

LYCÉE ERMESINDE MERSCH
MÉMOIRE



IS A CRYING
BABY THE
PRECURSOR
OF A SICK
GROWN UP?

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"If I let him cry, he'll stop sooner or later"

-The unknow women in the bus I took.

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1 INTRODUCTION

1.1 Quote Background and personal motivation

A few months ago, I was sitting in the bus and heard a baby crying. This was a usual happening and the response of the mother to her crying baby was nothing new either. She turned around to another person and said: "If I let him cry, he'll stop sooner or later". This made pop up a few questions in my head: "Yes, the baby will probably stop crying, but will this send unconscious signals to the child?", "Is this a common education method promoted in guides for parents?", and "what is this parenting-thing?".

I decided to dedicate this topic and especially the question "Is a crying baby the precursor of a sick grown-up?" to this Mémoire, because it is not only in my interest to reach a better understanding of how parenting works and what it does to the future grown-up, but also to give grownups, parents, and children an insight in how it works, and why it works this way. The question "Is a crying baby the precursor of a sick grown up?" is led to the extreme in order to figure out to what extend not responding to your child's need can cause harm. The question includes the question whether not reacting to the baby crying can cause trauma or not, which I am going to try and figure out along the research for this work. Also the term 'sick grown up' includes not only mental conditions but also physical illnesses.

Throughout this work I am going to analyse the basic child development and also in regard to their parents and how they raise their children. I am also going to analyse the different brain processes that happen in children whenever their needs are not met and how this can have a long-time effect. As well as why parents base their upbringing methods on commonly spread guides.

So, what can you expect from this work:

- Psychologically and biologically based facts which are giving an insight into child development
- an insight of what struggles parents or legal guardians can face
- Not a guide on how to raise a child

Along this mémoire I am going to alternate between the term's 'mother', 'legal guardians', and 'parents'. For the first chapters in which I am talking about the biological processes during the pregnancy as well as during the birthing I am talking about the biological person who carried the baby. For the rest of this work, I am talking about the people that take the role as a mother.

My main goal with this work is not to put even more pressure on parents but to simply make the reader understand the biological happening and maybe inspire them to act intuitive and with fact-based knowledge around their children.

At the bottom of this mémoire, you can find word explanations of words I used throughout this work in order to understand the different conditions. As well as I often used the short version of condition names throughout this work.

2 SUCCESSFULL GROWN-UPS

2.1 Definition of child development

Child development is the process, period and changes from birth to fully functioning adult. It refers to the sequence of physical, language, thought and emotional changes that happen during a specific time pattern. It includes the process from being totally dependent on their parents or legal guardians to becoming totally independent in a fluent rhythm. Child development is influenced by genetic factors as well as prenatal happenings during a mother's pregnancy and certain circumstances while growing up.

Overall child development, is divided in five categories:

- The cognition which is the perception whether it is visual or auditory; the sustained, focused, or divided attention; the short-term, working, long-term, visual, or auditory memory; and the logical reasoning.
- The social interaction and emotional regulation. Both relate to social language and communication.
- Speech and language which is a tool of understanding and communicating.
- Physical skills is the fine motor skills which is the use of the finger as well as gross motor skills, where you use your whole body.
- Sensory awareness which is the immediate focus and registration on a sensory aspect of your body or the outer or inner environment. It does not include the reaction to it.

Those five aspects can be measured by different scales in order to make sure that a human is developing in the right rhythm and during the right period of time. This is called a 'normative development'. During developmental check appointments the baby or child is examined, and screenings are made. Those screenings are made up of checklists and questionnaires for the parents or legal guardians. This questionnaire includes questions about its child's language, movement, thinking, emotions, and behaviour. These questions are made to figure out if a child has reached certain developmental milestones. If those milestones are not reached in comparison to other children their age, it may be a sign of a developmental disability or delay.

Neurodevelopment disabilities are attention-deficit, hyperactivity disorder, autism spectrum disorders, learning disabilities such as dyslexia, intellectual disability, and Rett syndrome which are lifelong.

A developmental delay can be outgrown and are often caused by premature birth, low birth weight or not getting enough oxygen due to the birth cord. They can also be caused due to poor nutrition, alcohol exposure, drug abuse through the mother, trauma, or other medical conditions such as an ear infection that causes a delay in the communication area.

2.1.1 Stages and their necessity until the age of 1

The first chapter of the book 'Dann ist das wohl psychosomatisch!', shows that child development and brain development happen in the prenatal phase. The author Dr. Med. Alexander Kugelstadt points out that according to the neurobiology not only genes, experiences in the womb before birth, the first parent-child connection, but also stress processing is essential to a human's immune system. A person carrying the baby who is experiencing stress during pregnancy is prone to getting in contact more frequently with cold viruses and may experience regular colds. Thinking, feeling and experience provokes neurone activities in certain brain areas. For example, building a personality happens in the limbic system.

With only eight weeks of pregnancy and a size of 2,5 cm a foetus can receive and perceiving active and passive stimulation. If during pregnancy, the biological mother experiences stress, stress hormones are released and go through the umbilical cord to the foetus. Stress is the active happening

and the release hormones are the passive reaction. 10% of the mother's cortisol levels go through the umbilical cord. Those hormones can cause a rapid heartbeat, which is then transmitted to the unborn baby, they can cause the narrowing of blood vessels which results in a bad oxygen content for mother and foetus. Regular stress hormones like cortisol and adrenaline in higher doses, can cause depressions and/or anxiety disorders that can slowly manifest in a human being.

