

INDEPENDENT STUDY

**USER RESEARCH TO ASSESS THE CONCERNS
AROUND PERSONAL SAFETY IN INDIA**

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SCOPE OF THE PROBLEM

This is the 21st century. On one hand, we hear about feminism, women empowerment and equal opportunity ; while on the other hand, disturbing statistics as regards women safety are at an all time high. On doing some perfunctory research, I realised that the concept of personal safety and in particular women safety is much more complex than I imagined and the statistics vary across the globe. It is, however, certainly a concern recognised by one and all.

Some statistics that emerged - In India alone, the number of sexual harassment complaints have doubled from 2013 to 2014!

In another study run by TrustLaw, 6 of 10 Turkish women recognize this to be their biggest challenge in the work place! Of the surveyed women, nearly half the women from Mexico and Argentina claim it to be a major concern.

Is this because of awareness or whether there is a significant increase in incidents makes for very interesting and pertinent research!

In Fall 2016, the team along with an Industry partner dedicated efforts towards addressing this problem in India. We wanted to design a wearable device that empowers the safety of women. We chose our target demographic to be women in the age group of 18 to 30 years of age - making assumptions about their socio-economic backgrounds and the awareness of not only, recognizing harassment as a concern but also, that they may be able to address it in some way.

We were successful in creating the first prototype. However, we realised that women safety is a complex issue the may not be addressed just by introducing a design intervention. So, I decided to take a step back and figure out if this is actually the best way to tackle the problem.

I decided to do some user research in terms of surveys as well as user interviews. I travelled to India to talk to women about personal safety in the context that I wanted to study.

WHY INDIA?

According to a study run by TrustLaw, the worst G20 country in the world to be a woman in is India. About 24,000 rape cases were reported in 2012 (the last study by TrustLaw) and this number is only growing at an alarming rate. 54.7% of these were reported by victims in the age group of 18 - 30 years of age. This fact hit close to home, more so probably because I belong from that part of the world. I decided that I wanted to address this and do my bit in trying to figure out the space.

India makes for the perfect place to study this because of all the other contributing factors like gender dynamics, power equations in relationships, awareness and taboos, cultural beliefs, education and also, law and order policies. The absence of a centralised emergency number (like 911) coupled with widespread distrust of the authorities by the people add to this mix. Moreover, the social stigma and victimization of the victim and family members by the society at large further limit them for being able to talk about this.

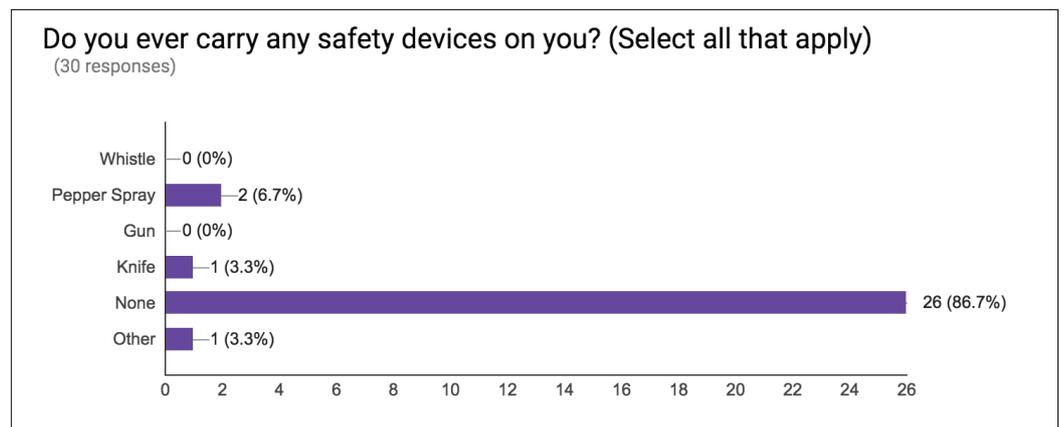
I wanted to have conversations around these seemingly trivial but extremely pertinent factors and gauge what the women of India feel, what they wanted to say.

This would definitely directly impact and inform not only, further iterations of the design intervention but also, the approach in itself.

