

R



E

M

a research report on the dreams children  
have when they experience trauma

BY: CHANELLE MILLER





# Table of Contents

<b>04</b>	ABSTRACT	<b>18</b>	DESIGN SOLUTIONS
<b>05</b>	LITERATURE REVIEW	<b>26</b>	DISCUSSION
<b>15</b>	HYPOTHESIS	<b>27</b>	CONCLUSION
<b>17</b>	METHODOLOGY	<b>28</b>	BIBLIOGRAPHY

# Abstract

As represented in my research, traumatic events are a common cause of bad dreams among children. There is ample evidence that children who weren't surrounded by distressing environments in comparison to children affected by harrowing occurrences, are more likely to have less friendly encounters in their dreams. As stated in 'The effect of trauma on dream content – A field study of Palestinian children', the Threat Simulation Theory where threat associated signals are triggered during a dream particularly after a threatening event occurs, is proven to be active amongst most kids who were questioned. Valli, Revonsuo, Päkäs, Punamaki (2006) When comparing that study to The Other as a Nightmare: The Israeli-Arab Encounter as Reflected in Children's Dreams in Israel and the West Bank', we can conclude images and patterns children see after a frightening experienced is lived. Bilu (1989) The studies concluded that 30% of the non-traumatized group of children had said they've never experienced threatening events in their dreams Vali et al (2006) while 90% of children living in the West Bank and Israel said to have dreams with much hostility leading to injuries and death Bilu (1989). In addition, according to 'The American Journal of Psychology' by James Ralph Jewell, patterns of frightful images were found in nightmares among children in stress induced environments. Calkins (1893)

As a consequence, children with post traumatic dreams are more likely to suffer from mental illnesses such as depression and anxiety due to reoccurring bad dreams caused by their previous history of stressful events. Weller, E. B., Shlewiet, B. K., & Weller, R. A. (2003) Although, further research is needed to determine ways in coping with these nightmares.

This thesis takes you through how dreams may look like for children with who've lived through severe trauma and determining design processes to best illustrate their dreams and emotions.

# Literature

# Review

## The history of dreams

Although, sleep was for many centuries a time to be taken away and brought into our greatest fantasies of sex, socializing, and encounters from the supernatural world. Stansell (2006)

The writer of the article decided to challenge this theory and as a result found underlying truths to when someone becomes drowsy. Stansell (2006)

The real pre-modern historians did take interest in making connections from our day-to-day life to dreams. Stansell (2006)

In societies where the community believed in magic and spells, sleep was a time when we can converse with the dead. Stansell (2006)

The author also goes into the American dreams where people

would dream of how to make it to the top and have material success. Although this was just an ideology. Although this was part of the American culture, people were putting their focus on not how to achieve those materialistic things but how to overcome a world full of burden and anxiety. Stansell (2006)

In the Nineteenth century, America was predominantly protestant which means that's they didn't give a lot of thought on dream culture. The reason for that is because people believed your body would go to heaven or hell when you die and not lurking around in people's dreams. Stansell (2006)

It was the Europeans and the Africans who were the most fascinated by dreams. Stansell (2006)

Although the Americans didn't study so much about dreams, it was still a hot topic for many because people believed that it may be a way of telling the future.

"The beloved dead, residents of the more stable realm of the afterlife, were the trusted emissaries of knowledge that could outwit danger and catastrophe"

Stansell (2006)

Dr. Kimmens investigates and interviews the dreams of children from elementary school. Stansell (2006)

## Different Theories on How Dreams are Made

Charles Lamb had always an interest in dreams due to his wild imagination and the frightful dreams he experienced as a child. Daggett (1942) It has not been confirmed yet but it seems that Lamb's current mental state and insanity was provoked by his childhood dreams. Daggett (1942) After seeing Charles Lamb's name come up a couple of times in the article, I decided to do a quick search of his history to make sense of other articles. Charles Lamb was famous for his essays of Elia and for children's book Tales from Shakespeare which was written with his sister Mary Lamb. Calkins (1983) His family showed a history of mental illness in which he was heavily affected by later on. Calkins (1983) It was even found in one of his letters that he was admitted to a mental hospital for six weeks during 1775. Calkins (1983) Although his sister, Mary Lamb, suffered severely from her mental illness creating a traumatic experience for Charles. Calkins (1983) On September 22, 1796, when Mary was in the kitchen preparing dinner, she became upset with her apprentice and started to get physical with the little girl. Calkins (1983) Charles and Mary's mother stepped in and started yelling at Mary which triggered a mental breakdown while her mother continued to yell at her. Calkins (1983) Mary became so upset that she took a knife from the kitchen and

stabbed her mother in the heart. Charles walked in and took the knife out of his mother's heart. Calkins (1983) This not only left Charles to be liable for Mary's actions but to also be scarred for the rest of his life. Calkins (1983) The death of Charles father was also a relief to him because he became mentally unstable after his father suffered a stroke. Calkins (1983)

Charles Lamb was an important theorist I wanted to research on not only because of his fascination towards dreams, but because he has a history that reflects my subject and target audience directly. I wanted to discover how his history mentally and his scarring past events affected his dreams.

Not all of Lamb's dreams were morbid. He said, "Some people have no good of their dreams. like fast feeders, they gulp them too grossly, to taste them curiously. We love to chew the cud of a foregone vision; to collect the scattered rays of a brighter phantasm, or act over again, with firmer nerves, the sadder nocturnal tragedies." Daggett (1942)

According to some evidence, we can predict that Lamb was able to anticipate his dreams.

Concurring to Lamb's philosophy on dreams, he believes that dreams reveal our deep rooted issues which could explain why

dreams can be so morbid and sad for those in troubled affairs. Daggett (1942) "We should Rise with the Lark. Dreams seem to us to have much significance as our waking concerns." Daggett (1942)

In Hawthorne's story, "The Birth-mark", he states, "The mind is a sad state when sleep, The all involving, cannot confine her spectres within the dim region of her sway, but suffers them to break forth, affrighting this actual life with secrets that perchance belong to a deeper one." Daggett (1942)

The difference between Lamb's theory and Hawthorne's theory about dreams is that Lamb welcomes the idea of sad dreams rather than Hawthorne fears it. Lamb's theory was most interesting to me because he saw it as an opportunity for people, mostly those who are aging, to reflect on their dreams and to analyze them in hopes to improve their future. Sort of like seeing a psychologist to map out the deep rooted issues and to provide a solution or new perspective.

Another theorist who brought a more scientific perspective is Burton who was a key source of inspiration for Charles Lamb. Stansell (2006). He didn't have a very big opinion on dreams and that's because he preferred to look at them from a scientific point of view. Stansell (2006). He believed that dreams are a reflection of your environment.

