



**University of
Zurich^{UZH}**

Designing Technology for People Affected by Forced Marriage in Switzerland

Bachelor's Thesis in Informatics
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Zusammenfassung

In den letzten Jahren gab es im Bereich der Human-Computer Interaction ein zunehmendes Interesse an der Forschung mit benachteiligten, marginalisierten Gemeinschaften. Zu diesen Gemeinschaften gehören zum Beispiel motorisch beeinträchtigte Benutzer, obdachlose Erwachsene oder Menschen, die mit ihrer psychischen Gesundheit zu kämpfen haben. Automatisch generierte und fähigkeitsbasierte Schnittstellen, Kommunikationsunterstützung für sehbehinderte Menschen und für Obdachlose sind Innovationen und Lösungen, die sich durch diese Studien ergeben haben. Diverse Studien zeigen auf dass ein dringender Handlungsbedarf besteht. Human-Computer Interaction ermöglicht, sinnvolle und innovative Lösungen zu finden, die erhebliche Auswirkungen auf das Leben von Menschen in den jeweiligen Gemeinschaften haben können.

Diese Arbeit untersucht die Probleme und Schwierigkeiten der Problematik Zwangsheirat in der Schweiz sowie die damit verbundenen Einschränkungen und Herausforderungen bei der Schaffung einer technologischen Lösung zur Unterstützung der Frauen in Zwang. Diese Arbeit entstand durch die Zusammenarbeit mit der Schweizer Fachstelle Zwangsheirat. Anhand meiner Forschungsergebnisse und den gewonnenen Erkenntnissen aus Interviews mit Betroffenen habe ich eine technologische Lösung entworfen, deren Anwendbarkeit ich getestet habe und in dieser Arbeit diskutiere.

Abstract

The field of Human-Computer Interaction has recently taken a growing interest in research with disadvantaged, marginalized communities, and participants, such as motor-impaired users, homeless adults, or people who struggle with mental health. These collaborations turned out to be very fruitful, because they enable the creation of designs such as automatically generated ability-based interfaces, communication and social support for visually impaired as well as homeless people. Previous scholarship has shown that there is a greater need to address the issues of marginalized and disadvantaged groups and that the incorporation of Human-Computer Interaction promises innovative solutions that significantly improve the lives of these groups. In cooperation with the Swiss Centre of Competence against Forced Marriage, this thesis explores the issue of forced marriage in Switzerland and the restrictions and challenges it imposes on creating a technical solution. The thesis proposes an app, designed through the findings of several interviews with affected, to help people affected by forced marriages in Switzerland, and tests and discusses its feasibility of use.

Acknowledgments

First and foremost my sincere thanks go to my professor Elaine M. Huang, for supporting me and encouraging me tremendously in these past months. Next I would like to thank the whole team at the Centre of Competence against Forced Marriage for their patience and support, for constantly pushing me to do my best and achieving more. Additionally, without the interview participants, this thesis would have not been possible, and I admire each and every one of them for their strength and courage to share their story with me. Lastly, I also would like to thank my friends, especially George, Steven, Jasmin and my partner for being there and motivating me through this, even though sometimes it was exhausting. **Thank you!**

Chapter 1

Introduction

«All human beings are born free and equal in dignity and rights [...]»

Article 1 Universal Declaration of Human Rights 1948 (UN General Assembly, 1948, p. 2).

«A woman's right to choose a spouse and enter freely into marriage is central to her life and her dignity and equality as a human being. »

General Recommendation No.21, Article 16 (UN Committee on the Elimination of Discrimination Against Women (CEDAW), 1994, p.4)

According to the Universal Declaration of Human Rights, article 16, section 2, the freedom to choose a spouse is a basic human right, that applies to all human-beings equally, irrespective of race, nationality, and religion. A marriage shall only be conceived with the free and full consent of both spouses (UN General Assembly, 1948). The recognition of the right to consent to marriage is also guaranteed by the International Covenant on Civil and Political Rights (UN General Assembly, 1966a), the International Covenant on Economic, Social and Cultural Rights (UN General Assembly, 1966b) and the Convention on the Elimination of all Forms of Discrimination against Women (UN General Assembly, 1979).

Despite several national and international laws, not everyone and disproportionally women and girls are retained from exercising this right. If family members, relatives, and the social environment project their expectations and pressure on a young woman and force her to marry someone of their choice, one speaks of forced marriage. This pressure can present itself in several ways, such as psychological, physical, emotional, or socio-economic. It is a harmful practice preventing young women from living their lives free from all forms of violence and violates their rights to self-determination, freedom of

movement, bodily and psychological integrity (Hussain, Waheed, & Husain, 2006).

Contrary to popular belief, forced marriages are common worldwide and are not bordered by any culture, religion, age, or nationality. In 2017, the International Labour Office (ILO) estimated 15.4 million people living in marital captivity in 2016 and reported the numbers by sex, age and location as illustrated in *Table 1*. The term «marital captivity» describes the pressure to stay in an already entered marriage. One talks about forced marriage when at least one of the spouses feels forced to stay in the marriage against his will, due to reasons such as pressure by their own family, their spouses' family, their spouse by different means. Marital captivity can even occur when initially both spouses entered the marriage freely (Competence Centre against Forced Marriage, 2020).

World		15 443 000
Sex	Male	2 442 000
	Female	13 000 000
Age Grouping	Adults	9 762 000
	Children	5 679 000
Region	Africa	5 820 000
	Americas	670 000
	Arab States	170 000
	Asia and the Pacific	8 440 000
	Europe and Central Asia	340 000
	Asia	

Table 1: Number of persons in forced marriages, by sex, age and locations. Data taken from “Global Estimates of Slavery: Forced Labour and Forced Marriages” by The International Labour Office (ILO) & Walk Free Foundation and International Organization for Migration (IOM). Copyright © International Labour Organization and Walk Free Foundation, 2017

Forced marriages are no longer only an issue of the “Global South”, but due to the growing numbers of immigrants also of the western countries. According to article 181a of the criminal law, forcing someone to marry is prohibited in Switzerland and punishable up to five years in prison. Despite these laws, according to the Swiss Competence Centre against Forced Marriage (hereafter CoCFM), they had 361 registered cases in 2020, a number similar to the numbers seen in past years. Additionally, it can be observed that every third person is underage, and it is assumed that there is a much higher number of unregistered cases in Switzerland (Competence Centre against Forced Marriage, 2020; Sabbe, Temmerman, Brems, & Leye, 2014).

In a study in 2012, the Swiss federal council states that there is a considerable gap in knowledge and identified several problems such as the lack of information and required measures, as well as missing

procedures and resources for those in need. Based on their findings, they launched a campaign¹ to fight forced marriage (Neubauer & Dahinden, 2012).

Since 2001, the CoCFM, a non-profit NGO, dedicates itself to opposing the forced marriage. Not only do they offer counselling services in-person, through email & phone, but they also work to educate and raise awareness among the Swiss population.

1.1 Research Questions

In recent years the field of human-computer interaction has been increasingly concerned with designing and evaluating technologies for people's health and well-being. In introducing efficient and accessible technology, it has proven to have the potential to improve people's life quality. Previous scholarship has provided evidence that human-computer interaction can significantly impact and enhance the lives of marginalized and disadvantaged communities (Gajos, Wobbrock, & Weld, 2008; Jackson & Dua, 2004; Vashistha, Cutrell, Dell, & Anderson, 2015). Technological solutions not only help raising the awareness of the targeted group but also help people affected by forced marriages to ask for help and reach the necessary resources.

Forced marriages are not a technological problem, they cannot be completely solved with and neither exist due to the lack of technology. However, as digital technologies play an increasingly central role in our everyday lives, they can act as a mean to gain help. This is because there are some points and aspects in forced marriages which can be addressed and facilitated through technology such as access to and circulation of information, connectivity and reach.

In collaboration with the CoCFM, this bachelor thesis investigates the suitability of different technologies and methods to assist advisors in their forced marriage cases in helping people affected by forced marriage. The following research questions are addressed in this work:

RQ1: What are the current challenges being faced by the organization and women affected by forced marriage?

RQ2: How can technology assist and address the RQ1 identified problems?

To answer these research questions, qualitative semi-structured individual interviews with women who have escaped a forced marriage, as well as CoCFM advisors were conducted by the author. The purpose of those interviews was not only to identify areas where technology could be used as an assistive tool but also to gain a better understanding of the forced marriage situation in Switzerland. On the one hand, the author was interested in the experiences and challenges of affected of forced marriage in Switzerland. On the other hand, the author was

¹ <https://www.gegen-zwangsheirat.ch/aktivitaeten-des-bundes/bundesprogramm>

interested to explore the ways in which the CoCFM advisors can support affected of forced marriages as well as the obstacles the CoCFM staff face themselves while providing the necessary support to their clients. The term «affected» is used throughout this thesis and describes women who are at risk of a forced marriage, are being forcibly married, are already in a forced marriage or have escaped a forced marriage. The reasoning behind the use of the word «affected» rather than «victim» is that the CoCFM abstains themselves from using the word victim. This is because of the CoCFM not wanting to define the women by their abuse and additionally due to the fact that the word «victim» often has a negative associations and bias attached to it. Furthermore, the term affected can cover the many different situations a women can find herself into in regards to forced marriages, whereas the term victim may be misleading and cause readers to assume that the addressed women have already been forcibly married.