If those circumstances last a long-time during pregnancy, particular brain regions like the *hippocampus* and *hypothalamus* of the embryo are adjusting to these stress levels and taking it as normal. This results a quicker activation of the stress response as the baby is born.

The construction and development of the brain doesn't stop after being born, but it is an ongoing process where many factors should be included.

In the first year after birth the building of mother-child connection is very important. According to multiple infant research in the past 40 years a baby needs much more than being fed. For example, the right amount of touch from parents, can help their kid to have a better understanding in its body as a teenager. This is also important as a grown up. Receiving and giving physical affection is liberating oxytocin. Oxytocin is an important hormone to encourage to be trustful in relationships of any kind, to be more open-minded, calmer and more confident. It is also proven to reduce the stress hormone cortisol. Immediately after a baby is born medical staff often insists on the so called "skin to skin" method where the baby is laying nude on their mother and fathers' chest for at least 60 minutes. This helps to create an emotional bond and the release of bonding hormones as oxytocin.

A Newborn has seven basic emotions that evolve over time: Being interested, surprised, disgusted, happy, angry, sad and afraid. For each of these emotions the baby has an individual face expression. The baby has a huge repertoire of showing its emotions and communicating its needs: Sound, gesture, screaming and so on. In the beginning he parents now must guess and listen to their intuition what its child could need. If the mother is the primary bond person, it is helpful to often make eye contact with their baby in order to get to know all the different face expressions and to slowly manage the understanding of their baby's needs.

Verbally communicating with the baby is important as well. Listening consciously to the sound the baby makes and trying to figure out what it's needs are encourages the baby to verbally communicate. Listening to the baby and responding when the baby stops, creates a personal conversation. The baby also hears and feels the mother's well-being and emotions through the unconscious changes of her voice. If the mother is stressed and the baby perceives it through her voice, the baby will also release stress hormones and may start to cry in order to communicate its state.

During that period, the baby realises its capability of sending the parents back and forth and keep them away from having a healthy sleep pattern. According to Sigmud Freud this can be called the "primary narcissism" because the baby is experiencing its power.

Back in the days it was a common educational method to not let the baby decide what the parents should do, and so to ignore the baby when it is crying. I am going to analyse this and other common methods in the "guides over guides" chapter.

The phase of the "primary narcissism" is very important for the buildance of self-efficacy and self-consciousness. The feeling of being able to make the environment your advantage is essential in a grown-up's life.

If this phase fails and the mother can't build a connection due to addiction, stress, or crisis's the baby can be prawn to sicknesses. It can lead to a personality disorder with emotional instability or a *narcisstic personality* disorder with many other *psychosomatic symptoms*.

2.1.2 Stages and their necessity until the age of 2

In this time, the baby starts to crawl and realises its capability of going wherever it wants and has its first sense of independency. Even if the toddler feels the need to go further away from the parents and has the allowance to do that he still can return to their bond person whenever it is needed.

According to science, in this time the young kid has its "oral phase" in which he starts to lick and bite on objects. This phase lasts until the end of the age of two. The theory of Sigmund Freud describes the kid's mouth not only as an organ in order to be able to eat, but also as erogenous zone for children and grown-ups. Through the mouth goes the breast milk and later solid food, it so is an early regulator of relationships. If a baby is fed by its bond person, it reinforces trust and reliability that the young kid can feel safe.

The oral phase is important to reach certain milestones. Bringing objects with their hands to their mouth helps to improve and strengthen the hand-eye coordination. Licking on objects can help to strengthen the tongue muscles which is important to develop speech skills later on. Lastly, chewing on objects or solid foods helps with teething and the eruption of the teeth.

If this phase fails, it is possible to develop an *eating disorder*, a lack of self-soothing skills or a low self-esteem.

2.1.3 Stages and their necessity until the age of 4

This phase includes further steps of independency and the creation of individuality. This is called the "anal phase" because the child has no longer to wear a diaper. The child learns to control things, like actively going to the toilet.

The independency on the one hand and still being dependant on your parents, results in a phase of defiance. This phase is a very important milestone in a child's development but is often perceived as negative by the parents. The rebellion is very important in order to learn the skills of conquering power and acting autonomously without losing the mother's love. The child's impulses are the main focus in this phase. In this phase the child may express more feelings of possession and has troubles sharing their belongings with others. They also want to force their wishes and may experience rejections because the mother isn't agreeing on certain things. This results in screaming.

If this phase fails, and parents are not able to cope with this rebellious behavior, the child is not capable of developing a sense of safety whenever it is doing something. As a grown up this means the incapability of taking decisions or not even being aware of your own needs and disputes are led from behind because it feels like there is no safety to openly communicate their needs and fear of losing their person's affection. This can lead up to an being a people-pleaser or even *obsessive-compulsive disorder* or *hypochondriac disorder*.

3 Parenting

3.1 What is a parent

Parenting means raising a child from babyhood to adulthood, in the environment of nurturance, support, encouragement, direction, guidance and love.

If one of those aspects can't be fulfilled this can have a toll on the child.