For example, humours, diet, actions, objects, etc. Browne, another one of Lamb's inspiration's had more respect than Burton about dreams and saw them as a powerful tool although he did see them through a scientific perspective as well. Burton believes that dreams stem from physical conditions and recognizable mental disorders.

In complete contrast to other theorists beliefs, Freud considers that dreams act as an escape for people. Stansell (2006) They reflect us visualizing our accomplishments and our wildest fantasies. Stansell (2006) Freud even goes as far as saying that he believes sleep can be a form of telepathic communication. Stansell (2006)

What was devastating to my discovery is that Freud was in agreement with Lamb's saying, "We should Rise with the Lark" which correlates to Lamb's beliefs that dreams can predict your future. Daggett (1942) Lamb had dreams and desires to die and not be living in this world anymore which inspired Freud's thoughts on "an impulse of self-destructions," which is the "manifestation of a death instinct, which can never be absent in any vital process". Daggett (1942)

## The Psychology of Dreams

After exploring many of the different theories about dreams, I wanted to better understand the

psychology and science behind dreams to perhaps have a know if there can be a solution or an explanation as to how children may have nightmares.

According to 'The Psychology of Dreams', there were some cases in which when children chose not to think about their most depressing thoughts/experiences by reading a book or meditating before bed and almost every time, they would not have nightmares. Nelson believes that the power of negative suggestion plays a defining role in your dreams. Jewell (1905)

"Many times I have banished unpleasant thoughts from my mind in order not to dream of them and have succeeded almost every time. At one time in my school life, when very unhappy, if I could entirely banish the thoughts I feared dreaming of, I never dreamed of them; if not, I would spend a horrible night. (Her teacher writes " Two sisters and brother died of same disease, father a suicide, she and mother frail physically. She has a fine mind, an artist, linguist, intellectual grasp unusual. "

Jewell (1905)

When discussing about the feelings one might have the next day after having a dream, about half the candidates said they aren't very much affected, while the other half say they tend to have feelings of depression the following day after having a bad nightmare. Jewell (1905) The

feeling is more present amongst younger children causing them to develop more feelings of fear. Moreover, a little more than half said they have reoccurring dreams. Jewell (1905) During childhood, kids are more likely to have dreams about animals and places and where the animal is chasing the dreamer. Jewell (1905) The study found that when a child is having dreams where they're floating, there's almost always a staircase visible and the dreamer can recognize when they're dreaming. Jewell (1905)

Dreams will differ depending on age. Before the ages of adolescences children will often dream that they are an animal and seeing the dreams happen through an animal's body. Jewell (1905) Later on, more problems will creep up on their dreams, for example, financial issues. Jewell (1905) It was recorded that kids who've grown up in a household where financials were often spoken about, they ended up having dreams where they owned houses of stores or won a lot of money. Jewell (1905)

Different patterns were found in dreams based on where people were from. Jewell (1905) Studies showed that people who are from Minnesota and who were just entering adolescence had very few dreams. Jewell (1905) Over one-third say they couldn't remember their dreams which is unusual because that's the age when children have the most vivid

dreams. Jewell (1905) Those that claimer they never felt an emotion from a dream were most like German or Scandinavian.

Dreams have an explanation behind their causes and there are two subdivisions that in which dreams come together; "the external stimuli coming from the end of organs of sense, and organic muscular sensations." Jewell (1905) Dreams can be changes by the external stimuli. Children are more likely to experience nightmares if they are over-tired. Jewell (1905) This can be cause by sleeping in an uncomfortable or cramped position which will then cause poor circulation or respiratory problems. Jewell (1905)

The slightest thoughts about how a child's day went the day before can appear to be in their dreams the next day. Jewell (1905)

"Dreams are far clearer and more vivid in the calm country than in the noise of London. Change of environment stimulates, and hard mental work increases the tendency to dreams; a stuffy bedroom diminishes their clearness. Persons of well-developed intelligence dream far more frequently -than those of low culture. Dreams of motion, falling, flying, are rare under the age of 9 or 10 year." Jewell (1905)

The fear dream is very common in quite young children; 25 per cent. were of this nature, and



were chiefly of the dread of objectionable men; the fear of animals was more common amongst boys than girls. School activities appeared little in the dreams of children of any age. Jewell (1905)

THE INFO THAT WILL  
HELP ME LINK MY IDEAS  
TOGETHER //

## Study done on Traumatized and Non-Traumatized Children in Palestine

“ When the threat content of dreams of severely traumatized, less traumatized, and non-traumatized children was compared, the frequency of threatening events was found to be the highest in the dreams of the traumatized children.”  
Valli, Revonsuo, Päkäs, Punamaki (2006)

Researchers conducted a study to test the **Threat Simulation Theory**. Their goal was to find patterns in severely and less traumatized Kurdish and non-traumatized Finnish children. Their hypothesis included:  
1. Threats should cause a threat simulation dream in return. Valli et al (2006)

a) Threats should stimulate more dreams and therefore, traumatized children will most likely have more dreams.  
Valli et al (2006)

b) Threats should stimulate more

nightmares that contain additional threats. Valli et al (2006)

2. Threat simulations can cause children to dream about worst case scenarios in their head to prepare themselves for actual threatening life events. Valli et al (2006)

c) In order for the threat simulation to actually be triggered, the threat needs to be targeted towards the actual dreamer or loved ones. Non-traumatized children will dream of a less threatening event occurring to their close friends or family.  
Valli et al (2006)

d) Traumatized children should experience more life-threatening events than those who weren't traumatized. Valli et al (2006)  
Dream Content of Palestinian Children (non-traumatized children)

e) Non-traumatized children will have less of a reaction to the threat in comparison to children who are traumatized. Valli et al (2006)

f) Effective reactions should be practiced more amongst traumatized children. The more dangerous the threat is, the more often the dream self should have a reaction. Valli et al (2006)

### Participants

They conducted the test on 413 Palestinian children and adolescents. 269 of them lived in the Gaza Strip, and 144 lived in a

peaceful part of Galilee, Israel. Valli et al (2006)

The children of Gaza will be referred to as the traumatized group of children. These children lived in harsh environments where they would experience 6 years of curfews for every night, house demolitions, imprisonment, confrontations with soldiers, and detentions. The trauma group consisted of 235 children. Valli et al (2006)

Children of Galilee will be known as the controlled group or non-traumatized children. These types of children were used to living in a more controlled peaceful environment despite living in a Palestinian nation. The controlled group consisted of 121 children. Valli et al (2006)

### Procedure

Researchers decided to test a town and two refugee camps. The town was separated into four areas to make sure that they were conducting tests on all types of economic status. Every third house in the town was visited. Valli et al (2006)

