

Investigating the problem of child safety and the psychological affect it has on parents

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This project will tackle the massive issue of baby safety, this topic was chosen because one of, if not the worst thing that could happen to a person would be to lose their child. Babies are so fragile and earnest that they have a tendency to get themselves into trouble all the time and need a lot of protection for the first few years of their lives, as a result the psychological strain on parents is massive. The aim of this project will be to make a product that lessens the stain on parents minds and ensure that less babies get serious injuries or worse.



Literature Review

Injuries that happen to children are to be considered a public health problem. The World health organisation says that in just 2011 it can be estimated that over 630,000 of children under 15 years of age died due to an injury. Although UNICEF (2005) recently held community-based studies which suggests this number could be higher. Injuries in childhood have shown to be associated with higher levels of morbidity. Children that have suffered from a injury of some sort may also then go on to develop disabilities which rob them of their childhood and also rob the families of their children. These children have to learn to cope with repercussions of their injury and in some cases can be profound and lifelong while it is now known that most injuries can be prevented; therefore, the impact of these injuries on society is enormous, so it is in the interests of everyone to develop preventative measures considering most injuries are predictable and preventable.

The classical public health model keeps focus on preventing the likelihood of new injuries which is known as primary prevention, putting an emphasis on early management to reduce the severity of disabilities after the injury (Mohan D 2006). This approach requires identifying factors which are found in the children or family's products that are used and the environment where they are interacting pre-injury known as Haddon's matrix (Haddon Jr W. 1968). For child injury prevention to become successful it would need to excel into making the products and environment safer for children through and system's approach (THE WHO; 2004; 2009]. This would also mean combination of education, emergency care and enforcement, integrated through programmes and policies.

The pain, grief and suffering experienced when a child is lost unexpectedly due to injury and the psychosocial impacts on the family is inestimable. They are left with emotional wounds which can take many years to heal and, in some cases, never do. This pain is amplified even more for the entire family and society if simple measures could have prevented the accident that caused the death. Results from this study by Dyregrov (2003) show that one and a half years after the sudden death of a child due to accident most of the parents were showing symptoms of general health problems, complicated grief reactions and post-traumatic distress which was measured by The General Health Questionnaire, Impact of event scale and the inventory of complicated grief. The results from this study support other research which shows that losing a child suddenly and in in traumatic situations is a truly heart-breaking experience and it most often results in vast, long-lasting psychological impact (Dyregrov & Dyregrov, 1999; Janoff-Bulman & Berge, 1998; Lehman, Wortman & Williams, 1987; Parkes, 1986; Schwab, 1996; Thuen & Schlytter, 1996; Vance et al., 1993). The results from the inventory of complicated grief in this study also show that untimely, sudden and preventable death may lead to syndromes of complicated grief or distorted and delayed mourning, this is in line with other research carried out by Prigerson et al (1995); Prigerson et al (2000) Rando (1994). Cut-off levels for traumatic grief interactions 78% of survivors of accidents in this study were above the zone of risk for maladaptive symptoms of long-term dysfunction and loss. Correlations that were held between the impact of events sub scale of Intrusion and Avoidance and the total sum of scores on The general health questionnaire and the inventory of complicated grief, these show that the highest correlation is between the intrusion subscales and the inventory of complicated grief. This goes onto the supporting the idea that traumatic grief is an integral part of complicated grief. Even if the injuries are not fatal there is often a financial burden put on the parents to be able to provide for special care and medical costs for their severely disabled or injured child. This can create emotional and practical difficulties which are challenging for the families.

Literature Review Continued

It has been found that injury is the leading cause of death in children in many countries. A lot of these injuries happen due to injuries such as drowning, falls and burns that can occur in or around the home. Hopkin and Simpson's (1996) study evaluated whether it is wise use of resources to prevent home injuries. Their starting point they used was road accident values where it was assumed that values for non-fatal injuries were the same. However, because serious injuries that happen within the home tend to be less severe than those sustained in road accidents this assumption does not work in terms of non-fatal injuries. One of the reasons for this may be because they do not require as long of a stay in hospital and they do not need as much time to recover afterwards.

They estimated that £28,830 is the total value for preventing serious home injuries, £3920 for hospitals treating slight injuries and £120 for slight injuries treated by the general practitioner. Fatal injury was the same as road accidents which amounted to a sum of £784,090, taking all of this into account it brings the average value to £9460. Injuries in the home are responsible for 150 deaths per year among the age group of 0-14-year olds which gives an overall value of £118 million. It is estimated that one million children appear in accident and emergency services of British hospitals due to accidents in the home therefore taking the Hopkin and Simpsons value of a home accident, £9460 million could be saved by preventing accidents in the home.

