emotion to physical sensation. (Kinniburgh et al. 2005, 428.)

The nurse can teach the child to name the observed emotion by using reflective listening, labeling of emotions and by identifying emotions when reading or watching television. (Kinniburgh et al. 2005, 428.) Child´s ability to name emotions and sensations can be improved by practicing body awareness and mindfulness. The nurse can help the child to find words for his sensations by asking for example “if your stomach could talk what would it say?”. This practice will teach the child to deal with unpleasant sensations. (Kuban 2012, 16.) The child should also be able to identify precursors to mood changes. For example, the nurse can use special code words to let a child to know that a shift to other emotion state has occurred. This is especially suitable for children suffering from dissociative symptoms. (Weber 2009, 3-4.)

Learning to identify emotions was one part of the emotion regulation skills, but the child needs also ability to **modify** his emotions in order to cope in social situations.

During the treatment in the ward, a nurse can help the child to regulate his level of emotional arousal. (Becker-Weidman & Hughes 2008, 334.) The emotion modification can be trained by positive self-talk, by thought interruption and by positive imaginary (Cohen et al. 2010, 423). A nurses´ duty is to maintain emotional safety and balance of the child. The overwhelming activation of emotions can be avoided by using relaxation skills such as focused breathing or progressive muscle relaxation. Also physical activities such as breathing exercises, yoga and stretching are effective ways to down-regulate overwhelming feelings. When the child need comforting holding, rocking and cuddling can be used. (Kuban 2012, 16.)

During the trauma event recall overwhelming emotions might appear. Therefore, the nurse should monitor respiratory and pulse rate during recalling of trauma event in order to be able to down-regulate distressing emotions and in order to be able to intervene with time-out if it is needed. (Mulvihill 2007,21-22.) It is also useful to use feelings thermometers or number scales (0-100) when assessing the strength of the emotion in order to help the child to build understanding about degrees of feelings. Sometimes up-regulating emotion is needed and in these situations grounding or physical movement can be used. It is important that the adults support and praise the child when he is trying to regulate his affects in appropriate way. (Kinniburgh et al. 2005, 428.)

Often traumatized children have problems to express their emotions in appropriate way and they might think that their **emotional expressions** are not normal. Therefore, emotional experiences should be normalized and those experiences should be normal part of ward´s routines. Thus, the nursing staff should be able to tolerate emotional expressions and encourage children to express their feelings in a safe way. The different methods for expressing emotions such as verbal, drawing, writing, drama and physical exercises should be used. (Kinniburgh et al. 2005, 428.)

The child should also be able to communicate feelings of anger, fear, and regressive needs to their parents but in appropriate ways. The nurse can encourage the child to communicate also negative feelings to their parents but parents should be taught to tolerate these expressions. This will promote the healthy attachment between the child and his parents. Complexly traumatized children should also be helped to control self-destructive and impulsive behavior. Controlling of the behavior can be reinforced by identifying changes in moods or by interrupting dysfunctional impulsive habits. (Weber 2009, 3-4.)

Enhancing competencies and self-esteem

Developmental competencies are often impaired after trauma exposure so one objective of the treatment is to build normative developmental competencies and increase external resources in order to improve the resilience of the child. First the mastery over the environment need to be developed by identifying child´s interests across different areas of life, by helping the child to build concreate goals and by encouraging age-appropriate responsibility. The child should also be supported to make independent choices and in school achievement. After that social connections to peers and adults should be created. The nurse can help the child to develop social skills, such as ability to negotiate and integrate into activities and peer groups. (Kinniburgh et al. 2005, 429-430.)

Concentrating on child´s strengths will promote positive self-concept. Positive self-concept can be enhanced for example by creating power-book with the child. By reflecting child´s likes, dislikes, hopes and values in power-book foster the sense of identity. The nurse should encourage the child to develop independent values and support the child in self-care and life skills in ward´s daily routines. The school achievements are important part of the positive self-concept and self-esteem. Because of that the nurse should collaborate with the child´s school (Kinniburgh et al. 2005, 429-430.) and teach the child how to succeed in learning. Many complexly

traumatized children have learning disabilities. Therefore, it should be ensured that early trauma experiences will not cause further assaults on their self-esteem in the form of poor school achievements. So the extra support in the schoolwork is often needed and if the child has serious learning problems transfer to the special school might be needed. (Streeck-Fischer & van der Kolk 2000, 913-915.)