It was important to note that the economic situation was very bad in Gaza and studies found that children were suffering more economic hardships than the Galilean group. In addition, both groups suffered poor education systems although the Galilean village had more military interruptions during school time. Valli et al (2006)

The children were asked to record a diary of their dreams. They were given one sheet of paper each day and were asked to fill out all that they remembered the next morning starting with "Last night I dreamed that..." Valli et al (2006)

### Results from the Study

"The Results show that the trauma group children reported more dreams than the control group children, and that the trauma group children has more threatening events per dream report than the control group children." Valli et al (2006)

"The trauma group children also has a higher percentage of dreams including threats than the control group children." Valli et al (2006)

The trauma group used more words to describe their threats in their dreams than the control group. Valli et al (2006)

"The dream self was the most often threatened person, followed by significant others and insignificant strangers." Valli et al (2006)

When a child who was a part of the control group encountered a threat in their dream, it was most often themselves that were being threatened. As apposed to the trauma group, studies found that the threat was targeted towards

a loved one, a stranger, or their environment. Valli et al (2006)

"The threats of the trauma group were, altogether significantly more severe than the threats of the control group, and especially the trauma group has more psychologically, socially or financially severe threats than the control group." Valli et al (2006)

Reactions to threatening events in dreams were both similar. Valli et al (2006)

"Almost 30% of the non-traumatized children had no threatening events in their dream reports." Valli et al (2006)

They compared this study to a previous one done on Kurdish children and the results were similar. In the Kurdish study, severely traumatized children reported to have longer dreams and 61% used more words to describe their dreams. To conclude the comparison of both studies, "trauma indeed seems to increase the number of dreams reported, dream report length, threat description length, the number of dreams including threats, and the relative amount of threatening events per dream report." Valli et al (2006)

"Dream content is constructed by automatically selecting traces from long term memory, and the memory traces with the highest relative saliency are chosen for simulation." Valli et al (2006)

The Israeli-Arab Encounter as Reflected in Children's Dreams in Israel and the Westbank

More than 2000 dreams were reported from Jewish and Arab fifth to seventh graders living in separate parts of Israel and the West Bank. Of the 2000 dreams, 212 were extracted and analyzed for supporting Calvin Hall's hypothesis that children internalize their emotions and troubles and as a result have an effect on their dreams. The articles also discusses the stereotypes as seen in dreams and the severity of violences and aggression in dreams amongst these children. Bilu (1989)

Research Population Groups  
The research was done on all sorts of Jews and Arabs with different backgrounds and political views in order to assure no bias opinions and to record patterns based on all types of children affected by the war. Some population groups are more severely affected by the war and live in lower income communities. Bilu (1989)

### Method

The method used to conduct the dream research is very similar to the research done on traumatized and non-traumatized Palestinian children. The children from fifth to seventh grade must record up to four of the dreams in a journal shortly after waking preferably in their house. The purpose of this study was to see if they can

learn about these children's lives through their dreams. Bilu (1989)

### Images and Stereotypes

As the study continued, researchers began to notice that some children recorded dreams that included political references in more abstract ways. For example, a boy described that as he was trying to run away from crows, he stumbled into an Arab worker who was trying to block his way. "The association between the birds and the human adversary may be deduced from the Hebrew word-play orvim (crows)-aravim (Arabs)." Bilu (1989) Another boy had a dream that had a reference at the end to Arabs when he took a piece of Arab bread during prayer for a performance for his youth movement. Bilu (1989)

A boy from the urban settlement opened his dream report: "I lived in an Arab town full of criminals." Another boy from immigrant town described how in his dream he went to buy a soft drink in his town and was caught there "by two guys, an Arab and a gangster." The association between Arabs and profligate behavior was naively envisioned by a kibbutz girl: "The terrorists are coming... they kidnap the children of the class and put us all in jail, and they force us to smoke cigarettes and drugs and alcohol." Bilu (1989) The studies also found that the children from the urban settlement had more recurring dreams of the moral gap being

the the Arabs don't know how to speak Hebrew. "In his dream the police seized two Arab criminals and sought to transform them into law-abiding citizens. The dreamer volunteered to 'tame' them:... "and I began to educate them, and I taught them to write Hebrew until they became decent human beings, and they were released and didn't make any troubles and more." Bilu (1989)

The children described the facial expression of the Arabs and Jews to be very "grim, tough, and frightening." Bilu (1989)

They described their dreams in a lot of black and white colours because Muslim Arab dreamers dressed the infidel Jews in black, while the Muslim warriors were dressed in white suits. Bilu (1989)

### Results

Arab children were more likely to encounter Jews in their dreams than the Jewish sector of children who would encounter Arabs. Nineteen percent of the Arab children dreamed of the Jews in their dreams. Seven percent of Jews only experienced encounters of the Arabs. Bilu (1989)

"Given the harsh political reality to which children in Israel and the West Bank are exposed, it is not surprising that hostile interactions dominated the scenes of encounter dreams. Yet the scope and intensity of this trend are overwhelming. The dreams were redolent with aggression, appearing in about

90% of the interactions, while acts of friendliness are rare." Bilu (1989)

"Another boy from the immigrant town described how in his dream he went to buy a soft drink in a grocery store and was caught there "by two guys, an Arab and a gangster." The association between Arabs and profligate behaviour was naively envisioned by a kibbutz girl: "The terrorists are coming...they kidnap the children of the class and put us all in jail, and they force us to smoke cigarettes and to consume drugs and alcohol." Bilu (1989)

The aggression found in the dreams amongst the Jews was very parallel to the dreams the Arabs had. Most of the children's dreams from both sides dreamt that they weren't the instigator. They themselves or their companions were the ones being attacked. There were only one boy they found that dreamt he was the antagonist of the dream. He explained that in one of his dreams he along with other policemen invaded a town with a cannon. When the commodore arrived to the scene, the policeman tried to cover up their illegal use of weaponry and as a result the boy (the dreamer) got caught along with his innocent parents. He remember hearing that he was accused of killed and wounding 400 people and in attempt to defend himself he yelled out, "It's impossible! We killed and wounded 20 at the most." Bilu (1989)

The most common occurrence in dreams (58%) among the Jews is an Arab terrorist attack. The attacks were made in a place the child felt safe for example, their home or their school. Many of the Bilu (1989)