It is no secret that parenting is hard and themes that come up are similar in that when someone becomes a parent there is more opportunity for frustration and worry to kick in when negative emotions take over. A research study from Nelson et al (2013) found that having children is associated with more happiness than unhappiness however it is important to note that it was found that increased satisfaction in parenting was only amongst fathers. This is a common pattern and was also found in another study by Nelson et al (2013) that mothers are more likely to experience negative effects and they tend to experience more stress, fewer positive effects of being a parent, lower satisfaction in parenting, greater depression, fewer positive emotions and a decline in the amount of sleep time. This supports the idea found in a groundbreaking book by Jay Belsky and John Kelly which is called the transition to parenthood. It went on to follow couples which were expecting to children up to three years. It was noted that there are two transition phases into parenthood for most couples. It was found that men reclaim many parts of their pre-child life such as their sleep improving; they return to work; they exercise. However, mothers' lives were found to change a lot more with more time and energy being spent on the child. Mothers were more likely to sacrifice their needs for the child and Fathers were more likely to have their psychological needs met. Parenthood can take a greater toll on a mother's needs because a mother who is devoting all their time to their child will have less time to spend on other relationships.

Stay-at-home mothers may also miss the opportunity to exercise their competence in the workplace and lead them to just label their current occupation as "just a mum". This research shows that a mother can lose themselves a lot more in parenthood and it can take a toll on their health such as more of a likelihood of sleep deprivation and worry to kick in. The reason for this may be that if a mother spends every moment thinking of their child, they may not make any time for themselves or any other relationship; means they have more time to worry about every little thing their child is doing and obsessing over the little things. This will lead them to become more stressed and worried about their child.

In a study conducted by Murray et al (2000) it was found that psychological long-term psychological effects on children can be found with those who have suffered severe injuries and that these psychological effects can bleed into adulthood. These effects can be a hidden cost when investigating the problem of childhood injury. A study by Heptinstall (1996) explored whether there was a need to give emotional support to children who are taken into accident and emergency. Her concluding thoughts determined that children who are not taken into hospital received little or no emotional support other than comfort from the hospital staff and those who are taken in receive little or no support when they are discharged from hospital. Allowances are made for the cost of physical rehabilitation however, there is no allowance made for emotional and psychological problems which they may face even after minor injuries and accidents. This lack of support may lead to further psychological damage experienced by the child in later life.