Based on the existing literature on forced marriages and several interviews conducted with affected of forced marriage, identified challenges, possible technologies and answers are presented in this thesis. Through discussion and feedback with the CoCFM, the most promising ideas are identified and combined into an app. The following main contributions are made in this thesis:

- To offer a better understanding of the scale and situation of forced marriage in Switzerland.
- To illustrate the issues affected of forced marriage and their CoCFM advisors are facing.
- Design implications for technologies to better address the detected challenges from RQ1.
- To offer suggestions for several technical solutions and approaches that could address the issues of affected and their CoCFM advisors.

The thesis is structured as follows: The first chapter will provide an overview of the existing broader scholarly debate on what we mean by the term «forced marriage» It will also illustrate the reasons, causes, and consequences of forced marriages, as well as discuss the existing literature on technological solutions that have been used to tackle the issue of forced marriages in other countries. In this context the CoCFM and several anonymous examples of forced marriage cases in Switzerland are presented. Then, the employed methodological approach and some of its shortcomings are discussed. This is followed by a discussion of the main findings and insights from the interviews with the affected of forced marriages. These findings are used to create a prototype of an app that could help affected of forced marriages in Switzerland.

The thesis ends with a critical reflection on the empirical and theoretical contributions outlined in this study by suggesting ways in which these may be furthered by future research.

1.2 Personal Motivation

Given my own cultural background (first generation migrant from Pakistan), forced marriage is an issue very well known to me. The social pressure, the judging society, and gendered expectations are all issues that are present in my native country. In my own upbringing, I was faced with these issues daily, and therefore I occupied myself extensively with the question of how I could contribute to our society in a positive way and make a difference. I have since tried to advocate against such cultural norms and inequality of women actively. Two years ago, I had the opportunity to talk to one of the advisors working for the CoCFM, who shared his experiences, insights, and department's struggles. He also shared with me that he believes that technology could provide a solution and a means of hope to the women facing the above issues. Due to my cultural background and my studies in Human-Computer Interaction, I believe my contributions and insights can be of high significance and hopefully raise further awareness of this topic.

Chapter 2

Background on Forced Marriage in Switzerland

As the topic of forced marriage in Switzerland is often perceived as less concerning, the purpose of this chapter is to provide an in-depth overview of the current situation incorporating social, cultural and legal perspectives. Creating this comprehensive picture, will provide use with the necessary the foundation for the subsequent parts of this thesis, involved two primary research approaches: a review of literature and resources available on the subject, as well as interviews with advisors from the CoCFM about their work and the types of cases they deal with. This chapter first introduces the Swiss Competence Centre against Forced marriages before defining the term «forced marriage» and the existing technological solutions and research on how this issue is tackled in other countries.

2.1 The Swiss Competence Centre against Forced Marriage

«All human beings are born free and equal in dignity and rights.»
Universal Declaration of Human Rights, Art 1, 1948 (UN General Assembly, 1948)

The Swiss Competence Centre against Forced Marriage is a non-profit organization that is politically and religiously neutral and fights for dignity for all humans. They mainly consult those directly affected or third affected parties about situations of coercion around marriage, sexuality, and love. The CoCFM has been founded more than 20 years ago and operates across Switzerland. It has international ties and connections with people on the state-administrative level, NGO's and specialists. Since 2018 they are officially known as the Swiss centre competence centre against forced marriage. To fulfil their aim to ensure

free choice across Switzerland, they offer a wide range of aid, including consultations of affected and at-risk people, workshops, and resources for support centres. Between 2007 and 2009, the centre contributed to the elaboration of European recommended measures against forced marriage. It still maintains international relationships, helping incorporate further insights and experience (CoCFM, 2020).

With their website www.forcedmarriage.ch, they try to give women in need the possibility to reach out and, together with them, bring a change to their situation. Additionally, the website provides information and further education for people who politically, scientifically, professionally, or individually occupy themselves with the problem.

The Centre of Competence itself states that they focus their activities on six levels: activities for prevention and for security, coaching for professionals and counselling of affected, professional development and workshops, scientific research, networking & public and media work. They are the leader in the development of counselling concepts and the scientific field of forced marriage in the German-speaking countries. They are also the most consulted website on the mentioned topics.

Despite their many activities, their advisory activity for the affected is their highest priority. It is important to highlight that the competence centre advises people who **are at risk** of a forced marriage, people who **are being** forcefully married, people who are suffering from martial captivity as well as those who have already **fled** a forced marriage. The team is available 24/7 and is dedicated to help and accept every case that comes in. Each case is discussed and evaluated on a scale from 1 to 10, depending on the danger and severity. Depending on the threat level and situation, different measures are taken, and the involvement of the CoCFM can vary. In an interview, one of the advisors explains: *“We work with a risk-management scale from 0 to 10. Above 5 the person has to leave their family. Above 6 they should be in a protected place. Above 7 the person has to leave the canton. Above 8 they have to leave the country and above 9 they receive new and protected identities by the federal police”* (CoCFM, 2020). A person with a higher threat level may be tracked with the help of GPS, and others may be equipped with a device they can press upon an emergency. Upon such an alert through the device, the CoCFM can organize the police to interfere within 20 minutes. Furthermore, if the risk level is on the higher side, name change, plastic surgery, or even police supervision or a new identity are measures considered. They help to organize the appropriate resources and help affected with financial and emotional challenges with the help of their ties. In less severe cases, it can be that they only play a supporting role.

Usually, a case is active for around three months. For some cases, this period can be shorter. There have been cases which have been active for over a year and are still being handled by the CoCFM. The main goal of the CoCFM is to enable a sustainable life for the affected. For this, they evaluate each case around the SUS-framework. The term SUS stands for three characteristics as follows «Selbständig», «Unabhängig», «Selbstbestimmt», which can be translated as, self-

reliant, independent, and self-determined. Even after an affected person has fulfilled the SUS-framework and a case is closed, the CoCFM continues to be available for them, if any kind of problems appear, and act as a safety-net.

With their extensive knowledge, experience and ties, the centre has come up with several protective measures to counteract forced marriages. Even in a situation of outplacement, there are several actions that can be taken. For example, the centre has the ability to ensure that the affected can't leave the country with the help of the border control. It is furthermore possible that, with the help of a statutory declaration², marriages taken place abroad can be annulled.

The small team consists of members from diverse geographical backgrounds, professions, educational backgrounds, specializations, and experiences. Since 2015, people who were once affected by forced marriage have joined the team, using their knowledge and experience to improve their resources further. However, due to security reasons, the team works anonymously. The team consults five to eleven new cases weekly, before the summer holidays it can rise to fourteen cases due to the affected being more afraid of being abducted.

Since starting its advisory services in 2001, the Competence Centre has advised over 2750 cases (as of 31.12.2020). In an expert interview with the head of the advisors (2020), it was mentioned that: *“despite having solved many cases, there have only been around two cases where the abusers were convicted”*.

2.2 Interviews with the Competence Centre

For the interviews with the advisors, there were two main goals: first, to understand the underlying problem of forced marriage and why it happens, and second, to understand how the collaboration with the affected looks like. As previously mentioned, there is a lack of literature and studies on the problem of forced marriage in Switzerland. The government has launched some efforts in recent years, which will hopefully promote research on this topic in the future. Since the CoCFM is leading in the German-speaking countries in the development of counselling concepts and the scientific field of forced marriage, it was extremely beneficial and helpful for this thesis to gather the information first-hand through interviews, workshops, and discussions. Before creating the protocol, I started out with a broad collection of ideas around the work of the advisors and the problem itself. The questions were created with the intention to see what the advisors see as helpful, considering they have handled over 2750 cases (as of 31.12.2020).

The interview questionnaire was created in several drafts before arriving at the final one. One of the main difficulties was to gather enough information and but at the same time, minimize the amount of information. Even though the centre fully supports and desires such an

² https://www.zwangsheirat.ch/wp-content/uploads/2019/02/mm_eidesstattliche_erklaerung_20170801.pdf

app, it was important to them to only reveal as much relevant information as needed in order to minimize any kind of risk or information leak.

The final draft was also sent to the managing director, who was not interviewed, to check and, if necessary, discuss and modify problematic questions. However, no modifications were required.

For the first part, the questions focused on the following aspects:

- **What is a forced marriage, and why does it happen in Switzerland?**

The answers and discussions to this question should provide a basis for *Chapter 2: Background on Forced Marriage in Switzerland* and provide the necessary context needed to start solving the problem.

- **What does the Competence Centre do?**

To gather the necessary information needed on the CoCFM and what resources and capabilities they have.

For the second part, the focus lay more on the collaboration:

- **What is the overall process?**

This question should clarify the general process outline of a case. What are the necessary steps to be taken, what is important? What kind of things have to be taken into consideration? This should help to create a list of steps and, therefore, potentially reveal gaps between steps.

- **What does not currently work how they want it to? Problems? What are common breakdowns?**

Here it was important to gather information on situations where a breakdown currently happens. Problems that could have been identified by the centre themselves as well as problems communicated to them by the affected during the process. These questions should help create a list of problems and then be analysed to see if they can potentially be solved with the help of technology.