A nurse should encourage child to participate into activities that give the child a sense of pleasure and mastery and that do not have trauma-related triggers. Physical games and neutral fun tasks give complexly traumatized children experiences of relaxation and a sense of physical mastery. (Streeck-Fischer & van der Kolk 2000, 913-915.) A nurse can help the child to believe in his skills and potential in order to promote motivation for growth and future success (Weber 2009, 3). The child should be given opportunities to explore new pursuits and relationships with a trusted adult (Kuban 2012, 15). It is a good idea to plan short- and long-term goals with the child in order to build future orientation (Kinniburgh et al. 2005, 429-430). By engaging the child in activities that emphasize their progress in spite of bad experiences they have, will improve their self-esteem. One example of the method that is focused on positive future progress is to draw timelines with the child that reinforce how far the child has come. This kind of visual presentation helps the child to see continued forward motion and help to remind that trauma experience is only one part of their life. (Kuban, 2012, 16.)

5.2 Interactional interventions

Therapeutic relationship

The quality of the therapeutic relationship was often mentioned as an important part of the treatment of traumatized children and their families in analyzed articles. Among complexly traumatized children supportive and long-term adult relationships

are rare, and in the ward the nurse has possibility to form trusted relationship with the child and act as a secure attachment figure. The trust should be built in the beginning of the nursing care. After a traumatic event the child has need to regress for a while and a nurse can use this regressive period to form therapeutic relationship with the child. The period of regression enables the nurse to provide comfort in order to create atmosphere that builds trust. A nurse can provide comfort by offering child´s favorite foods and physical care and if a nurse is caring and consistent during this regressive period the trust is established more easily. (Mulvihill 2007, 21-22.)

The therapeutic relationship is a special kind of relationship and its most important features can be summed up into acronym PACE. The PACE is attitude of the therapist and it describes the way how the therapist should interact with the traumatized child. It is developed and used in the context of dyadic developmental psychotherapy (DPP) but its principles can well be used in the other settings as well. The PACE - attitude means that a nurse interacting with the child should be playful, accepting, curious and empathic. A nurse who uses PACE-attitude should aim to regulate the child´s trauma related emotions by being empathic and when appropriate even playful. By accepting child´s affects and experiences and by being curious about the meanings the child has given to his experiences facilitate the processing of trauma experiences. If there turn ups any conflicts between the child and a nurse, they can be repaired by taking the PACE attitude. (Becker-Weidman & Hughes 2008, 330-331.)

5.3 Occupational interventions

Expressive methods

Occupational interventions are used with traumatized children as an alternative, nonverbal way to process the trauma memory and as a way to facilitate the expression of child´s own feelings and thoughts (Knoverek et al. 2013, 659). There are various different occupations a nurse can use in this purpose. In the material researches discussed about different art activities, play and sensorimotor techniques which are more deeply discussed next.

A nurse can use different art forms such as painting, clay, sculpting and drawing as means of self-expression. Art activities has special effects in treatment. They allow the child to express his trauma-related experiences without judgement and by processing the trauma through art, the child not need to identify himself as a victim. (Knoverek, et al. 2013, 659.) Art activities also facilitate the self-expression because verbal communication alone is often too overwhelming (Leenarts et al. 2013, 279). The goal of the art therapy is to find a balance between regressive art and art that encourages mastery (Weber 2009, 3-5).

A nurse can use play as part of child´s treatment. When nursing children, the playfulness has central role and a nurse can aim to use play as a treatment method in more conscious way in his work. In a play therapy conflicts, contrasting role expectations and negative feelings are brought to play and a nurse can bring these into conscious awareness of the child by his comments. Through the play the identity of child can be supported, (Weber 2009, 3-5.) the sense of safety established and exploring feelings facilitated (Knoverek et al. 2013, 659). In the play the child gets possibility to express even negative emotions such as anger in a safe supportive environment. (Lawson & Quinn 2013, 499). It is also possible to improve child´s sense of control by letting the

child to select the toys. During the play a nurse gains deeper understanding about child´s trauma related emotions and can assist the child in verbal expression. (Knoverek et al. 2013, 659.) Re-enacting trauma events and creating the trauma narrative are possible to do by playing with the toys (Lawson & Quinn 2013, 499). Playing allow child to get distance from the traumatic events and help to imagine alternative outcomes (Streeck-Fischer & van der Kolk 2000, 913).

Sensorimotor techniques are also one possible occupation to use in ward settings. They comprise of tactile experiences and physical activities that aim to improve proprioception and vestibular mechanism. Tactile experiences can be soothing for the child. One example of possible useful practice is to hide small toys in rice or sand and ask child to try to find them. Physical activities such as jumping and running aim to improve proprioception which enables child to determine the position of his body relative to their environment. Body´s vestibular mechanism can be stimulated by physical activities such as swinging, rocking or other rhythmic movements. Sensorimotor techniques are used because traumatized children often have difficulties to assimilate sensory input from the environment and this might lead to emotional dysregulation. The other reason is that repetitive activities such as body movements give sensory input to the child and this enhance brain development and self-regulation skills. (Knoverek et al. 2013, 658-659.)