### **The Nature of Interactions in Encounter Dreams**

In about 90% of dreams, aggression and hostile interactions were found in most of these dreams. Only 4% appeared to be friendly encounters. Both Israeli and Arabs both experienced aggression in their dreams which was mostly fuelled by the lack of respect and hatred towards the other culture. The aggression tended to lead to injuries and death. Bilu (1989) Most of the Jewish children dreamt that they were the receivers of aggression but in some other cases they were also the antagonist in the dreams, One kid had dreamt that himself with a group of policemen bombed a neighbourhood with a cannon. When the commander arrived, he arrested the little boy and his innocent parents and claimed that he killed 20. "It's impossible! We killed and wounded 20 at the most." (Page 377) Much military forces were also very prevalent in the dreams. 58% of the dreams encountered a terrorist attack from the Arabs that were targeted towards innocent children in places they thought were safe. Bilu (1989)

### **Why Victims of violence live out their nightmares**

The article starts off by presenting Steven, a six year old child who is a victim of an abusive household. He lives in a foster home and attends a program that provides treatment. His mother has a history of substance abuse and had an abusive boyfriend that would torture Steven. Weller, E. B., Shlewiet, B. K., & Weller, R. A. (2003)

Psychiatrist found tendencies of PTSD that presented in children like Steven and discuss that PTSD dreams occur when a child has been through severe trauma and may also affect their sleep cycle as an adult. Weller et al (2003)

PTSD dreams were found to have more reoccurring traumatic events. Weller et al (2003)

Terrorists force their way into the apartment. Dreamer, equipped with knife and bottle, attacks one of them and retrieves his gun. He shoots another terrorist; the others run away but get caught by the police. Dreamer receives an award for his courage (boy, middle class community).

One-eyed terrorist, dressed in black, penetrates into the apartment and tries to poison dreamer and friends. Father fails to rescue them, but before the intruder carries out his lethal plan he is killed by the police (girl, m.c. community).

Three terrorists in a car sneak into the kibbutz. They hit the sentry at the gate and a few other members, but the other kibbutzniks seize their rifles and kill two of the assailants. The third terrorist takes the dreamer's friend as a hostage but is killed by dreamer (boy, kibbutz).

A group of terrorists take hold of the children house. Dreamer and classmates escape through emergency exits and summon the adults who exterminate the invaders (girl, kibbutz).

While on a bus, in a journey, dreamer and classmates are taken hostage by terrorists but manage to escape. Dreamer and friend hide on top of the bus, then jump on their assailants and wound one of them. Everyone praises their feat of bravery (girl, immigrant community).

Terrorists penetrate the settlement. Dreamer, alone at home with his little sister, sneaks to his father's room, finds his rifle and uses it to disarm the invaders. He ties them and calls the security forces (boy, the Bloc).

A young woman is kidnapped by Arabs in Ma'alot. By diverting their attention dreamer assists the police in rescuing the kidnapped woman and capturing the terrorists (girl, urban settlement).



# Hypothesis

It seems that children experience many nightmares regardless of their upbringing because they have more suspicious fears such as the dark. Although, I believe that children who've grown up in rougher environments and who have experienced hardships during their childhood, are more likely to experience nightmares and less friendly encounters in their dreams. The biggest questions I have that my predictions revolve around is why these nightmares happen? What do they look like for most kids? And how can we best visualize them? I believe that a child's psychology plays a huge factor on how they might dream. For example, our dreams can be linked to mental illnesses such as depression, anxiety, PTSD, schizophrenia, etc. While mental illnesses doesn't solely rely on your environments during your upbringing, certain mental diseases such as PTSD and anxiety can be caused by traumatic events. Based on personal experiences, I think children who are more troubled spend a lot of their time subconsciously thinking about their problems and worries which can lead to an explanation behind their nightmares. I also believe that children who've had difficult experiences, don't always relive their hard times. In fact, I think that children's dreams are more abstract but have deep rooted underlying meaning behind them.

I came to this prediction because growing up, I was bullied pretty often in school and was sexually assaulted at a young age. Though I didn't understand what was physically happening to me and I didn't have an explanation for any of it, I learned that later on, my dreams were all related to somehow being tied down, feeling trapped, and that no one was listening. Five years ago when my interest in dreams really peaked, I became very curious as to what my dreams meant and why I had so many nightmares. I wrote down the dreams that were most reoccurring to me and the dreams that had an impact on me the most. I took away certain elements of what I remember seeing, hearing, and feeling and looked them up in a dream dictionary I got off a shelf from Indigo. I researched words such as ankle, strangling, yelling, and looking away. According to The Dream Dictionary written by Theresa Cheung, ankle and strangling all linked to feelings of being trapped as if I couldn't break free or express myself. As I started connecting the problems I was faced as a child in my life I started to believe that maybe my dreams reflect the deep-rooted issues I couldn't understand as child.

In addition, aside from having suspicions that nightmares might link to misfortunes experienced as a kid, I have questions that perhaps there is more of a scientific reason that's more aligned with the sleep cycles that can explain the nightmares children with harsher upbringings would experience. As mentioned previously, I experienced many nightmares myself as a child although I've never gotten the proper sleep I should have been getting as a child. After several examinations, I learned that I have a deviated septum meaning that I can only breathe out of one side of my nose. Therefore, instead of getting a proper night's rest, my body is focusing on trying to breathe. Sleep is crucial to a human's overall health and mental health and so I wonder if perhaps kids who live in difficult conditions also don't get a full 8 hours of essential rest which causes them to have nightmares and other problems down the line. Furthermore, I believe that these children will be more likely to experience issues with their mental health due to their nightmares creating fears of falling asleep and not getting a proper night's rest. I think the reverse can be said where their traumatizing memories have created depression or PTSD causing them to have more distractions and nightmares when sleeping. Can we prevent children from falling down a bad spiral or sleep and mental illness? Are there resources available to them that they know about? What is the best solution for troubled children to have better sleeps and a healthy mental state.

Lastly, I believe that I'll be able to best visualize children's dreams by reading their stories and drawing them out to the best of my abilities. I believe that many of these kids that live in dangerous environments or go through hardship, relive their memories in their dreams. Therefore, by reading up on their past experiences will help guide my way through designing their nightmares.



# Methodology

## Primary Research

I'll be collecting most of my research from online journals, studies done by psychologists, and analysis on theories presented by famous psychologist/theorists. I relied mostly on JStor for the majority of my articles and studies. I found using Google Scholarly Article Search was also helpful in finding reliable journals. Most of my sources reflected general studies done on dreams as well as articles about the link between PTSD and dreams. My initial research started off by looking into the theories among old theorist like Charles Lamb.

For my design process, I believe I'll need to collect drawings by children with trauma for better accuracy in my final piece.

## Secondary Research

In order to figure out what design method will work best for me to create an experience for people to truly understand what the dreams inspired by the manifestations of trauma among children, I plan on exploring several different forms of visual representation. The first one is playing with projectors in a space and quickly mocking up presentations of abstract images inspired by the dreams. The projectors will display these images in a closed in room on all the walls.

