Diplomarbeit

Nightmares in children and adolescents

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Eidesstattliche Erklärung

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Graz, am 03.12.2015 *Agnes Karnberger eh*

Acknowledgements

If you want to go fast, go alone.
If you want to go far, go together.

(African proverb)

Firstly, I would like to express my great appreciation to Prof. Dr. Kerbl for giving me the opportunity to conduct this study, for his encouragement, his patient guidance and useful critiques throughout the writing process.

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Last but not least I would like to thank Lukas for always having faith in me even when I don't have faith in myself. Thank you for being the person that you are and thank you for always believing in me.

Abstract

Little is known about nightmares and their contents in children and adolescents. The aim of this diploma thesis was to gain more knowledge about nightmares concerning children and adolescents. Data was collected by using a self-provided questionnaire for children and their parents. The children and adolescents questioned were inpatients at the hospital in Leoben, Styria.

The main focus was on the frequency of nightmares, their contents and different coping strategies. The results showed that nightmares tend to occur more often than assumed, with 88,4% of the children reporting that they had previously experienced nightmares. There seems to be no age difference in the occurence and frequency of nightmares, but there is however an age difference concerning the topics of those nightmares. Most children and parents asked, stated that nightmares occured not very frequently and in most cases nightmares were not regarded as a problem. In only a few cases of nightmares professional help, such as a pediatrician or psychologist, was sought out. The findings of this study suggest that it might be interesting to conduct further research concerning childrens' nightmares and the way they react to them. Some interesting correlations were found while conducting this study, suggesting that further research should be considered.

Zusammenfassung

Es ist wenig über Albträume und deren Inhalte bei Kindern und Jugendlichen bekannt. Das Ziel dieser Diplomarbeit war es, mehr über Albträume im Kindes- und Jugendalter herauszufinden. Das Erheben der Daten erfolgte mittels eines selbstentwickelten Fragebogens für Kinder und Jugendliche und deren Eltern. Alle Kinder und Jugendliche wurden im Rahmen ihres stationären Aufenthaltes im Krankenhaus Leoben, Steiermark befragt.

Hauptinteresse der Befragung war die Häufigkeit des Auftretens von Albträumen, die Frage ob es häufig vorkommende Trauminhalte gibt und verschiedene Bewältigungsstrategien von Albträumen. Die Befragungen haben ergeben, dass Albträume öfters vorkommen als angenommen. 88,4% der befragten Kinder gaben an, schon einmal einen Albtraum gehabt zu haben. Es scheint keinen Altersunterschied im Auftreten und in der Häufigkeit des Auftretens von Albträumen zu geben, allerdings beeinflusst das Alter die Albtrauminhalte.

Die meisten befragten Kinder und Eltern gaben an, dass die Albträume selten auftreten und sahen die Albträume nicht als ein Problem an. Nur sehr wenige Befragte gaben an professionelle Unterstützung (Kinderarzt, Psychologe) zur Bewältigung der Albträume aufgesucht zu haben.

Die Ergebnisse dieser Studie zeigen, dass weitere Forschung auf dem Gebiet der Albträume bei Kindern und Jugendlichen und deren Bewältigungsstrategien von Interesse wäre. Es wurden einige interessante Zusammenhänge im Rahmen der Befragungen ermittelt, die einmal mehr zeigen, dass weitere Studien in Betracht gezogen werden sollten.

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List of Abbreviations

IRT	Imagery Rehearsal Therapy
REM	Rapid Eye Movements

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1. Introduction

1.1 Sleep and dreams

Newborns need about 16 to 18 hours of sleep, children who are 10 years old need about 9 to 10 hours of sleep. The hours of sleep needed can vary greatly (Kerbl et al. 1995). The difference between sleep in newborns and sleep in adults is not only the duration but also that newborns experience more REM phases than adults.

About 20 to 30% of children have troubles sleeping. Those troubles can be divided into several groups: acute temporary sleep disorder (caused by eg. stress or pain) and chronic sleep disorders, which can be divided into insomnia (trouble falling asleep or waking up during the night), hypersomnia (abnormal sleepiness), disturbance of the circadian rhythm (eg. through encephalopathy or retardation), and parasomnias (nightmares, parvor nocturnus, somnambulism) (Kerbl et al. 1995).

Nightmares are commonly considered as bad dreams, but there are some differences between dreams and nightmares. Dreams occur in all phases of sleep but most of the time their contents cannot be remembered. Nightmares on the other hand happen during REM sleep and their contents can be recalled.

Studies suggest that children from the age of 3 can remember their dreams (Foulkes 1982; Honig & Nealis 2012). Retrospective studies have shown that the earliest remembered dream tends to occur somewhere between the ages of 3 and 12 years. Those dreams often revolve around family members, animals, dead characters, and imaginary characters. There also tends to be a lot of physical aggression, mostly towards the dreamer (Bulkeley et al. 2005). Most characters in dreams are human characters, whereas only a small amount are animals. Young girls tend to dream more often about female characters, and young boys tend to dream more often about male characters (Sándor et al. 2015). According to some studies, 58,1% of children report that they have dreams „very frequently“ or „frequently“ (Hoedlmoser et al. 2010). Usually children aged 9 and older are able to differentiate between dream and reality (Siegel 2005).

1.2 General knowledge about nightmares

According to the ICD-10 classification nightmares are part of the sleep disorders. A nightmare is characterized by frightening dreams that occur repeatedly. The individual wakes up from those nightmares, is fully awake and can recall the nightmare (ICD-10 German F51.5). Nightmares are associated with REM sleep and mainly occur in the second half of the night when REM phases tend to be longer. The frightening contents of nightmares can appear repeatedly. They can often be triggered by strong feelings. The main feelings in 90% of the nightmares are fear, sadness, confusion, anger, frustration, disgust and guilt (Robert & Zadra 2014).

Regarding their content, nightmares can be divided into different groups: dysphoric dreams (aggravating dreams), bad dreams (person does not wake up), nightmares (disturbing dreams, person wakes up), posttraumatic nightmares (very strong fear, content often correlates with traumatic content) and posttraumatic flashbacks (can occur both during sleep and awakeness, traumatic content is being relived over and over) (Holzinger 2013).

There can be multiple reasons for nightmares: stress, traumatizing experiences, depression, snoring, fear, sleep apnoe or different kinds of drugs.

Up to 85% of adults report experiencing nightmares at least once a year, with women having nightmares more frequently than men (Hasler & Germain 2009). The gender difference might be explained by women being more vulnerable regarding abuse, different coping styles between different sexes or different emotion processing strategies.

A study concerning the contents of nightmares in persons aged 14 and older showed that the most common contents include falling, being late, being chased, being paralyzed and death of close persons (Schredl 2010). Other contents might include physical aggression, interpersonal conflicts, environmental abnormality, evil presence (eg. monsters, vampires, ghosts), disaster (eg. flood, earthquakes, end of the world), accidents, insects or vermin (eg. insects, rats, snakes), failure or helplessness, worry (without a threat present) and health-related concerns (Robert & Zadra 2014).

1.3. Nightmares and children

Nightmares are the most common parasomnias in children but they tend to fade as the children get older and become adults. Another parasomnia is parvor nocturnus, which mainly occurs during non-REM sleep. Children experiencing nightmares wake up from their dreams and are able to recall their dream contents rather precisely whereas children experiencing parvor nocturnus are not able to recall what frightens them and often seem disoriented at first.

Depending on the study the prevalence of nightmares in children is between 14% (Fricke-Oekermann & Lehmkuhl 2007) and 57,6% (Smedje et al. 1999). Most studies on nightmares in children and adolescents question children that are 5 years or older. A study with smaller children (29 months to 6 years) shows that only 1,5% to 3,9% of the smaller children experience bad dreams frequently (Simard et al. 2008). 30% to 44% of school-aged children report nightmares sometimes (Schredl et al. 2009a). Most adolescents and adults recall having experienced nightmares during their childhood (Englehart & Hale 1990; Schredl et al. 1996). About 50% of adults report recurrent nightmares that started during their childhood or adolescence (Sandoval et al. 1997).

There are different ways to learn more about nightmares in children and adolescents. A sample of these ways might include: 1) waking children up during REM periods in the sleep laboratory and questioning them about their dreams, 2) asking children to write down their most recent dreams, 3) getting children to record dream tapes, 4) combining written dream reports with interviews, 5) a 7-day dream journal written by the children, 6) questioning adults about their earliest remembered dream. Choosing a method might be influenced by the aims and hypotheses of the study, the age of the participants, sample size, time frame and financial possibilities (Siegel 2005).

So far little research has been done regarding the contents of nightmares. One study asked children, ages 4 to 12, about their scary dreams and revealed that the most common nightmares were about imaginary creatures, being kidnapped, harm, death and dangerous animals (Muris et al. 2000).

When asked about the origin of their scary dreams most children pointed towards the information pathway (eg. watching something on TV), whereas only a small amount of children mentioned role models (eg. father being afraid of spiders), or

conditioning experiences (eg. dreaming of a car accident after having been involved in an accident) (Muris et al. 2000).
Different sleep problems like sleepwalking, problems falling or staying asleep and night terrors can be associated with the occurrence of nightmares (Schredl et al. 2009b).

1.4. Nightmares and other factors

There are many factors nowadays that might increase the prevalence of nightmares. Children watch more TV, have easier access to computers or tablets and the content of video games and TV shows tends to be increasingly violent. Watching TV before going to sleep has become quite common and having a TV in the bedroom occurs rather often. The contents of TV shows or computer games might also be contents of nightmares occuring regularly (Van den Bulck 2004). Other studies however suggest that there is no correlation between the amount of computer playing and TV viewing and the frequency of nightmares (Schredl et al. 2008).
Concerning parental attitude towards nightmares and sleeping in general, studies have shown that children who are taken out of bed to be comforted and children who are allowed to sleep in the parents' bed at a small age are at a lower risk to develop nightmares. On the other hand children who are lulled before being put to bed, compared to children who are put to bed awake and have to fall asleep on their own, have a higher risk of having bad dreams once they get older (Simard et al. 2008).
Another study was conducted concerning bullying and parasomnias. It showed that being bullied during childhood was associated with different parasomnias, but it also showed that being a victim, especially a chronic victim, was a predictor for having nightmares or night terrors at age 12 to 13 (Wolke & Lereya 2014).
A connection between traumatic experiences during childhood and adolescence and the occurence of nightmares is also expected. A study performed on university students shows that people who experienced traumatic experiences during childhood tend to have nightmares more often than those who did not have those experiences (Agargun et al. 2003).

Another study was conducted concerning anxiety and sleep problems. Children were asked to self-report their level of anxiety by using a questionnaire and were then also questioned about sleep-problems (eg. nightmares, fear of sleeping alone, fights with parents about going to bed). This study suggests that children who have higher anxiety levels tend to experience more nightmares (Gregory & Eley 2005). It might also be possible that nightmares and generalized anxiety in childhood and adolescence might have a common genetic origin (Coolidge et al. 2009).

1.5. Coping with nightmares

Nightmares are mostly considered as something every person experiences at some point in life. Therefore most people do not take actions to prevent from having further nightmares or to seek professional help to process those nightmares. One way of treating nightmares is the imagery rehearsal therapy. The idea behind this therapy is that the patients get to change their nightmares while awake (eg. changing the ending of the nightmare into something positive) and write this ending down. IRT is mostly used in adults but it is also known to work in children (Simard & Nielsen, 2009). IRT consists of different steps: First the child is asked to picture his feelings experienced during the nightmare (eg. by drawing the key scene of the nightmare), second the child is encouraged to find a „solution“ for the pictured scene (eg. drawing his or her favourite hero between the monsters and himself or herself) and in the third step children have to train this coping strategy by practicing once a day for about 5 to 10 minutes over the period of two weeks. IRT can be used by the parents and does not require professional aid (Schredl, 2015).

Other possible treatments for nightmares are the Exposure-Relaxation-Rescripting Therapy (including sleep hygiene, writing down nightmares and psychoeducation) which is mainly used in nightmares associated with PTSD, and the so called „sleep dynamic therapy“ which is also mainly used in nightmare patients with PTSD (including treatment in a sleep laboratory combined with IRT, sleep hygiene and other therapies). Other treatment options are the self-exposure therapy (patients write down a list of frightening dreams and try to imagine different

situations with different levels of fears and then write down their experiences), and the systematic desensibilisation (patients are gradually confronted with their frightening dream contents) (Holzinger 2013).
Other therapy options might include progressive muscle relaxation (which can be added to other therapies but fails to cure nightmares just by itself), hypnosis, eye movement desensitization and reprocessing (past experiences are reproduced, integrated and processed), testimony-therapy (a short variation of a trauma-confrontation technique) and psychotherapy (Holzinger 2013).

1.6. Aims of this work

This diploma thesis is aiming towards gaining more knowledge about nightmares in children and adolescents. Nightmares are often considered as something that everybody experiences at some point in life and therefore frequently are not considered as problematic.
There are several questions this diploma thesis wants to answer:

- What percentage of children experience nightmares?
- Is there a difference in gender?
- Is there a common age for nightmares to start?
- What are main contents of nightmares?
- How do children and adolescents cope with their nightmares?
- How do parents respond to their children's nightmares?
- Do parents or children consider nightmares as a problem?
- Do parents or children seek the help of a paediatrician?
- Is there a correlation between nightmares and TV watching?
- Is there a correlation between nightmares and other spare-time activities?
- Is there a correlation between nightmares and social life?
- Is there a correlation between nightmares and school life?