5.4 Guidance

Psychoeducation

A nurse guides patients and give professional information for the patient and his relatives. The guidance has central role also when thinking about treatment in child psychiatric ward. One special area of guidance discussed in the literature was psychoeducation and traumatized children has especially high need for information and

guidance regarding the experience they had and trauma symptoms they had experienced. The children and their caregivers should be educated about the type of traumatic event the child experienced. Issues such as how many children this kind of trauma happen to, what causes it to happen and common trauma reactions should be discussed. (Cohen et al. 2010, 423.) A nurse should normalize trauma reactions. Children need to know that their fears and other trauma related symptoms are normal reactions to devastating life event. The knowledge reduces worry that something might be wrong with them and gives them assurance that they are not alone with their feelings. (Kuban 2012, 15.) The child need also knowledge how the past may affect present behavior and emotions (Becker-Weidman & Hughes 2008, 337.) and that they might repeat their early experiences in their behavior (Streeck-Fischer & van der Kolk 2000, 915). The child is not the only one who need validation for his reactions, but also parents reactions and feelings should be normalized (Cohen et al. 2006, 741).

5.5 Environmental interventions

Safety

The sense of safety and predictable environment were one of the most often expressed methods in the treatment of childhood complex trauma. Especially in the early stages of treatment nurses need to focus on to establish safe and predictable conditions (Streeck-Fischer & van der Kolk 2000, 913). In the minimum level the safety means the absence of physical danger, emotional or social maltreatment and neglect (Becker-Weidman & Hughes 2008, 334). In severely traumatized children the restoration of the sense of physical safety might need concrete and specific actions. The children need also knowledge about what adults are doing to create safe environment. It may comprise sharing simple facts or the child could concretely be shown what actions are done to create safe environment. (Kuban 2012, 15.)

Streeck-Fischer & van der Kolk remark that safety issues need to be considered also because the child might have compulsion to repeat the trauma to others. So the safety is not only about ensuring that the child will not get hurt but also that the child should be kept from hurting others. In the ward settings the sense of safety can be restored by setting clear rules (Streeck-Fischer & van der Kolk 2000, 913.) and by eliminating coercive and shaming interactions (Becker-Weidman & Hughes 2008, 334). The use of restrictive "holding" therapies are not recommended and coercive techniques such as forcibly binding, restricting and withholding food or water are not supported by empirical evidence. (Cohen et al. 2010, 426.)

The nurse can provide environmental continuity by using tools that are precise in detail such the same type of clothes or hand-washing soap. Also the child´s daily activities such as meal preparation and bedtime should be predictable routine. Predictability and continuity of nursing care can be improved by following a plan of care and by developing nursing interventions into the form of storybook. The idea behind the storybook is that the nurse reads the book before doing any nursing activity so the child knows what is going to happen next. The child´s sense of control is improved if the child is allowed to change order of care and these changes are marked also into the storybook. (Mulvihill 2007, 20-21.) These kind of routines and rituals support sense of safety and reduce anxiety about what is going to happen next (Kuban 2012, 15).

Because complex trauma happens in social relationships, a nurse can help the child to find sense of safety outside the social relationships such as with computer games, in nature or in sports (Streeck-Fischer & van der Kolk 2000, 913). By experiencing safety and fun, the child will have more resources to concentrate on other important treatment objectives such as regulation of emotions (Kinniburgh et al. 2005, 426-427). Future safety need to be considered also by preventing future trauma (Cohen et al. 2010, 423).

Educational interventions and collaboration with the school

Besides of the environment that support the sense of safety, the interventions can be directed toward wider social environment such as child´s school. A nurse should cooperate with the school staff and give psychoeducation about the impact of complex trauma on student´s behavior and learning in school. (Cohen et al. 2010, 424-426.) Teachers should support the traumatized child in learning and help them to achieve the greatest potential possible. The limits and expectations in the school should be clear and the child should give possibilities to talk about sources of stress that may influence on performance. Traumatized children may require special education because learning problems, disruptive behavior and mood instability that interfere with academic function. (Weber 2009, 5.) In some situation the child might benefit from the placement at an alternative school especially if the perpetrators are bullying the traumatized child in the school (Cohen et al. 2010, 424-426).

5.6 Pharmacological and other physiological interventions

Pharmacotherapy

In several articles the medication was mentioned as one treatment option for the traumatized child. According to studies the medication might be useful with some children but it cannot be the only treatment method. Health care professionals need to be careful when medicating young children and it is important to have good collaboration and communication with members of the care team. (Weber 2009, 5.)