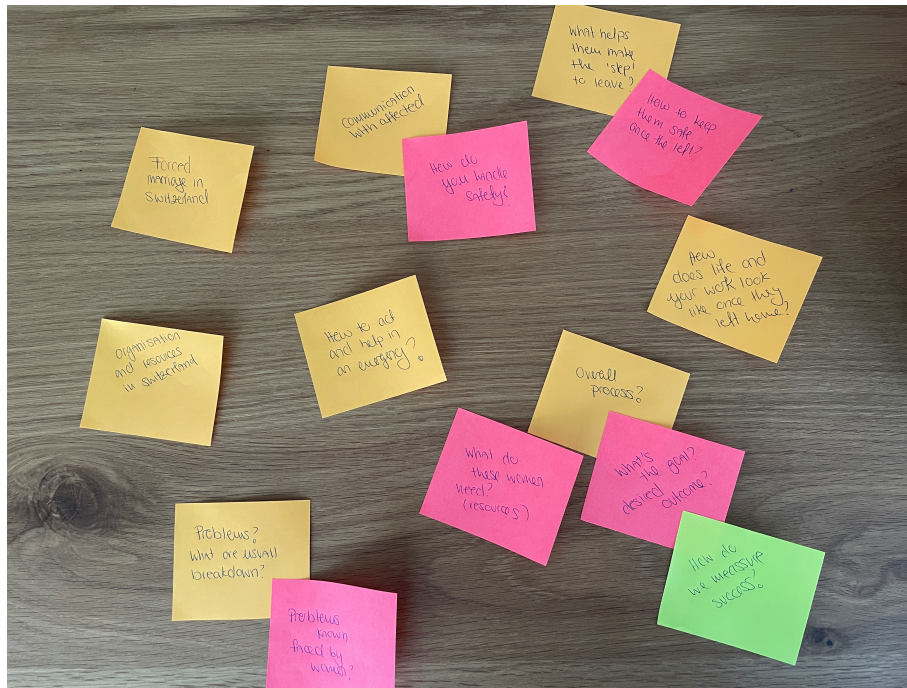


Figure 1: Collection of ideas for advisors. Orange Post-Its include different questions surrounding the topic of forced marriages in Switzerland. Pink and green Post-Its are related topics and questions.

2.3 What is a forced marriage?

According to the Forced Marriage Unit (2010), the term «forced marriage» is defined as a marriage where one or both spouses do not consent to the marriage, and duress is involved. As mentioned previously, this duress can present itself in many forms, such as physical, psychological, financial, sexual, and emotional pressure. Therefore, it is possible that the affected person may not even dare to refuse due to fear of negative consequences (Forced Marriage Unit, 2010).

Forced marriage is widely recognized as a human rights abuse, violating several international human rights norms and violating the rights to self-determination, freedom of movement, bodily and psychological integrity (Forced Marriage Unit, 2010). In 1948, the right to free and full consent to marriage was stipulated by the Universal Declaration of Human Rights. Considering the abuse frequently associated with forced marriage, the issue is perceived as a form of violence against women. The United Nations supports a loose definition and describes it as “*an act of gender-based violence that results in, or is likely to result in, physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or private life.*” (UN General Assembly, 1993, p.3)

Forced marriage ≠ arranged marriage?

It is essential to not mix-up the term «forced marriage» and «arranged marriage». In order to illustrate the underlying differences between these two terms we need to first define the term «arranged marriage». According to Karma Nirvana (n.d), a British human rights charity fighting against forced marriages, as well as (Neubauer & Dahinden, 2012) contrary to forced marriages, both partners freely consent to arranged marriages.

In an arranged marriage, the family takes the lead to find a marriage partner for their son or daughter. Both parties are free to choose to enter the marriage, and parents respect the child's wishes (Karma Nirvana, n.d).

However, there is a thin line between consent and coercion (Competence Centre against Forced Marriage, 2020; Karma Nirvana, n.d.) Even if the child has the right to say no, they may not do so due to fear of the consequences. They might face intense pressure from their families and society not to decline or are too young and inexperienced to make such a life-altering decision (Competence Centre against Forced Marriage, 2020; Karma Nirvana, n.d.). It is important to be aware of the differences but also take into consideration that an arranged marriage can have the potential to become a forced marriage.

CoCFM (2020) states that there are three different views commonly found as it can be seen in *Figure 2*. People with the «cultural relativistic view», often consider forced marriage and arranged marriage to be two completely different traditions. The term «cultural relativism» refers to the idea *“that a person's beliefs, values, and practices should be understood based on that person's own culture, and not be judged against the criteria of another.”* (The Encyclopedia of World Problems and Human Potential, 2017, para. 1). This view is opposed by the feministic view, which consider forced marriage and arranged marriage to be the same, a view often found in media (Naipul, 2012; Rustin, 2011; Leppard & Hussain, 2005). The last view, labelled as Competence Centre's View, has been often found during research and are further validated by several scholars (Pande, 2015; Phillips, 2007; Raj, 2003; Stopes-Roe & Cochrane, 1990).

Some common misconceptions

In 2016, there were an estimated of 15.4 million people in forced marriages (International Labour Office, 2017). The Forced Marriage Unit consistently reports giving advice to 1,200-1,500 people per year (Forced Marriage Unit, 2020). Furthermore, the National Centre for Social Research (NatCen) (2009) estimates that there are likely between 5,000 and 8,000 cases per annum for England. The Government of Netherland reports on their website between 674 and 1,914 affected of forced marriage in the Netherlands (Smits van Waesberghe, et al., 2014).

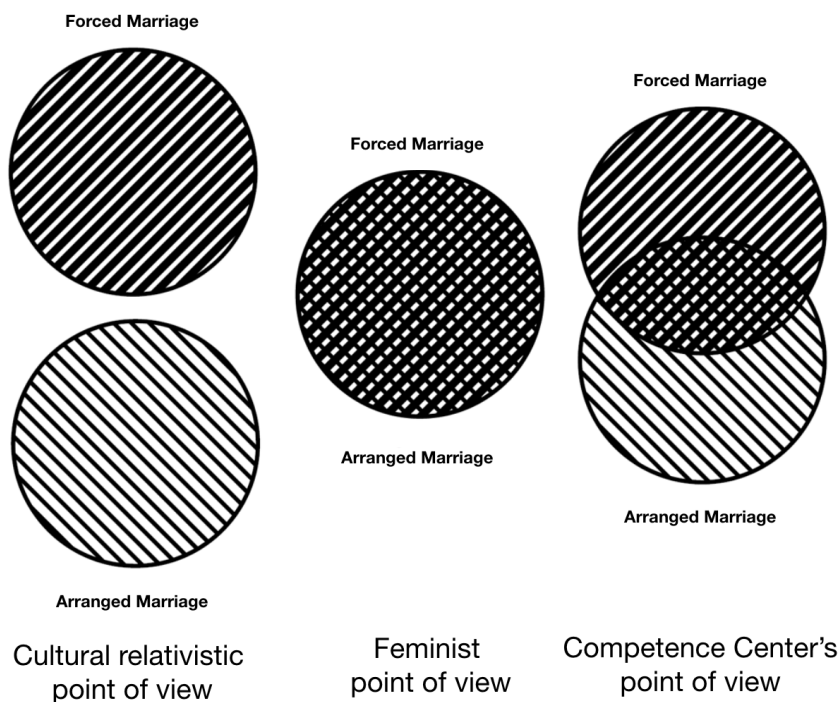


Figure 2: Forced marriage versus arranged marriage, a comparison of different views. Illustration by the CoCFM (2020) Translated by author.

Switzerland is, with its 25.1 per cent one of the European countries with the highest number of foreign residents (Federal Statistical Office Section Demography and Migration, 2020). Due to this high number of immigration, Switzerland is a country where many different cultural communities with their different perceptions about gender roles, marriages, families, and the general lifestyle come together. Some of their ideals may change over time and adjust themselves to the Swiss mentality, whereas others stay the same. Even if they prevail, there is generally no objection towards a different lifestyle as long as it is within the legal boundaries (CoCFM, 2020). Nonetheless, there are some cultural traditions, upheld by migrants, that do breach Swiss laws and human rights, such as forced marriages. A study (Neubauer & Dahinden, 2012) by the Swiss government revealed that there are about 700 cases of forced marriages per year in Switzerland. However it is assumed that due to the sensitivity of the problem that the actual number is much higher (Neubauer & Dahinden, 2012). In Switzerland, a separate legislative package against forced marriage was enacted in 2013. Until then, forced marriage was not a separate criminal offense but was classified as “coercion” under Article 181 of the Swiss Penal Code. Since 2013, there is an extension of this article, which also declares forced marriage an official offense: Article 181a of the Swiss Penal Code.

According to the CoCFM (2020), there is low awareness among the general population on this topic. Not only is there a considerable lack of knowledge, but also the wrong belief that forced marriages are tied to specific religion or origin, an assumption which is a false, dangerous simplification of a complex problem. The opposite can be

easily shown: according to a study conducted by Neubauer & Dahinden (2012) for the Swiss government, people affected by forced marriage originate from all over the world including west-southeast Europe (e.g. Kosovo), Turkey, Sri-Lanka, Eritrea, Somalia as well as Iraq, Iran, Afghanistan, Pakistan, and Syria. Forced marriages can occur in Muslim communities, Christian, Jewish, Hindu, Buddhist and atheistic communities since the concept of forced marriage is not based on religious beliefs but rather on traditions (CoCFM, 2020).