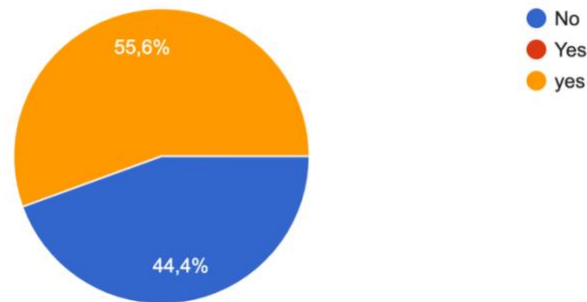
A few reasons why these aspects can't be fulfilled are the following:

- The pregnancy was unplanned,
- The pregnancy influenced the parents' mental health,
- The mother experienced postpartum symptoms like a postpartum depression or has had a traumatic experience during giving birth,
- Feeling of helplessness,
- Or believing in certain upbringing methods promoted in guides.

3.1.1 Fact-check

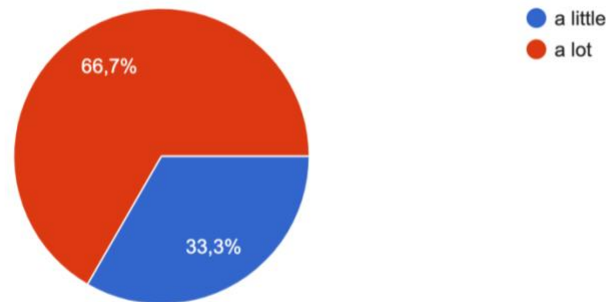
The following survey I created gives an insight on what factors can have a toll on the parents which then can result in mistreating of children. Those factors are not an excuse for certain behaviours and child neglect but are presented in order to visualize that not every parent has the same condition in order to be a successful parent.

-The first question in my survey was whether the pregnancy was planned or not. Those are the responses:



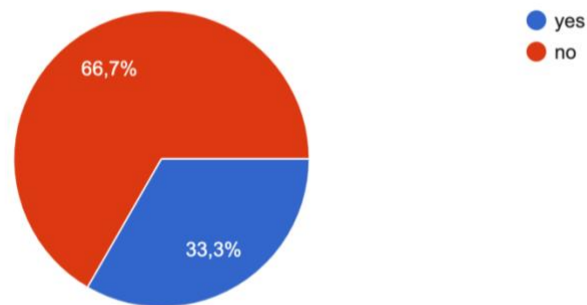
As a result of unplanned pregnancy, the biological mother and the father can have issues identifying themselves with the role as parents and need more time to adapt to the situation and the upcoming responsibility. If this can't be fulfilled this can influence the foetus or the baby because the parents avoid a connection.

-To the question whether this pregnancy affected their mental health this was the result:



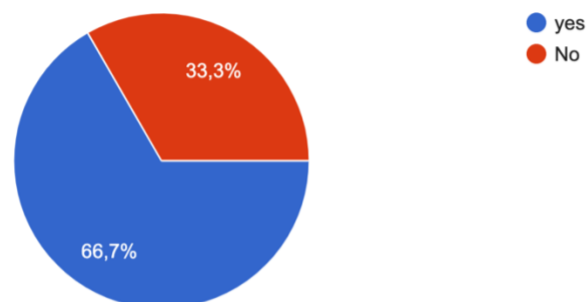
A not fully healthy mental state can cause the parents to neglect the baby.

-Those where the responses to the question if they had postpartum symptoms like postpartum depression



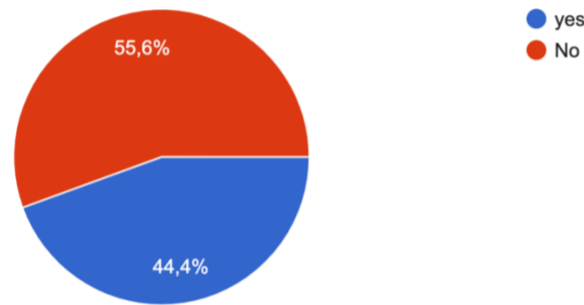
As an example is the postpartum depression which is marked with a lot of symptoms. Those include mood swings, anxiety, trouble of sleeping, suddenly crying or feeling severely exhausted. These can lead to the point where the mother can't give the baby enough affection.

-This result is about whether the parent experienced helplessness whenever their baby cried:

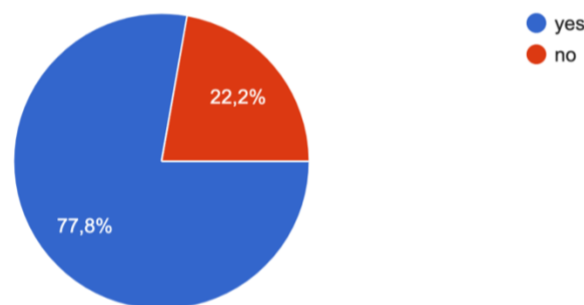


The feeling of helplessness is a commonly spread phenomenon which often lead the parents to feel frustrated and scared. They tend to completely ignore their intuition.

-This is the result of the question whether the parents based their upbringing on methods promoted in guides:



-This is the result of the question if the parents do believe that letting a baby cry without comforting it, has a toll on its mental health later in life:



3.2 Guides over guides

Even though the survey in the previous chapter shows that most parents don't base their upbringing methods on guides, still 44,4% do so. This is a logical consequence if we look at the percentage of parents that feel helpless whenever their baby cries. Guides as books or lessons you can take did not always exist, however since the history of human, people got advice from other people. This is also a common phenomenon in parents. They either ask their parents to receive tips on how to raise their children, or close friends.