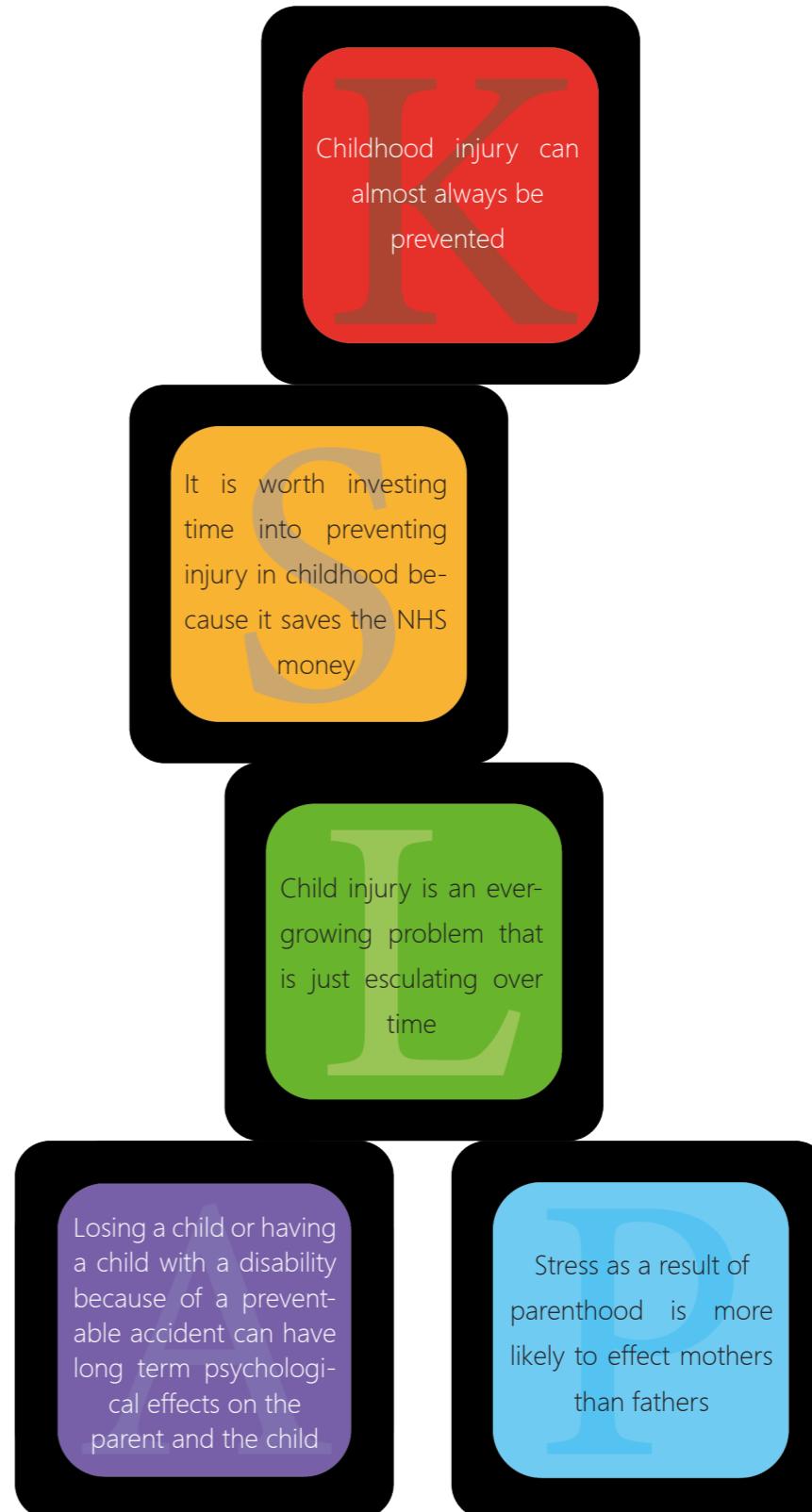


Secondary Research Conclusions and Key Findings

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This research has shown that the impact that preventative measures can have is staggering, such as the money that could be saved by the emergency services, the idea that child injuries can almost always be prevented and the psychological damage on parents and children could be stopped if something were to be done about the lack of pre-emptive measures.

Child injury is also shown closely tied into their health and so should also be one of the central focuses of all initiatives as well as preventative measures in the pursuit to reduce child mortality, disability, morbidity and when trying to improve the development and growth of children. Child injuries are a preventable health problem and not necessarily always random or accidental events; they are predictable to a degree so therefore they can be prevented. This is a public health problem, injuries should not be neglected any longer; it is time to challenge the idea that injury is unavoidable to make room for a preventative pro-active approach to reduce injury mortality globally.



Methodology

Diary Study

The aim of the diary study is to foster a greater understanding of the problems parents face trying to keep their child safe in their day to day lives and how that makes them feel, that information can then lead to achieving meaningful insights that will focus the project on key problem areas.

Strengths of using a diary study

A diary study is one of the chosen methods because, it can give contextual insights about the users' needs and behaviours in real time.

- A great asset is that it gives a large quantity of specific information about the problem space being investigated and allowing it to continue for several days or weeks allows the researcher to understand the problem on a grander scale as opposed to only doing it for one day or a weekend, as that could be an outlier compared to normal.

- People tend to be more closed off when talking to strangers about sensitive subjects such as this one, giving them something like a book with little structure could lead to more meaningful results because they are more willing to write down the truth and more events that would normally be considered too embarrassing to say to an interviewer and understanding those complex emotions is one of the objectives of doing this study.

- Even if during the study the participant doesn't disclose how they feel there should be a list of situations that have caused those negative emotions to come up and this information is invaluable.

Limitations of using a diary study

- One of the biggest downsides to doing this type of study is that it relies so heavily on the participants doing everything correctly. Despite talking through what they need to do for the study and having the information sheet explaining what to do, the participants can; misunderstand and do the study incorrectly, the study could get lost in the post, or the user could forget to fill out the study leaving large gaps in the days which will waste time and money and could lead to a lack of useful results, to counter this problem as many participants as possible will be asked to take the study so in case something goes wrong there is there should be ample results that can be used.

- The other main problem with doing a diary study is; finding the participants to take part. Due to the nature of the study taking place over a longer period than normal and having the participant write is daunting for many people who don't want to take part in something that will take up a lot of time.

Why Diary Studies and Interviews?