According to Cohen et al. SSRIs might be effective in reducing trauma related symptoms in children but it is recommended to begin treatment with the psychotherapy alone. SSRI medication should be used only if the symptoms are severe or if there is lack of response to psychotherapy. According to research SSRI medication should not

be used without psychotherapy. The combined psychotherapy and medication are used for acute symptom reduction, for a comorbid disorder or if the response has been unsatisfactory to psychotherapy and if it likely that the outcome will be improved with combined treatment. If the child suffers comorbid disorders such as depression known to respond to an SSRI, SSRI can be used in the earlier phase of the treatment. SSRIs might have ill effects such as over activation which might lead to irritability and inattention. A nurse need to be aware of these ill effects when medicating children with SSRIs. (Cohen et al. 2010, 424-425.)

In addition to SSRIs, also other medication might be effective in reducing trauma related symptoms. These include alfa- and beta-adrenergic blocking agents, novel antipsychotic agents, non-SSRI antidepressants, mood-stabilizing agents, opiates and dopamine blocking agents such as neuroleptics. (Cohen et al. 2010, 424-425.) Children with dissociative symptoms may benefit from psychotropic medication thought there are not many randomized controlled trials done about the usage of the drug in the treatment of trauma symptoms (Weber 2009, 5).

Nutrition

After trauma experience there are changes in body´s way to metabolize nutrients and food because of the release of stress hormones such as cortisol and catecholamines. This abnormal metabolism, poor appetite, reduced digestive functions and alteration of normal daily routines in complexly traumatized children might lead to insufficient supply of protein and calories. After trauma experience, it is difficult to achieve usual levels of nutrition so the nursing staff should ensure the adequate nutrition of traumatized child. Traumatized children need protein and calories more than normally and this in turn requires increased water and fluid intake. (Mulvihill, 2007, 22.)

5.7 Family-focused interventions

Parent as a part of the treatment

The parent as part of the child´s treatment was one of the most discussed features of childhood trauma treatment, especially the importance of mother was highlighted in the literature. Parents should at least collaborate with the nursing staff, but they can also participate into child´s therapy or even have their own therapy sessions. (Foroughe & Muller 2014, 546-547.) According to Ippen, Harris, Van Horn & Lieberman (2011, 504) it is especially effective if mother is part of the treatment when the child is young and experienced several traumatic life events. The aims of the family-focused interventions are to enhance the attachment between the traumatized child and parent, to give psychoeducation and teach more effective parenting skills for the parent (Kinniburgh et al. 2005, 426-427).

When a parent participates in the child´s treatment, he learns to deal with difficult emotions related to trauma memory and can be involved into creation of a trauma narrative. When child´s condition improves, parent´s stress is reduced and self-efficacy increased because of the feeling that they contributed to their children´s recovery by participating in to treatment. (Ippen et al. 2011, 512.) Sometimes therapy sessions can be arranged for the parent especially if the parent has her or his own difficulties with self-regulation (Kerig et al. 2010, 715). In the therapy aims are to promote parental support of the traumatized child and decrease parent´s own emotional distress related to child´s victimization experience (Cohen et al. 2006, 741.) Parent should also be helped to understand how the child´s and their own experience of the traumatic event affects child´s functioning (Lawson & Quinn 2013, 499). When working with the parent significant focus is directed to ensure that the child is in a supportive and sensitive relationship (Becker-Weidman & Hughes 2008, 334).

Establishing attachment

According to ARC-model a main objective of the intervention is to form secure attachment between the child and parents but also between professionals and the child. When trying to form attachment, one need to create a structured and predictable conditions by establishing rituals and routines in a family. A nurse and parents should build daily patterns with the child and treatment routines in the ward should be predictable. A nurse can support parents in setting appropriate limits for the child, in establishing familial routines for daily situations such as for bedtime and mealtimes. (Kinniburgh et al. 2005, 426-427.) and to provide the sense of safety (Lawson & Quinn 2013, 499).

It is recommended to do parent background interview for the parents´ own attachment history. Sometimes disorganized or insecure attachment style has transmitted intergenerationally and in these situations empathy and sensitiveness are especially important when forming the therapeutic relationship between a nurse and family. A nurse should express empathy for the parent´s own attachment-related loss and help them to empathize their child´s loss. (Foroughe & Muller 2014, 541-547.) Strengthening the parent-child relationship has significant positive effects for child´s and parent´s psychological wellbeing and it is one of the most effective healing mechanism (Ippen et al. 2011, 511). Besides of the parents, the sibling relationships might be beneficial in the treatment process. The secure attachment between siblings will decrease the negative influence of intrafamilial trauma and allow the child to process the trauma experience with his siblings. (Foroughe & Muller 2014, 546-547.)