One common guide was a book from around the second world war. 1934 the doctor Johanna Haarer published her adviser, *Die deutsche Mutter und ihr erstes Kind*". This book turns out to have great success as it was sold 1,2 million times and used as the fundament of child upbringing and education during the NS period. It was not only used by the mothers but also in kindergarten and other institutions like school.

The goal of this guide was to create an independent grown up who is capable to fight in the German army during the war. Johanna Haarer promoted a low-binding relation between mother and child. She promoted to let the baby cry instead of comforting it, physical contact should be minimised to a minimum, not looking the baby in the eyes, not sleeping with the baby in one bed and not always feeding it whenever it seems to be hungry. She quoted that letting a baby cry will help strengthen their lungs.

She based her methods on three main points. Discipline, in case of the baby crying the mother should stay consistent and resist the natural urge to comfort it. Second, Punishment in order to make the baby understand that crying has no purpose according to Johanna Haaren. And lasty sense of duty, in order to understand what responsibility this baby is once going to carry.

Johanna Haaren main motivation was to avoid the baby becoming a narcissist because it has the unstoppable feeling of willpower. During that time, most were afraid of the, primary narcissism which is one of the reasons why her methods were widely spread.

Till today, those methods have an impact on grownups that have been raised with those standards. This is mostly the case for Germany where till today people are using sentences like, *der Indianer kennt keinen Schmerz*”. This includes and empowers the mentality of emotion repression in order to seem strong and unstoppable.

Karl-Heinz Brisch a psychiatrist and psychologist rejects this theory. He states that a missing reaction to a baby's sound or facial expressions due to a lack of mother baby connection, creates the false reality for the baby that this form of expression is unnecessary. Eventually as a grown up this person will have issues communicating or even spotting their needs.

Another untypical guide is the Tv show „Mein Kind, dein Kind-wie erziehst du denn?”. It started 2015 and presents itself as a Doku soap. The show is about two pairs of parents with their children. One parent typically the mother visits the other family for one day and inspects and judges their parenting skills. The other day the other mother visits the other family. After the two days the parents meet up and discuss about what they disliked and liked about their upbringing methods.

For the audience other families are visible on the screen which are commenting the whole situation and giving their opinion from their couch at home.

This sums up a big number of methods which are not necessarily explained on a pedagogical, psychological basis. This can lead to spreading opinions and explaining them as official proved and researched facts.

As the Tv show does not declare itself as a pedagogically valuable and only as entertainment it automatically distances itself from the responsibility to give useful and factual help. The problematic with this is the misconception of the audience which could take this Tv Show as a guide and adapt those ideas into their daily life and upbringing.

There are thousands of other guides that parents use in order to structure their upbringing methods. The extreme utilisation is a result of being afraid to do something wrong and harm their baby. Those parents that tend to strictly apply a common method, often care a lot about their children's life later when it is grown up. Another issue that comes with parenting and comparing parenting styles is that it nearly becomes competitive as every parent wants to brag with how well raised their child is.

One problematic that comes with hyper focusing in order not to do something wrong is not only becoming severely anxious and feelings of guilt but also ignoring the natural intuition that comes with becoming a parent and losing the joy in acting around your children. As well, as raising a child is not a 'one size fits all' and always should be adapted individually.

Parents often tend to panic whenever they feel like they are failing at their parenting skills and immediately turn to guides instead of analysing the situation and trying out their own ideas. With only and strictly using methods promoted in guides, they don't wait for a reaction to their action. The part of adaption from both sides is missing.

Intuitive parenting aims to arm parents with the confidence and knowledge they need to quit worrying and maximize the beneficial of the time they have with their children. Intuitive parents respond to their children's cues and often react to their children's 'sweet spot', because they act as a team.

4 CRYING BABYS

4.1 Meaning and fact check

As I already wrote about the communication of a baby in the chapter "stages and their necessity until the age of 1" crying is one way of expression.

While a Newborn only has few options on how to communicate crying is one.

Most Newborns cry immediately after being born with their first breath. Not all babies do, but after a few second of not being with their mother, they will start crying. This is an instinctual reaction in order not to get overlooked and being touched or fed immediately after birth if everything went well. Various research show that the first cry is the most intense and loud scream that has evolved till today as a survival mechanism. The first cry is also designated to open the Newborns lungs to function correctly. When the baby is still in the utero amniotic fluid fills the lungs because the baby is not needing the functionality of its lung in the amniotic sac due to the umbilical cord. As the baby is born the squeezing throw the vaginal canal makes the amniotic fluid come out of the lungs. The umbilical cord gets clamped immediately after birth which signals the Newborn that there is no access to oxygen anymore which forces the baby to use its lungs. The baby will cry as long as it needs the scream to liberate excess fluid until it can breathe normally.

Crying is also a reaction to the physical trauma and pain that the baby has experienced from a vaginal birth and the temperature switch, light changes and auditive changes from inside the womb to the outside.

If the baby doesn't stop crying after five to ten minutes this could be a sign of respiratory issues or the baby feeling cold.

After the first short cry and the Newborn being fed, he will stop crying for approximately eight hours because the process of being born is not only very exhausting for the parent but also for the baby.