2. Material and Methods

2.1. Material

Two questionnaires were established, one for children and one for their parents. Each questionnaire consisted of about 3 to 4 pages. The questionnaires were reviewed and adapted to the chosen age group. The questionnaires were also randomized by numbers, making sure that each kid and their parent was given the same number for being able to retrace the questionnaire. The questionnaire consisted of some single choice answers, but the main part were written answers. Also established were informed consents for the kids and their parents. There was one consent form for children under the age of 14, one for children aged 14+, and one for the parents. The study was approved by the university Ethics Committee.

2.2. Methods

Children from the age of 5 to 15 and their parents were included in the questioning. In the summer of 2014, children being inpatients at the hospital of Leoben, Styria, and their parents were asked if they were ready to participate in the study. They were explained the aims of the study and the methods and were then given a consent form to sign. The participation in the study was based on voluntariness and was calculated with approximately 30 minutes for both the children and their parents. Excluded from the study were children who were mentally incapable of understanding the questions. The questioning was performed by the author of this diploma thesis. It was mostly written answer questions since especially about nightmare contents not much was found in the literature and we thus did not know which answers to expect. If multiple children of one family participated in the study, the parents were asked to fill out a questionnaire for each child participating.

The childrens' questionnaire consisted of 33 questions. 3 were considered general questions (eg. age, gender), 13 were about nightmares, 3 were about sleep and bedtime behaviour, 3 questions were about health, 2 were about leisure time, and

9 concerned social life. In the parents' questionnaire there were 41 questions. 10 were considered general questions (eg. age, gender, education), 11 asked about the child's nightmares, 8 were about the child's sleep and bedtime behaviour, 4 were about the child's leisure time, 2 concerned the child's health, 5 asked about the child's social life, and at the end parents were asked to rate how nightmares might affect their child's future.

First, the children were asked what nightmares meant to them. They were given time to explain their definition of a nightmare and then their explanation was talked about. It was ensured that the children knew what a nightmare was, before the questioning started. The parents were allowed to be present during questioning the child but they were asked not to influence their childrens' answers. Then the parents were questioned.

IBM SPSS Statistics 22 was used for evaluating the questionnaires. The written answers had to be transformed into different categories to ensure best possible evaluation. If a written answer occured more than 5 times in the different questionnaires a new category was developed for this answer. If it appeared less than 5 times it was included in the category „not listed above". Depending on the desired results different analyses were performed, including cross tabulations, frequencies, Phi coefficient, Pearson's chi-squared test and Eta-squared. Since most answers were nominally or ordinally scaled statistical evaluation of the results was limited. The statistical evaluation was done by the author of this diploma thesis.

3. Results

3.1. General results

121 children and 121 parents were questioned and all completed questionnaires could be used for evaluation. Out of the 121 children, 62 were male and 59 were female. The mean age for the children was 9,66 (SD ± 3,156). The average age for the girls was 10,12 (SD ± 3,291), while the average age of the boys was 9,23 (SD ± 2,983). 92,2% of the children were healthy, 1,7% suffered from respiratory diseases (mainly asthma), 0,9% suffered from cardiovascular diseases and 5,2% suffered from diseases not listed above (eg. Crohn's disease). 1,7% of the children had to take medication on a regularly.

109 parents were female and 12 were male. 101 parents (83,4%) were married, 8 (6,6%) were divorced, 8 were single parents (6,6%), 2 were widowed (1,7%) and 2 (1,7%) did not answer the question. Looking at the education, 11 parents (9,1%) had received only the mandatory 9 years of schooling, 27 parents (22,3%) went on to a teaching profession, 23 parents (19%) graduated from high school, 46 parents (38%) received a university degree, 13 (10,7%) received another kind of schooling (eg. university of applied sciences) and 1 parent (0,8%) did not answer the question.

The mean age for the parents was 39,41 years (SD ± 5,987). The average age when they first became parents was 26,35 (SD ± 5,006) and the main gestational age of their children was 38,79 weeks (SD ± 2,351). 116 children (95,9%) were born in Austria, 3 children (2,5%) in another country of the European union, 1 child (0,8%) was born outside the European union and one child (0,8%) did not answer the question. When asked if there were any complications during delivery (eg. emergency Cesarean-section, neonatal resuscitation), 32 parents (26,4%) answered with yes, 86 parents (71,1%) stated that there were no complications throughout delivery, and 3 parents (2,5%) did not give an answer. We asked about traumatization throughout the childhood, and 14 parents (11,6%) stated that their children had previously experienced traumatization (eg. death of one parent), 104 children (86%) did not experience any traumatizing events and 3 parents (2,5%)

did not answer the question. 96 children (79,3%) have siblings while 25 children (20,7%) are single children.

3.2. Children and nightmares

One of the key interests of this study was to know how many children do have nightmares. When asked that question 107 children (88,4%) reported that they had nightmares before while only 14 children (11,6%) stated that they had never experienced a nightmare before. Looking at gender, 55 girls and 52 boys have and 4 girls and 10 boys have not experienced nightmares before. When asked at what age they had first experienced a nightmare the mean age was 5,57 (SD $\pm$ 1,943). The children were then asked to report how often they experienced nightmares. 2 children (1,9%) reported that they experienced nightmares daily, 7 children (6,7%) experienced nightmares several times a week, 9 children (8,6%) reported nightmares weekly, 8 children (7,6%) said they had nightmares several times a month. 14 children (13,3%) reported their nightmares as seldom (less than once a month), 64 children (61%) said they hardly (less than once a year) had any nightmares, and one child (1%) didn't report any nightmares. We then asked the parents how often their children talked about nightmares. 4 parents (3,3%) said that their children talked about nightmares several times a week but not daily, 15 (12,4%) reported that their children talked about nightmares a couple of times per month, 7 parents (5,8%) said that their children seldom (less than once a month) talked about nightmares, 72 parents (59,2%) hardly ever (less than once a year) heard their children talk about nightmares, 18 parents (14,9%) never talked about nightmares with their children and 5 parents (4,1%) did not answer the question.
We then asked the children to talk about the contents of their nightmares. They were asked to freely talk about their nightmares and the answers where than divided into different categories. If one content fit under two different umbrella terms it was listed under both of them.
31,8% of the contents were about self endangerement (eg. getting hit by a train, falling from a building), 18,7% were about fantasy characters (eg. wizards, dwarfs, werewolves), 15% of the dream contents were criminal (eg. burglars, murderers), 14% were animals (ranking in the top 3 were foxes, wolves and snakes), 12,1%

dealt with relatives or close friends being in danger, 4,7% of the dream contents were about things that had really happened and 3,7% dealt with contents of TV shows or movies. When looking at the age it shows that older children (10 years or above) mostly dream of self endagerement or criminals, while younger children (under the age of 10) mostly dream of animals, fantasy characters or the endangerement of relatives or friends.

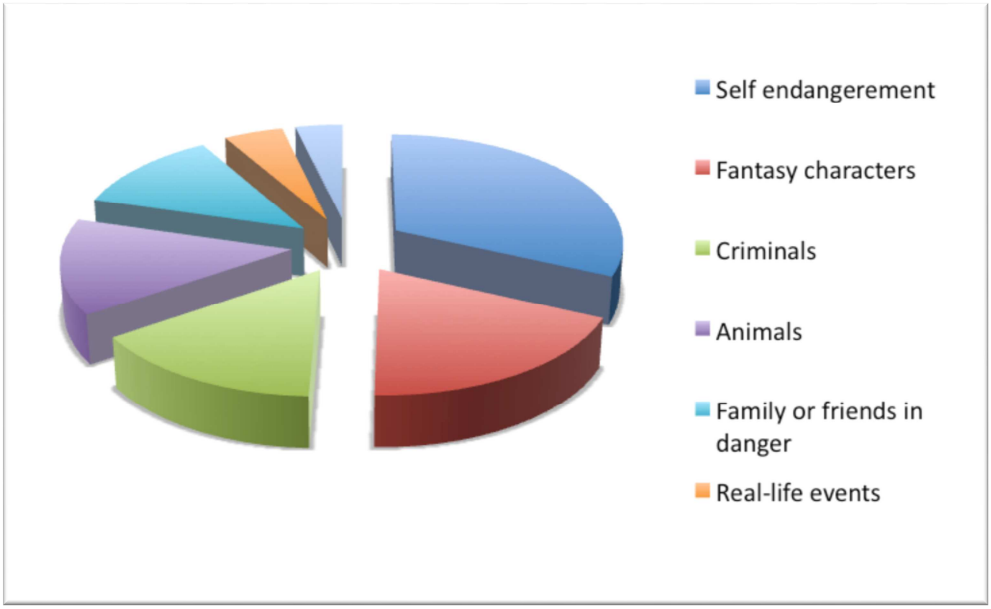

Figure 1 Nightmare contents

The parents were asked to tell us what their children talked about when they told a nightmare. 21, 6% of the dreams were about self endangerement, 18,2% of the reported dreams dealt with fantasy characters, 17% with the endangerement of relatives, 14,8% of the reported dreams dealt with animals, 14,8% were about things not listed above, 8% of the dreams were about criminals, 4,5% dealt with real life events and 1,1% were about TV shows or movies.

Another question the children were asked was how they coped with their nightmares. 47,5% answered that they went to their parents, 37,5% did different things (eg. getting a drink of water, turning the lights on, turning the radio on), 8% calmed themselves by telling themselves that it was only a dream, 5% stayed in their bed and went back to sleep, and 2% thought about their nightmares and why it could not be real. Younger children went to see their parents more often while older children tended to stay in bed, thought about the nightmare and calmed themselves.

The children were also asked, whether they talked about their nightmares and how the contacted person responded to that. 60% talked with their parents about their nightmares, 6,7% talked with other persons (eg. siblings, friends) and 33,3% did not tell anyone about their nightmares. 45,6% said that their parents talked with them about the nightmares, 25,3% were calmed by their parents, 20,3% simply cuddled with their parents and 8,8% did something else with their parents.

We also asked the parents how they reacted when their children talked about nightmares. During daytime 33,8%, talked with their children, 25% soothed their children, 20% simply listened to their children talk about the nightmares, 15,6% cuddled with their children, 4,4% did something else with their children, 0,6% did not do anything, and 0,6% said that this item did not apply to them.

They where then also asked how they reacted when their children came to them in the middle of the night and told them about a nightmare. 33,8% said that they would cuddle with their children, 32,3% would soothe their children, 17,3% did something different (eg. let the children sleep in the parents' bed), 14,3% talked with their children about the nightmares and 2,3% did not do anything. They were also asked if the children preferred one parent to talk about their nightmares. 54,6% said that their children did not prefer one parent over the other, 43,3% said that their children rather talked about nightmares with the mother, and 2,1% said that their children preferably talked with the father. 70,4% of the parents remembered having had nightmares themselves while 29,6% had never experienced nightmares. 17,5% of the parents did not remember their nightmares, 57,1% said that they dreamt of self endangerement, 8,9% dreamt of things not listed (eg. characters portraied on TV, cartoon characters), 7,9% dreamt of fantasy figures, 6,3% dreamt of animals, 1,6% dreamt of real life events and 1,6% dreamt of endangerement of a relative or a friend.

When asked about the potential reason for their childrens' nightmares 37,75% said that they considered nightmares as a way of coping with real life events. 36,65% said that they thought their children had nightmares because of TV shows, movies or computer games, 14,6% could not think of a specific reason for their childrens' nightmares, and 11% gave an answer not listed above.

44,2% of parents have taken actions to prevent further nightmares (eg. bed-time-rituals, night lamp) and 55,8% didn't take any actions. The parents were then asked to rate their childrens' nightmares on a scale from 1 to 5, 1 being no

problem and 5 being a strong burden. 78,6% rated the nightmares as no problem (1 on the scale), 11,2% felt a little problem (2 on the scale), 7,1% felt a moderate problem (3 on the scale), 2% considered their childrens' nightmares as a burden (4 on the scale), and 1% considered it as a heavy burden (5 on the rating scale). The parents were also asked how they thought their childrens' nightmares would affect their childrens' future. 64% of the parents thought that the nightmares would fade away without any interventions, 24,3% did not know how the nightmares would change with time, and 11,7% thought that the nightmares could get worse with time.

The children were asked whether they were scared that nightmares would reoccur at bedtime. 34% said „yes" and 66% said that they were not scared when going to sleep. We then also asked if they were scared during daytime because of their nightmares. 12,3% said „yes" and 87,7% answered with „no".

When asked if they had talked to a paediatrician about the nightmares, 0,9% of the children and 3,2% of the parents said that they had done so. 99,1% of the children and 96,8% of the parents had not talked to a paediatrician about the childrens' nightmares.

3.3. Children, sleep and bedtime behaviour

Children and parents were asked about the childrens' sleep and sleeping behaviour. 94,1% of the children slept through the night and 5,9% did not. The average age for children to regularly sleep through the night was 16,9 months (SD ± 16,6). The average hours of sleep per night were 9,3 (SD ± 1,1). The average time the children had their last meal before going to sleep was 2,69 hours before bedtime (SD ± 1,464).

The parents were also asked at what time their children go to bed and wake up on school days. 33,1% go to bed at 8pm, 24,8% go to bed at 9pm, 14% go to bed at 8.30pm, 8,3% go to bed at 10pm, 5,8% go to bed at 9.30pm, 5,8% go to bed at 7pm, 5% go to bed at 7.30pm, 1,7% go to bed at 11pm, 0,8% go to bed at 6.30pm and 0,8% go to bed at 10.30pm.

50% of the children get up at 6.30am, 30% get up at 6am, 14,2% get up at 7am, 3,3% get up at 7.30am, 1,7% get up before 6am and 0,8% get up at 8am.