A second misconception about forced marriages is that affected of forced marriages are women. The British Forced Marriage Unit (2020) stated that out of all 1,080 UK forced marriage cases in 2019, 19 per cent per cent were male. This claim is validated by the CoCFM (2020) who argues that about 20 percent of the forced marriage cases they are dealing with in Switzerland are men. To simplify and for reading clarity, the focus of this thesis is narrowed down on women who have escaped forced marriage arrangements and female affected of forced marriages. The technological solutions presented here might also be useful for male affected of forced marriages. In his study, Idriss (2021) reported about 13 cases of male affected who faced forced marriage due to various reasons including homosexuality or as a form of discipline for the parent's perception of promiscuous behaviour. A vast number of cases include minors. Sabbe et al. (2014) concluded that from all cases, male and female, in Germany and UK, 30 per cent of the affected were younger than 18 years. The CoCFM reports that in 2020, out of 361 affected, 133 were underage (CoCFM, 2020). Similar numbers were reported by Riaño and Dahinden (2012).

Finally, a third misconception is the educational background of the affected. In an interview, the CoCFM stated that the educational and economic background does not exempt someone from ending up in a forced marriage. *“Education is not liberation. Knowledge and education are not the same, which is why we try to convey keen insights into human dignity and human rights to the people exposed to forced marriage (attempts)”* (CoCFM, 2020).

In 2008, Humayra Abedin, a 33-year-old doctor from London was being held captive in her native country of Bangladesh by her parents, who were planning to forcefully marry her to a husband, they deemed suitable for her (Walker, 2008).

To conclude, the issue of forced marriages is not solely a problem of the “Global South”. Moreover, affected of forced marriage can be women or men, irrespective of race, ethnicity, religion, age, origin, and economic and educational backgrounds.

Reasons behind forced marriages

The CoCFM (2020), as well as Riaño & Dahinden (2010), argue that the main three root causes for forced marriages are:

- Familialism: attributing high importance and priority to family.
- Traditionalism: adhering to traditional practices or beliefs.
- Patriarchy: a system where men hold power and women are largely excluded from it.

Familialism is a concept which attributes high importance to the family, and therefore advocating anti-individualism. Lau (1984) states that in an individual society “*the individual constitutes the most important unit, and self-sufficiency, personal autonomy and independence are highly valued*” (pp. 11-12), a mindset not commonly found in anti-individual families, who rather live by a more group-oriented practises. Decisions are made by, and in the interest of the group rather than the individual and obedience and the proper respect for elders and the family honour is a requirement (Ballard & Ballard, 1977). In a study conducted by Stopes-Roe & Cochran (1989), members of anti-individual families were more inclined to support and felt responsible for their siblings and parents. It was also much more common for them to live in an extended or joint family rather than as an elementary family, only consisting of the parents and children. Contrary to young adults from individual families who preferred a more individual living arrangement, young-adults from anti-individual families desired, while wanting slightly more space, to be closely and continuously involved in the family unit. The CoCFM reports that if women from such families suddenly must live independently, they lose their footing and cannot cope because of the unprecedented situation they find themselves in (CoCFM, 2020).

In the survey created by Neubauer & Dahinden (2012), 35 per cent of participants indicated not wanting to take any measures which would involve their families. They indicated that they are open for help as long as it happens “behind their families back”. An expert interview conducted by Neubauer & Dahinden (2012) also highlights that the conflict is bigger in persons who are not only emotionally dependent but also financially: “*In some cases where economic independence is better given, natural loyalty and ambivalence may decrease. [...] I just only realized that people decide to split up when they have rather good psychosocial and economic resources. They obviously still have the conflict, and the ambivalence, that they don’t actually want to lose their family but realize that they have to decide. They can now at least afford to since they also have other possibilities to secure their existence.*” (Translated by the author. Neubauer & Dahinden, 2012, p.81)

Many also fear retaliation if family members find out that private matters were discussed externally, which can even prevail after they have cut ties through means such as stalking, harassment or «honour-killings» (CoCFM, 2020). The UK Forced Marriage Unit (2010) defines the term «honour-killing» as a “*murder where the person is being punished by their family or their community. They are being punished for actually or allegedly undermining what the family or community*

believes to be the correct code of behaviour. In transgressing against this correct code of behaviour, the person shows that they have not been properly controlled to conform by their family, and this is to the “shame” or “dishonour” of the family” (p.8).

Traditionalism can further impose restrictions and criteria on the future spouse. The Forced Marriage Unit (2010) states: *“Parents who force their children to marry often justify their behaviour as protecting their children, building stronger families and preserving cultural or religious traditions. They often do not see anything wrong in their actions” (p. 9).* For Neubauer & Dahinden’s study (2012), a questionnaire was sent to 244 participants. 81 per cent of the participants state that the reason behind their forced marriage was that their family wished for a spouse of the same ethnicity or nationality: *“You are marrying one of us!”*

Additionally, many young people live their entire childhoods with the expectation that they will marry someone their parents select – most of them are unaware that they have the fundamental human right to choose their spouse: *“A woman’s right to choose a spouse and enter freely into marriage is central to her life and her dignity and equality as a human being” (UN Committee on the Elimination of Discrimination Against Women (CEDAW), 1994, p.4)*

In patriarchal communities, honour is a highly important concept and may be crucial for community inclusion. Honour is an abstract concept that includes personal, individual values, also defined as «ethos», as well as norms of social interaction, known as a «code of behaviour». Honour is a measure of the quality of a person, including personal ethics such as honesty or compassion. In an honour-based society, a person’s status and the respect they command is dependent on the perception of the society (CoCFM, 2020). The term «honour-based abuse» is explained by Karma Nirvana (n.d, para. 1) as follows: *“The concept of ‘honour’ is for some communities deemed to be extremely important. To compromise a family’s ‘honour’ is to bring dishonour and shame, and this can have severe consequences. The punishment for bringing dishonour can be emotional abuse, physical abuse, family disownment, and in some cases, even murder. In most honour-based abuse cases, there are multiple perpetrators from the immediate family, sometimes the extended family and occasionally the community at large.”*

The CoCFM (2020), as well as Riaño & Dahinden (2010), both mention that many families fear that their loss of honour can harm the solidarity in the community or even cause them to be excluded from the community. Since the head of the family, usually the father and once married, the husband, is responsible for the female members, his honour depends on, and is affected by, them. Therefore, the marriage of a daughter can be used as evidence to show their capabilities as parents: *We can bring up our children well, even in Switzerland!* Neubauer & Dahinden (2012) also highlight that forced marriage could be used as a measure to bring back the children to the «correct path». The correct path in this context means the lifestyle which adheres to their parents’ ethos and code of behaviour.

It is also a proactive measure to ensure or regulate sexuality since becoming sexually active before marriage may be seen as a shame or dishonour (Neubauer & Dahinden, 2012). There have also been instances where women and men have been forced into marriage due to their homosexuality or bisexuality (Bundesministerium für Familie, Senioren, Frauen und Jugend, 2007; Chantler, Gangoli, & Hester, 2009; Hester, et al., 2006).

Due to all of the aforementioned reasons, families often restrict their children's freedom of movement once they hit puberty. This can include strict curfews, observation, little-to-no privacy, further controlling behaviours such as regularly checking private text/e-mail/phone conversations and imposing restrictions on friends (CoCFM, 2020). In this way, parents try to ensure that the children do not have the opportunity nor the resources to do anything which would go against the family ethos or code of behaviour. The CoCFM (2020) further explains that the act of «outplacement» is another method sometimes used by family members to discipline their daughters. The term outplacement defines the act of bringing the affected to a foreign country, most often the origin country of the parents, and leaving them behind. It should serve to bring the affected back to the right path according to their ethos. Outplacement can happen without a forced marriage but often goes hand-in-hand with it. There have been instances where the affected have only been informed about their impending marriage on their vacation in their home country. Some are taken to their home country under false pretences, such as the impending death of a family member who desperately wants to see them for the last time (CoCFM, 2020).

The aforementioned root causes, and the challenges make it incredibly hard for females to refuse or escape a forced marriage by creating a conflict of loyalty. Gill, Cox, & Weir (2018) recount a British Indian woman who pressed charges against her abusive husbands, mentioned how she felt unable to pursue them. She recalled that: *“I had threats from him and his family to say they were waiting outside my house to watch to see if I was going to go to court or not.”* (p. 12)

A known case that had received media coverage was the honour-killing of twenty-three-year-old Hatun Sürücü. At age sixteen, she was married to her cousin. After the divorce, she decided to live apart from her family with her son while still maintaining contact with some family members. She embraced a western lifestyle without a veil and traditional clothing, and the family suspected her to engage in amorous relationships outside marriage. This led to her murder by her very own brother at a bus stop in Berlin by three shots to the head for dishonouring her family (Todt, 2005).

Consequences of forced marriages

Forced marriages and the thus occurring marital captivity have a wide range of consequences that may affect not only the affected but also families and the respective community. Women forced to marry find it incredibly difficult to end their marriage due to the aforementioned causes and are often subjected to repeated rape and domestic violence (UK Forced Marriage Unit, 2010). Studies also reveal that forced marriages are linked to a wide range of health problems. Not only is there a significant impact on psychological and emotional well-being, but an increased and higher risk of self-harm and suicide (Ali, Israr, Ali, & Janjua, 2009; Hussain, Waheed, & Husain, 2006; Sabbe, Temmerman, Brems, & Leye, 2014; Samad, 2010, Samad & Eade, 2003).