These two methods were picked to get the best results by covering each of their weaknesses. Although diary studies provide a lot of invaluable information it will more than likely not get fully explained, interviews allow for more depth in everything they say, and there is a possibility that someone doing a diary study would be willing to have an interview as well so that could lead to a follow up interview where they can be asked about things they wrote and they can elaborate.

What population will be asked to take part?

Anyone that has a new born baby, this could be the mother or the father and the age range could be anywhere from 18 and onwards, there should be a range of candidates to show the extent of parents concerns (some parents might be extremely concerned, and some are a lot more relaxed).

Sampling

In order to get the participants required a range of probability sampling techniques have been used, by targeted parents of new born children certain methods will be used to obtain participants from that audience such as; Street encounters, online parenting groups will be messaged, online request for participants and calling new parent support groups and asking the class at the end of their session. These methods should lead to a variety of different parents willing to take part.

Interviews

The aim of the interviews was to delve deeper into; their stories, how it makes them feel, any feelings of stress need to be explored to find out exactly what part of having a baby is causing them so much stress and what they do to try and alleviate some of those feelings.

Strengths of conducting interviews

Conducting an interview will give a lot of meaningful data other methods wouldn't as the interviewer has much greater flexibility in what to ask and allows them to extract the information necessary from the interviewee. By being in the room/ talking over the phone the interviewer can react in real time, this will allow techniques such as piggy backing and storytelling to be even more effective because if they say a situation that happened that was particularly interesting they can be asked to elaborate as much as required to foster a more complex understanding of a parent's psyche.

Being face to face offers both verbal and nonverbal cues, not only does this give more understanding of how they are actually feeling and their behaviours when talking if they seem to start becoming upset the interview can be paused or ended so the participant doesn't have to suffer.

Limitations of conducting interviews

Interviews typically don't last very long and lead to a very limiting amount of information to use although they can be extremely useful depending on the person being interviewed they could not have much to say or can't think of things on the spot.

When talking to another person people tend to hide things that they don't want others to know, this could pose a problem as this study is very personal and covers very sensitive topics, as a result it could be difficult to find out certain key bits of information

As being face to face can be considered uncomfortable, the amount of people willing to take part in this kind of study could be very limited.



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What if... they
forget about my
baby?

What if... my
baby chokes
on something
they put in their
mouth?



What if...
something bad
happens while
Im away?



What if... they
crawl somewhere
when Im not
looking?

QUESTIONS /
SCENARIOS THAT RUN
THROUGH PARENTS MINDS
WHEN THEY ARE OUT OF THE
HOUSE/ SEPARATED FROM
THEIR BABY.

What if...
something
happens when I am
asleep?

What if... they
get stolen/
abducted?