71,1% of the children were sleeping in their own room, 18,2% were sharing their room with siblings or sleeping in their parents' room and 10,7% were changing between their own room and their parents' room. 18,3% of the children said that they had problems with their sleep (eg. difficulty to fall asleep, waking up during the night) and 81,7% did not have any sleep problems.

The parents were asked what their children liked to do before going to sleep. 32,5% said that they read a story or had a story being read by the parents, 22,2% did things not listed (eg. getting a drink of water), 18,9% watched TV, 9,9% brushed their teeth as last action before going to sleep, 7,5% listened to music, 6,1% talked with their parents or siblings, 2,4% prayed before falling asleep, and 0,5% sang with their parents before going to sleep.

Children were then asked the same question. 27,7% said that they read a book before going to sleep, 24,6% did things not listed (eg. drinking some water, eating a small snack), 21,5% watched TV before falling asleep, 13,1% brushed their teeth right before going to sleep, 7,3% listened to music, 4,7% talked with their parents or siblings, and 1,1% sang with their parents or had their parents sing to them.

32,5% of the children had a TV in their room and 67,5% had not. When asked if they had a cellphone in their room 33,6% answered with „yes" and 66,4% answered with „no".

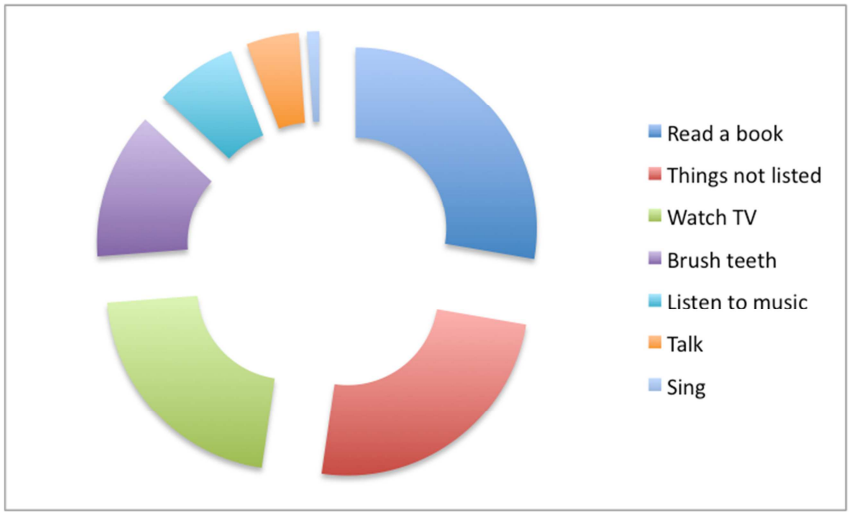

Figure 2 Bedtime behaviour (children's answers)

3.4. Children and leisure time

The children were also asked what they enjoyed doing during their leisure time. Since the answers were semi-structured, children could give multiple answers. If multiple answers were given they were split into the different sections and accounted for in each section. 35% of the children said that they enjoyed sport during their leisure time, 31,5% enjoyed doing things not listed (eg. handicrafts, taking care of animals, going to the movies), 11,5% met with their friends during leisure time, 6,5% enjoyed reading, 6% played computer games as a leisure time activity, 5,5% enjoyed watching TV, and 4% enjoyed drawing or painting. When asked if they generally enjoyed doing sports 89,1% answered with „yes".

The children were also asked how much time they usually spent watching TV or playing computer games. The average time spent in front of the TV was 2,26 hours (SD ± 1,406), and the average time spent playing computer games was 1,8 hours (SD ± 1,349). When asked about their favourite game 48,3% of the children named a computer game, 36,8% named a board or card game, and 14,9% named a different game (eg. hide and seek).

The parents were then asked about their childrens' TV and computer behaviour. The average time children watched TV per day were 2,45 hours (SD ± 1,441), and children in average spent 2,03 hours (SD ± 1,475) playing computer games. The parents were also asked what kind of programs their children liked to watch. 50,9% enjoyed watching childrens' programs, 19,4% enjoyed watching documentaries, 12,1% enjoyed watching TV series, 7,9% enjoyed watching movies, 7,3% enjoyed watching programs not listed and 2,4% enjoyed watching sports. When asked if their children did sports regularly (more than three times a week) 82,5% of the parents answered with „yes".

3.5. Children and social life

When asked whether they enjoyed attending school or kindergarten, 76,9% of the children stated that they enjoyed to go there, 17,4% did not enjoy going to school or kindergarten and 5,8% moderately enjoyed attending school or kindergarten. Then they were asked about their favourite part in school or kindergarten. Once

again it was a semi-structured answer, and multiple answers were accounted separately. For 21,2% the favourite part was sports or crafts, 20,7% enjoyed going to school or kindergarten because of their friends, 20,7% enjoyed things not listed (eg. a specific school subject), 16,3% enjoyed learning, 8,2% enjoyed the breaks, 7,7% enjoyed playing, 4,3% enjoyed the teachers, and 0,9% could not name anything they enjoyed in school or kindergarten.

The parents were asked how often their children talked about school or kindergarten and what their children mostly talked about when talking about school or kindergarten. 74,6% of the children talked daily about school or kindergarten, 14,4% talked about it several times a week, 8,5% hardly ever or never talked about it, and 2,5% talked about it several times a month.

Concerning the contents of these talks, 36,4% were about things not listed (eg. specific subjects, food), 22,5% of these talks were about friends, 13,9% were about conflicts, 11,8% were about teachers, 8,7% were about games, and 6,7% were about homework.

The parents were also asked how often their children talked about their school or kindergarten friends. 59% talked about them daily, 26,5% talked about them several times a week, 7,7% talked about them several times a month, and 6,8% hardly ever or never talked about their friends. Concerning the subjects of these talks, 51,2% talked about experiences with their friends (eg. going to movies together, lunch with their friends), 25,2% talked about conflicts, 17,6% talked about games, and 6% talked about the personality of their friends.

When asked how much time the children usually spend with their friends outside of school or kindergarten, the parents answered that 49,6% see their friends several times a week, 21,2% see their friends once a week, 11,5% see their friends daily, 11,5% hardly ever see their friends outside of school or kindergarten, and 6,2% see their friends several times a month.

The children were asked what they enjoyed doing most with their friends, 38,7% stated that they enjoyed playing games, 26,8% enjoyed things not listed (eg. taking care of animals), 25% enjoyed doing sports together, 4,2% enjoyed going to movies, 3,6% enjoyed playing computer games, and 1,7% enjoyed watching TV together with their friends. 92,5% of the children stated that they meet their friends outside of school or kindergarten.

66,1% of the children questioned said that they have pets. The average number of pets for the children questioned is 4,73 (SD ± 7,003). 38,3% of the pets are cats, 21,8% are dogs, 21,1% are other small domestic animals (eg. rats, mice, guinea pigs, fish), 12% are rabbits, 4,5% are horses and 2,3% are other large domestic animals (eg. cows, donkeys, pigs).

3.6. Nightmares and family settings

The correlation between the parents' marital status and the occurence of nightmares in children was not significant (*p=.297*). Regarding parents' highest received education and the occurence of nightmares in children, there was no significant correlation (*p=.052*). There was also no significant correlation between the occurence of nightmares in children and problems during pregnancy (*p=.704*), problems during labour and delivery (*p=.102*), the country children where born in (*p=.778*), the age the parents first became parents (*p=.503*) and the gestational age children where born at (*p=.275*). The correlation between parents having experienced nightmares and children experiencing nightmares was significant (*p=.011*), indicating that children from parents having previously experienced nightmares tend to experience nightmares as well.

Regarding the frequency of nightmares there was no significant correlation between parents' marital status and the frequency of nightmares in children (*p=.090*). There was also no significant correlation between parents' highest received education (*p=.163*), age when they first became parents (*p=.926*), problems during pregnancy (*p=.177*), gestational age children were born at (*p=.503*), parents having experienced nightmares (*p=.293*) and traumatic events (*p=.170*) and the frequency of nightmares. There was a significant correlation between problems during labour and delivery (*p=.035*) and the frequency of nightmares, indicating that children who were born without problems during labour and delivery tend to experience nightmares less frequently. There was no significant correlation between nightmare frequency and the country in which children were born (*p=.264*).

There was also no significant correlation between children with siblings and only children concerning the occurence of nightmares (*p=.154*). There was no

correlation between having pets and experiencing nightmares (*p=.878*). There was also no correlation between the amount of pets and the occurence of nightmares (*p=.429*) or the kind of pet (dog (*p=.201*), cat (*p=.847*), rabbit (*p=.479*), horse (*p=.365*), other small animals (*p=.111*) and other large animals (*p=.217*).

When looking at the frequency of nightmares and children with siblings or only children there was no significant correlation (*p=.116*). There was also no significant correlation between nightmare frequency and having pets (*p=.095*), the amount of pets and the frequency of nightmares (*p=.697*) or some kind of pets and the frequency of nightmares (dog (*p=.082*), rabbit (*p=.137*) and other large animals (*p=.101*)). There was however a significant correlation between nightmare frequency and the following pets: cat (*p=.045*), horse (*p=.007*) and other small animals (*p=.036*). These correlations lead to the following assumptions: children having cats hardly ever experience nightmares, children having horses hardly ever experience nightmares and children having other small animals as pets (eg. guinea pigs, hamsters) tend to seldom or hardly ever experience nightmares.

Correlation with nightmare occurence	**p**
Parents experiencing nightmares (children experience more nightmares)	.011
Correlation with nightmare frequency	
Problems occuring during labour and delivery (children experience more nightmares)	.035
Having cats as pets (children hardly ever experience nightmares)	.045
Having horses as pets (children hardly ever experience nightmares)	.007
Having other small animals as pets (children seldom or hardly ever experience nightmares)	.036

Table 1 Significant correlations regarding family settings

3.7. Nightmares and sleep

There was no significant correlation between the hours children slept per night and the occurence of nightmares (*p=.127*). There was also no significant correlation between the time children went to bed and their nightmares (*p=.248*) and the time children got up and their nightmares (*p=.307*). The sleep setting (whether children slept alone or shared their bedroom) also did not influence the occurence of

nightmares (*p=.383*). There was no significant correlation between children sleeping through the night and their nightmares (*p=.831*) and the age when children first slept through the night also did not influence the occurence of their nightmares (*p=.317*). There was also no significant correlation between having a TV in the bedroom (*p=.137*) or having a cellphone in the bedroom (*p=.818*) and the occurence of nightmares.

Regarding the frequency of nightmares and sleep there was no significant correlation between nightmare frequency and the hours children slept per night (*p=.986*), the time children went to bed (*p=.073*), the time children got up (*p=.083*), whether children slept through the night or not (*p=.192*), the age when children first slept through (*p=.690*), having a TV in the bedroom (*p=.079*) or having a cellphone in the bedroom (*p=.104*). The sleep setting (having a bedroom to themselves or sharing the bedroom) also did not significantly influence the frequency of nightmares (*p=.182*). There was also no significant correlation between the age the children first experienced nightmares and nightmare frequency (*p=.424*).

3.8. Nightmares and bedtime behaviour

Children and parents were interviewed about the things they or their children enjoy doing before going to sleep. Regarding the parents' answers there was no significant correlation between watching TV before falling asleep and the occurence of nightmares (*p=.753*) or between reading and the occurence of nightmares (*p=.515*). There was also no significant correlation between singing (*p=.103*) or brushing the teeth (*p=.932*) or talking to someone before falling asleep (*p=.921*) or praying (*p=.590*) or listening to music (*p=.511*) or things not listed above (*p=.647*) and the occurence of nightmares. There was also no significant correlation between the time children last ate before going to bed and the occurence of nightmares (*p=.990*). There was no significant correlation between frequency of nightmares and the time the children last ate before going to bed (*p=.399*), watching TV (*p=.086*), reading (*p=.101*), singing (*p=.147*), brushing the teeth (*p=.065*), praying (*p=.059*), listening to music (*p=.131*) or doing things not listed above (*p=.050*) before falling asleep. There was a significant correlation

between nightmare frequeny and children who enjoyed talking before going to bed (*p=.023*), indicating that those children tend to seldom or hardly ever experience nightmares.

When looking at the children's answers concernig the occurence of nightmares and their bedtime behaviour, there was no significant correlation between watching TV (*p=.533*), reading (*p=.294*), singing or having their parents sing for them (*p=.100*), brushing their teeth (*p=.426*), talking (*p=.842*), listening to music (*p=.414*) or things not listed above (*p=.884*) and the occurence of nightmares. There was no significant correlation between watching TV (*p=.120*), reading (*p=.096*), singing or having their parents sing for them (*p=.147*), talking (*p=.055*), listening to music (*p=.150*) or doing things not listed above (*p=.044*) and the frequency of nightmares. There was a significant correlation between children brushing their teeth as the last thing before going to bed and nightmare frequency (*p=.009*), showing that those children are hardly ever experiencing nightmares. There was no correlation between children that were scared of nightmares before falling asleep and the occurence (*p=.471*) nightmares. There was, however, a significant correlation between children that were scared of possible nightmares before falling asleep and the frequency of nightmares (*p=.002*), showing that those children experience nightmares a couple of times per week or almost weekly.

Correlation with nightmare frequency	**p**
Talking before going to bed (children seldom or hardly ever experience nightmares)	.023
Brushing teeth before going to bed (children hardly ever experience nightmares)	.009
Children being scared of nightmares before falling asleep (children experience nightmares a couple of times per week or almost weekly)	.002

Table 2 Significant correlations regarding bedtime behaviour

3.9. Nightmares and leisure time

Children and parents were asked about their favourite activities in their or their children's leisure time. Looking at the parents' answers there was no significant correlation between the amount of time spent in front of the TV (*p=.402*) or the computer or other gaming devices (*p=.319*) and the occurence of nightmares.