Parenting skills training

Many parents need parenting skills training. In several papers the ideal parental skills were discussed and a nurse can help parents to follow these parenting tips. The idea behind the therapies which highlight the training of parenting skills is that through

positive parenting and behavior modification skills, the parents themselves become the agent of change in reducing their child's behavior problems. For example, in the Parent-child interaction therapy (PCIT) parents are guided to notice their child´s positive behavior regularly and praise desired behavior. Parents are also taught to describe their child behavior to the child and to repeat or paraphrase the child's words. (Urguiza & Timmer 2012, 146-148.) Also Cohen et al (2010, 423) mentioned in their study that parents should be trained to use good parenting skills such as praise, positive attention and selective attention. The idea behind above-mentioned parenting skills is that the frequency of child´s desired behavior increases if it is regularly reinforced. A nurse should encourage parents to show warmth, enthusiasm and enjoyment in their interactions with their children. Parents who express positive behavior in their interactions with their child models these same behaviors to their child. (Urguiza & Timmer 2012, 146- 154.)

A nurse can give direct guidelines how to cope with the complexly traumatized child. For example, in order to enhance child´s compliance, the parents are taught to give only essential, clear and direct commands and when dealing with the noncompliance, the parents should use time-out or "hands-off" strategies such as removal of privileges. (Urguiza & Timmer 2012, 146-148.) Parents are trained to reduce harsh and coercive discipline practices (Cohen et al. 2006, 742). Parents should also be taught how to deal with negative emotions accompanying their child's distracting behavior and noncompliance. Anxiety reducing skills such as deep-breathing, counting silently (Urguiza & Timmer 2012, 146-148.) and using calming self-talk can be taught to parents (Lawson & Quinn 2013, 500). The child should be allowed to communicate anger, fear, and regressive needs to their parents and parents should be able to tolerate these emotional expressions. This promotes healthy attachment and prevent the situations where negative emotions are expressed in inappropriate ways. (Weber 2009, 4.)

6 Discussion

Through research search and content analysis plenty of different treatment methods for traumatized children emerged. Many interventions described in the data have the individual in their focus. The treatment methods that were directed to change child´s internal world, understanding and his internal tendencies to think or behave in certain way were classified into theme of individual-focused interventions.

Psychiatric care is usually interactional by its nature and mental health work has its´ base in therapeutic relationship. In the child psychiatric ward this means the relationship and communication between the child and a named nurse. (Friis et al. 2006, 150-154.) The theme of interactional interventions was formed because interaction has special role in mental health care and it was also highlighted in the literature.

Expressive methods such as art or sensorimotor techniques were classified into theme of occupational interventions. Occupational methods can be used to change an individual or environment but as a method they have their own special role. Separate themes for pharmacological and other physiological interventions and guidance were formed because they are working methods that a nurse uses also in other fields of nursing. In the child psychiatric care, the medication is used only with caution. Medication might be effective with severe cases but it cannot be the only treatment method. Implementing pharmacotherapy needs multi-professional collaboration and a nurse has his own special role in pharmacotherapy together with the physician. (Weber 2009, 5.)

The theme of environmental interventions included methods to change environment to more suitable for the child, such as actions to increase the safety of the environment or modifications that needed to be done in the school if the trauma has caused learning problems. Interventions toward family, such as parenting skills training,

were categorized into separate theme because of the importance of family in pediatric care. In the literature the most referred treatment methods were related to family and importance of including parents into care.

When working with complexly traumatized children, a nurse should use clinical reasoning to decide what kind of treatment methods to use, when and why. The base of the treatment is to fulfill child´s physiological needs such as nutrition, to ensure the safe environment and the sense of safety and to establish therapeutic relationship. Without these basic components it becomes impossible to process trauma related memories or to change child´s internal word or communication in a family. A nurse should reason in which phase of therapeutic process he is with the child and what is the quality of their relationship in order to decide what methods to use and when.

The findings of this thesis will help a nurse to consider his ways to support complexly traumatized children and their families. This thesis can serve as a guidebook where a nurse can find concrete methods and gets new ideas for working with the children. This thesis also gives scientific justifications why to use certain treatment methods. For example, occupational interventions can be used to form relationship, to play and have fun, to process and integrate trauma memories, or to create a narrative, or to regulate emotions (eg. Knoverek et al. 2013, 659). A nurse should not just do "tricks" with the child but there should be evidence-base knowledge behind using of certain method.

A nurse should also keep the aim of the treatment in his mind and consider why he is using certain method with this child in this situation. Every complexly traumatized child is also an individual living his own kind of situation and because of that treatment methods should be applied in flexible way and not every method is suitable for every child and family.