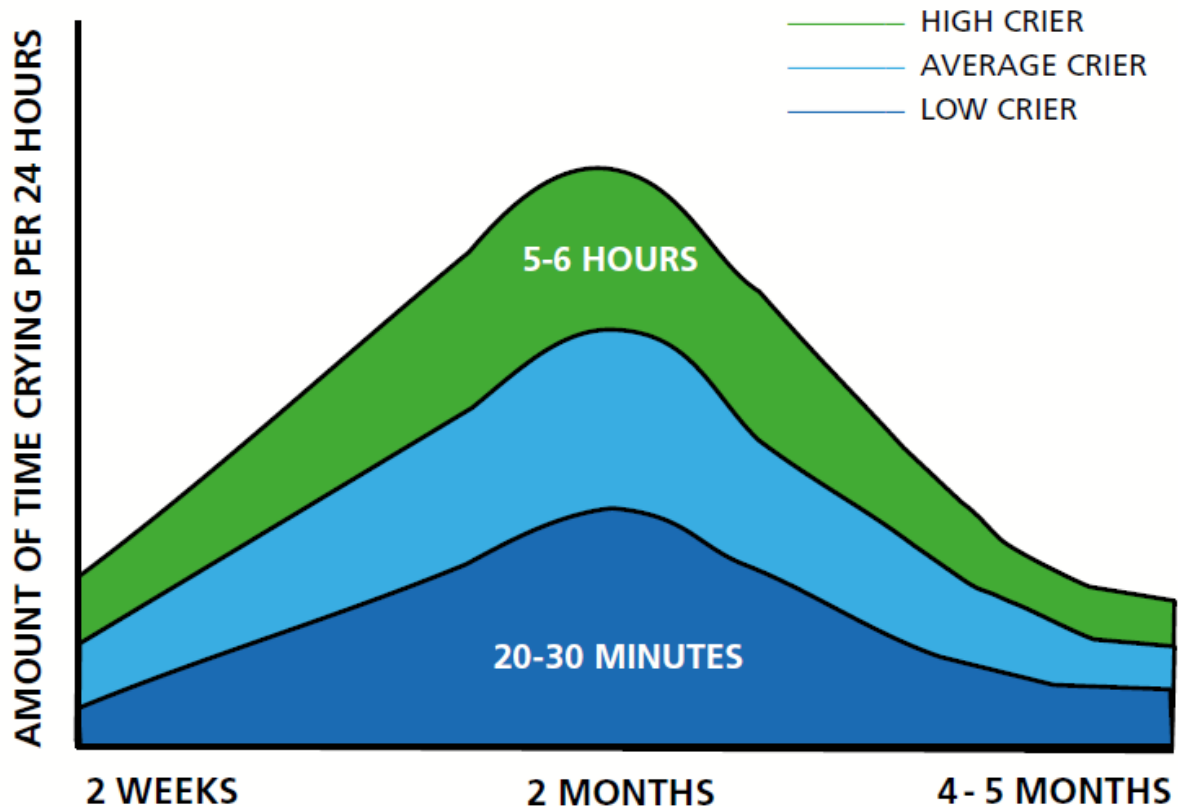
In the first 24 hours after birth the Newborn does not cry a lot. If the baby is crying it's because of hunger, being tired, needing to be closer to the parent, or being too hot or too cold. Parents must now try to guess the baby's needs.

In the next weeks the baby will cry much more especially after around two weeks of age. Their crying gets more frequently and lasts much longer. For most babies the excessive crying happens later in the day around late afternoon because they start to get tired but feel unable to relax. The crying helps to release tension that builds up from being stimulated over the day. The crying episodes can last up to three hours and during those periods it is very important to give the baby attention.

After round eight weeks the crying gets less because its nervous system matures and adapts to exterior influences.

At regular check-ups the crying pattern is also looked over in order to gain an understanding or to have an overview what the reasons for excessive crying could be.

Here is a representation of a normal crying rhythm in a baby.



Barr, R. (1990) The normal crying curve: What do we really know?
Developmental Medicine and Child Neurology.

¹Crying in babies can be a very difficult task to manage for parents that are running low on sleep and not having any privacy but is a very important part. The ability to cry comes with many health benefits. Crying releases stress and emotional or physical pain and liberates the hormones oxytocin and endorphins which makes you feel better after crying. It is also proven that crying helps to develop and increase empathy. Crying is also as important as laughing, being angry, yawning, sweating and trembling. Those things are part of the relief reaction that is replaced as a fully mentally healthy person by expressing verbally.

On the other hand, it is proven that repressing emotions can result in a less resilient immune system, cardiovascular disease, hypertension as well as mental health conditions like excessive stress, anxiety and depression.

If a baby isn't feeling safe to cry because the mother's reaction to the crying transported stress to the baby, those side effects can occur while growing up.

Babies tend to have different cries to express different needs and emotions. When a baby is hungry the crying might be more low-pitched, rhythmic and repetitive. The baby might search for the breast and keeps doing a sucking motion or lip-smacking.

If the baby is tired or feels uncomfortable due to feeling too hot or having a full diaper the crying might be a more nasal and continuous cry that builds up in intensity. This shows that the baby does not want to stay in those circumstances. If the baby needs sleep this might be combined with yawning and eye-rubbing.

¹ http://west-sussex-family-assist.custhelp.com/app/answers/detail/a_id/181/~crying-baby%3A-advice-and-support-for-parents-and-carers (30 April 2022)

If the baby is overstimulated, it might cry more loudly than usual and gets more restless. The baby might turn its head away from the source of stimulation.

If the Baby is bored the crying might start slowly and is a mixture of laughing and crying. If the baby doesn't get the needed attention the crying will get much angrier and louder.

If the baby has a colic the crying may start later in the evenings often around the age of three to four months. The crying is often intense screaming.