The next exploration will be putting together a website using those images and incorporating sounds and other visual elements that metaphorically relate to the dreams. I'll then test out the website on others and record their reactions. Since I found many summaries of the dreams from children in Palestine, Israel, Germany and Africa, I plan on attempting to quickly draw those summaries and playing around with the outcome to see what visual conclusion I can come up with.

# Design Solutions

## Concept 1

My hope is to best visually illustrate children's dreams for the general public by taking direct elements from children's dreams from my research and compiling them into a panoramic collage that can be viewed in virtual reality. I think that having the user be in a scenario where they can not only see what the child is dreaming but hear and feel the emotions from children with a traumatic past. In addition to this concept, I would like to collect children's drawings in the future to help my design process be more accurate and to perhaps include them in the virtual reality experience.

## Concept 2

Create a website that brings users through the illustrations and stories of traumatized children's dreams. I would like this website to reflect the patterns seen through the children with difficult pasts and share their story in a visual and interactive way. A design piece that inspired this concept is the <http://thingsithought.today/> by Lauren Holden where she takes you through her thoughts as a person with Schizophrenia. I loved her use of typography throughout the site and how users were able to feel the chaos and emotions she feels with the way she plays with type and has it flow through the images. At the very end of the website, there is a call to action with kids help phone that I believe can be a suitable organization for this sort of subject.

## Concept 3

Another concept would be to create an interactive book that displays images to question users and have them scan their phone to bring the images in the book to life. A piece that doesn't necessarily create empathy for users but rather becomes a questionable piece that completely envelopes the subject of traumatized children's dreams. I was very inspired by the Fun House exhibit in Toronto and seeing how all the still illustrations came to life within your phone. I believe books can be very symbolic and reminiscent of childhood innocence and I would like to bring a digital and interactive effect on a form that's so traditional and metaphorical.



# Results

# Statistics about the children living in the West Bank and Israel

Figure 01. and figure 03 are important to put in the first set of statistics because they give the readers a better understanding of who they're interviewing and to validate that the research was done in a fair manner.

Figure 03. provides more information and describes how many encounter dreams the children had according to where they're living. Some areas may suffer from the war more and in other areas they may be facing more problems of poverty. We learn later on that the dreams differ depending on their surrounding and living experiences.

**Figure 01.**

	Israel	West Bank
Jewish groups	Kibbutzim Middle class community Immigrant town	The "Bloc" settlements Urban settlement
Arab groups	Village	Refugee camp

This table shows the specific areas in which they would be doing their research on the Arab groups and the Jewish groups.

**Figure 02.**

	Males	Females	Total	Arabs	Jews
Dreamers	292	352	644	179	465
Dreams	853	1150	2003	565	1438

This table shows the male and females the researchers would be interviewing.

**Figure 03.**

	Jews: kibbutzim		m.c. community		immigrant town		The Block	
	dreamers	dreams	dreamers	dreams	dreamers	dreams	dreamers	dreams
Boys	9	3	8	4	30	11	19	8
Girls	22	7	13	5	20	6	18	5
Total <sup>a</sup>	15	5	11	4	23	7	18	6
	Urban Community		Arabs: village		Refugee camp			
	dreamers	dreams	dreamers	dreams	dreamers	dreams	dreamers	dreams
Boys	33	14	39	16	59	30		
Girls	29	11	31	11	54	26		
Total <sup>a</sup>	31	12	34	13	56	28		

This table reflects the number of males vs. females and how many encountered dreams they had.

# Trauma groups and Controlled groups of Children Living in Palestine

Figure 01. and figure 03. are important to put in the first set of statistics because they give the readers a better understanding of who they're interviewing and to validate that the research was done in a fair manner.

Figure 03. provides more information and describes how many encounter dreams the children had according to where they're living. Some areas may suffer from the war more and in other areas they may be facing more problems of poverty. We learn later on that the dreams differ depending on their surrounding and living experiences.

**Figure 04.**

	Participants		Age		
	<i>N</i>	%	<i>M</i>	<i>SD</i>	Range
Trauma group	<b>235</b>	<b>66</b>	<b>10.8</b>	2.41	5–16
Boys	132	56.2	10.6	2.56	5–15
Girls	103	43.8	11.2	2.19	7–16
Control group	<b>121</b>	<b>34</b>	<b>11.3</b>	2.86	5–16
Boys	61	50.4	11.1	2.79	5–15
Girls	60	49.6	11.5	2.94	6–16

This table reflects the age range between the controlled group vs. the trauma group

## Legend

**M** = 12.1 years vs. 11.1 years

**U** = 71860.0  $p < .05$

**Boldface** = importance

\*It is important to note that thirty-four children from the trauma group and twenty-three from the control group were omitted from the study because of the lack of dream narration or missing data.