Joamets & Sogomonjan (2020) also agree with the statement and further clarify that affected of domestic violence, sexual abuse, and children forced to early marriage are at greater risk of developing mental disorders which negatively affect their daily activities, relationships between family members, and physical health, harming individual capacity, decision-making and inability to protect themselves in marital conflict. Becker, Mirkasimov, & Steiner (2017) find that due to the high psychological stress pregnant women of forced marriage face, birth outcomes are affected. According to Behrman & Rosenzweig (2004), this can affect infant health and is related to long-run outcomes such as adult height, completed education, and earnings.

Young people, mostly women, forced to marry, or those who fear they might be unable to choose their own spouse, are frequently withdrawn from education, restricting further their personal development (Neubauer & Dahinden, 2012). These factors can contribute to impaired social development, limited career and educational opportunities, financial dependence, and lifestyle restrictions (UK Forced Marriage Unit, 2010). Furthermore, children within marriage who witness such domestic abuse are often associated with depression, trauma-related symptoms, and low self-esteem in adulthood. Additionally, they may learn that violence and abuse is an acceptable way to get something one wants (UK Forced Marriage Unit, 2010).

2.4 Illustrative Example Cases

Cases the CoCFM handles are extremely diverse. In order to provide the reader with a better understanding of the variety of cases in Switzerland, this chapter introduces four examples of affected of forced marriages in Switzerland. However, due to security concerns, it is not possible to recount real cases. It could be dangerous for the affected and be an information leak if family or relatives read their story.

The following cases were created with the help of the centre. Each story consists of /combines different real-life cases that have been handled by the CoCFM. Even though each case is unique, these examples can be seen as a generalization from the many observation

made by the experts at the CoCFM. It also illustrates how the timing and the extent of intervention by the CoCFM can vary from case to case.

Case 1: Selin, 25

Selin is a student at the University of Zurich and lives in a very conservative, strict family. Selin knows that her family wants her to marry someone from her home country. She will be expected to move abroad to live with her husband, where she will be a housewife and not be able to further pursue her education or career. Despite her parents regulating many aspects of her life, including whom she talks to, she manages to befriend some co-students at her university with whom she secretly spends time. Suffering from the restrictive environment she grew up with and envy of her friends, she desires to live a freer life. Knowing her parents would not allow any activities with friends, she decides to pursue different experiences, such as going secretly swimming or meeting up to go to the cinema secretly during lecture time.

Selin is seen with her friends by a relative, who informs her parents. This leads Selin's parents to physically and emotionally abuse her for behaving inappropriately. In order to put a stop to her behaviour, the parents start looking for an appropriate marriage proposal. From now on, she is under stricter observation and is only allowed to go to university if her father drops her off and picks her up. However, her co-students help her to contact the CoCFM, which advises and helps her through calls and emails on her friend's device, so that communication between them and her cannot be found by her parents. As advised, she decides to secretly copy and 'smuggle' important documents and contracts out of the house and store them at her fellow students' place. She also starts terminating contracts such as phone providers or bank accounts. The centre further helps her by organizing a temporary safe place to live with police supervision. Once everything is prepared, Selin is brought to the safe place where she will stay for the next month.

Selin's parents are furious, and to save their family honour, they try to get hold of Selin, by contacting her friends and threatening her through any possible means. They also manage to access her old phone records by calling the telecommunication company and requesting her call logs. They find the number of the CoCFM and continuously call and harass them. Due to the perceived risk, the competence centre helps Selin to change her name, allowing her to start a new life. The centre guides and advises her further with emotional and financial resources in her goal to become independent.

Case 2: Demet, 22

Demet was not able to fight back against her forced marriage. During her vacation back home, Demet was locked up in her room because she is supposed to marry her cousin in a few days. Not considering anything like this to happen, she had not informed anyone of the risk or could have reached out. Escaping was impossible. During the signing of the marriage contract, all relatives were present.

Demet spent her married life with her cousin in Switzerland, where she was imposed with several new rules such as not being allowed

to meet with her friends. She did not know back then that there are shelters and resources in Switzerland which could have helped her. Only after she attempted suicide did someone referred her to the proper resources and to the competence centre, which helped her to fight against her husband and family.

Case 3: Hüriye, 18

Hüriye moved to Switzerland with her parents at the age of 14. At first, it was expected of her to stay at home and help out her mother with the household and chores. However, she managed to convince her parents to let her attend language classes to learn German and further education.

Due to a lack of personal resources and, therefore, accessibility, she only managed to complete an apprenticeship as a hairdresser and worked as one. One day, her father forced her to sign a paper, and without knowing what it really was, Hüriye complies. She had just signed a marriage contract which certifies that her cousin currently living in her home country is her husband. Even her now-husband was forced to enter this marriage by his parents. For the time being, he stays and completes his education.

In Basel, Hüriye vainly tries to find help. Her husband had decided that he now suddenly does want to continue the marriage and travels to Switzerland. Not being able to endure the force and control carried out by her husband, Hüriye flees to a women's shelter, which forwarded her to the competence centre. Her husband and father tried to prevent her from separation, but the competence centre helps her to file for divorce.

Case 4: Zara, 17

Zara is doing an apprentice as a sales assistant and lives together with her parents and brother. Despite her parents forbidding and threatening her of the consequences of dating and participating in inappropriate pre-marital relationships, she has been dating a guy whom she met at work. Her parents allow her a bit of freedom, as long as she adheres to some set rules.

Contrary to her belief that her family is clueless about what has been going on behind their backs, her brother grows increasingly suspicious, and one day, when she claims that she is going to meet a friend, he decides to follow her. Upon seeing that his suspicions were correct, her brother ambushes her and gets in not only a fight with his sister but also her partner when he tries to protect her. Believing he is defending his family honour, he assaults Zara's boyfriend and takes her back home, where he reveals to the family what Zara has been up to. After verbally abusing her and punishing her physically for her behaviour, she is locked up in her room. To ensure that she cannot further contact her boyfriend, they take away her phone and decide to plan to take her back to their home country where she would live with her relatives until she is of age to marry. In this way, she can learn the proper traditions, customs, and values.

Fortunately, Zara is still allowed to go to work, as her parents do not want anyone to get suspicious about her sudden vanishment. It allows her to reach for help on the internet while at work and ask her

colleagues for help. She manages to contact a women's shelter, which forwards her the contact details for the competence centre. Through the help of the competence centre, she organizes several safety mechanisms and prepares herself to leave her parents. With the help of the immigration police, the competence centre ensures that she cannot leave the country and would be apprehended at the customs. One day, Zara pretends to be going to work and packs a few important belongings. She is taken by the competence centre and brought to a different canton for the next month. Due to her being very independent and self-reliant and no further perceived risk from her family, her case is closed.

2.5 Previous scholarship on prevention of forced marriages

In recent years, there has been a rise in research on forced marriages in the social, political, and medical fields due to several reports of girls in European countries taken to their country of origin to be forcibly married (Gill & Anitha, 2011). In 2011, the Council of Europe adopted a convention on preventing and combating violence against women, requiring that states make it an offense to force someone into marriage. Switzerland criminalized the act of forced marriage in 2013. Several governments throughout Europe have proposed solutions. Countries such as Belgium, the Netherlands, and the United Kingdom have raised the minimum age both for a sponsor and a spouse entering the country to 21 years (Sabbe, Temmerman, Brems, & Leye, 2014).

This has also led to different countries commissioning research and studies in their country on the topic, such as the Netherlands, Germany, Switzerland, and United Kingdom, and recommending measures and preventive intervention and treatment programs (Neubauer & Dahinden, 2012; UK Forced Marriage Unit, 2010). The European Union Agency for Fundamental Rights (2014) released a paper summarizing and illustrating promising practices implemented across Europe, such as from the Netherlands, Sweden, Germany, and United Kingdom.

Even though there has been some research on forced marriage in the political and sociological field, there is a lack of awareness in other fields. There have been several studies in the area of human-computer interaction on domestic violence and «intimate partner violence». While the two previous terms appear to be the same thing, they are, in fact, two separate terms with different meanings. Moorer (2021) explains that domestic abuse takes place within a household and can be between any two people within that household, for example, between a parent and child, siblings, or even roommates. Intimate partner violence can only occur between romantic partners who may or may not share a household (Moorer, 2021). However, it needs to be noted that even if there are some similarities, each of the situations has unique characteristics which cannot always be addressed by the same app. In recent years, there have been several studies and proposals of technological solutions such as a smartphone app for domestic violence survivors (Dieterle, 2015), apps

to reduce stress and anxiety of domestic violence survivors (Panatagama, Pratama, & Wibawa, 2018), a safety app for dating violence for college women (Glass, et al., 2015) and an app for women in abusive same-sex relationships (Bloom, Gielen, & Glass, 2016).

There have been several other smartphone apps developed to address the general issue of women's safety, such as bSafe, Circle of 6, Hollaback!, Panic Button, LifeLine Response, and Guardly. *Table 1* in the appendix describes some of the apps in more depth.