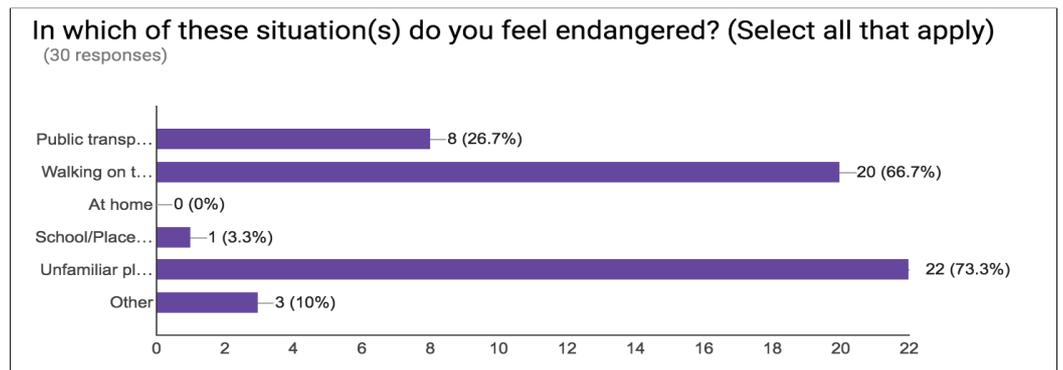
USER RESEARCH PHASE 1

I ran the first study in class, here at Georgia Tech. This was a pilot survey to assess the general personal safety concerns and best practices people follow. The target audience for this were students studying here at Tech - a safe environment. This gave me an opportunity to ask these questions to people from different backgrounds - cultural, social, economic and even linguistics. It was intriguing to see how these responses vary across these backgrounds. I was able to follow up some survey responses with a few informal one-on-one conversations that further informed the process ahead. These one-on-one conversations were with people (female) who wanted to share their experience verbally (perhaps, because of comfort levels) and not put it in a written format.

I received 31 responses - 16 male and 15 female. These students were in the age-group of 20-30 years of age and hence, aligned very well with our target demographic. The most intriguing fact that emerged from this exercise was that whilst 30 out of 31 people recognised threat to personal safety as a valid concern, 26 out of 31 people did not carry any kind of safety devices!



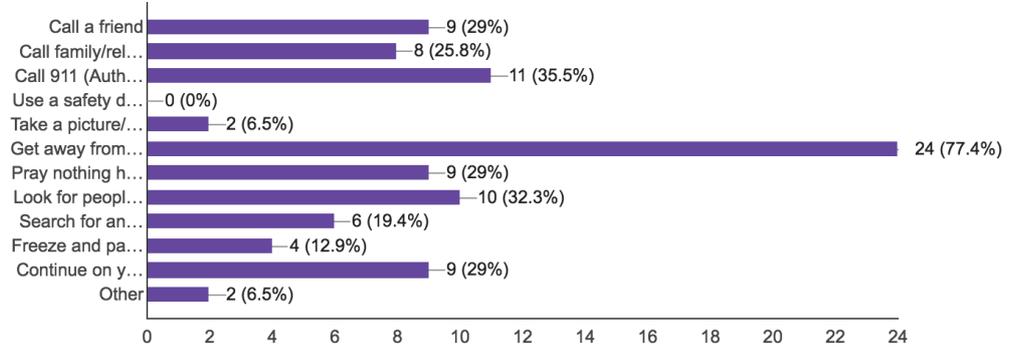
Picture 1 : Survey Response Analysis



Picture 2 : Survey Response Analysis

If you are/have been in a situation that endangers your personal safety, what do you do? (Select all that apply)

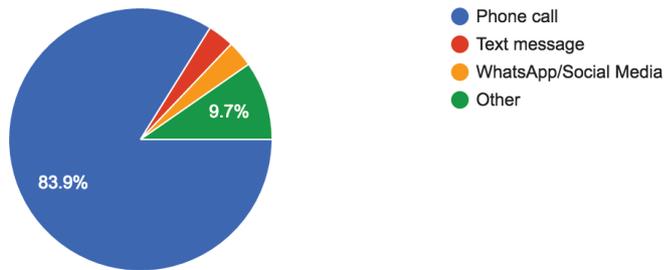
(31 responses)



Picture 3 : Survey Response Analysis

When somebody wants to reach you urgently, which is your preferred mode of communication?

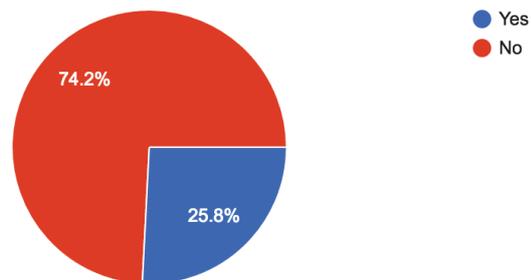
(31 responses)



Picture 4 : Survey Response Analysis

Do you have any wearable devices that you currently use/would like to use?