When selecting suitable treatment methods and planning the care of traumatized child and his family, the severity and development of symptoms and child´s ability to function should be considered. Comorbid diseases, such as depression should be recognized because they influence on the selected treatment methods and timing of the care. The child´s treatment should be comprehensive and there should be collaboration with the home, daycare or school, and with the social services. The aims of the care are reduction of symptoms, enabling normal development and integrating trauma experience into child´s life. The healing process should be followed even after the treatment. Complexly traumatized children usually need treatment for a long period of time and also rehabilitation after inward treatment is often needed. The prevention of trauma-related disorders and early intervention are central in child psychiatric care. (Viheriälä & Rutanen 2010.)

7 Ethics and reliability of review

According to The Finnish Advisory Board on Research Integrity the scientific research and findings are ethical and reliable only if the research is done according to the responsible conduct of research. Prerequisites for the responsible conduct of research are honesty and meticulousness in conducting research, reporting and evaluating results in an open fashion and respecting work of other researchers. (Tutkimuseettinen neuvottelukunta 2012, 30-31.) In this thesis the method and search process is depicted in an open way so it can be replicated. All the databases and used search words are depicted in the methodology section. The researcher of this thesis aimed to use the same research words in all databases and all used databases can be found through JAMK library. The research was conducted in meticulous way and the work of others was respected by citing their work appropriately. Also the ethics of articles

selected into literature review was estimated. The selected articles reported their methodology and their results carefully and openly.

The gathered data was analyzed by inductive content analysis and the phases of analysis are reported openly so it is easier for other researchers to evaluate the quality of analysis. Thought the aim was to do objective analysis, the own intentions and subjective perspectives of the researcher may have influenced on it. Because the method was inductive content analysis researchers´ own reasoning might be seen in the results section. It is possible that the categorization could have done also in different way. But the method is also strength of this thesis because it might bring some new thinking on the field. The reliability of categorization is also strengthened because same kind of themes or treatment methods were found also in data. One of the strength of the thesis is that themes are formed according to different "nursing practices" so one contribution of this thesis is that it aims to strengthen the base of nursing science. The researcher of the thesis aimed also to gain deep understanding of the topic before doing the analysis and reduce the material in meaningful way. The selected material depicted phenomena in reliable way and there is clear connection between the material and derived results. (Latvala & Vanhanen-Nuutinen 2003, 42- 43.)

In this thesis only quite new research articles published in peer-reviewed academic journals were used. Almost all the selected articles were less than ten years old though there were two little bit older articles which were included into thesis because they were cited also in other articles and so it seemed that they have special contribution to the field. The reliability is also increased because several international articles were used and they all were written by the specialists from the field of

childhood trauma treatment. On the other hand, because there was no Finnish research used in this review, the generalization of the suitability of different treatment methods into Finnish culture, should be considered with caution.

The quality of the selected researches varied somewhat and publications were quite different compared to each other. Research using different methodology were selected into thesis. Only one high quality randomized clinical trial and few systematic literature reviews were included. Few case studies were also selected for this thesis thought their results are not necessarily as easily generalized as the results of clinical trials but they contained relevant and usable information. Because searching engines only from university library of JAMK were used and only articles that has full text access were accepted into thesis, it set some boundaries for the study. For example, all the relevant clinical trials were not necessarily found. On the other hand, the thesis is more reliable because only full text articles were used, so it was possible to assess the reliability of selected studies more trustworthy compared to situations where access to only abstract is enough for acceptance into review.

The literature about complex childhood trauma treatment was easily found but it was more difficult to find articles which comprised of treatment methods directed only to nurses. Some studies included into thesis were based on nursing science but the researcher of this thesis included also studies from fields of psychology and psychotherapy into the review. Thought some of the treatment methods were linked to some psychotherapeutic tradition, the results of them can be generalized and used also in ward settings by a nurse. It is nurses´ experience and clinical reasoning which help to determine what treatment methods to use, when and with whom.

8 Conclusion and further research topics

Lack of nursing science based articles highlighted the need for study of treatment of traumatized children and their families from nurse´s point of view. Most of the material were international so it would be interesting to know how complexly traumatized children are treated in Finland and are there any differences between cultures. Finnish research on the topic would be important because cultural differences might affect the suitability and effectiveness of some treatments methods. In the literature there were not discussion of therapeutic aspects of the inward care and what is the meaning of community of children in the ward settings. So in future it would be beneficial to study more about therapeutic aspects of inward care when treating complexly traumatized children. The meaning of mothers in the treatment of the child was highlighted but the meaning of fathers was not take into account. In the future it would be interesting to know what is the role and the meaning of father in the trauma treatment. There was also no information about holding therapy thought it is used in child psychiatric wards in Finland (Satakunnan sairaanhoitopiiri 2016). However, there was mention in one article that restrictive or coercive strategies are not recommended to use with traumatized children but the holding therapy was not discussed broadly so one further research topic could be related to benefits holding therapy.