Finally, if the baby is sick the crying is much softer as the baby has not a lot of energy. It might also be nasal sounding with a low pitch.

In considering the information in this chapter, letting a baby cry without comforting them can cause harm. If a baby cries and is not comforted, stress hormones like cortisol are released which have an impact on the autonomic nervous system which later can result in cardiovascular health issues like chronically high heart rate, a bad immune system, sleep related issues like *insomnia*, fear of attachment and anxiety, higher risk of osteoporosis or a slow development of cognitive skills and physical growth only to name a few. The body reacts to the hormone's adrenaline and cortisol in a fight, flight or freeze reaction. This is a natural reaction and can be beneficial for a grown up but a in bed lying baby hasn't any benefits. This reaction works the same as named in the chapters "stages and their necessity until the age of 4" and can even result in traumata.

As well as excessive crying physically hurts the baby. Crying and related screams activate the pain receptors in the brain.

5 Sick grown-ups

5.1 Mental health issues and physical impact on the body due to trauma

As mentioned in the previous chapter a non-adequate reaction to a baby crying can result in a trauma which can manifest itself in many ways. In this case it would be a childhood trauma which can cause physical or emotional symptoms. Those symptoms are a result of a *posttraumatic stress disorder and/or a nervous system dysregulation*.

A *ptbs* not only causes symptoms but also occurs in the brain and is an anxiety condition. In order to understand the happenings in the brain I am going to emphasize on the relation between the thalamus, amygdala, hippocampus and the cerebral cortex and their usual reaction to situations.

The *thalamus* is receiving the information our senses like hearing, seeing, tasting, feeling perceive. This happens unconsciously as we are exposed to the environment. The thalamus must filter those information's into categories like important or not important and consciously send them to our perception.

The *amygdala* is responsible for a human's fear while analysing or recognizing a situation and rating its level of danger. In this area of the brain situations are linked up with emotions and saved as rather positive or negative. It also creates emotions without assessment.

The *hippocampus* also called the cool system is responsible for the limbic system and has an arranging effect. Happenings get saved attached to where and when they happened. This area is also responsible for saving those memories from the short-term memory to the long-term memory in someone's cerebral cortex.

The *cerebral cortex* is the area where happenings get saved as memories on a final note.

This is how a healthy brain should be able to respond to certain situation in a norm. If a situation is out of the norm, the brain can't adapt and respond fast enough. This is also what happens during a traumatic event.

In this case the brain gets an overflow of stress hormones which then has an unfavourable effect on the neurons in the brain, especially on the amygdala and hippocampus. Their collaboration is harmed, and emotions, images, and physical reactions get saved but the rational happening can't get saved in the hippocampus. This is called a hippocampal amnesia.

If a trauma is not worked out, the emotional response is higher than the rational one which often results in flashbacks triggered by multiple triggers like the scent of something, the way how bright something is, a sound and many other factors. Those triggers can be exterior and caused by something or someone but they can also be interior like a rapid heartbeat or sweating which then can result in a panic attack, a derealisation, depersonalizing or dissociation.

Trauma can also affect the nervous system which then can result in a nervous system dysregulation. Symptoms may include a disturbed flight, fight or freeze response, rapid heartbeat, tension in the body, or hyperventilation syndrome, constant fatigue, digestive dysfunction, hormone dysfunction, or generally a low immune system.

The following studies reinforce those facts:

researchers interviewed over 17,000 adults in the ACE (adverse childhood experience) study from the 1990s onwards. They looked for physical abuse, sexual and emotional abuse, neglect, violence towards the mother, separation and parental drug use. Two-thirds of the middle-class respondents with a good education and a stable job were found to have experienced at least one trauma, and 12.5 per cent had four or more traumas in the past. The link with the health situation as an adult, such as liver, heart and lung diseases, cancer, bone fractures, later stillbirths, but also nicotine addiction, depression, suicide attempts and sexually transmitted diseases. what is astonishing about this study

is that for most diseases and late consequences, the risk increases quite evenly with the sum of the traumas. This means that even with negative childhood experiences, the dose makes the poison.

Another research published by the American psychological association shows that people who suffer from trauma early in life show biological signs of aging faster than people or children who have not.

The researchers performed a meta-analysis of almost 80 studies, with more than 116,000 total participants. They found that children who suffered threat-related trauma such as violence or abuse were more likely to enter puberty early and showed signs of accelerated aging on a cellular level—including shortened telomeres, the protective caps at the ends of our strands of DNA that wear down as we age. However, children who experienced poverty or neglect did not show either of those signs of early aging.

In a second analysis, McLaughlin systematically reviewed 25 studies with more than 3,253 participants that examined how early-life adversity affects brain development. They found that adversity was associated with reduced cortical thickness—a sign of aging because the cortex thins as people age. However, different types of adversity were associated with cortical thinning in different parts of the brain. Trauma and violence were associated with thinning in the ventromedial prefrontal cortex, which is involved in social and emotional processing, while deprivation was more often associated with thinning in the frontoparietal, default mode and visual networks, which are involved in sensory and cognitive processing.

These types of accelerated aging might originally have descended from useful evolutionary adaptations, according to McLaughlin. In a violent and threat-filled environment, for example, reaching puberty earlier could make people more likely to be able to reproduce before they die. And faster development of brain regions that play a role in emotion processing could help children identify and respond to threats, keeping them safer in dangerous environments. But these once-useful adaptations may have severe health and mental health consequences in adulthood.