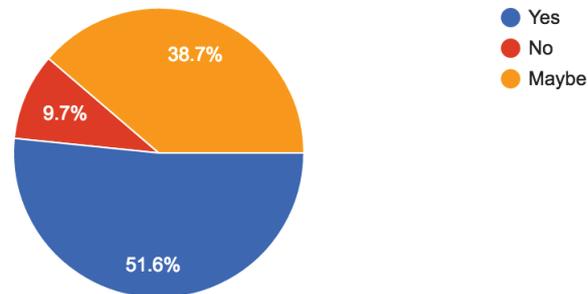
(31 responses)



Picture 5 : Survey Response Analysis

Are you open to the idea of a wearable device that empowers personal safety?

(31 responses)



Picture 6 : Survey Response Analysis

On asking what would make them more likely to use it, here is what they had to say -

"if it is a gift from a female family member, wouldn't spend more than a few dollars"

"portable, multi-functional, easy"; "small, convenient, fail-proof, robust, durable"

"how unintrusive it is; the less noticeable it is, the better"

As per the feedback received, possible form factors are -

"near pant pockets or hips - close to where hands actually fall, but could also be accessed by elbow or some other body part easily";

"bracelet, earring"; "Watch"; "Sunglasses"

"something that one can wear in the wrist like a watch"

You can view our survey -

<http://goo.gl/forms/ZxqTRvjJVy>

USER RESEARCH PHASE 2

The next step in our research phase was to do some field work. I traveled to India to talk to women in the context. I was able to interview 6 women - 3 working professional and 3 students. I also got a chance to interview some men and get their take on the same. These people have offered to connect me with more people who I can interview to further understand this space and inform our design process.

Before I left, we (Dr. Ellen, Dr. Neha and I) brainstormed to come up with a list of questions that were more pressing as compared to others. I then designed an interview guide that outlined most of our research questions. Some of these questions were regarding the role of the police, the part the NGOs may play and more implicit questions like the role of gender dynamics and relationships in the context of women safety. I was also trying to gauge if at all, to begin with, the women even perceive any concern for their personal safety and whether they may be aware of available avenues that may provide assistance in case of emergency. It is our belief that only if you have the awareness that there is a concern, only then you may be empowered to take any further steps.

The interviews were very insightful and resulted in great learning. These were in mixed languages - Hindi, English and some Marathi, depending on the comfort of the interviewee. Some of these women were open to talking and were fairly communicative while some others took some time to open up. The younger lot of those interviewed were very vocal about their feelings. The anger and frustration, not only on the assailant, but also on the society as a whole was apparent. One of the interviewees said that "from the day we are born, we are taught to ignore and not engage... (Beta) do not make eye-contact, lower your head and just get out of there... cover up well and be careful", "what if he gets 20 other people.. What will happen then" and even "I really want to say something and sometimes punch, but my mom keeps coming in my head.."

One of the men I had a chance to talk to said something that immediately got me thinking. He asked "who (are you to) decides what the culture is... who says what is right and what is not". He even went on to say "who defines change? Who defines the right way of change?"

These questions are extremely thought-provoking and reinforce a need for these conversations to happen. It is comforting to see that, at the very least, this is a source of debate amongst the millennials. Awareness is what will eventually result in empowerment and that in equality in the truest sense. The conversations are certainly the starting point for a change that will happen.

Some other excerpts from our conversations are as follows -

"..no I never travel alone.. I ask my friends or someone to drop me"

"..I travel to work everyday.. but I use my own car.. so I AM SAFE"

"No I don't use a safety device.. No one ever gave it to me"

"My friend gave me a pepper spray.. but I don't know how to use it..

Having it with me made me FEEL SAFE "

"The police have made changes.. there is prompt action now.. but I wouldn't call them. I'll call my husband first"

"The NGOs only get involved when there is a high profile case, media attention or a very serious crime"

Something that completely changed in this research experience was the expectations from the police and the NGOs- the two key players in this ecosystem as perceived by us.

Usually the police in India is not perceived to be the most helpful and prompt in their action. Moreover, the social dynamics in India are such that talking about these things are taboo. The women, therefore, are not comfortable in talking with any of these authorities about their incident and some have said that "it makes them feel that they are being violated for the second time!". Some say that "the police are all males and rather than helping they have fun by asking me (victim) questions that make me feel more used than the rape itself"! However, on asking about whether the police is a viable emergency contact, the interviewed women said that they definitely want the police in the mix. The police have made changes in the past 10 or so years and that makes them more reliable than before even though occasionally one may hear of incidents that take place in the police stations. One lady said that she would call her husband first and if he tells her to call the police, she will. This can be interpreted in two ways. One, the lady believes in her husband to come 'save' her and take care of the situation. The other reflects on the power dynamics in this relationship where the man still makes all the decisions in what is still a patriarchal society.