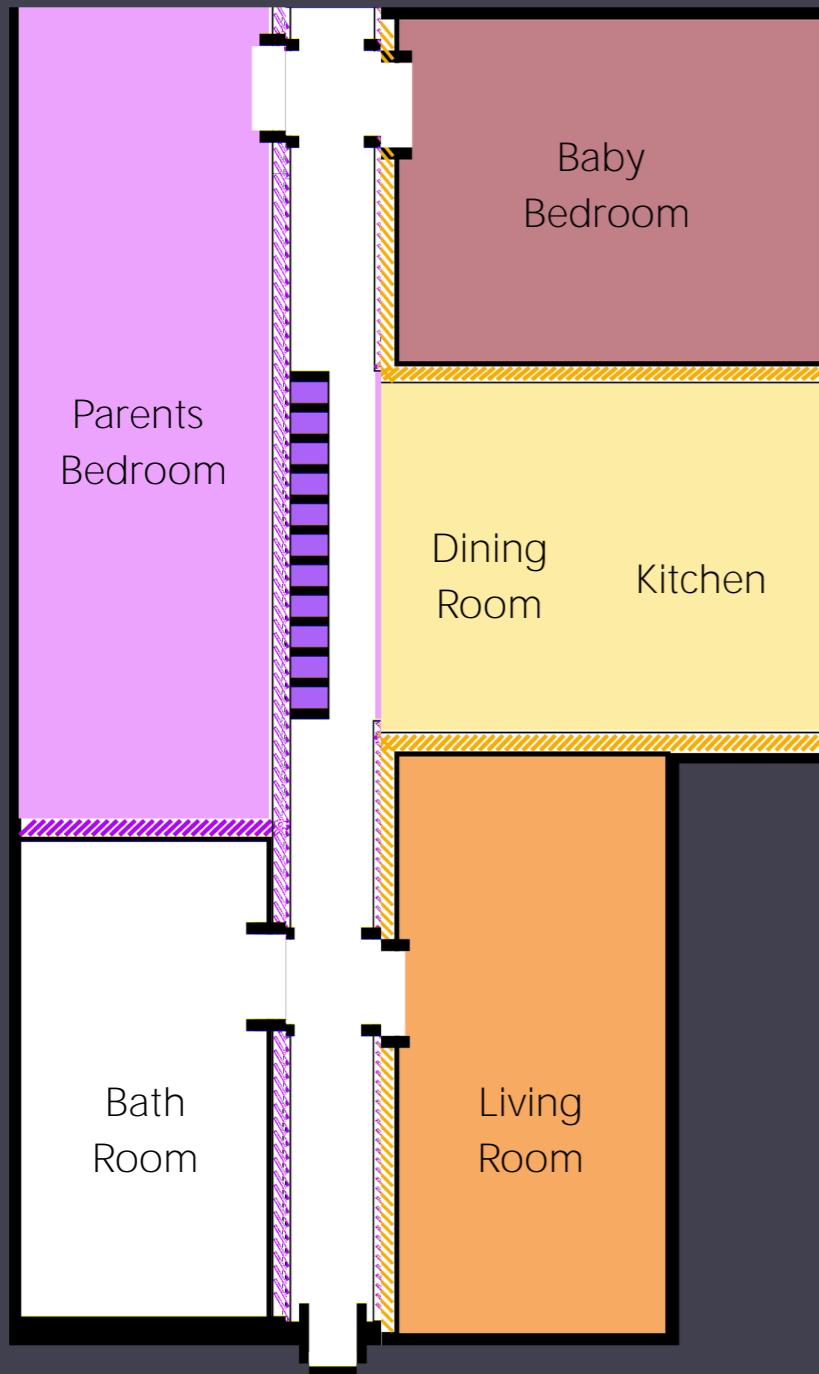
What if... they
start to
overheat?

What if...
they are not
breathing properly?



What if... they put their
hands too far in their
mouth and cannot
breathe?

What if... they fall
and hurt
themselves?

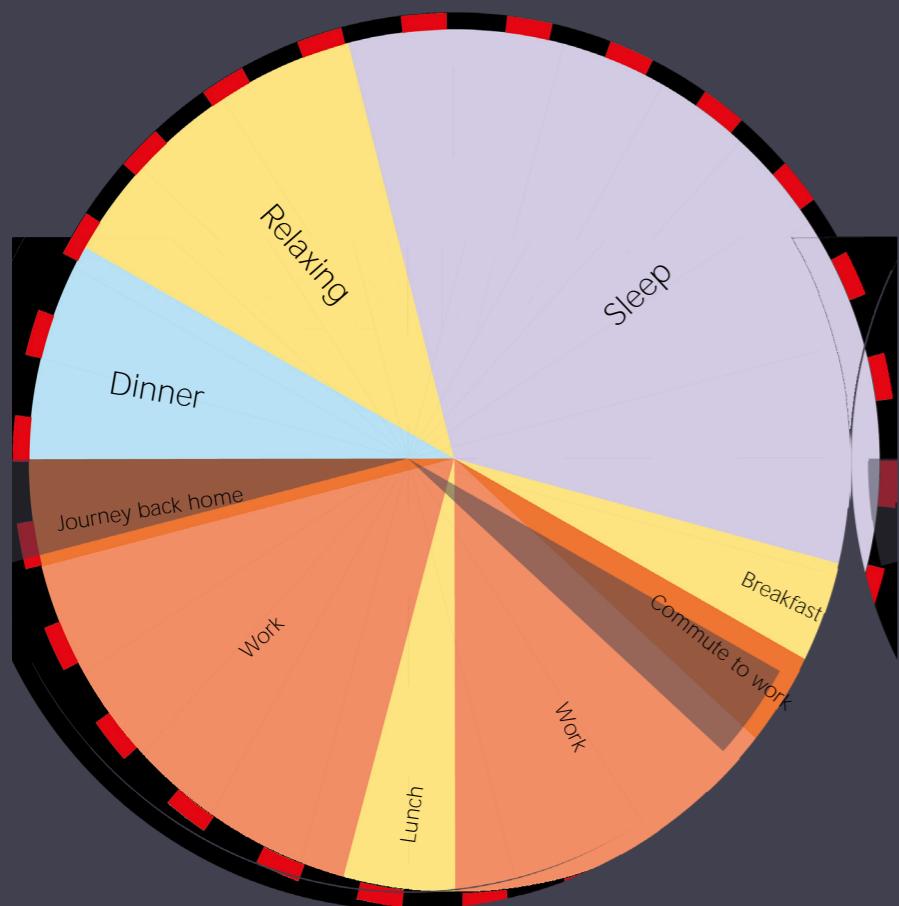


Baby monitors are not reliable

While engaged in other activities the user is distracted and is not always seen throughout the room.