The new research underscores the need for early interventions to help avoid those consequences. All the studies looked at accelerated aging in children and adolescents under age 18.

If someone is prone to trauma depends on everyone's level of resilience and their coping mechanism which is often affected by previous happenings and the way, it was handled afterwards. A baby has not yet built resiliency and so is very vulnerable and quickly traumatised.

5.2 Complex trauma and complex post-traumatic stress disorder

Also, it is important to make a difference between trauma and PTSD or complex trauma and complex PTSD. While a PTSD often occurs after one traumatic event complex PTSD happens if someone is in long term exposure to any kind of abuse or if the traumatic event happens multiple times. So said the reaction in the brain happens multiple times.

Complex PTSD can present the same symptoms as mentioned before but there are still differences between PTSD and complex PTSD.

While trauma PTSD often causes flashbacks that remind the person of the happening, complex PTSD has a wider range of affectioning the person's daily life. People who are suffering from complex trauma find themselves in high alert and highly aroused during their day. This reaction can flare up and become chronic and can last up to weeks, months or even years. Also, people that are affected by it typically have a fixed negative worldview because they start believing that the world is a negative place. They also might be attached to the people responsible for their trauma whereas people that experienced trauma once tend to avoid their abusers. Lastly, c-trauma may result in people having troubles maintaining healthy relationships because they lost trust in support systems due to repetitively bad experiences.

Complex trauma is harder to be diagnosed because the chronology of traumatic events can make the trauma seem more subtle whereas one traumatic event in a lifetime can be spotted easier. On top, the symptoms caused by c-ptsd also occur in many other mental illnesses like *bipolar disorder*.

5.3 Manifestation of trauma in young children

Even though people's perception is that children don't face difficulties because they have no obligations studies show that trauma in young age is real.

Young children from birth up to the age of four are depending on their parents or legal guardians for various needs. I am going to pick each need from the pyramid of needs from maslow and explain what could happen if those are neglected in young age.



First the physiological needs which are the things that are essential to surviving like food, water, sleep or shelter. A young child up to the age of four is verbalizing their hunger with crying, if the parent ignores this call for help the crying will increase and the child brain sets stress hormones free which then form the brain to have a higher stress response when grown up.

Neglect of basic needs can cause c-trauma because the child has no or little sense of reassurance that they are going to survive.

Second are the safety needs which include personal security, health and property. If a young child cries because it feels endangered and the parent or legal guardian can't spot the danger because for them it seems like a usual situation, the child can become traumatised and has no sense of safety.

Thirdly the love and belonging section in the pyramid. This includes the feeling of intimacy, family and sense of connection. If a child has no feeling of connection to their legal guardians which can be build u by talking to the child when it is crying as it is mentioned in the chapter "stages and their necessity until the age of one" this can result in feelings of abundance which then can lead to a c-trauma.

The fourth and the fifth section are about building an esteem and self-actualization in which the child can be harmed if not being allowed to build an independency or the allowance to try out unknow things and being able to face new situations. This is often the case with parents that are too focused on the wellbeing of the child and who are afraid of possible dangers. This can also result in c- trauma.

Those examples can result in especially complex trauma or complex pts because the parents or legal guardians' reaction is prolonged over a certain period. If the child's crying is not immediately reacted to once, this does not immediately result in trauma. The neglect can also result in other mental illnesses or *psychosomatic illnesses* and can occur differently depending on what stages the neglect has happened as it is explained in the chapters on stages and their necessity.

Trauma and PTSD manifest equally in children as in adults, but children have less of self-reflective skills which makes it harder for them to spot their symptoms and actively work on them. This means that young children may adopt coping mechanisms that can be spotted by the legal guardians.

Typical changes can be spotted if their child's normal routines change. For example, if they eat less or more, if they change their sleeping pattern or simply if they seem less interested in what they usually invested their interests in.

6 Conclusion

6.1 My take-away

In this mémoire I attempted to answer the question “Is a crying baby the precursor of a sick grown up?”. Throughout my work I focused on the natural child development and on the biological effects every act has on the children. I based my mémoire not only on processes that happen in the brain but also how those brain reactions have a toll on your physical and psychological health.

I got to learn how small acts from parents can have an impact on their baby and their later life but also that this knowledge can lead to obsessively well organised and fact-based parenting which often lacks intuition.

I would declare this work as successful as I found an answer to this question. Even though the answer is not in a clear black and white scheme, I figured that the tendency goes to a yes. I got to learn that a crying baby can be the precursor of a sick grown up. To say it more correctly, a baby that often got neglected by their parents and cried for longer periods can become traumatised and suffer from a post-traumatic stress disorder. This trauma or the complex-trauma can cause other symptoms which can lead a grown up to have several other mental illnesses. This is one of the reasons parents are concerned about doing something wrong and tend to spiral in receiving knowledge from guides. One factor which is on the other hand often forgotten is that you as a biological parent have already a lot of power about your baby's future during pregnancy and your own neglect during pregnancy can also lead the baby to have several mental and physical illnesses as a grown-up.

So said, I believe in doing the best you can with what you have depending on your situation in life. I also believe that those consequences come from parents wanting the best for their children but often losing themselves and their intuition because of lacking faith in themselves. Also I got to learn that parenting and how a baby turns into a grown-up is more often a chain of events that happen during life instead of something you can have full control of.