Sinha, Shrivasta, & Paradis (2020) categorize these apps into four categories: crowdsourcing reporting apps, emergency assistance apps, self-help/assessment apps, and evidence collection apps. Since no relevant crowdsourcing apps were found, they were left out in *Table 1*. However, some examples can be found in the appendix. The first type of apps are usually conceived for general safety and can also be used by children or boys. They allow witnesses to report incidents. This allows the creation of a hotspot map, which can be useful for the citizens of a city but also the police. The second type of app allows users to send text messages to their saved emergency contacts such as family or friends and the global positioning system (GPS) location and address by just pressing the built-in panic alarm/danger alert button. Some even allow users to get connected with nearby support services, such as nearby police stations, hospitals, or counselling services. The third category of apps is designed to increase the user's understanding of violence and also engage in self-learning and self-assessment of their risk of abuse/danger in their relationship. Lastly, the fourth category of apps are evidence collection apps which allows to safely store and upload evidence of abuse.

Glass, et al., 2015 created "MyPlan", a password-protected app that educates women on intimate partner violence and describes characteristics of healthy relationships. It also includes a danger-assessment and lets the women fill out a survey where they can indicate their concerns. Lastly, it provides them based on their survey, tips, inputs, and resources: *"For example, if a woman indicates in the "My Safety" section that her partner has stalked her, the personalized safety plan messages will include detailed information about stalking and resources available to increase her safety. For friends, the "My Plan" section includes personalized messages on how to privately discuss concerns and provide campus and off-campus resources that can be useful to support their friend."* (Glass, et al., 2015, p.8).

In a study to evaluate the effectiveness of the *MyPlan* App, it could be seen that after 12 months of using the app, the percentage of women experiencing physical or sexual abuse declined, and the support groups of survivors of violence were more prepared to help their friend leave the relationship safely (Glass, Eden, Bloom, & Perrin, 2010)

As seen [previously](#), affected of forced marriages often face domestic violence and intimate partner violence. The previously mentioned apps do provide some kind of support and help but do not specifically help with problems and characteristics unique to a forced marriage situation. The Homicide Prevention Unit (2015) describes forced marriage as a joint, organized effort against the victim. Whereas in domestic violence and intimate partner violence, there is often one

perpetrator, in a forced marriage situation, there is a multiplicity of perpetrators, which can range from siblings, parents, spouses, grandparents to in-laws. This highlights how different these types of incidents are from domestic violence or any other form of violence (CoCFM, 2020). Additionally, they often fail to help with problems such as years of grooming leading up to the forced Marriage and its effects, e.g., restricted education and personal development, fear of disownment by the family or not being aware of their rights and others mentioned in.

Name	Type	Content
bSafe ³	Emergency Assistance Apps	SOS button, location sharing with selected contacts, recording of incidents, voice activation.
Circle of 6 ⁴	Emergency Assistance Apps	Sends location upon activation to six chosen contacts with GPS location.
myPlan ⁵	Self-help/Assessment App	Self-evaluation tool to help assess safety, resources, support and tips for safety.
Smartsafe+ ⁶	Evidence collection App	Evidence collection such as documents, pictures, voice recordings for affected of family abuse.
Bright Sky ⁷	Self-help/Assessment App	Assessment of safety, list of help services, guides, and information about domestic violence.
AspireNews App ⁸	Evidence collection App	A camouflaged app that allows evidence collection such as pictures, documents, and video/audio recordings.

Table 2: List of safety apps

³ <https://getbsafe.com/>

⁴ <https://www.circleof6app.com/>

⁵ <https://www.myplanapp.org/>

⁶ <https://www.dvrcv.org.au/file/smartsafe-mobile-app>

⁷ <https://www.hestia.org/brightsky>

⁸ https://play.google.com/store/apps/details?id=com.aspireapp&hl=de_CH&gl=US

In 2012, the Freedom Charity helped launch an app to help young people at risk. It is designed to look like a game to avoid suspicion. It includes a comprehensive checklist for affected to sport signs of forced marriage and thus can be categorized as a Self-help/Assessment App. Additionally, the app provides resources for friends and professionals and informs them of how they can help. The *STOP* app, designed for human-trafficking cases, also used outplacement cases, where affected are kidnapped and taken abroad to be forcibly married (Stop The Traffik, 2020). Bangladesh has brought out an offline and online app that should not only fight child marriage but also educate the community. It is reported to have successively stopped 3700 child marriages (Plan International, 2018).

Chapter 3

Methods

The overarching goal of this thesis is to locate and design technologies that could support the work of the CoCFM and/or provide assistance to the affected. This was done through a number of activities. A lot of information was gathered through personal communications and discussions. Additionally, several interviews were conducted with the advisors of the centre and affected of forced marriages.

In the following chapter, the study process used to understand the dynamics and challenges of the stated problem is presented. For this, the overall procedure is explained and the methodologies used are highlighted. Inspired by the findings from these interviews, suitable ideas were collected. These wireframes were evaluated with the help of the CoCFM, and promising ideas were turned into a high-fidelity prototype and finally combined into one app.

3.1 Challenges & Problems

Before discussing the process and methodologies used, it is important to understand what kind of challenges were encountered during the study. As previously mentioned, not only the affected but also the advisors of the CoCFM are considered a vulnerable and at-risk population. Even after leaving their homes, affected can be stalked, harassed, and threatened by family members. Often the advisors themselves are faced with a variety of dangers such as death-threats and harassment due to the parents' beliefs that the advisors are to blame for their daughter's "shameful" behaviour (CoCFM, 2020).

Throughout the study, it was of the highest importance to ensure anonymity, safety, and security for all participants. This meant that a lot of information on the affected and details of the CoCFM was not made available or had to be redacted. Throughout the interviews, it was important that information such as the city, age, country, and names were not mentioned. Originally, the CoCFM did not approve the conduct of interviews with affected of forced marriages due to safety concerns and several rules and regulations. The original plan for this

thesis was to only execute expert interviews. Mainly because personal interviews with affected are not only hard for the affected having to recount their abuse, but can also be an information leak and provide their oppressors hints about their current whereabouts and life.

However, in March, half-way through my thesis, The CoCFM changed their mind and allowed me to interview five affected in a 3-way interview. This entailed that I was enabled to join a meeting between an advisor and one of the affected and listen to him interviewing the affected. Under the supervision of the CoCFM advisor, I was also allowed to ask the affected some of my own questions. As a result, I was able to collect first-hand information from the affected and I had to restructure my thesis accordingly. The interview were held in German and Swiss German, depending what the affected preferred.

Another challenge faced was the organization of meetings and interviews. Even though research is important to the CoCFM, their advisory activities are their first and highest priority. This meant that meetings and interviews had to be postponed, rescheduled, and cancelled if a case or other advisory activity for the affected came up. The interview schedule and place also had to be accommodated in accordance to the needs of the affected. The location and time of the interview was organized and selected by the CoCFM.

Due to the fact that the advisors and affected are a vulnerable population themselves, it was crucial to get the approval of the *Human Subjects Committee Faculty of Business, Economics, and Informatics* and to get affirmation of the legal division of the competence centre to confirm if the procedures and protocol comply with all applicable regulations. The process consisted of submitting the prepared interview questionnaire as well as the accompanying protocol for approval. Upon review, it was decided to further protect their identity, the audio would be deleted upon transcription.

For the interviews with the affected, the legal division of the CoCFM created their own consent form, which can be found in the appendix as well. Since it was important to them that the audio data as well as the transcriptions only get used for my thesis, the audio had to be deleted upon transcription and the transcriptions themselves were decided to be not disclosed.

3.2 Collecting Information

To collect information and insights, several interviews with both sides (advisors and affected) were conducted. The interviews with the advisors were conducted mainly through a call in a one-to-one interview and several conversations or workshops. Throughout the thesis, whenever a question or problem arose, a short call was organized and a short-interview or discussion was held with the advisor.

For the interviews with the affected, two-to-one in-person interviews were conducted. Other means of data collection such as one-to-one interviews, analysis of transcripts made by the CoCFM, or even a diary study were concluded unsuitable and too unsafe and as a liability.

The interviews were conducted in a location deemed safe by the centre. Talking about such a delicate and scary part of their life is hard and extremely emotional, the support provided by the advisor during the interview was helpful for some of the affected. Some affected were extremely eager to help, however, had troubles remembering some situations due to their trauma. The advisor managed to help them out by giving them pointers or providing me with necessary clarifications. The interview questions were designed with the help of the CoCFM. At first, we tried to narrow our focus down by thinking about the topics and questions I wanted to investigate, but it was made obvious in the first interview that it was much more interesting and insightful to follow and listen to their story and problems and adjust my questions accordingly. This meant that I was able to gather a lot more diverse insights but had much less control over the route of the interview. For the next few interviews, I created a short outline with focus aspects rather than a detailed protocol. The interviews were tape-recorded and later transcribed. The duration of the interviews varied from 60 minutes to 90 minutes.

3.3 Focus Aspects & Interview Questions

For the interviews with the affected, we decided to split the questions into two parts as well: the first part featured questions around the problems and issues they faced before going away from their family. The second part focused on the challenges and problems they faced after they had left. Since the questionnaire for the affected was created after completing the interviews, it was important that the question are not leading questions. *Figure 3* shows the process of collecting topics and question for the interview protocol for the affected.