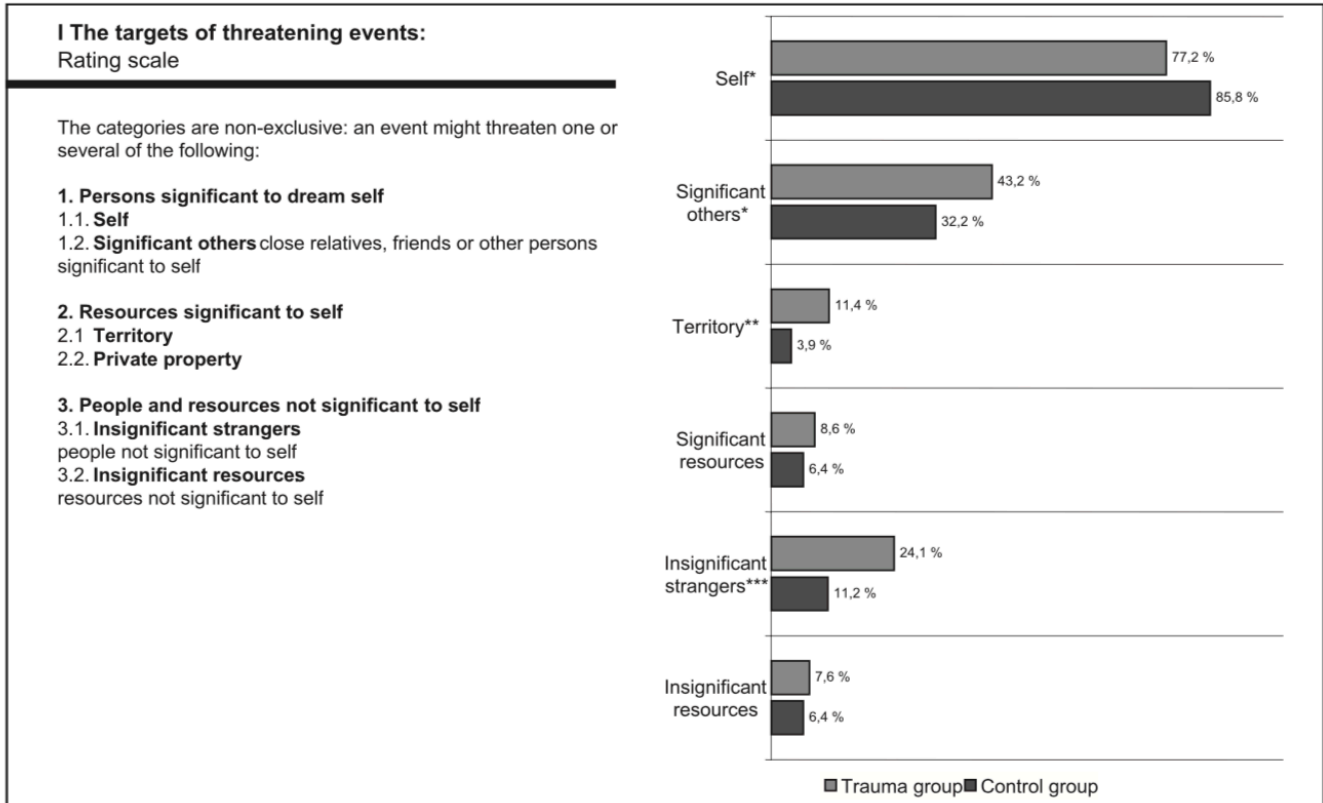
**Figure 05.**

Variable	Words per dream report			Number of words used to describe threatening events	
	<i>M</i>	<i>SD</i>	Range	<i>M</i>	%
Trauma group	41.5***	34.6	1–273	20.1**	45.7
Control group	31.6	30.1	3–222	12.8	38.0

\*\*  $p < .005$ . \*\*\*  $p < .001$ .

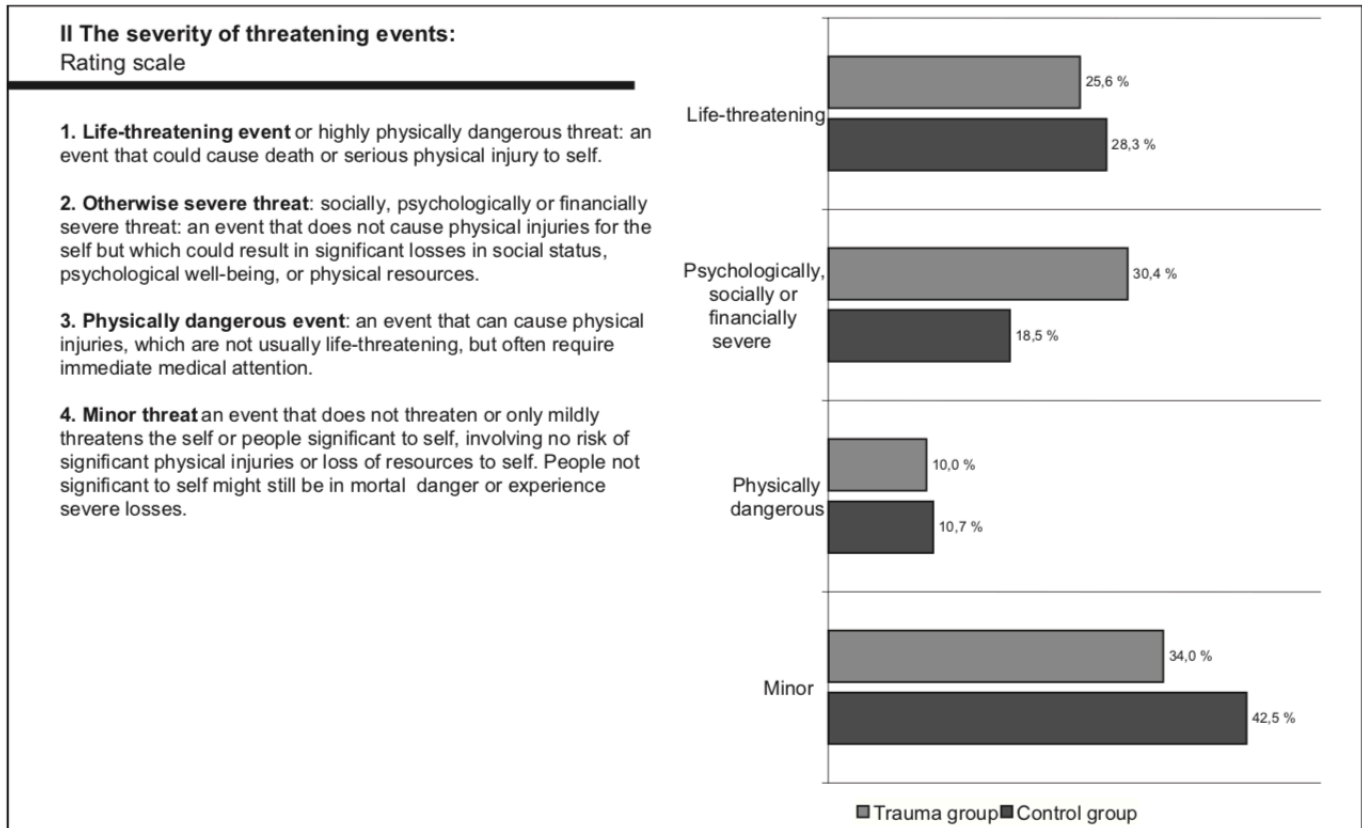
The results show that the trauma group children reported more dreams than the control group children and that the trauma group children has more threatening events per dream report than the control group children. The trauma group children also has a higher percentage of dreams including threats than the control group of children. In the trauma group 22 children and in the control group 35 children has no threatening events in their dream reports.

**Figure 06.**



The bar chart above shows what the child was dreaming and who was being threatened. The dreamer themselves was the most threatened in the control group. In the trauma group, significant others or strangers were more likely threatened.