Level of concern: High

HOW MUCH TIME DOES THE AVERAGE PARENT SPEND WORRYING ABOUT THEIR CHILD?



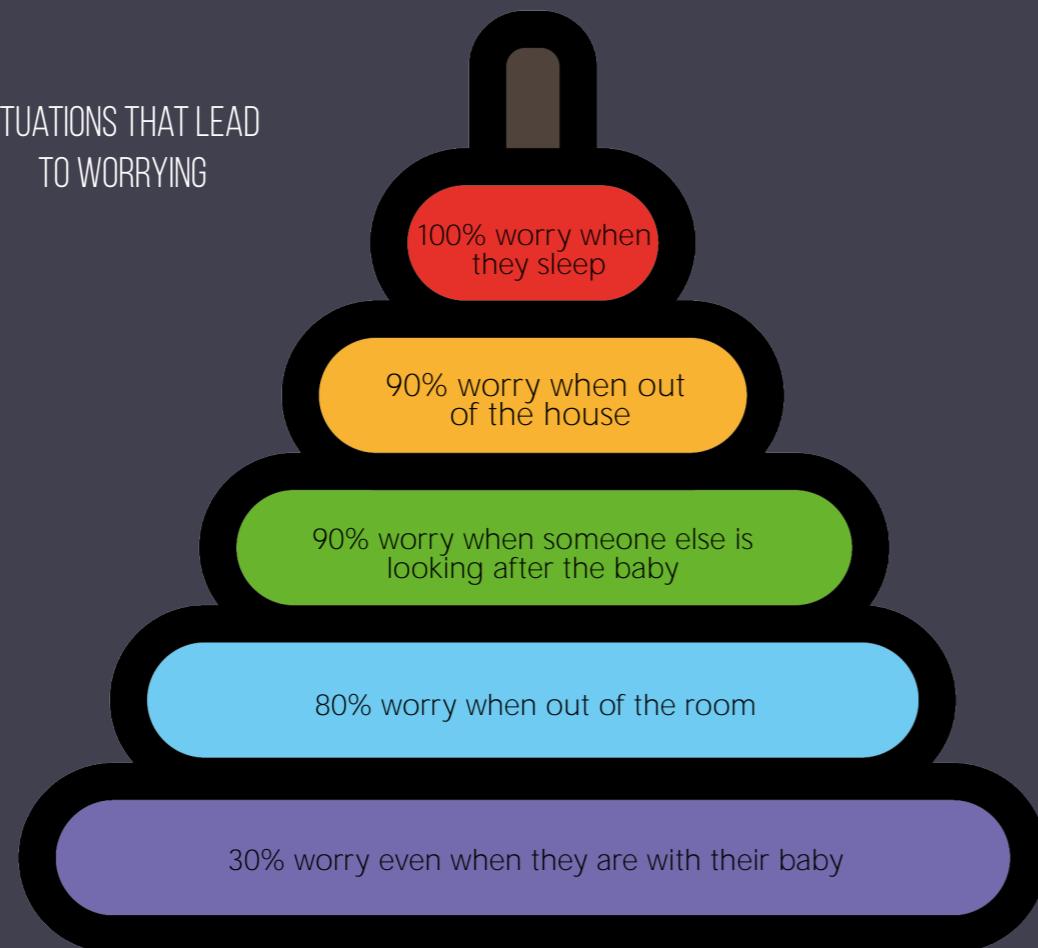
The red border shows on average when a parent is thinking about their babys wellbeing

It seems to run in tangent with the average persons life, they **spend all day worried**

During times the parent can see the baby on demand or call someone they spend a **significant amount of that time checking the baby** is alright.