There was also no significant correlation between children watching children's programs (*p=.741*), documentaries (*p=.206*), sports programs (*p=.441*), motion pictures (*p=.577*), TV series (*p=.263*) or programs not listed above (*p=.166*) and the occurence of nightmares. There was also no significant correlation between children doing sports regularly and the occurence of nightmares (*p=.681*).

There was no significant correlation between nightmare frequency and the amount of time spent in front of the TV (*p=.554*), the amount of time spent in front of the computer or other gaming devices (*p=.613*) and the programs children watched (children's programs (*p=.191*), documentaries (*p=.144*), sports programs (*p=.182*), motion pictures (*p=.061*) and TV series (*p=.111*)). There was a significant correlation between children watching programs not listed above (*p=.027*) and nightmare frequency, showing that those programs (eg. news, cooking shows) are associated with hardly ever experiencing nightmares. There was no significant correlation between children doing sports regularly and nightmare frequency (*p=.123*).

Regarding the children's answers about their leisure time activities there was no significant correlation between doing sports (*p=.527*), meeting friends (*p=.229*), watching TV (*p=.787*), playing computer games (*p=.561*), reading (*p=.167*), drawing (*p=.290*) or activities not listed above (*p=.869*) and the occurence of nightmares. There was also no significant correlation between children enjoying sports and the occurence of nightmares (*p=.629*). There was also no significant correlation between the amount of time children declared they spent watching TV (*p=.313*) or playing computer games (*p=.443*) and the occurence of nightmares.

There were no significant correlations between doing sports (*p=.145*), watching TV (*p=.092*), reading (*p=.069*) and doing activities not listed above (*p=.062*) and the frequency of nightmares. There was, however, a significant correlation between meeting friends (*p=.028*) and playing computer games (*p=.024*) as a leisure time activity and nightmare frequency. These correlations showed that children who enjoyed meeting friends or playing computer games as a leisure time activity hardly ever experience nightmares. There was no significant correlation between children enjoying drawing in their spare time and the frequency of nightmares (*p=.252*) or between children enjoying sports in general and the frequency of nightmares (*p=.196*).

Correlation with nightmare frequency	p
Watching programs not listed (children hardly ever experience nightmares)	.027
Meeting friends in leisure time (children hardly ever experience nightmares)	.028
Playing computer games in leisure time (children hardly ever experience nightmares)	.024

Table 3 Significant correlations regarding leisure time activities

3.10. Nightmares and social life

Children and parents were also asked about school and social life. Looking at the parents' answers there was no significant correlation between the amount of time children talked about school or kindergarten and the occurence of nightmares (*p=.414*). There was also no significant correlation between the contents of these talks (games (*p=.431*), friends (*p=.521*), conflicts (*p=.145*), homework (*p=.647*), teachers (*p=.636*) or things not listed above (*p=.292*)) and the occurence of nightmares. There was also no significant correlation between the amount of time children talked about their friends and the occurence of nightmares (*p=.772*) or between the contents of these talks (games (*p=.119*), conflicts (*p=.133*), different undertakings (*p=.516*) or things not listed above (*p=.192*) and the occurence of nightmares. There was also no significant correlation between the amount of time children spent with their friends outside of school or kindergarten and the occurence of nightmares (*p=.457*).

There was no significant correlation between the amount of time children talked about school or kindergarten and the frequency of nightmares (*p=.375*). There were no significant correlations between nightmare frequency and the contents of these talks (games (*p=.056*), friends (*p=.143*) and homework (*p=.086*)). There was a significant correlation between nightmare frequency and children talking about conflicts (*p=.023*), teachers (*p=.036*) or things not listed above (*p=.049*). These correlations showed that children who talked about conflicts and teachers hardly ever experienced nightmares and children who talked about things not listed above seldom or hardly ever experienced nightmares.

There was no significant correlation between the amount of time children talked about their friends and nightmare frequency (*p=.206*). There were also no

significant correlations between nightmare frequency and the contents of these talks (games (*p=.165*), conflicts (*p=.132*) or things not listed above (*p=.157*)). There was, however, a significant correlation between nightmare frequency and children talking about different undertakings (*p=.011*), indicating that those children tend to experience nightmares less frequently. There was no significant correlation between the amount of time children spent with their friend outside of school or kindergarten and the frequency of having nightmares (*p=.154*).

Regarding the children's answers there was no significant correlation between enjoying attending school or kindergarten and the occurence of nightmares (*p=.877*). There was also no significant correlation between things they enjoyed at school or in kindergarten (teachers (*p=.964*), lunch breaks (*p=.978*), learning (*p=.555*), gymnastics or crafts (*p=.591*), playing (*p=.071*) or things not listed above (*p=.229*). There was a significant correlation between children enjoying meeting their friends in school or kindergarten and the occurence of nightmares (*p=.018*), showing that those children tend to experience more nightmares. There were no significant correlations between activities they enjoyed doing with their friends and the occurence of nightmares (playing games (*p=.656*), sports (*p=.241*), going to the movie theater (*p =.314*), watching TV (*p=.248*) and playing computer games (*p=.716*)). There was however a correlation between doing things other than listed above with their friends and the occurence of nightmares (*p=.048*), indicating that those children experience more nightmares. The children's favourite game also correlated with the occurence of nightmares (*p=.026*), showing that children who talked about video or computer games as their favourite game tend to experience more nightmares. There was no correlation between children meeting their friends outside of school and the occurence of nightmares (*p=.305*).

There was no significant correlation between children enjoying going to school or kindergarten and the frequency of nightmares (*p=.077*). There was also no significant correlation between nightmare frequency and things they enjoyed doing at school or in kindergarten (teachers (*p=.055*), lunch breaks (*p=.183*), learning (*p=.101*), gymnastics or crafts (*p=.055*) or playing (*p=.092*)) There was a significant correlation between nightmare frequency and things they enjoyed doing in school or kindergarten such as, things not listed above (*p=.037*) and meeting friends (*p=.036*), showing that children who enjoyed those things hardly ever experience nightmares. There was no significant correlation between children

meeting their friends outside of school or kindergarten and the frequency of nightmares (*p=.473*). There were also no significant correlations between nightmare frequency and actitivities they enjoyed doing with their friends (playing games (*p=.108*), sports (*p=.075*), going to the movie theater (*p=.060*), watching TV (*p=.113*) and playing computer games (*p=.084*)) There was a significant correlation between doing things other than listed above (*p=.042*) and nightmare frequency, indicating that children who enjoy those things hardly ever experience nightmares. There was no significant correlation between their favourite game and the frequency of them experiencing nightmares (*p=.130*).

Correlation with nightmare occurence	**p**
Children enjoying meeting friends in school (children experience more nightmares)	.018
Doing things not listed with friends (children experience more nightmares)	.048
Favourite game (children naming computer games experience more nightmares)	.026
Correlation with nightmare frequency	
Talking about conflicts (children hardly ever experience nightmares)	.023
Talking about teachers (children hardly ever experience nightmares)	.036
Talking about things not listed (children seldom experience nightmares)	.049
Talking about different undertakings with friends (children experience nightmares less frequently)	.011
Doing things not listed in school or kindergarten (children hardly ever experience nightmares)	.037
Enjoying meeting friends in school (children hardly ever experience nightmares)	.036
Doing things not listed with friends (children hardly ever experience nightmares)	.042

Table 4 Significant correlations regarding social lif

3.11. Nightmares and health

When looking at nightmares and health there was no significant correlation between children having health issues and the occurence of nightmares (*p=.927*). There were also no significant correlations between children having stayed in a hospital for more than a week and the occurence of nightmares (*p=.286*) and

between children having to take medication regularly and the occurence of nightmares (*p=.091*).

There was no significant correlation between children having health issues and the frequency of nightmares (*p=.080*). There was also no significant correlation between children having stayed in a hospital for more than one week and nightmare frequency (*p=.077*). There was also no significant correlation between children having to take medication regularly and nightmare frequency (*p=.225*).

3.12. Nightmare contents

When looking at nightmare frequency and animals as a nightmare content there is a significant correlation (*p=.033*) indicating that children who dream about animals seldom or hardly ever experience nightmares. There was also a significant correlation when looking at fantasy figures as a nightmare content, showing that children who hardly ever experience nightmares dream about those figures more often (*p=.013*) than children experiencing nightmares more regularly. Children who dreamed about contents of movies or TV shows said that they hardly ever experience nightmares (*p=.033*). There were no significant correlations between nightmare frequency and family or friends in danger (*p=.126*), criminals (*p=.100*) or things not listed (*p=.096*). There was a significant correlation between nightmares about self endangerement and nightmare frequency (*p=.020*), indicating that children who dream about self endangerement tend to experience nightmares less frequently. Children who dreamed about real life events hardly ever experience nightmares (*p=.028*).

When looking at the nightmare contents children told their parents about and the nightmare frequency there was no significant correlation between fantasy figures (*p=.054*), movies or TV shows (*p=.239*), self endangerement (*p=.104*), criminals (*p=.087*) or things not listed above (*p=.128*) and nightmare frequency. There was, however, a correlation between children telling their parents about animals and their nightmare frequency (*p=.037*), indicating that those children tend to hardly ever or seldom experience nightmares. There was also a significant correlation between nightmare frequency and family and friends in danger (*p=.008*), indicating that those children tend to experience nightmares a couple of times per month.

Children who talked about real life events as their nightmare contents tend to hardly ever experience nightmares (*p=.039*).

Correlation with nightmare frequency	**p**
Animals as a nightmare topic (children seldom or hardly ever experience nightmares)	.033
Fantasy figures as a nightmare topic (those nightmares occur mostly in children who hardly ever experience nightmares)	.013
TV-shows and movies as a nightmare topic (children hardly ever experience those nightmares)	.033
Nightmares about self-endangerement (children experience nightmares less frequently)	.020
Real life events (children hardly ever have nightmares)	.028
Telling parents about nightmares with animals (children seldom or hardly ever experience nightmares)	.037
Telling parents about family and friends in danger (children experience nightmares a couple of times per month)	.008
Telling parents about real life events (children hardly ever experience nightmares)	.039

Table 5 Significant correlations regarding nightmare contents

When looking at animals as a nightmare content there is no significant correlation between parents' marital state (*p=.671*), parents' highest received education (*p=.495*), the age they first became parents (*p=.051*), complications during pregnancy (*p=.477*), the gestational week children were born at (*p=.112*), complications during labour and delivery (*p=.293*), the country children were born in (*p=.717*) and whether the children had previously experienced traumatizing events (*p=.180*) and animals as part of their frightening dreams. There was also no significant correlation between animals as a nightmare content and parents having experienced nightmares themselves (*p=.210*), children watching TV before falling asleep (*p=.824*), children reading before falling asleep (*p=.421*), singing before falling asleep (*p=.653*), brushing their teeth (*p=.603*), talking (*p=.547*), praying (*p=.430*), listening to music (*p=.470*) and doing things other than listed above (*p=.621*). There was also no significant correlation between the hours children slept per night (*p=.119*), sleeping arrangements (sharing the bedroom vs. having a bedroom for themselves) (*p=.285*), the time children went to bed (*p=.120*), the time children got up (*p=.061*), whether children slept through the night or not (*p=.712*), the amount of time per day children spent playing computer or video games (*p=.077*), the amount of time children watched TV per day

(*p=.084*), the kind of TV program children enjoy watching (children's program (*p=.428*), documentaries (*p=.331*), sports programs (*p=.488*), motion pictures (*p=.793*), TV series (*p=.161*) and programs not listed above (*p=.123*)), whether children did sports regularly (*p=.593*), whether children talked about school or kindergarten regularly (*p=.311*), the contents of these talks (games (*p=.420*), friends (*p=.695*), conflicts (*p=.516*), homework (*p=.852*), teachers (*p=.225*) and things not listed above (*p=.865*)) and animals as a nightmare content. There was however a significant correlation between the time children last ate before going to bed and animals as the content of their frightening dream (*p=.022*), showing that one third of the children who last ate one and a half hours before going to bed dreamt of animals in their nightmare. There was no significant correlation between animals as a nightmare content and gender (*p=.946*), having siblings (*p=.629*), the age children first experienced nightmares (*p=.404*), having a TV in the bedroom (*p=.752*), having a cellphone in the bedroom (*p=.972*), suffering from a disease (*p=.229*), having spent more than one week in the hospital (*p=.165*), taking medication regularly (*p=.634*), favourite leisure time activity (sports (*p=.245*), meeting friends (*p=.074*), watching TV (*p=.169*), playing on the computer (*p=.429*), reading (*p=.361*), drawing (*p=.948*), doing things not listed above (*p=.459*)), generally enjoying sports (*p=.200*), enjoying school or kindergarten (*p=.433*), their favourite thing about school or kindergarten (friends (*p=.343*), lunch breaks (*p=.471*), learning (*p=.547*), sports and crafts (*p=.502*), games (*p=.835*), things not listed above (*p=.450*)). There was also no significant correlation between animal-related nightmares and things they enjoyed doing with their friends (games (*p=.095*), sports (*p=.723*), going to the movies (*p=.160*), watching TV (*p=.648*), playing on the computer (*p=.446*)), their favourite game (*p=.711*), meeting their friends outside of school or kindergarten (*p=.879*), having pets (*p=.259*), the amount of pets they have (*p=.563*) and the kind of pet they have (dog (*p=.546*), rabbit (*p=.506*), horse (*p=.085*), other small animals (*p=.430*), other large animals (*p=.680*)). There was a significant correlation between children dreaming of animals in their nightmares and having a cat as their pet (*p=.044*), indicating that one fifth of the children who had a cat as their pet dreamed of animals in their nightmares. There was also a significant correlation between children talking about their teachers and animals as a nightmare content (*p=.031*), indicating that half of

the children who talk about their teachers when talking about school, experience nightmares with animals.