For the first part, the focus aspects were as follows:

- **How was life at home? How was your situation like?**
In this section, I tried to understand what their situations were like at home. Were they abused? What did they face? Did they have any help? What is their social and educational background?
- **What helped you make the decision to leave?**
Even though this question seemed very simple, it could be that there is a commonality between all participants that helped them realize that what was being done was not right. What helped them?



Figure 3: Collection of ideas for affected. Green Post-Its illustrate the two different stages. Orange Post-Its contain topics and question surrounding their life and pink Post-Its are additional notes.

- **What measures did you take for yourself while at home till the day you left?**

How did they keep themselves safe? How did they organize their escape? This question should help provide insights into the challenges they face and to help us understand what they had to do, keep in mind or organize before they left.

- **What would have helped you? What advice would you give to other affected who are currently in this situation?**

Considering that all these women interviewed have now successfully escaped, it would be interesting to hear in retrospect what they thought could have helped, what issues they think could have been solved better and what advice they had for other women.

For the second part, the following questions were the focus:

- **What were the problems and challenges you faced once you left home?**

Being brought up in a restrictive environment has several consequences and influences on the women, as mentioned in *Chapter 2: Background on Forced Marriages in Switzerland*. What was hard for them once they left home? With what did they struggle?

- **How did you keep yourself safe? Do you feel safe?**
Safety is a priority for these women. What were the measures taken by them? What can be done to provide affected of forced marriage with the necessary safety and security ?

In the following table, a short overview of participants and their code is given. This code will be used for the interview findings. In the column *Note*, the status of their case is mentioned. As a reminder for the reader, a case is considered as closed for the centre if the affected fulfils the SUS framework: «Selbständig», «Unabhängig», «Selbstbestimmt», which can be translated as self-reliant, independent and self-determined.

Participant	Note
Advisor C01	Head of the advisors at the competence centre. The main person in contact with me.
Affected A01	Active case.
Affected A02	Active case.
Affected A03	Closed case.
Affected A04	Closed case.
Affected A05	Closed case.

Table 3: List of participants

3.4 Analysing Interview Data

Due to time constraints and the aforementioned safety issues, the interviews were only partially transcribed. Excerpts which were clearly not relevant for this project or too private to disclose were not transcribed. Examples of such left-out excerpts were clarifying explanations by the interviewer or details about the abuse. The software used for the transcription was f4transkript.⁹

The transcribed interviews were coded using an open-coding process. In this process, codes were assigned to excerpts that could represent recurring concepts or categories. In the next step, quotes, sentences, and excerpts that represented the most commonly applied codes, alongside the respective code of the participant, were transferred to Post-Its in order to create an affinity diagram. Additionally, to distinguish between the advisors and affected easily, two different colours were used: orange for affected, green for the advisors. The affinity diagram revealed the main themes of challenges and practices which were being faced by the affected. An image of the completed affinity diagram can be seen in figure 4.

⁹ www.audiotranskription.de/f4



Figure 4: Affinity Diagram. Quotes, paragraphs and notes taken from different interviews were written down on the respective Post-Its. Similar Post-Its are grouped together and labelled with a pink Post-It.

Chapter 4

Interview Findings

In this chapter the main findings from the interviews with advisors and affected are presented and summarized. The identified needs of the affected and the advisors of the CoCFM serve as the basis for the app design, which will be discussed in the following chapters.

4.1 Main narratives in Interviews

All affected interviewees recounted situations where they felt unsafe or were scared of their family, and how this influenced their behaviour largely. B03 recounts how she felt so unsafe and scared, that she didn't dare doing simple things such as having friends, worried of how her family would react: *"As soon as I hit puberty, I was told very clearly that we are not like Swiss people, I am not allowed to be touched, have a boyfriend, and that in our culture, men and women have to have a minimum distance of 1 meter. And that I can never, under no circumstances, forget where we are from"*. Her brother continuously verbally abused her and accused her of partaking in promiscuous acts, even if she had not done anything. She states that she feels like she missed out on her childhood and teenage years. She also described a situation where her mother told her that: *"if your brother were to find out that you [removed for security reasons], he would have killed you"*. B05 reports something similar: *"Whenever I did something which did not please them, such as having friends or not agreeing with them, they would scream at me and ask me if I am trying to be like Swiss people now. For them, being Swiss was an insult and a synonym for inappropriate behaviour."*

B05 & B02 both recount how they were under constant supervision. They both were not allowed to leave the house alone, and if they had to go to school or work, they were accompanied by their father or brother.

Often the affected experienced different kind of abuse and threats, which leads to them hiding and lying about their activities to

protect themselves. B04 recounts how her family acted harshly, physically abused her and locked her up in her room, when they found out that she talked to a male classmate, because they worried that she could lose her virginity before marriage. When asked why she did so anyway, she explained that: *“If they think I do all these things [in reference to talking to male classmates, friends and dating] anyway and constantly punish me even though I hadn’t done anything, I might as well do it and get punished rightfully”*. *“When I was 13, my brother found out I had a Facebook account, despite him not allowing it. Once he found out, he attacked me. My mother saw everything and didn’t interfere.”* (B05).

B03 states that in order to protect herself from suspicion and any abuse she opted to behave inconspicuously: *“I acted stupid and dumb, so they thought I wouldn’t ever dare doing anything, so they left me alone”*. B05 recounts how she was constantly paranoid and in panic that she mistakenly would do something that her parents don’t like without knowing, as they often expected her to *“just know”*, and face abuse or even be outplaced. *“I stopped doing anything at all, it gave me a peace of mind. If I do absolutely nothing, there is no risk of doing something which they don’t approve of.”* (B05).

B01, B03, B04 & B05 all reported that they used to delete their text conversations and call traces so their families wouldn’t read something upsetting to them. Additionally, B03 remarked how important such protective measures are: *“As long as my family thought I am innocent and too incapable to do anything, I was able to avoid any suspicion and secretly plan my escape. However, I put everything in jeopardy when I once was caught sneaking out of the house. They were much stricter, making it much more difficult to escape.”* B03 recounted how she shaved away all her hair on her head once her parents purposed marriage because she knew her parents couldn’t marry her if she had no hair.

From the interviews, it can be concluded that the space to act and live a normal life is considerably constricted by the overly strict protective measures of the family. Surprisingly, despite the strict rules imposed, all of the affected sooner or later decided to act secretly and partook in activities which their parents had forbidden.

This constant supervision makes it extremely hard for someone to help. Even for the CoCFM, this can portray itself as a problem. Even though they have the measures and the possibility to interfere with the help of the police, often this is not wanted by the affected. Communication between the CoCFM and the affected can therefore be complicated, as it is important to not raise any suspicion of what’s going on. B04 states that she was often worried she wouldn’t have the time to call or write the CoCFM upon an emergency, or in case she was taken to another city. Additionally, she often couldn’t sleep, worried about what would happen if her parents found out she was in contact with the CoCFM. Affected want to reach out for help but are scared that her perpetrators learn about their escape plans.

The Need for Someone Who Understands

Their love for their family and upbringing, makes standing up for themselves conflicting. Often it is hard to realize that what is happening is not okay, since it has been taught to them since they were young, and it seems to be accepted in their family and respective community. B03 mentions that no other girl in her community ever complained about the rules and treatments practiced: *“I thought I am the abnormal one, not my family”*. B04 mentions that she often blame herself, rather than her family, because her sister followed the rules and was happy with the imposed lifestyle by her parents. What is interesting was that B01, B03 & B04 noted that if friends remarked that the treatment they received by their parents was not okay, they often dismissed it since *“they don’t understand their culture and live differently anyway”*. B05 explained that often, it was just too exhausting to explain to friends, since there is no point anyway.

Teachers, colleagues or friends often lacked the empathy due to the lack of awareness and understanding of the issue and failed to act appropriately. It helped them to accept it and realize that what was being done was not okay, once they talked to the CoCFM, which were people who understood the culture very well. Even C01 mentions that the women feel more understood and accepted, once they realized they do not have to explain their culture and family dynamics to them.

B03 also reports how it was discouraging to always hear of bad women who did not manage to escape forced marriage : *“It would have been easier if I knew someone or at least was able to read about someone who was in my situation and successfully escaped and lives now happily. Since the news and internet only reports the unsuccessful stories of women who tried to escape a forced marriage, it scares many [affected] off to seek help.”* B05 shared that despite it being two years since she left and her being happy about her life currently, she still desires to connect with others who went through the same.

Lack of Knowledge about Resources & Rights

Surprisingly, none of the affected were aware of the CoCFM and all of them were shocked to find out what kind of support and resources they were entitled to. B04 was the only one who got into touch with the CoCFM directly, the other three first reached out to other support centres such as the *Mädchenhaus*¹⁰ or organizations such as *Terre Des Femmes*¹¹. All of the affected mentioned how difficult it was to find the proper help centres, since there is little-to-no awareness among the general population in Switzerland about them. Especially upsetting for them was that there was a lack of information even in institutions where they had expected to find help, such as school or at the workplace. This problem further extends if an affected is to leave the country or outplaced. Whereas in Switzerland they have somewhat of the capability and the resources to act, their space to act is much more restricted abroad. B01 recounts, how, prior to having met the CoCFM, she was

¹⁰ <https://www.maedchenhaus.ch/>

¹¹ <https://www.terre-des-femmes.ch/de/>

afraid that her parents would marry her off to someone during their vacations back home. She organized some money with her partner, which she planned to use in case of the emergency but did not know how she would and could use the money to escape the forced marriage. She did not know that there were organizations that she could have referred to if needed. Another point that was raised during the interviews was the importance of transparency when it comes to such organizations. B04 & B05 mention that it was important for them that nothing would happen against their will. In Switzerland, domestic abuse and forced marriage are official offenses, and so organizations and police are obligated to report it according to the article 43a (ZGB). However, organizations, such as the CoCFM, are subjected to confidentiality according to article 11 (OHG).