It doesn't stop during the night, the anxiety for some is constant and can **very negatively** affect peoples **work** and their **sleep**

SITUATIONS THAT LEAD TO WORRYING



WORDS/ PHRASES PARENTS USED TO DESCRIBE HOW THEY FEEL



THINGS THE PARENT HAVE TRIED TO LESSEN THEIR PSYCHOLOGICAL BURDEN

Have a baby monitor constantly watching the child
Breathing monitor for when the parent goes to sleep

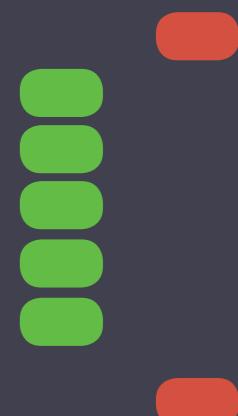
Have the baby in the same room

Go check on the baby if they are in a separate room.

Call the person looking after the baby.

I am looking for photos/ videos from whoever is looking after the baby.

DID IT WORK? YES NO



Reassurance that their baby is alright is the only thing that can calm down a concern parent.

Parents waste a massive amount of time every day checking to make sure their baby is alright or worried that something will happen.

The information must be reliable

There is a vicious cycle of unrest which makes the parents worry even more.

Separation causes the most psychological strain on parents

The fear of the unknown causing the parents to always question; "What if", and it is this fear that ruins their sleep and conquers their thoughts.

Parents always have something watching the baby, during the day it might be their spouse while the other person is at work, while in the home it might be a baby monitor, either way they always have someone they can connect for an immediate response or a device that gives them the reassurance their child is alright.

Most parents stated that they spend 'the majority of the time concerned about something happening, one woman even said, "I get up and check on him every couple of minutes... just to be sure".

Most parents that had baby monitors did not think they were very good tools for ensuring their baby is still alright.

100% of the parents interviewed explained that their anxiety got worse when they could not be near their baby, being separated means that the parent cannot help preventing anything from happening and they cannot be there to help if something does happen that needs their attention.

Most of the parents explained that they worry even when there is nothing happening, and the baby is safe in their arms, because there is always an element of the unknown, they never know when a peaceful night can change into an upsetting one.

All of the parents had in some way their own version of the same cycle, which in general looks like this; The parent worries all night and cannot get any sleep, they wake up tired and unrested so they cannot be as tentative to their baby as they would like to be, they then worry while at work and cannot be as productive, they then come home and remain anxious and finally they get into bed ready to sleep and start the cycle all over again.





Poppy Robins

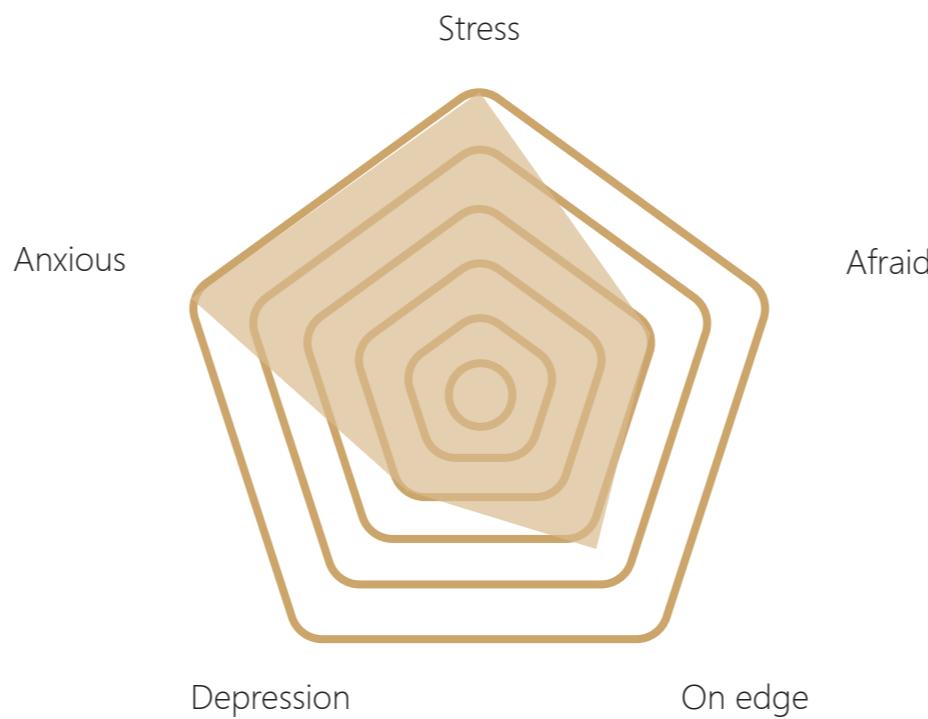
"No matter what I do I'm constantly worried that something will happen to my baby boy and I won't know until it's too late!"