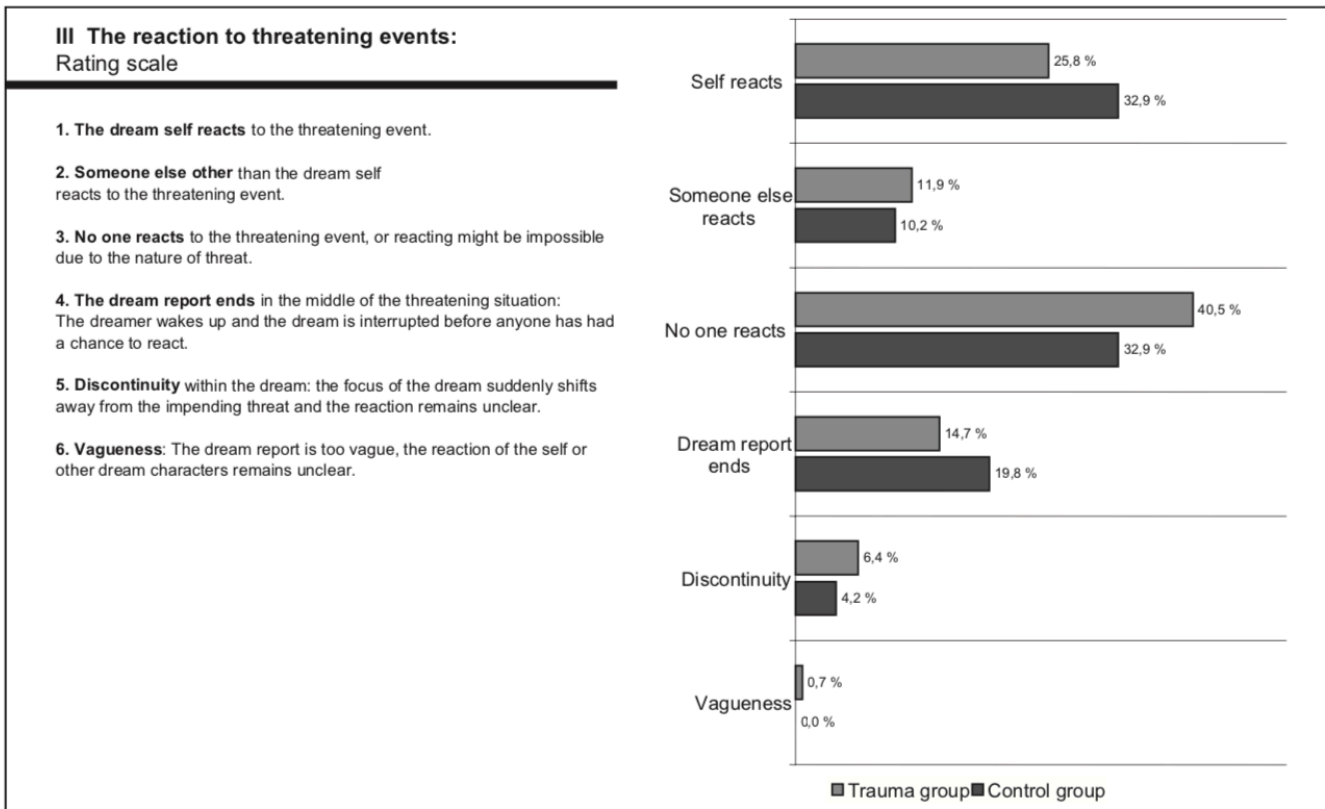
Figure 07.



The bar chart above reflects the nature of the threatening event in their dream. On average, the threats from the trauma group were more severe than the control group.



**Figure 08.**



**Figure 09.**

Dream self reacts vs. doesn't react to the threat	Severity of the threat				N/%
	Life-threatening	Psychologically, socially, or financially severe	Physically dangerous	Minor severity	
<b>Trauma group</b>					
N/ <b>Expected count (%)</b>	<b>243/25.6</b>	<b>288/30.4</b>	<b>95/10.0</b>	<b>322/34.0</b>	<b>948/100</b>
Dream self reacts, %	<b>41.4***</b>	<b>21.7**</b>	11.1	<b>25.8*</b>	244/100
Dream self doesn't react, %	20.2	33.4	9.7	36.8	704/100
<b>Control group</b>					
N/ <b>Expected count (%)</b>	<b>66/28.4</b>	<b>43/18.6</b>	<b>25/10.8</b>	<b>99/42.5</b>	<b>233/100</b>
Dream self reacts, %	29.3	21.3	10.7	38.7	75/100
Dream self doesn't react, %	27.8	17.1	10.8	44.3	158/100

Note. Boldface indicates both importance and statistical significance.

\*  $p < .05$ . \*\*  $p < .005$ . \*\*\*  $p < .001$ .

The charts above shows the reactions to teh threat. In the trauma group, the dreamer reacted intensely and significantly more than the control group. Although the trauma group reacted less often to psychologically, socially, and financially related events. There were no huge differences between the frequency of the reactions of the control group and the trauma group.

# Discussion

Children with trauma are more likely to have dreams that reflect their traumatic experiences. The main question I am trying to solve is what do those dreams mostly look like? Are their nightmares curated by their imagination? Are they more vivid than those who haven't had scarring experiences? What do these types of children hear or feel when they have nightmares? Are they reliving their past in other words, do they experience PTSD nightmares?

The research I did in fact does support my findings. I was able to find three articles that gave me relevant information to what dreams look like. The most relevant articles were the ones that spoke about the children living in the West Bank, Israel, and Palestine. In 'The Other as a Nightmare: The Israeli-Arab Encounter as Reflected in Children's Dreams in Israel and the West Bank' spoke about a study done on the Israeli and Arab children living in the war and what their dreams appear to be. While this article included summaries and direct quotes from the children describing their

dreams, they mostly found that aggression was the biggest and most common finding in all the children's dreams. This aggression often lead to violence and death and in many of the scenarios, the dreamers themselves were the victims. I didn't want to solely rely on this one article to answer all my questions and I also wanted to test if the settings had any effect on children's dreams. Therefore I compared it to another case study, 'The effect of trauma on dream content--A field study of Palestinian children Dreaming' As a result, the dreams reported have similar elements to the article about the children living in the West Bank and Israel. The children in both articles were re-living their past traumatic experiences in their dreams. In both cases children were living in a war and majority of them are living in poverty. I learned that in both scenarios that children are vulnerable to the impact of trauma and it heavily effects their dreams negatively. It was rare that a friendly encounter was recorded in a child's dreams in both studies. Although, not all dreams we're a direct replay of their realities.

In many cases, these children dreamt of terrorist and terrible things happening to a loved one in a setting that they felt safe.

The limitations I experienced with my research is that there were only few articles that had direct references to what the children were describing in their dreams. I was expecting to find descriptive journal entries from kids writing about their dreams but I only found summaries of those dreams. If I had more time, I would have reached out to children clinics that specialize in helping kids with PTSD dreams or I would have reached out to kids recovering from a trauma and asked them my own questions. I also would have liked to send out a survey for the general public asking people to share stories about their dreams if they've experienced anything dramatic and scarring in their life.