We also learnt that even though the world perceives NGOs as a supporting organization to help women who have suffered, the women do not think so. They believe that the NGO would get involved only when it is a high-profile case or has media attention or if at all it is a very serious crime that the whole world is watching. Moreover, barriers exist that prevent people from actually being able to reach out to these organizations. This was the complete opposite of our initial hypothesis wherein we believed that the NGOs function as a lifeline of support for victims and could, therefore, possibly be the first respondents in case of any emergency.

Another interesting development was the advent of a centralised emergency system in India like the 911 in USA. India will now be using 112 as its single emergency response number across the country. It had a slew of emergency contact numbers before - 100 for police, 101 for fire, 102 for ambulances and 108 for disaster management. Having discussed this briefly with some people (men and women both), some of them confessed to not knowing what to do when an emergency occurs. They confessed that they couldn't remember which number is for which and a central line would really help. However, in terms of implementation, it remains to be seen how effective 112 can be with regard to the volume of people it will have to manage in a country like India. Irrespective, such a system will be a great access point for our design intervention. We will now be able to dispatch/send one alert to 112 (vision being prompt action) and assume that they will take appropriate action.

If you want to have a listen to the interviews -

<https://drive.google.com/open?id=0B56qevp1niXaTENEZ2RSRXEoYzg>

USER RESEARCH PHASE 3

With the aim of gaining further insight and also some constructive feedback, I presented my findings in front of one of my classes. I really wanted to get some critique around why my proposed design intervention won't work knowing all that we do know now.

I had conversations with different people along the course of this semester and wanted to figure out if I had missed out anything or made assumptions which may not hold true. I even had feedback from the Ideas to Serve Competition (honourary mention) which coupled with our research guided us further along this path. I wanted to make sure that I had all the constructive feedback that I could get in order to help me achieve my goal that much more effectively.

With this aim in mind, I circulated an online feedback form in class that had only two questions - one about why this wouldn't work and the other about any other feedback they may have.

Here are some snippets -

Why do you think that this design intervention may not work? (6 responses)

Locked phone in immediate danger situation

The emitter can be broken if it is known to be the cellphone or another obvious object.

The assumption that people will view and understand a threat and will respond to it by contacting others.

I'm not sure how many women own a smartphone in your particular user context.

May be start with a positive question ? this is a good idea, and good chance that this would work. Since you really ask for why it might not work, this is focused on upper echelon of the society (not that it is limited, the model can be very well applied to non-smartphone users, or the majority of women who actually need it.), lets say who needs this more, the woman in a car or the woman on mumbai public transport ? Agreed the woman on public transport will also have the transport, will she be able to activate the button in that crowd? Maybe that will determine the push vs pull. :) that make it non-anonymous I guess

If it requires a lot of maintenance in terms of data input for the user it may get neglected by users a little bit. For example, if they frequently have to update information about contacts and other things that are separate from the wearable device itself, people may not put the effort into it and use it less.

Picture 7 : Survey Response Analysis

Any other thoughts and/or concerns that you may want to share? (5 responses)

Have you thought about including a direct link to the app in the SOS interface of the phone?

Will the product be adapted to all genders?

I would like to see a higher fidelity prototype.

great work, again!

It would be awesome to see it as a line of wearables instead of just one style. If the technology is the same, I imagine you could fit easily it into a number of accessory-type things such as bracelets, necklaces, keychains, pins, hair clips, etc. Then you could please a lot of users who have different fashion sense / styles and use the same technological setup.

Picture 8 : Survey Response Analysis

You can view this feedback form
<http://goo.gl/forms/bFl4OpYYUc>

KEY TAKEAWAYS & NEXT STEPS

This semester has been great in terms of the exposure as well as experience in terms of not only project insight, but also techniques of survey design, user interviews and critique sessions.

I have come a long way in techniques for an effective interview session, which may be the questions to push and prob and which may be the ones that require to be handled sensitively. My comfort levels are very apparent when you listen to the audio recordings of all the interviews.

I presented this idea in the Ideas to Serve Competition which did wonders for my morale and more importantly, further strengthened my belief in this vision. The team received honorary mention and some incredible feedback.

The next step of the project is to identify which category of existing literature they fit in and whether there may be any overlaps and then, piece together a contribution for the same.

To transcribe and analyze all the data collected during the course of this semester and look for patterns that may emerge.

There is opportunity to do more user interviews to reinforce the data already collected.

There is a possibility of collaboration with a researcher who is looking to work with the authorities on safety in India.