During the research for this work, I not only got to know more about children and parents but also about myself. While reflecting about the facts and exchanging them with my mother, and her reporting her pregnancy to me, I got to understand a lot of what I now call my Identity and where it is coming from. I also understood how generations are affecting each other especially on how differently my mother grew up in comparison to me which is often a result of uncontrollable happenings in life.

Finally, I realised how much work it takes to turn a child into a grown up and how much my parents were invested in my childhood and development.

With that being said, I want to dedicate this work to every legal guardian, parent, grandparents and people who can take care of children in order to worship their dedication and investment. I also want to dedicate this mémoire every child or grown-up that has not been treated the right way and encourage them that they still have the power to turn their life in what they want it to be.

7 Word explanations and definitions

Hippocampus

- The hippocampus is an area in the brain responsible for memory. The name is derived from the Greek word "hippokampus" in which "hippo" means horse and "kampos" sea monster because of its shape.

Hypothalamus

- a region of the brain below the thalamus which coordinates the autonomic nervous system

Autonomic nervous system

- The autonomic nervous system is part of the nervous system that controls involuntary actions like your heartbeat, the narrowing or widening of your blood vessels.

Narcissistic personality disorder

- the narcissistic personality disorder is a mental disorder in which people have a heightened sense of their importance and need excessive attention

Psychosomatic symptoms/ illness

- Psychosomatic disorder is a psychological condition that leads to physical symptoms without any medical reason. The people affected by it often need medical reassurance by visiting doctors frequently.

Eating disorder

- An eating disorder can be any of a range of psychological disorders often characterized by abnormal change in eating habits like overeating or undereating. There are many eating disorders like anorexia, bulimia and others.

Obsessive- compulsive disorder

- Also called ocd, this mental illness leads to unwanted thoughts that cause a repetitive behaviour called compulsions.

Hypochondriac disorder

- Hypochondria is one of the anxiety disorders which causes people to believe that they have a serious medical condition which then can cause psychosomatic symptoms which reinforce their beliefs.

Insomnia

- Insomnia is an inability to sleep or to obtain sufficient sleep. It is often a symptom of other mental disorders like PTSD.

Posttraumatic stress disorder

- Also called PTSD, is a psychiatric disorder that often occurs in people that have witnessed a traumatic event like a car accident, a traumatic loss of a family member or witnessing war. A PTSD can also occur because of other traumas that may seem less obvious.

Nervous system dysregulation

- A nervous system dysregulation describes the clinical symptoms that come from repeated or prolonged activation of stress

Thalamus

- The thalamus is a part of the brain that filters information between the brain and the body. Sensory impulses are received in this area and send to the cerebral cortex.

Amygdala

- the amygdala is an area in the brain primarily associated with emotional processes. Amygdala is derived from Greek which means almond associated with its structure.

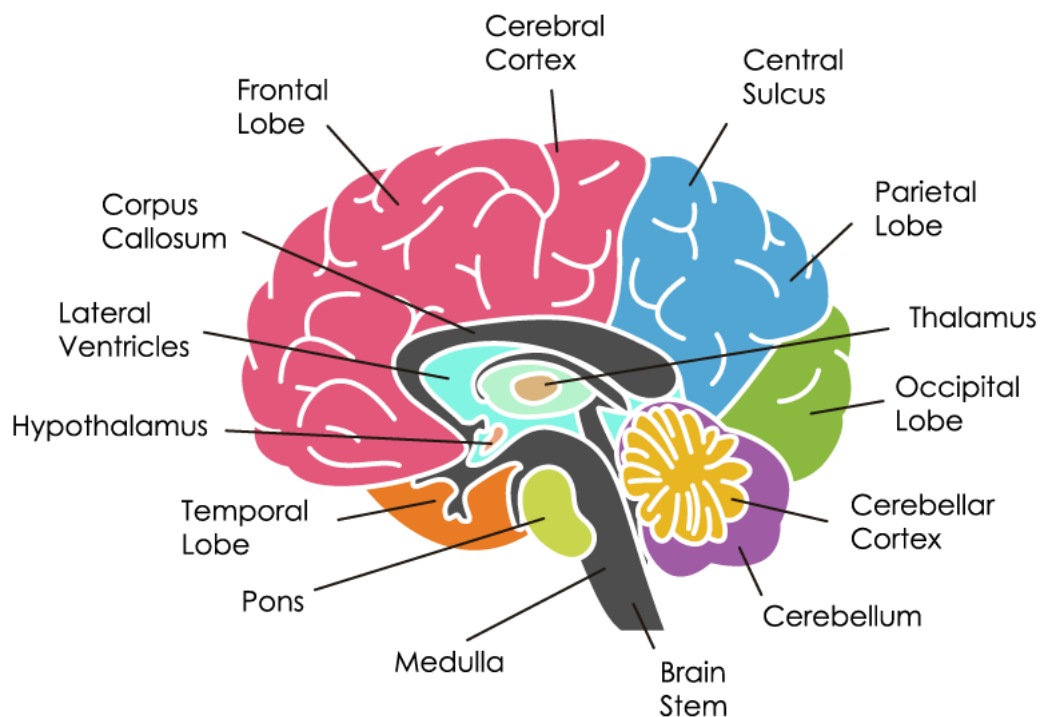
Cerebral cortex

- cerebral cortex is the grey outer layer of cerebrum, which is responsible for language, thinking and creating new ideas

Bipolar disorder

- Bipolar disorder is a mental disorder that causes rapid shifts in mood, energy, activity levels, and concentration.

In the following picture you can see the anatomy of the brain.



2

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