Correlation with animals as a nightmare topic	p
Time of last meal before going to bed (one third of children who last ate one and a half hours before going to bed dreamt of animals)	.022
Having a cat as a pet (one fifth of those children experienced animal-related nightmares)	.044
Talking about teachers (half of the children talking about teachers experience nightmares with animals)	.031

Table 6 Significant correlations regarding animals as a nightmare topic

Regarding fantasy figures as a nightmare content there are no significant correlations between this content and the parents' marital status (*p=.083*), parents' highest received education (*p=.331*), the age they first became parents (*p=.469*), complications during pregnancy (*p=.055*), the gestational age children were born at (*p=.294*), problems during labour and delivery (*p=.129*), the country children were born in (*p=.579*) and whether children had previously experienced traumatisation (*p=.094*). There was also no significant correlation between fantasy figures as a nightmare and parents having experienced nightmares as children (*p=.259*) or between fantasy figures and children's bedtime behaviour (watching TV before falling asleep (*p=.544*), reading (*p=.898*), singing (*p=.587*), brushing teeth (*p=.920*), talking (*p=.310*), praying (*p=.063*), listening to music (*p=.706*) and doing things not listed above (*p=.567*)). There were also no significant correlations between fantasy figures and the hours children slept per night (*p=.422*), sleeping arrangements (*p=.296*), the time children went to bed (*p=.342*), the time children got up (*p=.177*), children sleeping through the night (*p=.965*), the age children first slept through the night (*p=.540*) and the time children ate their last meal before going to bed (*p=.324*). There were also no significant correlations between fantasy figures and the amount of time children played computer games throughout the day (*p=.452*), the amount of time children watched TV (*p=.235*) and the programs they watched (children's programs (*p=.147*), documentaries (*p=.488*), sports (*p=.321*), motion pictures (*p=.420*), TV series (*p=.326*) and programs other than listed above (*p=.420*)). There were also no significant correlations between nightmares with fantasy figures and children doing sports regularly (*p=.177*), children talking about school or kindergarten (*p=.100*) and the contents of these

talks (games (*p=.085*), friends (*p=.161*), conflicts (*p=.152*), homework (*p=.712*), teachers (*p=.349*) and things not listed above (*p=.791*)). There were also no significant correlations between fantasy figures and the amount of time children met their friends outside of school of kindergarten (*p=.313*), the amount of time children talked about their friends (*p=.120*) or the contents of these talks (games (*p=.666*), conflicts (*p=.912*), different undertakings (*p=.647*) and things other than listed above (*p=.473*)). There were no significant correlations between fantasy figure related nightmares and gender (*p=.928*), children having siblings (*p=.723*), children having a TV in their bedroom (*p=.670*) and having a cellphone in their bedroom (*p=.442*). There were also no significant correlations between children suffering from a disease (*p=.540*), children having spent more than a week in a hospital (*p=.130*) and children taking medication regularly (*p=.581*) and fantasy figures as a nightmare. There were also no significant correlations between fantasy figures as a content of nightmares and children's favourite leisure time activities (sports (*p=.297*), meeting friends (*p=.972*), watching TV (*p=.440*), playing computer games (*p=.547*), reading (*p=.897*), drawing (*p=.557*) and doing things not listed above (*p=.976*)) and whether children enjoyed sports in general (*p=.416*). There was also no significant correlation regarding whether children enjoyed attending school or kindergarten or not (*p=.384*), the things they enjoyed doing while at school or kindergarten (meeting friends (*p=.447*), teachers (*p=.681*), lunch breaks (*p=.388*), learning (*p=.416*) and sports and crafts (*p=.325*)). There was a significant correlation between children enjoying games at school or kindergarten and fantasy figures (*p=.004*), showing that two thirds of the children who enjoyed playing games dreamt of fantasy figures. There was also a significant correlation between those types of figures and children who enjoyed things other than listed while at school or kindergarten (*p=.045*), indicating that more than one third of those children dreamt of fantasy figures. There were no significant correlations between things children enjoyed doing with their friends (games (*p=.428*), sports (*p=.189*), going to a cinema (*p=.221*), watching TV (*p=.058*), playing on the computer (*p=.349*) and doing things not listed (*p=.989*)), meeting friends outside of school or kindergarten (*p=.885*) and their favourite game (*p=.793*) and fantasy figure related nightmares. Looking at pets there were no significant correlations between the amount of pets (*p=.310*) and the kind of pets (dogs (*p=.645*), cats (*p=.562*), rabbits (*p=.949*), horses (*p=.305*) and other small

animals (*p=.778*)) and fantasy figures. There was a significant correlation between having pets and experiencing fantasy figure related nightmares (*p=.024*), indicating that only one out of seven children with pets experiences those nightmares. There was also a significant correlation between having other large animals and experiencing nightmares with fantasy figures (*p=.021*), indicating that children without those animals are less likely to experience those nightmares.

Correlation with fantasy figures as a nightmare topic	**p**
Children enjoying games at school or kindergarten (two thirds of those children dreamt of fantasy figures)	.004
Children enjoying things not listed at school (more than one third of those children dreamt of fantasy figures)	.045
Children having pets (one out of seven children having pets dreamt of fantasy figures)	.024
Having other large animals as pets (children without those animals are less likely to experience nightmares)	.021

Table 7 Significant correlations regarding fantasy figures as a nightmare topic

Regarding TV or movie figures as a content of nightmares and family life there are no significant correlations between parents' marital status (*p=.958*), parents' highest achieved education (*p=.710*), the time they first became parents (*p=.631*), complications during pregnancy (*p=.124*), the gestational week children were born at (*p=.237*), problems during labour and delivery (*p=.208*), children having previously experienced traumatizing events (*p=.503*) and parents having previously experienced nightmares (*p=.974*) and this nightmare topic. There was a significant correlation between TV or movie characters as a nightmare content and the country children were born in (*p=.038*), indicating that children being born in Austria are less likely to dream of those characters than those born in other countries. Concerning sleep and bedtime behaviour there were no significant correlations between the activities children did before falling asleep (watching TV (*p=.222*), reading (*p=.581*), singing (*p=.822*), brushing teeth (*p=.302*), talking (*p=.451*), praying (*p=.693*) and doing things not listed (*p=.083*)) and nightmares about TV or movie characters. There was a significant correlation between listening to music and this nightmare topic (*p=.025*), indicating only one fifth of the children who listened to music before falling asleep experiences those nightmares. There were no significant correlations between the hours children slept per night (*p=.334*), sleeping arrangements (sharing the bedroom or not) (*p=.805*), the time

children went to bed (*p=.268*), the time children got up (*p=.344*), whether children slept through the night or not (*p=.645*), the age children were when they started sleeping through the night (*p=.383*) and the time children last ate before falling asleep (*p=.255*) and nightmares about TV or movie characters. Looking at leisure time there were no significant correlations between the amount of time children spent in front of the computer (*p=.132*), the amount of time children watched TV (*p=.159*), the programs children enjoyed watching (children's programs (*p=.988*), sports (*p=.741*), motion pictures (*p=.379*), TV series (*p=.301*), programs not listed (*p=.462*)) and TV or movie characters as a nightmare topic. There was a significant correlation between this nightmare topic and children who watched documentaries (*p=.002*), indicating that one fifth of the children who enjoyed watching documentaries had nightmares about TV or movie characters. There was no significant correlation between this nightmare content and children who did sports regularly (*p=.381*), whether children talked about school or kindergarten (*p=.339*), the contents of these talks (games (*p=.566*), friends (*p=.086*), conflicts (*p=.206*), homework (*p=.413*), teachers (*p=.305*), things not listed (*p=.557*)), whether children talked about friends (*p=.378*), the contents of these talks (games (*p=.845*), conflicts (*p=.061*), different undertakings (*p=.665*), things not listed above (*p=.439*)) and the amount of time children spent with their friends outside of school or kindergarten (*p=.226*). There was no significant correlation between TV or movie characters as a nightmare content and gender (*p=.866*), having siblings (*p=.693*), the age children first experienced nightmares (*p=.314*), having a TV in the bedroom (*p=.943*), having a cellphone in the bedroom (*p=.151*), suffering from a disease (*p=.564*), having spent more than one week in the hospital (*p=.776*), taking medication regularly (*p=.820*), favourite leisure time activity (sports (*p=.530*), meeting friends (*p=.241*), watching TV (*p=.509*), playing on the computer (*p=.539*), reading (*p=.522*), drawing (*p=.151*), doing things not listed above (*p=.065*)). There was also no significant correlation between this nightmare topic and generally enjoying sports (*p=.478*), enjoying school or kindergarten (*p=.841*), their favourite thing about school or kindergarten (friends (*p=.751*), teachers (*p=.572*), lunch breaks (*p=.522*), learning (*p=.290*), sports and crafts (*p=.140*), games (*p=.454*), things not listed above (*p=.422*)), things they enjoyed doing with their friends (games (*p=.367*), sports (*p=.951*), going to the movies (*p=.653*), watching TV (*p=.845*), playing on the computer (*p=.731*), things not listed above

(*p=.837*)). There was a significant correlation between TV and movie characters as a nightmare topic and childrens' favourite game (*p=.037*), indicating that children who listed a favourite game had fewer of those nightmares. There was, however, no significant correlation between meeting their friends outside of school or kindergarten (*p=.606*), having pets (*p=.493*), the amount of pets they have (*p=.496*) and the kind of pet they have (dog (*p=.495*), cat (*p=.342*), rabbit (*p=.316*), horse (*p=.652*), other small animals (*p=.710*), other large animals (*p=.846*)) and TV or movie characters as a nightmare content.

Correlation with TV or movie figures as a nightmare topic	**p**
Country children were born in (children born in Austria are less likely to experience those nightmares)	.038
Listening to music before falling asleep (one fifth of those children experienced those nightmares)	.025
Children watching documentaries (one fifth of those children experienced those nightmares)	.002
Favourite game (children who listed a favourite game had fewer of those nightmares)	.037

Table 8 Significant correlations regarding TV or movie figure related nightmares

Looking at the nightmare topic of harassment of family or friends and family life there are no significant correlations between parents' marital status (*p=.871*), parents' highest achieved education (*p=.853*), the time they first became parents (*p=.355*), complications during pregnancy (*p=.292*), the gestational week children were born at (*p=.335*), problems during labour and delivery (*p=.946*), the country children were born in (*p=.755*), children having previously experienced traumatizing events (*p=.200*) and parents having previously experienced nightmares (*p=.894*) and this nightmare topic. Concerning sleep and bedtime behaviour there were no significant correlations between the activities children did before falling asleep (watching TV (*p=.274*), reading (*p=.225*), singing (*p=.667*), brushing teeth (*p=.304*), talking (*p=.673*), praying (*p=.384*), listening to music (*p=.128*), doing things not listed above (*p=.721*)), the hours children slept per night (*p=.183*), sleeping arrangements (*p=.935*), the time children went to bed (*p=.326*), the time children got up (*p=.286*), whether children slept through the night or not (*p=.377*), the age when children started sleeping through the night (*p=.657*), the time children last ate before falling asleep (*p=.143*) and the nightmare content of

harassment of family or friends. Looking at leisure time there were no significant correlations between the amount of time children spent in front of the computer (*p=.418*), the amount of time children watched TV (*p=.306*), the programs children enjoyed watching (children's programs (*p=.978*), documentaries (*p=.071*), sports (*p=.544*), motion pictures (*p=.717*), TV series (*p=.657*), programs not listed (*p=.532*)) and harassment of family or friends as a nightmare topic. There was no significant correlation between this nightmare content and children who played sports regularly (*p=.992*), whether children talked about school or kindergarten (*p=.711*), the contents of these talks (games (*p=.293*), friends (*p=.546*), conflicts (*p=.397*), homework (*p=.555*), teachers (*p=.639*), things not listed (*p=.283*)), the contents of the talks about their friends (games (*p=.346*), conflicts (*p=.605*)) and the amount of time children spent with their friends outside of school or kindergarten (*p=.133*). There was a significant correlation between harassment of family or friends as a nightmare topic and the amount of time children talked about their friends (*p=.044*), indicating that one fourth of the children who talked about their friends daily had those nightmares. There was also a significant correlation between children who talked about different undertakings with their friends and those nightmare topics (*p=.003*), indicating that all of the children who talked about different undertakings experienced those nightmares. There was also a significant correlation with children who talked about their friends and things not listed indicating that one third of the children who did not talk about this topic experienced nightmares with the endangerement of family and friends (*p=.013*). There was no significant correlation between harassment or endangerement of family or friends as a nightmare content and gender (*p=.560*), having siblings (*p=.577*), the age children first experienced nightmares (*p=.697*), having a TV in the bedroom (*p=.967*), having a cellphone in the bedroom (*p=.411*), suffering from a disease (*p=.292*), having spent more than one week in the hospital (*p=.788*), taking medication regularly (*p=.677*), favourite leisure time activity (sports (*p=.268*), meeting friends (*p=.212*), watching TV (*p=.423*), playing on the computer (*p=.938*), reading (*p=.313*), drawing (*p=.203*), doing things not listed above (*p=.909*)). There was also no significant correlation between this nightmare topic and generally enjoying sports (*p=.773*), enjoying school or kindergarten (*p=.617*), their favourite thing about school or kindergarten (friends (*p=.362*), teachers (*p=.280*), lunch breaks (*p=.887*), learning (*p=.725*), sports and crafts (*p=.103*),

playing games (*p=.620*), things not listed above (*p=.226*)), things they enjoyed doing with their friends (games (*p=.708*), sports (*p=.568*), going to the movies (*p=.793*), watching TV (*p=.662*), things not listed above (*p=.506*)). There was a significant correlation between endangerement or harassment of family or friends as a nightmare topic and enjoying playing computer games with their friends (*p=.014*), indicating that two thirds of the children who enjoyed this activity with their friends experienced those nightmares. There was, however, no significant correlation between their favourite game (*p=.086*), meeting their friends outside of school or kindergarten (*p=.707*), having pets (*p=.720*), the amount of pets they have (*p=.421*) and the kind of pet they have (dog (*p=.546*), rabbit (*p=.506*), horse (*p=.702*), other small animals (*p=.115*), other large animals (*p=.680*)) and harassment of family or friends as a nightmare content. There was a significant correlation between this nightmare topic and having a cat as a pet (*p=.033*), indicating that only one tenth of the children having cats experienced those nightmares.