# Conclusions

As a result, my hypothesis is partly true and proves that children with trauma have more frightful dreams than those who are raised in a more controlled environment. According to 'The Effect of Trauma on Dream Content – A field Study of Palestinian Children' and 'The Other as a Nightmare: The Israeli-Arab Encounter as Reflected in Children's Dreams in Israel and the West Bank', studies show that in about 90% of dreams, aggression and hostile interactions were found in most of these dreams. Only 4% appeared to be friendly encounters. Bilu (1989) When comparing both articles, there are patterns found in the dream diaries amongst children who've experienced severe trauma where they have more encounters of trauma and terror in their dreams than of those in the controlled group or of the children that have never experienced trauma. Based on the studies done in both scenarios, we can conclude that children not only have more nightmares but they experience hostility that often leads to violence and death. The aggression was a reflection on different reasons for

the Palestinians than for the Arabs and Israelis.

Children with rough upbringings tend to have dreams that not only last longer but they are more vivid and tend to have more severe traumas. In support of this finding, 'The American Journal of Psychology' explained that there have been repeating descriptions of frightful images in nightmares among children in stress induced environments. Although it is difficult to conclude exactly what the sensations are like when children with trauma feel or see exactly when they fall asleep. We are able to imagine what they dream as their dreams often reflect their past lived realities. 'The Other as a Nightmare: The Israeli-Arab Encounter as Reflected in Children's Dreams in Israel and the West Bank' provides summaries of the most common dreams children would have such as terrorist intruding in people's apartments or kidnappings of a relative, a friend, or the dreamer themselves.

Although there have been theories about what dreams

mean and why others may have more nightmares than friendly encounters, there has been no direct evidence that proves to have one answer. Further research is still in the process, though studies have shown patterns relating to PTSD dreams and what children encounter after they've been through traumatic experiences and how their PTSD leads them to more mental health issues in adult years.

Further research is needed to determine ways on how to help prevent children's nightmares from becoming reoccurring and to counteract their potential of adopting anxiety and depression tendencies.

# Bibliography

- Bilu, Y. (1989). The Other as a Nightmare: The Israeli-Arab Encounter as Reflected in Children's Dreams in Israel and the West Bank. *The Other as a Nightmare: The Israeli-Arab Encounter as Reflected in Children's Dreams in Israel and the West Bank*, 10(3), 365-389. Retrieved from <https://www.jstor.org/stable/3791354> Accessed: 11-12-2019 01:22 UTC
- Breus, M. J. (n.d.). Why We Dream What We Dream. Retrieved from <https://www.psychologytoday.com/ca/blog/sleep-newzzz/201501/why-we-dream-what-we-dream#targetText=Dreams appear to be influenced,absorbed throughout the waking day.>
- Calkins, M. W. (1983). Statistics of Dreams. *Statistics of Dreams*, 5(3), 311-343. Retrieved from <https://www.jstor.org/stable/1410996> Accessed: 28-10-2019 07:08 UTC
- Wikimedia Foundation. (2019, December 11). Charles Lamb. Retrieved from [https://en.wikipedia.org/wiki/Charles\\_Lamb](https://en.wikipedia.org/wiki/Charles_Lamb).
- Daggett, H. (1942). Charles Lamb's Interest in Dreams. *Charles Lamb's Interest in Dreams*, 4(3), 163-170. Retrieved from URL: <https://www.jstor.org/stable/370529> Accessed: 26-10-2019 17:49 UTC
- Jewell, J. R. (1905). The Psychology of Dreams. *The Psychology of Dreams*, 16(1), 1-34. Retrieved from <https://www.jstor.org/stable/1412227> Accessed: 26-10-2019 17:46 UTC
- Kaminer, D., & Eagle, G. (2010). TRAUMA AND CHILDREN. *Traumatic Stress in South Africa*, 122-145.
- Kirschke, J., & Vliet, W. van. (2005). "How Can They Look So Happy?" Reconstructing the Place of Children after Hurricane Katrina: Images and Reflections. "How Can They Look So Happy?" Reconstructing the Place of Children after Hurricane Katrina: Images and Reflections, 378-391. doi: <https://www.jstor.org/stable/10.7721/chilyoutenvi.15.2.0378>
- Li, S. X., Yu, M. W. M., Lam, S. P., Zhang, J., Li, A. M., Lai, K. Y. C., & Wing, Y. K. (2011, April 1). Frequent nightmares in children: familial aggregation and associations with parent-reported behavioral and mood problems. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3065259/#targetText=Frequent nightmares in children are,economic status, and parental predisposition.>
- Li, S. X., Yu, M. W. M., Lam, S. P., Zhang, J., Li, A. M., Lai, K. Y. C., & Wing, Y. K. (2011, April 1). Frequent nightmares in children: familial aggregation and associations with parent-reported behavioral and mood problems. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3065259/>.
- Puhar, A. (1994). Childhood Nightmares and Dreams of Revenge. *Childhood Nightmares and Dreams of Revenge*, 22-22.
- Stansell, C. (2006). HISTORIC PASSION Dreams. *HISTORIC PASSION Dreams*, (62), 241-255.
- Simpson, L. V. (1953). Insomnia vs. Nightmares. *Insomnia vs. Nightmares*, 27(2), 132-135. Retrieved from <https://www.jstor.org/stable/381909> Accessed: 28-10-2019 07:05 UTC
- University of Warwick. "Frequent childhood nightmares may indicate an increased risk of psychotic traits." *ScienceDaily*. ScienceDaily, 28 February 2014. <[www.sciencedaily.com/releases/2014/02/140228160616.htm](http://www.sciencedaily.com/releases/2014/02/140228160616.htm)>.
- Valli, K., Revonsuo, A., Pääkäs, O., & Punamäki, R.-L. (2006). The effect of trauma on dream content - A field study of Palestinian children. *Dreaming*, 16(2), 63-87. doi: 10.1037/1053-0797.16.2.63
- Weller, E. B., Shlewiet, B. K., & Weller, R. A. (2003). Traumatized children: Why victims of violence live out their nightmares. *Traumatized Children: Why Victims of Violence Live out Their Nightmares*.
- Who was Charles Lamb? Everything You Need to Know. (2017, October 30). Retrieved from <https://www.thefamouspeople.com/profiles/charles-lamb-1013.php>.
- Zeitlin, S. (1975). Dreams and Their Interpretation from the Biblical Period to the Tannaitic Time: An Historical Study. *Dreams and Their Interpretation from the Biblical Period to the Tannaitic Time: An Historical Study*, 66(1), 1-18. Retrieved from <https://www.jstor.org/stable/1454105> Accessed: 28-10-2019 07:07 UTC