Age 34
Occupation Cashier at Sainsburys
Location Brighton, UK
Personality Kind, friendly, reserved
Lifestyle Busy, Hectic

About Poppy

Poppy is a loving wife and mother of two, she **struggles** with **feelings of anxiety and stress** about living her day to day life and keeping her baby **safe**, she has a baby monitor in the house and tries to keep him **close at all times** whenever possible when he isn't in the cot, however she is still **afraid that something can happen**. She feels the worst **anxiety** when **separated** from her baby, unfortunately this occurs daily when she **goes to work**, and her anxiety hits its peak when she **falls asleep** due to the **feeling of the unknown**. The **stress** affects her performance at work and makes it impossible for her to get a good night's **sleep**.

Feelings



Motivations

Family



Mental Health



Time



Pain Points

- Current baby monitors don't make the user's feel secure
- Can't make the most out of each day
- Experiencing tiredness through the day and repeating the cycle of being tired every day

Goals

- Stop letting the stress control her day
- Get a good night's sleep
- To know her family is safe
- Have more confidence and to have a feeling of being secure



User Requirement Specification

A1. The product must help to relieve some of the psychological distress experienced by the parents when they are separated from their baby.

The main theme that kept coming up in the secondary and primary research was how this psychological stress was in some cases crippling (see pages 6-8, or 3.1-3.10 in the appendix), it affects some people worse than others, but it seems like most parents feel this stress in some form or another and it can creep into their minds and negatively affect their work and sleep at any time.

A2. The product must allow parents to remotely check their baby's vital information within 5 seconds.

During the primary research it became clear that the most effective way of quelling the parents anxiety was to give them reassurance that that their child is alright, by allowing them to check quickly they can make sure the baby is ok whenever they start to feel anxious, this should help with the parents fear of not knowing their baby is healthy and fine. It also helps to keep the baby safe and prevent serious injuries because the parent will be able to see if something is happening that could be a sign of danger.

A3. The product must be able to alert the parents if something is wrong even when they aren't monitoring their babies, for example when they are asleep or at work.

All the participants in the study made it clear that one of things that causes the most stress is that something might happen while they are asleep/ are not around (see page 6, or 3.1-3.10 in the appendix). Injuries are bound to happen as babies get themselves into trouble regularly, however if the parent is alerted when something is happening/ happened they can give the baby the help required as soon as possible preventing serious injuries.

A4. The product must alert the parents if their child stops breathing for 10 seconds or more.

A massive risk to babies is suffocation and choking, and the number one thing all the parents were worried about most was if their baby suffocates while they are asleep, on average a baby cannot breathe for up to 6 minutes before they are classed as medically brain dead, so after 10 seconds they will have ample time to get to their child and perform the necessary actions if required. This is one of the biggest concerns with current baby monitors (see page 7, or 3.1- 3.10 of the appendix), that it does not tell the parents if the baby is suffering in silence. Having this feature will not only minimise the number of children that sustain serious injury due to choking and suffocating but it will also help unburden the parents mind because they will know that they will be alerted and will have enough time to help in most situations.

A5. The product must relay live and accurate data of at least one of their baby's vital statistics to the parent within 2 seconds of it happening.

It is important that the data the parents receive is as close to live time as possible, if something happens to their baby they will want to know as soon as it is happening/ happened, so they can go to help as soon as possible.

A6. The product must work 100% of the time without fail in alerting the parent's in case of an emergency.

This was one of the biggest flaws with current baby monitors, their unreliable nature due to connectivity issues and not alerting parents properly monitors (see page 7, or 3.1- 3.10 of the appendix), means parents will still constantly be on edge that the baby monitor has stopped working or they would not see if something happens, so by ensuring they will be alerted the psychological weight should be at least slightly lifted.

B1. The product should not restrict the babys movements, and they should be free from discomfort.

Some parents had not tried certain monitors such as a heart monitor simply because they thought it could cause their baby discomfort (see 3.1- 3.10 of the appendix), the product should aim to be unnoticeable to a baby.

B2. The product should be usable 24 hours a day, there should be no time the child is not being monitored.

This comes from parents concern that if at any time the baby is not being monitored that they are more susceptible to a problem occurring and the parent not getting notified in anyway.

C1. The product could store data on the baby and be personalised to their specific needs.

The primary research showed that each parent has their own specific wants and needs that will help put their mind at ease, and that some children with problems such as asthma might need the parents to be alerted sooner if they begin struggling to breathe.

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