In many studies the focus was quite wide. The selected articles examined many treatments methods or several aspects of psychotherapy at the same time. It would be useful to examine in more precise way what is the meaning of one treatment method or one component of psychotherapy in a healing process of the complexly traumatized child. In this thesis different methods were listed but there is no information which of the methods is the most effective one and what are the most important components of the healing process. For example, next questions remain still

open: is it more effective that interventions are focused on individual or whole family, should the intervention aim to change the child or the environment, or is it more important to enhance self-esteem or emotion regulation skills in complexly traumatized children.

The treatment of childhood complex trauma is a wide area and there are variety of treatment methods for nurses to use. It is important that the treatment of complex trauma begin early enough, continues for enough long time and the treatment comprises all the sectors of child`s life. The findings of the thesis demonstrate that nurses can support complexly traumatized children and their families by cultivating safety, by establishing trusted relationship with the child, by helping child to regulate emotions and enhancing self-esteem, by making changes into child´s environment, by collaborating with the school and family, by using psychoeducation and pharmacotherapy and by using wide range of nursing methods to integrate trauma experience into child´s life.

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Appendices

Appendix 1. Material of the literature review. Analyzed articles and researches.

Author, journal & Date of publication	Title	Methodology/ Database	Aim	Main findings
Becker-Weidman, A. & Hughes, D. Child and Family Social Work. 2008	Dyadic developmental psychotherapy: an evidence-based treatment for children with complex trauma and disorders of attachment	Academic article Cinahl	To outline elements of DDP (dyadic developmental psychotherapy) and demonstrate the evidence-base of those elements.	Principles of treatment of DDP has strong empirical evidence and it is effective with children with complex trauma and disorder of attachment.
Cohen, J.A., Buckstein, O., Heather, W., Scott, B.R., Allen, C. ,Farchione, T.R., Hamilton,J.,Ceable, H., Kinlon, J.,Schoettle .U., Siegal, M. & Stock,S. Journal of the American Academy of Child & Adolescent Psychiatry, 2010.	Practice parameter for the assessment and treatment of children and adolescents with posttraumatic stress disorder.	Literature review Elsevier	To review research and clinical experience of the assessment and treatment of posttraumatic stress disorder.	The ultimate judgment regarding the care of a particular patient must be made by the clinician in light of all the circumstances presented by the patient and his/her family, the diagnostic and treatment options available, and available resources.
Cohen, J.A., Mannarino, A.P., Murray, L.K. & Igelman, R. Journal of Social Issues, 2006.	Psychosocial interventions for maltreated and violence-exposed children	Literature review of randomized controlled studies Ebsco	To summarize knowledge regarding treatment of maltreated and violence-exposed children.	The review summarized knowledge about different models of cognitive-behavioral therapy, psychodynamic therapy, child-parent therapy, play therapy and family interventions.

Foroughe, M.F & Muller, R.T. Journal of Family Violence, 2014	Attachment- based intervention strategies in family therapy with survivors of intra-familial trauma: a case study	Clinical case study Cinahl	To illustrate therapeutic process involved working with siblings and parent-child dyad	Sibling relationships can be a significant benefit throughout the process of therapy.
Ippen, C.G., Harris, W.W., Van Horn, P. & Lieberman ,A.F. 2011 Child Abuse Negl.	Traumatic and stressful events in early childhood: can treatment help those at highest risk?	Re-analysis of randomized controlled trial. N= 75 preschool-aged children and their mothers Pubmed	To investigate whether CPP (child-parent psychotherapy) is efficacious with preschoolers exposed to multiple traumas.	CPP has positive effects for child´s and his mother´s psychological functioning.
Kerig, P.K., Sinki, H.E., Cuellar, R.E., Vanderzee, K.L. & Elfström, J.L. Journal of Clinical Child and Adolescent Psychology. 2010.	Case study	Implementing Trauma-Focused CBT with fidelity and flexibility: a family case study Ebsco	To illustrate implementation of Trauma Focused-Cognitive Behavior Therapy.	Key ingredients of treatment success was implementing evidence-based treatment with flexibility and fidelity.
Kinniburgh, K.J, Blaustein, M., Spinazzola, J. & van der Kolk, B.A. 2005, Psychiatric annals.	Attachment, self-regulation and competency. A comprehensive intervention framework for children with complex trauma	Academic article Elsevier	To introduce ARC model: an intervention framework for children with complex trauma.	Three principles of ARC model: attachment, self-regulation and competency.
Knoverek, A.M., Brigss,E.C., Underwood, L.A. & Hartman, R.L. Journal of Family Violence, 2013	Clinical considerations for the treatment of latency age children in residential care	Academic article Cinahl	To identify behavioral and emotional issues of complex trauma and to describe effective clinical interventions.	Effective clinical interventions: emotional regulation, sensorimotor techniques, expressive therapies, dyadic and family therapy and narration of trauma memory.
Kuban, C. Reclaiming children and youth, 2012	Healing Childhood Trauma Worldwide	Academic article Ebsco	To introduce six principles of healing interventions for childhood trauma.	Principles for trauma interventions are safety, connections, normalizing trauma reactions, routines