Correlation with the nightmare topic of family or friends in danger	**p**
Amount of time children talk about friends (one fourth of children who talked about their friends daily had those nightmares)	.044
Children talking about different undertakings with their friends (all of the children who talked about that experienced those nightmares)	.003
Children talking about things not listed and their friends (one third of children who did not talk about this topic experienced those nightmares)	.013
Children playing computer games with their friends (two thirds of children enjoying this activity experienced those nightmares)	.014
Having a cat as a pet (one tenth of the children having cats experienced those nightmares)	.033

Table 9 Significant correlations regarding nightmares of family or friends in danger

Looking at the nightmare topic of real-life events and family life there are no significant correlations between parents' marital status (*p=.937*), parents' highest achieved education (*p=.774*), the time they first became parents (*p=.532*), complications during pregnancy (*p=.740*), the gestational week children were born at (*p=.249*), problems during labour and delivery (*p=.197*), the country children were born in (*p=.907*), parents having previously experienced nightmares (*p=.166*) and this nightmare topic. There was a significant correlation between this nightmare topic and children having previously experienced traumatizing events (*p=.013*), indicating that one fourth of the previously traumatized children had real-

life event related nightmares. Concerning sleep and bedtime behaviour there were no significant correlations between the activities children did before falling asleep (watching TV ($p=.076$), reading ($p=.070$), singing ($p=.800$), brushing teeth ($p=.245$), talking ($p=.397$), praying ($p=.657$), listening to music ($p=.637$), doing things not listed above ($p=.073$)), the hours children slept per night ($p=.155$), sleeping arrangements ($p=.373$), the time children went to bed ($p=.214$), the time children got up ($p=.223$), whether children slept through the night or not ($p=.102$), the age when children started sleeping through the night ($p=.394$), the time children last ate before falling asleep ($p=.254$) and the nightmare content of real-life-events. Looking at leisure time there were no significant correlations between the amount of time children spent in front of the computer ($p=.164$), the amount of time children watched TV ($p=.313$), the programs children enjoyed watching (children's programs ($p=.435$), documentaries ($p=.602$), sports ($p=.710$), motion pictures ($p=.531$), TV series ($p=.256$), programs not listed ($p=.531$)) and real-life events as a nightmare topic. There was no significant correlation between this nightmare content and children who played sports regularly ($p=.773$), whether children talked about school or kindergarten ($p=.920$), the contents of these talks (games ($p=.332$), friends ($p=.953$), conflicts ($p=.839$), homework ($p=.675$), teachers ($p=.248$), things not listed ($p=.857$)), whether children talked about their friends ($p=.359$), the contents of the talks about their friends (games ($p=.845$), conflicts ($p=.439$), different undertakings ($p=.665$), things not listed ($p=.439$)) and the amount of time children spent with their friends outside of school or kindergarten ($p=.681$). There was no significant correlation between real-life events as a nightmare content and gender ($p=.231$), having siblings ($p=.286$), the age children first experienced nightmares ($p=.329$), having a TV in the bedroom ($p=.848$), having a cellphone in the bedroom ($p=.729$), suffering from a disease ($p=.261$), having spent more than one week in the hospital ($p=.977$), taking medication regularly ($p=.061$), favourite leisure time activity (sports ($p=.060$), watching TV ($p=.458$), playing on the computer ($p=.490$), reading ($p=.697$), drawing ($p=.525$), doing things not listed above ($p=.102$)). There was a significant correlation between nightmares with real-life events and enjoying meeting friends in the leisure time ($p=.003$), indicating that only one fifth of the children who enjoyed meeting friends experienced those nightmares. There was also no significant correlation between this nightmare topic and generally enjoying sports

(*p=.424*), enjoying school or kindergarten (*p=.326*), their favourite thing about school or kindergarten (friends (*p=.913*), teachers (*p=.525*), lunch breaks (*p=.350*), learning (*p=.502*), sports and crafts (*p=.208*), games (*p=.556*), things not listed above (*p=.560*)), things they enjoyed doing with their friends (games (*p=.385*), sports (*p=.681*), going to the movies (*p=.180*), watching TV (*p=.798*), things not listed above (*p=.963*)). There was a significant correlation between nightmares about real-life events and enjoying playing on the computer (*p=.045*), indicating that one third of the children who enjoyed playing on the computer with their friends experienced those nightmares. There was, however, no significant correlation between their favourite game (*p=.143*), meeting their friends outside of school or kindergarten (*p=.562*), having pets (*p=.775*), the amount of pets they have (*p=.253*) and the kind of pet they have (dog (*p=.851*), cat (*p=.160*), rabbit (*p=.352*), horse (*p=.577*), other small animals (*p=.878*), other large animals (*p=.810*)) and real-life events as a nightmare content.

Correlations with the nightmare content of real-life events	**p**
Children having previously experienced traumatizing events (one fourth of previously traumatized children experienced those nightmares)	.013
Children enjoying meeting friends (one fifth of those children experienced those nightmares)	.003
Children enjoying playing on the computer with friends (one third of those children experienced those nightmares)	.045

Table 10 Significant correlations regarding the nightmare topic of real-life events

Concerning the nightmare topic of self-endangerement and family life there are no significant correlations between parents' marital status (*p=.784*), parents' highest achieved education (*p=.329*), the time they first became parents (*p=.482*), complications during pregnancy (*p=.658*), the gestational week children were born at (*p=.355*), problems during labour and delivery (*p=.637*), the country children were born in (*p=.687*), children having previously experienced traumatizing events (*p=.167*), parents having previously experienced nightmares (*p=.411*) and this nightmare topic. Looking at sleep and bedtime behaviour there were no significant correlations between the activities children did before falling asleep (watching TV (*p=.744*), reading or having someone read to them (*p=.264*), singing (*p=.418*), brushing teeth (*p=.197*), talking (*p=.522*), praying (*p=.830*), listening to music (*p=.124*), doing things not listed above (*p=.734*)), the hours children slept per night

(*p=.314*), sleeping arrangements (*p=.504*), the time children went to bed (*p=.362*), the time children got up (*p=.299*), whether children slept through the night or not (*p=.140*), the age when children started sleeping through the night (*p=.460*), the time children last ate before falling asleep (*p=.206*) and the nightmare content of self-endangerement. Looking at leisure time there were no significant correlations between the amount of time children spent in front of the computer (*p=.360*), the amount of time children watched TV (*p=.200*), the programs children enjoyed watching (children's programs (*p=.127*), sports (*p=.782*), motion pictures (*p=.641*), TV series (*p=.386*)) and self-endangerement as a nightmare topic. There was a significant correlation between children watching documentaries (*p=.033*) and programs not listed (*p=.016*) and self-endangerement related nightmares, indicating that more than half of the children watching documentaries and two thirds of the children watching programs not listed experienced those nightmares. There was no significant correlation between the nightmare content of self-endangerement and children who played sports regularly (*p=.092*), whether children talked about school or kindergarten (*p=.275*), the contents of these talks (games (*p=.089*), friends (*p=.572*), conflicts (*p=.845*), homework (*p=.861*), teachers (*p=.108*), things not listed (*p=.187*)), the contents of the talks about their friends (games (*p=.165*), conflicts (*p=.560*), different undertakings (*p=.192*), things not listed (*p=.265*)) and the amount of time children spent with their friends outside of school or kindergarten (*p=.940*). There was a significant correlation between the amount of time children talked about their friends and the nightmare topic of self-endangerement, indicating that children who hardly ever or never talked about their friends experienced more of those nightmares (*p=.043*). There was no significant correlation between self-endangerement as a nightmare content and gnder (*p=.859*), having siblings (*p=.245*), the age children first experienced nightmares (*p=.390*), having a TV in the bedroom (*p=.602*), having a cellphone in the bedroom (*p=.187*), suffering from a disease (*p=.170*), having spent more than one week in the hospital (*p=.750*), taking medication regularly (*p=.220*), favourite leisure time activity (meeting friends (*p=.411*), watching TV (*p=.879*), playing on the computer (*p=.076*), reading (*p=.162*), drawing (*p=.730*), doing things not listed above (*p=.593*)). There was a significant correlation between children not enjoying sports in their leisure time and nightmares about self-endangerement, indicating that more than half of those children experienced those nightmares (*p=.047*).There

was no significant correlation between this nightmare topic and generally enjoying sports (*p=.329*), enjoying school or kindergarten (*p=.949*), their favourite thing about school or kindergarten (friends (*p=.473*), teachers (*p=.167*), lunch breaks (*p=.611*), learning (*p=.163*), sports and crafts (*p=.455*), games (*p=.492*), things not listed above (*p=.183*)), things they enjoyed doing with their friends (playing games (*p=.885*), sports (*p=.233*), going to the movies (*p=.991*), watching TV (*p=.409*), playing on the computer (*p=.342*)). There was a significant correlation between nightmares about self-endangerement and enjoying things not listed with their friends, indicating that more than half of the children who enjoyed those things experienced those nightmares (*p=.018*). There was, however, no significant correlation between their favourite game (*p=.506*), meeting their friends outside of school or kindergarten (*p=.359*), having pets (*p=.852*), the amount of pets they have (*p=.393*) and the kind of pet they have (dog (*p=.863*), cat (*p=.318*), rabbit (*p=.127*), horse (*p=.355*), other small animals (*p=.066*), other large animals (*p=.417*)) and self-endangerement as a nightmare content.

Correlation with self-endangerement as a nightmare topic	**p**
Children watching documentaries (half of the children experienced those nightmares)	.033
Children watching programs not listed (eg. cooking shows) (two thirds of the children experienced those nightmares)	.016
Amount of time children talk about friends (children who hardly ever or never talked about friends experienced more of those nightmares)	.043
Not enjoying sports in their leisure time (half of those children experienced those nightmares)	.047
Enjoying doing things not listed with their friends (half of the children experienced those nightmares)	.018

Table 11 Significant correlations regarding the nightmare topic of self-endangerement

Regarding the nightmare topic of criminals and family life there are no significant correlations between parents' marital status (*p=.649*), parents' highest achieved education (*p=.212*), the time they first became parents (*p=.337*), complications during pregnancy (*p=.223*), the gestational week children were born at (*p=.262*), problems during labour and delivery (*p=.578*), the country children were born in (*p=.094*), children having previously experienced traumatizing events (*p=.680*), parents having previously experienced nightmares (*p=.131*) and this nightmare topic. Concerning sleep and bedtime behaviour there were no significant

correlations between the activities children did before falling asleep (watching TV (*p=.434*), reading (*p=.106*), singing (*p=.623*), brushing teeth (*p=.618*), talking (*p=.359*), praying (*p=.389*), listening to music (*p=.359*), doing things not listed above (*p=.325*)), the hours children slept per night (*p=.217*), sleeping arrangements (*p=.102*), the time children went to bed (*p=.301*), the time children got up (*p=.308*), whether children slept through the night or not (*p=.776*), the age when children started sleeping through the night (*p=.473*), the time children last ate before falling asleep (*p=.282*) and the nightmare content of criminals. Looking at leisure time there were no significant correlations between the amount of time children spent in front of the computer (*p=.390*), the amount of time children watched TV (*p=.104*), the programs children enjoyed watching (documentaries (*p=.811*), sports (*p=.263*), motion pictures (*p=.254*), TV series (*p=.171*)) and criminals as a nightmare topic. There was a significant correlation between criminals-related nightmares and children watching childrens' programs (*p=.038*) and programs not listed (*p=.001*), indicating that one third of the children not watching childrens' programs and two thirds of the children watching programs not listed experienced those nightmares. There was no significant correlation between this nightmare content and children who played sports regularly (*p=.698*), the amount of time children spent talking about school or kindergarten (*p=.406*), the contents of these talks (games (*p=.265*), friends (*p=.857*), conflicts (*p=.366*), teachers (*p=.597*)), whether children talked about their friends (*p=.384*), the contents of the talks about their friends (games (*p=.575*), conflicts (*p=.427*), different undertakings (*p=.492*), things not listed (*p=.067*)) and the amount of time children spent with their friends outside of school or kindergarten (*p=.807*). There were significant correlations between the nightmare topic of criminals and children talking about homework (*p=.025*) and about things not listed (*p=.011*) when talking about school or kindergarten, indicating that half of the children who talked about homework and one tenth of the children talking about things not listed experienced this nightmare topic. There was no significant correlation between criminals as a nightmare content and gender (*p=.176*), having siblings (*p=.917*), the age children first experienced nightmares (*p=.275*), having a TV in the bedroom (*p=.153*), suffering from a disease (*p=.225*), having spent more than one week in the hospital (*p=.979*), taking medication regularly (*p=.631*), favourite leisure time activity (sports (*p=.329*), meeting friends (*p=.521*), playing on the computer

(*p=.094*), reading (*p=.571*), drawing (*p=.878*), doing things not listed above (*p=.071*)). There was a significant correlation between criminal-related nightmares and having a cellphone in the bedroom, indicating that one third of the children having a cellphone in their bedroom experienced those nightmares (*p=.031*). There was also a significant correlation between those nightmares and children watching TV in their leisure time, indicating that half of the children enjoying watching TV experienced those nightmares (*p=.019*). There was no significant correlation between this nightmare topic and generally enjoying sports (*p=.258*), enjoying school or kindergarten (*p=.290*), their favourite thing about school or kindergarten (friends (*p=.229*), teachers (*p=.878*), lunch breaks (*p=.821*), sports and crafts (*p=.781*), games (*p=.521*), things not listed above (*p=.977*)), things they enjoyed doing with their friends (games (*p=.063*), sports (*p=.061*), watching TV (*p=.618*), playing on the computer (*p=.381*)). There was a significant correlation between nightmares about criminals and children who enjoyed learning at school or in kindergarten, indicating that one third of the children who enjoyed it experienced those nightmares (*p=.024*). There was also a significant correlation between this nightmare topic and children enjoying going to the movies with their friends, showing that more than half of those children experienced criminals-related nightmares (*p=.020*), and between children doing things not listed above with their friends and those nightmares, indicating that one third of those children experienced those nightmares (*p=.036*). There was, however, no significant correlation between childrens' favourite game (*p=.687*), meeting their friends outside of school or kindergarten (*p=.226*), having pets (*p=.373*), the amount of pets they have (*p=.463*) and the kind of pet they have (dog (*p=.714*), cat (*p=.073*), rabbit (*p=.275*), horse (*p=.918*), other small animals (*p=.666*), other large animals (*p=.594*)) and nightmares about criminals.

Correlation with criminals as a nightmare topic	p
Children watching childrens' programs (one third of the children experienced those nightmares)	.038
Children watching programs not listed (two thirds of the children experienced those nightmares)	.001
Children talking about homework (half of the children experienced those nightmares)	.025
Children talking about things not listed (one tenth of the children experienced those nightmares)	.011
Having a cellphone in the bedroom (one third of the children experienced those nightmares)	.031
Watching TV in their leisure time (half of the children experienced those nightmares)	.019
Enjoying learning in school or kindergarten (one third of the children experienced those nightmares)	.024
Enjoying going to the movies with friends (half of the children experienced those nightmares)	.020
Doing things not listed with friends (one third of the children experienced those nightmares)	.036

Table 12 Significant correlations regarding criminals as a nightmare topic

Regarding the nightmare topic of things not listed and family life there are no significant correlations between parents' marital status (*p=.744*), parents' highest achieved education (*p=.521*), the time they first became parents (*p=.407*), complications during pregnancy (*p=.155*), the gestational week children were born at (*p=.269*), problems during labour and delivery (*p=.293*), the country children were born in (*p=.433*), children having experienced traumatizing events (*p=.729*), parents having previously experienced nightmares (*p=.453*) and this nightmare topic. Looking at sleep and bedtime behaviour there were no significant correlations between the activities children did before falling asleep (watching TV (*p=.963*), reading (*p=.675*), singing (*p=.639*), brushing teeth (*p=.494*), talking (*p=.285*), praying (*p=.476*), listening to music (*p=.382*), doing things not listed above (*p=.665*)), the hours children slept per night (*p=.225*), sleeping arrangements (*p=.104*), the time children went to bed (*p=.235*), the time children got up (*p=.152*), whether children slept through the night or not (*p=.712*), the age when children started sleeping through the night (*p=.485*), the time children last ate before falling asleep (*p=.150*) and the nightmare content of things not listed. Looking at leisure time there were no significant correlations between the amount of time children spent in front of the computer (*p=.173*), the amount of time children watched TV (*p=.146*), the programs children enjoyed watching (children's programs (*p=.621*), documentaries (*p=.052*), sports (*p=.525*), motion pictures

(*p=.620*), TV series (*p=.633*), programs not listed (*p=.620*)) and things not listed as a nightmare topic. There was no significant correlation between this nightmare content and children who played sports regularly (*p=.298*), whether children talked about school or kindergarten regularly (*p=.578*), the contents of these talks (games (*p=.458*), friends (*p=.289*), conflicts (*p=.247*), homework (*p=.949*), teachers (*p=.883*), things not listed (*p=.204*)), whether children talked about their friends (*p=.161*), the contents of the talks about their friends (games (*p=.975*), conflicts (*p=.767*), different undertakings (*p=.545*), things not listed (*p=.767*)) and the amount of time children spent with their friends outside of school or kindergarten (*p=.251*). There was no significant correlation between things other than listed as a nightmare content and gnder (*p=.100*), having siblings (*p=.792*), the age children first experienced nightmares (*p=.301*), having a TV in the bedroom (*p=.305*), having a cellphone in the bedroom (*p=.972*), suffering from a disease (*p=.229*), having stayed more than one week at the hospital (*p=.165*), taking medication regularly (*p=.634*), favourite leisure time activity (sports (*p=.245*), meeting friends (*p=.641*), watching TV (*p=.567*), playing on the computer (*p=.808*), reading (*p=.471*), drawing (*p=.296*), doing things not listed above (*p=.686*)). There was also no significant correlation between this nightmare topic and generally enjoying sports (*p=.139*), enjoying school or kindergarten (*p=.677*), their favourite thing about school or kindergarten (friends (*p=.839*), teachers (*p=.948*), lunch breaks (*p=.923*), learning (*p=.547*), sports and crafts (*p=.502*), games (*p=.499*), things not listed (*p=.172*)), things they enjoyed doing with their friends (games (*p=.095*), sports (*p=.364*), going to the movies (*p=.295*), watching TV (*p=.648*), playing on the computer (*p=.423*), things not listed above (*p=.780*)). There was also no significant correlation between favourite games (*p=.406*), meeting their friends outside of school or kindergarten (*p=.897*), having pets (*p=.204*), the amount of pets they have (*p=.430*) and the kind of pet they have (dog (*p=.757*), rabbit (*p=.650*), horse (*p=.935*), other small animals (*p=.313*), other large animals (*p=.598*)) and nightmares about other things than listed. There was a significant correlation between this nightmare topic and children having a cat as a pet, showing that almost half of the children without a cat experienced those nightmares (*p=.017*).

Correlation with things not listed as a nightmare content	p
Having a cat as a pet (half of the children without a cat experienced those nightmares)	.017

Table 13 Significant correlations regarding the nightmare topic of things not listed

3.13. Nightmares and coping strategies

Regarding the coping strategies there are no significant correlations between nightmare frequency and children waking up their parents (*p=.194*), thinking about the nightmare (*p=.056*), calming themselves (*p=.075*), staying in bed (*p=.164*) and doing things not listed above (*p=.170*). There was also no significant correlation between nightmare frequency and whether children talked about their nightmares or not (*p=.225*). Regarding the parents' reaction, as reported by the children, and nightmare frequency there was no significant correlation between soothing (*p=.097*) and nightmare frequency. There was a significant correlation between parents cuddling with their child when talking about a nightmare and nightmare frequency (*p=.042*), indicating that those children experience nightmares less frequently than children whose parents did not cuddle while talking about a nightmare. There was also a significant correlation between parents talking with their children about the nightmares and nightmare frequency (*p=.016*), indicating that those children tend to have nightmares less frequently. There was also a significant correlation between parents doing things not listed above and nightmare frequency (*p=.008*), indicating that those children experience nightmares less frequently.

Looking at the parents' answers on how they reacted when their children talked about nightmares there were no significant correlations between nightmare frequency and parents doing nothing (*p=.144*), parents talking (*p=.102*), parents listening (*p=.103*) or parents doing things not listed above (*p=.068*). There was a significant correlation between nightmare frequency and parents cuddling with their children (*p=.013*), indicating that those children are experiencing fewer nightmares than children whose parents do not cuddle with them.

Concerning the parents' reaction when children came and talked about their nightmares at nighttime there were no significant correlations between nightmare frequency and doing nothing (*p=.115*), talking (*p=.209*) and doing things not listed

above (*p=.077*). There was a significant correlation between parents cuddling with their children at nighttime and nightmare frequency (*p=.033*), indicating that those children are experiencing nightmares less frequently. There was also a significant correlation between nightmare frequency and parents soothing their children at nighttime (*p=.035*), indicating that those children tend to experience fewer nightmares.

Correlation with coping strategies	**p**
Cuddling with the child (children experienced nightmares less frequently)	.042
Talking with the children about their nightmares (children experienced nightmares less frequently)	.016
Parents doing things not listed above (children experienced nightmares less frequently)	.008
Parents cuddling with the children while talking about nightmares (children experienced nightmares less frequently)	.013
Cuddling with the children at nighttime (children experienced nightmares less frequently)	.033
Soothing the child at nighttime (children experienced nightmares less frequently)	.035

Table 14 Significant correlations regarding coping strategies

4. Discussion

The main interest of this study was to learn more about nightmares in children and adolescents. 121 children and adolescents and 121 parents were questioned to gain more knowledge about nightmares for the ages between 5 and 15. It was not sure what to expect concerning the contents of nightmares, therefore it was decided to ask children and parents to give written answers to ensure that all possible responses were captured. Statistical evaluation was a bit limited since most of the replies were encoded in a nominal scale. Since most children were not chronically ill and did not experience any traumatizing events, the aims of the study (learning more about nightmares in healthy children and adolescents) could be fulfilled. The questionnaire served as a useful tool to get a good summary of nightmares in children and adolescents. For further research it might be helpful to use the findings of this study for a more detailed questionnaire.

4.1. Epidemiology of nightmares

In contrast to other studies (Fricke-Oekermann & Lehmkuhl 2008; Smedje et al. 1999) nightmares in children and adolescents seem to occur more often than expected, with 88,4% of children and adolescents having previously experienced nightmares. These relatively high prevalence might be explained by the age category of children questioned. Even though we tried to explain the exact definition of nightmares to the children prior to questioning, especially some of the younger children might have included „bad dreams“ in their answers. The mean age for nightmares to start was 5,57 (SD ± 1,943). With 55 girls and 52 boys reporting that they had previously experienced nightmares, there was no difference in gender. Since about as many girls as boys took part in the questioning, a difference in gender was not expected to be found.

The frequency of nightmares was mostly defined as „hardly ever“ (less than once a year), most of the children and adolescents reported that nightmares are something they were not scared of during daytime or when going to sleep. To most parents nightmares do not pose a problem, which might be explained in part with one only third of children not talking about their nightmares with anyone. A

paediatrician was consulted only by few children or families. This might be something to take into consideration, since some children who were scared of their nightmares before going to bed or even during daytime did not talk about their nightmares. Some of the children experiencing nightmares rather frequently also did not talk to anyone else about their nightmares. Therefore it might be advantageous to address this topic during other pediatric consultations or when children and adolescents report general sleeping problems.

One study suggests that the most common nightmares were about imaginary creatures, being kidnapped, harm, death and dangerous animals (Muris et al. 2000), while another study suggests that persons aged 14 and older are experiencing nightmares about falling, being late, being chased or the death of close persons (Schredl 2010). Our findings did differ a little bit, showing that almost one third of nightmares dealt with self endangerement, being followed by fantasy characters in second place, criminals in third place and animals in fourth place. The high ranking of criminals might be due to the increasing amount of time spent in front of the TV and playing computer games. When asked about their favourite games, almost half of the children named a computer game and a big part of those games contained violent scenes. It was also shown that children who named a computer game as their favourite game experienced nightmares more often.

When looking at coping strategies for nightmares the findings of this study showed that younger children went to see their parents more often while older children tended to stay in bed, thought about the nightmare and calmed themselves. The interesting fact was that there was no significant age difference concerning coping strategies. Adolescents tend to go see their parents almost as often as children having experienced nightmares. Even though IRT has been shown to work in the treatment of nightmares (Simard & Nielsen 2009; Schredl 2015) none of the parents or children asked used a similar coping strategy (eg. drawing the nightmare content while talking about it).

Another interest of this study was to see how parents reacted to their childrens' nightmares. There were differences in daytime and nighttime behaviour. During daytime, talking about the nightmares was in first place while at nighttime cuddling and soothing was much more frequent. Since only a small amount of parents did not react to there childrens' nightmares, it could be assumed that the parents'

reaction influences the way children and adolescents experience nightmares and helps them master their nighttime fears.

4.2. Correlates of nightmares

These findings suggest that there might be a genetical component concerning nightmares, with children of parents who had experienced nightmares during childhood experiencing nightmares as well. Concerning the amount of time children and adolescents spent watching TV and playing computer games and the frequency and occurence of nightmares, our correlations were not significant which is also shown in another study (Schredl et al. 2008b). There was a significant correlation indicating that children who enjoy meeting their friends in their leisure time tend to hardly ever experience nightmares. Social encounters might be helpful as children might get a chance to talk about their nightmares with their friends and it might also help them to overcome their fears.

The significant correlation between children talking to their parents or siblings before falling asleep and the reduced nightmare frequency shows that it is important for children and adolescents to be able to talk about their daily life before going to bed to ensure that any problems might be settled. It might also help those children who are scared of possible nightmares before falling asleep, who are more likely to experience nightmares, to express their fears and to maybe reduce nightmares. This could also be associated with the findings that children and adolescents who talk about conflicts when talking about school or kindergarten are experiencing nightmares less frequently.