				and rituals, lower level of arousal, self-regulation and survivor thinking.
Lawson, D.M & Quinn, J. Journal of Clinical Psychology. 2013	Complex trauma in children and adolescents: evidence-based practice in clinical settings.	Academic article Ebsco	To examine different treatment models for children exposed to complex trauma and how these models could be implemented in clinical practice.	Examples of treatment models are Integrated treatment of complex trauma for children (ITCT-C) and Child-Parent Psychotherapy (CPP). Treatment models for complex trauma should involve caregiver, treatment lengths should be quite long.
Leenarts, L., Diehle, J., Jansma,E. & Lindauer, R. Child Adolescents Psychiatry, 2013	Evidence-based treatments for children with trauma-related psychopathology as a result of childhood maltreatment: a systematic review	a Systematic review, 26 randomized controlled clinical trials and 7 non-randomized controlled trials Ebsco	To evaluate and describe psychotherapeutic treatments for children exposed to childhood maltreatment.	Trauma-Focused cognitive-behavioral treatment is best-supported treatment for children with trauma-related psychopathology, phase-oriented approach in treating traumas should be used in clinical practice.
Mulvihill, D. Issues in Comprehensive Pediatric Nursing. 2007	Nursing care of children after a traumatic incident.	Integrative literature review Ebsco	To describe the nursing interventions with children to reduce the impact of a traumatic incident	The key points in the nursing practice of traumatized children are: continuity of nursing care, nurturing program, nutrition, self-soothing techniques and talking.
Streeck-Fischer, A. & van der Kolk,B.A. Australian and New Zealand Journal of Pychiatry. 2000	Down will come baby, cradle and all: diagnostic and therapeutic implications of chronic trauma on child development	Literature review Cinahl	To examine the clinical outcomes and treatments of exposure to chronic intrafamilial trauma.	Early intervention may effectively reserve some consequences of trauma. Therapeutic interventions lessen the long-term risk maltreated children pose to themselves and society.

Urguiza, A.J. & Timmer, S. Psychosocial intervention, 2012	Parent-child interaction therapy: enhancing parent-child relationships	Academic article Elsevier	To describe how traumatized children are treated with help of PCIT (Parent-child interaction therapy)	Parent is important part in the treatment process and by supporting the parent-child dyad well-being of traumatized child can be enhanced it is important to pay attention to behavior problems of traumatized children during therapy, not only to symptoms.
Weber, S. Journal of Child and Adolescent Psychiatric Nursing, 2009.	Treatment of Trauma- and Abuse-related Dissociative Symptoms Disorders in Children and Adolescents	Academic article Cinahl	To describe models of treatment for dissociation symptoms after trauma experience	Advanced practice nurses can lead the way in helping children with dissociative symptoms. Dissociative symptoms can be treated with techniques such as family therapy and educational interventions.

Appendix 2. Inductive content analysis: examples of analyzed units and formed subcategories and themes

Treatment of complexly traumatized children		
Themes	**Examples of subcategories**	**Examples of analyzed units**
Individual-focused interventions	- Emotional regulation skills	- identifying emotions - modifying emotions - expressing emotions
Interactional interventions	- Therapeutic relationship	- PACE -attitude - nurse as a secure attachment figure
Occupational interventions	- Expressive methods	- Expressive therapies are used in used in traumatized children as an alternative way to process the trauma experience - sensorimotor techniques - art forms as means of self-expression
Guidance	- Psychoeducation	- education about the type of traumatic event - normalizing trauma reactions - psychoeducation of family
Environmental interventions	- Safety	- absence of physical danger and emotional or social maltreatment - predictable routines
Pharmacological and other physiological interventions	- Pharmacotherapy	- medication cannot be used as only treatment option - SSRI´s
Family-focused interventions	- parenting skills training	- reduce harsh discipline - anxiety reducing skills such as deep-breathing - positive interaction with the child