There was also no significant correlation between health problems and the occurence or frequency of nightmares, which might be explained by the small number of children and adolescents that reported health problems. Further investigation in this area could be useful, since children with chronic diseases tend to spend more time in the hospital being exposed to frightening factors (eg. needles, being seperated from their parents) and therefore might experience more nightmares.

Since the nightmare contents were splitted into many different groups and the single groups contained only few individuals, these findings were mostly not

significant. It might be useful to perform further questioning about nightmare topics on a larger group of children and adolescents.

4.3. Outlook

These findings support the suggestion that nightmares occur quite often in healthy children and adolescents. It was also possible to highlight some of the main contents of those nightmares which might be helpful in treating patients and their parents with this particular sleeping disorder. The amount of time spent on questioning children and adolescents and their parents was limited and therefore some answers might no be statistically significant. To learn more about nightmares in children and adolescents, I would recommend further questioning of children and adolescents. Talking and learning more about nightmares and seeing that nightmares are quite common and occur often could also help those being affected by nightmares to talk about them and maybe get help if needed.

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Appendix

Questionnaire for children

Version 1 Nightmares in children and adolescents 10.06.2014

Fragebogen Nr

Allgemeines:
Alter:

Geschlecht:
weiblich männlich

Hast du Geschwister?

Albträume:
Hattest du schon einmal Albträume?

Weißt du noch in welchem Alter diese erstmals aufgetreten sind?

Wie oft hast du Albträume?
.... X wöchentlich .... X monatlich ..... ganz selten

Wovon hast du in diesen Albträumen geträumt?

Gibt es bevorzugte Inhalte, die immer wieder kommen?

Träumst du Dinge die du tatsächlich erlebt hast?

Träumst du Dinge, die du in Filmen bzw. Comics gesehen hast?

Was machst du wenn du einen Albtraum hattest und davon aufgewacht bist?

Erzählst du jemandem / deinen Eltern von den Albträume? Was machen sie dann?

Hast du beim Einschlafen Angst dass wieder Albträume kommen könnten ?

Machen dir die nächtlichen Albträume auch TAGSüber Angst?

Hast du sonstige Probleme mit dem Schlafen?

Hast du deinem Kinderarzt von den Albträumen erzählt? Was hat er /sie dir geraten?

Schlafgewohnheiten:
Was machst du bevor du schlafen gehst?

Schläfst du in einem eigenen Zimmer?

Hast du einen Fernseher / ein Handy im Zimmer ?

Gesundheit:
Hast du irgendwelche Krankheiten?

Warst du schon einmal für längere Zeit im Krankenhaus?

Machen dir die nächtlichen Albträume auch TAGSüber Angst?

Hast du sonstige Probleme mit dem Schlafen?

Hast du deinem Kinderarzt von den Albträumen erzählt? Was hat er /sie dir geraten?

Schlafgewohnheiten:
Was machst du bevor du schlafen gehst?

Schläfst du in einem eigenen Zimmer?

Hast du einen Fernseher / ein Handy im Zimmer ?

Gesundheit:
Hast du irgendwelche Krankheiten?

Warst du schon einmal für längere Zeit im Krankenhaus?

Musst du regelmäßig Medikamente einnehmen?

Freizeitgestaltung:
Was machst du am liebsten in deiner Freizeit?

Machst du gerne Sport?

Soziales:
Gehst du gerne in die Schule/in den Kindergarten?

Was gefällt dir am besten in der Schule/im Kindergarten?

Was machst du gerne mit deinen Freunden?

Wieviel Zeit pro Tag verbringst du beim Fernsehen ?

Wieviel Zeit pro Tag verbringst du am PC ?

Welches ist dein (Video-) Lieblingsspiel?

Siehst du deine Freunde auch wenn du nicht in der Schule/im Kindergarten bist?

Hast du Haustiere?

Wenn ja, wie viele und welche?

Informed Consent for children aged 5 to 14

Version 1 (5-14 Jahre) Nightmares in children and adolescents 10.06.2014

Hallo!

Ich heiße Agnes und studiere Medizin. Um das Studium beenden zu können muss ich eine Art „Aufsatz“ schreiben, welcher dann, wie in der Schule, benotet wird. Das Thema das ich mir ausgesucht habe, handelt von Albträumen bei Kindern. Der Titel meiner Arbeit lautet „Nightmares in children and adolescents“. Um mehr darüber herauszufinden, möchte ich möglichst vielen Kindern ein paar Fragen stellen und ich würde mich sehr freuen, wenn auch du teilnehmen würdest. Selbstverständlich können wir jederzeit damit aufhören wenn du keine Lust mehr hast.
Wir werden die Fragen gemeinsam durchgehen und wenn du dich irgendwo nicht auskennen solltest, werde ich dir helfen die Frage besser zu verstehen. Das ganze dauert nur eine halbe Stunde.
Deine Eltern können während der ganzen Zeit natürlich bei dir bleiben und dir natürlich auch beim Beantworten der Fragen helfen. Sie bekommen auch einen Fragebogen für Erwachsene und nehmen somit auch an der Arbeit teil.
Solltest du noch irgendwelche Fragen haben, so kannst du sie mir gerne jederzeit stellen. Auf dem Brief für deine Eltern steht auch eine Adresse unter der du mich erreichen kannst.

Vielen Dank, dass du mir bei meiner Arbeit hilfst!

Informed Consent for aged 14 and older

Version 1 Nightmares in children and adolescents 10.06.2014

Hallo!

Ich heiße Agnes und studiere Medizin. Um das Studium beenden zu können muss ich eine Art „Aufsatz“ schreiben, welcher dann, wie in der Schule, benotet wird. Das Thema das ich mir ausgesucht habe, handelt von Albträumen bei Kindern. Der Titel meiner Arbeit lautet „Nightmares in children and adolescents“. Um mehr darüber herauszufinden, möchte ich möglichst vielen Kindern ein paar Fragen stellen und ich würde mich sehr freuen, wenn auch du teilnehmen würdest. Selbstverständlich können wir jederzeit damit aufhören wenn du keine Lust mehr hast.
Wir werden die Fragen gemeinsam durchgehen und wenn du dich irgendwo nicht auskennen solltest, werde ich dir helfen die Frage besser zu verstehen. Das ganze dauert nur eine halbe Stunde.
Deine Eltern können während der ganzen Zeit natürlich bei dir bleiben und dir natürlich auch beim Beantworten der Fragen helfen. Sie bekommen auch einen Fragebogen für Erwachsene und nehmen somit auch an der Arbeit teil.
Solltest du noch irgendwelche Fragen haben, so kannst du sie mir gerne jederzeit stellen. Auf dem Brief für deine Eltern steht auch eine Adresse unter der du mich erreichen kannst.

Vielen Dank, dass du mir bei meiner Arbeit hilfst!

Ich habe den obigen Brief gelesen und verstanden. Mit meiner Unterschrift bestätige ich, dass ich mit der Teilnahme an dieser Studie einverstanden bin.

Datum, Unterschrift

Questionnaire for parents

Version 1 Nightmares in children and adolescents 10.06.2014

Fragebogen Nr

Allgemeines
Alter

Geschlecht
männlich weiblich

Familienstand
verheiratet/in einer Partnerschaft geschieden alleinerziehend verwitwet

Höchste abgeschlossene Ausbildung
Pflichtschule Lehre Matura Studium Sonstiges, nämlich

Mit welchem Alter wurden Sie zum ersten Mal Eltern?

Gab es in der Schwangerschaft Komplikationen?

In welcher Schwangerschaftswoche wurde Ihr Kind geboren?

Gab es bei der Geburt Komplikationen?

In welchem Land wurde Ihr Kind geboren?

Hatte Ihr Kind in seinem bisherigen Leben traumatisierende Erlebnisse (z.B: Kriegserlebnisse, Missbrauchserlebnisse, etc.)?

Albträume:
Wie oft erzählt Ihr Kind von Albträumen?

.... X wöchentlich .... X monatlich ..... ganz selten

Wovon erzählt Ihr Kind wenn es von Albträumen erzählt?

Was machen Sie wenn Ihr Kind Ihnen von einem Albtraum erzählt?

Was tun Sie wenn Ihr Kind in der Nacht kommt und von einem Albtraum berichtet?

Gibt es einen Elternteil mit dem Ihr Kind bevorzugt über Albträume redet?

Hatten Sie als Kind Albträume?

Wenn ja, wovon haben diese gehandelt?

Was glauben Sie ist die Ursache für die Albträume ihres Kindes ?

Haben Sie dem Kinderarzt von den Albträumen erzählt ? Was hat er /sie Ihnen geraten ?

Empfinden Sie die Albträume Ihres Kindes als Belastung ?
Wenn ja, graduieren Sie von 0 (gar nicht) bis 5 (schwere Belastung)

Was tun Sie wenn Ihr Kind in der Nacht kommt und von einem Albtraum berichtet?

Gibt es einen Elternteil mit dem Ihr Kind bevorzugt über Albträume redet?

Hatten Sie als Kind Albträume?

Wenn ja, wovon haben diese gehandelt?

Was glauben Sie ist die Ursache für die Albträume ihres Kindes ?

Haben Sie dem Kinderarzt von den Albträumen erzählt ? Was hat er /sie Ihnen geraten ?

Empfinden Sie die Albträume Ihres Kindes als Belastung ?
Wenn ja, graduieren Sie von 0 (gar nicht) bis 5 (schwere Belastung)

Haben Sie GENERELL etwas unternommen zur Vermeidung weiterer Albträume?

Schlafgewohnheiten:
Was macht Ihr Kind vor dem Schlafengehen?

Wieviele Stunden schläft Ihr Kind durchschnittlich pro Nacht?

Schläft Ihr Kind in einem eigenen Zimmer? Wenn nein, mit wem teilt es das Zimmer?

Um wie viel Uhr geht Ihr Kind in der Regel ins Bett?

Um wie viel Uhr steht Ihr Kind auf?

Schläft Ihr Kind in der Nacht durch?

Wie alt war Ihr Kind als es in der Nacht durchgeschlafen hat?

Wie viele Stunden vor dem Schlafengehen nimmt Ihr Kind die letzte Mahlzeit ein?

Freizeitgestaltung:
Wie viele Stunden pro Tag spielt Ihr Kind am Computer oder an der Spielkonsole?

Wie viele Stunden pro Tag sieht Ihr Kind fern?

Welche Programme/Inhalte schaut Ihr Kind?

Treibt Ihr Kind regelmäßig Sport?

Gesundheit:
Nimmt Ihr Kind regelmäßig Medikamente ein?

Welche Erkrankungen sind bei Ihrem Kind bekannt?

Soziales:
Erzählt Ihr Kind viel von der Schule/vom Kindergarten?
(fast) täglich mehrmals pro Woche mehrmals pro Monat (fast) nie

Wenn ja, was erzählt es?

Erzählt Ihr Kind viel von seinen Schul- oder Kindergartenfreunden?
(fast) täglich mehrmals pro Woche mehrmals pro Monat (fast) nie

Wenn ja, was erzählt es?

Wie oft trifft sich Ihr Kind außerhalb der Schule/des Kindergartens mit seinen Freunden?

Prognose

Glauben Sie dass die Albträume Ihres Kindes

o mit der Zeit vergehen
o gleich bleiben
o schlimmer werden
o weiß nicht

Informed Consent for parents

Version 1 Nighmares in children and adolescents 10.06.2014

Liebe Eltern!

Mein Name ist Agnes Karnberger und ich bin Medizinstudentin im 4. Jahr. Meine Diplomarbeit (betreut von Primar Univ.-Prof. Dr. Kerbl) handelt von Albträumen bei Kindern und Jugendlichen im Alter von 5 bis 15 Jahren. Der Titel meiner Arbeit lautet „Nightmares in children and adolescents". Da es zum Thema Albträume bei Kindern und Jugendlichen noch nicht sehr viele Informationen gibt versuche ich im Rahmen meiner Arbeit etwas mehr über dieses Thema herauszufinden. Ihre Unterstützung bei dieser Arbeit wäre für mich sehr hilfreich. Selbstverständlich ist die Teilnahme an dieser Befragung freiwillig.

Worum geht es bei dieser Diplomarbeit?
Mittels eines von mir und Prim. Univ.-Prof. Kerbl entwickelten Fragebogens versuche ich näheres zum Thema Albträume bei Kindern und Jugendlichen zu erfahren. Da dieses Thema noch nicht so sehr erforscht ist, hoffen wir etwas mehr darüber erfahren zu können.

Wie erfolgt die Teilnahme an der Diplomarbeit?
Wie bereits oben erwähnt erfolgt die Teilnahme mittels Fragebogen. Dieser wurde von einer Ethikkommission begutachtet und bewilligt. Die Teilnahme dauert etwa eine halbe Stunde und besteht in der Ausarbeitung der einzelnen Fragen. Die Ausarbeitung der einzelnen Fragen wird von mir betreut, sodass eventuell auftauchende Fragen Ihrerseits jederzeit beantwortet werden können.

Wer hat Zugang zu den ausgearbeiteten Fragebögen?
Die Ausarbeitung erfolgt ohne Erfassung und Speicherung persönlicher Daten, es werden also keine Namen oder ähnliche Angaben benötigt. Zu den Fragebögen haben nur Univ.-Prof. Kerbl und ich Zugang.

Ich möchte mich an dieser Stelle nochmals herzlich für Ihre Teilnahme an der Studie bedanken. Sollten noch Fragen auftauchen bin ich unter agnes.karnberger@stud.medunigraz.at jederzeit erreichbar.

Ich habe den obigen Brief gelesen und verstanden. Mit meiner Unterschrift erkläre ich mich mit der Teilnahme an der Studie einverstanden und bestätige, dass auch mein Kind an dieser Studie teilnehmen darf.

Datum, Unterschrift