It is not only the knowledge about the proper help centres and the resources which is important, but also educational resources. This includes different topics such as women rights, sexuality, sexual education, how a healthy relationship looks like and further topics around love, sexuality and relationships. A problem among the affected seems to be the lack of information and knowledge, sometimes even about their basic human rights. Often information was kept from them, so that they would be more obedient and comply to the rules. *“I didn’t know I had the right to say no, I didn’t know that as a women I actually could decide myself! I always thought I have to comply to what my family says, even though I am not a minor anymore”* (B03).

“I always had trouble understanding what a healthy relationship looks like, I thought that as a women am supposed to be obedient and serve my man and his family, I thought that is how a relationship works. I was always so sad, because it felt depressing and I was scared I will always be stuck in a loveless relationship but would have to accept it because that is how it is supposed to be. My mother told me, once she found out we had sex-education in school, that this is not how ‘it works’ in our culture, and how we don’t kiss or hold hands and that when it comes to intercourse, women just have to accept ‘it’ when the man wants it.” (B04).

B02 recounts how she didn’t know at the young age that being touched without consent was wrong. Marital rape was never discussed and considered a taboo in the family. She experienced sexual abuse by her own father and did not understand that what was being done to her was wrong for several years: *“A friend from the mosque, she explained to me when I got my first periods, what periods are, since my mother never educated me about them. Upon realizing I was not given the ‘talk’, she also further explained to me how nobody is allowed to touch my body and how it is wrong. Only then did I realize that my father’s behaviour towards me was wrong.”* (B02).

This is even of higher importance once they leave their old life behind, in order to not fall into the same patterns. B02 recounted how she started a relationship with someone from the same culture as her, and it led to the same circle of abuse and treatment as she had experienced before.

Running Away Needs a Lot of Preparation

A lot of thought and preparation goes into the process of leaving their old life behind. It includes several things such as:

- Gathering and copying of important documents (e.g. certificates, degrees, CV's, contracts)
- Saving pictures of family members on an USB for the CoCFM (in case the police need to get involved)
- Cancellation of contracts (e.g. bank, phone provider)
- Informing relevant institutions about absence (e.g. School, University, Work)
- Sneaking out personal belongings (e.g. clothes, laptops)

B01 & B04 both recount how they forgot to inform their old phone provider, which resulted in their family getting their old phone records and harassing their friends. Important letters and letters confirming changes or resignations of contracts, should not be sent home, and should be diverted to a safe address. B03 also recounts how in this phase, it is important that the communications work smoothly. She misunderstood and thought she was only allowed to take a bag of belongings along on the day she is supposed to leave, whereas the CoCFM actually meant that she should take a bag along each time she leaves the house with belongings and deposit it at her friend's place. B01 states that how sometimes it was confusing for her because she misunderstood the timeline of events and was not sure when certain tasks or meetings were taking place. Another issue seems to stem from the problem that these calls are often done secretly and therefore are short and concise calls. *"I had to use a public phone in our village and always had to be quick, so that nobody sees me and wonders what I am doing. Sometimes, because the calls were so short, I missed information and sometimes it wasn't very clear."* (B05)

Safety Always Comes First

As discussed in the first section, safety plays a crucial role in the lives of the affected. Even more so, after the affected leave their old life behind. For the first few weeks, it is important for the centre that they always know where the affected is located, preferably even just stay put at the decided safe place. Additionally, rules such as with whom they can and can't talk to, are imposed. The CoCFM advises against befriending new people from similar cultural backgrounds as the affected. Additionally, the CoCFM expects daily check-ins, where the affected recounts how they felt that day and what they did. Depending on the severity of the case, further restrictions can be imposed. B02 explained that how for her, it was important to see why she is following these steps, and if she couldn't comprehend the reasoning, she had difficulties following them since it *"didn't feel any different than at home"*. B01 states how normally she wouldn't agree to such controlling terms, being a breach of privacy, but for her safety, she would readily agree to harsh measures including location tracking or observation. This is a mindset shared by other interview participants (B03, B04 & B05).

Reality isn't Always as Expected

Unfortunately, it is still a long process ahead once they leave their old life behind. B03 & B04 both explained that during the preparation, they never really thought about how life would be afterwards, and *"reality came crashing down during the first few days away"*. Both state that they did not expect the first few days to be so difficult, they imagined it quite differently. *"After the first few days, it switched. I felt so immensely guilty and egoistic for what I did, and it was something I never expected I would go through."* (B05)

Additionally, affected face new problems and other hurdles. Often, it is the first time for them to be completely alone and on their own in their life, something many have difficulties with. Suddenly, they have to be responsible for themselves and navigate through life without aid. B03 states: *"I didn't know how to be a normal adult. I never had to be normal? I never did these things, I never had to go out and ride the bus somewhere"*. Tasks such as paying their bills or how to open a bank accounts can be overwhelming: *"I felt dumb and anxious asking their employee at the bank what I had to do. I cannot call my advisor 20 times a day to ask him simple stuff."* (B04).

B03 also stated how it made her feel hopeless that she couldn't stand on her own feet and was dependent so much on the help of others: *"I hated having to call my advisor for every little thing, I felt like a burden."*

C01 state that some affected can fall into bad habits and harmful patterns once they leave home. Since at home they were not allowed to do anything, some women fall into a behaviour of spite, where they do things just because they weren't allowed before. Substance abuse is a problem they often have to deal with. Additionally, some women have a very hard time adjusting and digesting their trauma, and are in need of psychological support to overcome it. Despite that, the task of having to rebuild their life can be overwhelming. Where previously they had guides and rules, now they are completely free and therefore can lose their footing. The CoCFM tries to help them tackle different aspects of their life one-by-one, but sometimes affected can feel *"demotivated and how they are not succeeding"* (B03 & B04). Progress is something that is hard for many to evaluate for themselves. Several (B03, B04, B05) affected mentioned how it felt like that they had not made enough progress in the time since they had left.

Chapter 5

Early Design & Ideas

In the previous chapter, the main insights and findings from the interviews with affected were presented, providing the reader with a good understanding of the requirements and needs of the affected. This chapter presents an overview of possible ideas for an app that could enhance the collaboration between the affected and CoCFM.

5.1 Requirements & Needs

Before brainstorming, short and concise key points from the interview findings were drafted, facilitating idea generation and more concretely addressing different identified problem areas.

Inconspicuous. Affected can be under strict observation and often get little-to-no privacy. It is not uncommon that belongings or phones are controlled. How can we discreetly address the abuse without alarming a perpetrator? This point can be seen as an requirement which applies to all solutions considered.

Safety. Being safe was very important to the affected. All of the affected had tips and tricks and suggestions on how someone can keep themselves safe. How can technology contribute to safety? How can it be ensured that the use of the app does not endanger the affected in any way?

Resources. Due to their restrictive upbringings, information was sometimes kept from the affected. There is a desire for information and education about topics such as sex, love, relationships and rights. Additionally, there is the need for an overview of different help centres relevant and close to them.

Support. Having someone who understands their situation and culture is encouraging and motivating. Their feelings are validated and it helps them accept that it is not them who are at fault. There is a need to hear or even connect with others who have experienced the same. How can communication between affected and others designed to be safe?

Organization. A good overview of when and what needs to be done and planned is important and crucial for their own safety. Some affected reported forgetting to complete certain tasks (e.g. terminating phone contracts), which led to problems later on.

Guidance. Living the first time on their own can be hard. Things such as paying their own bills, applying for apartments or opening a new bank account can be overwhelming if they never had the opportunity to learn that before.

Progress. Tracking your own progress and improvements can be difficult. How can technology aid and support mental health of affected and highlight their progress to them?

5.2 The Three-Stage Approach



Figure 5: The three stages as identified from the interviews

While brainstorming, it became clear that the majority of affected went through three stages as illustrated in *figure 5*: realization of abuse, implementing measures and lastly, building a new life. Originally, the second stage was named *Taking Action*. However, it has to be noted that the women who downloaded the app and are informing themselves are also already taking a step. To recognize the importance of every step, no matter how big or small, the second stage was renamed to *Implementing Measures*. This term also describes the stage more accurately since it does mainly consist of implementing different tasks and precautions depending on their situation as discussed together with the CoCFM. The idea to create steps, was inspired by a leaflet created by the British Home

Office for black and minority ethnic women and children¹² and *HelpGuide*¹³. As aforementioned, the interviews with the affected consisted of two parts: life at home and life after leaving. These two parts correspond to stage 2 and stage 3 in *figure 5*. Many of the affected recounted coming to realize their abuse through research or third-persons, thus leading to the addition of stage 1.

However, before presenting the chosen ideas, the question “*how an app can ensure safety?*” needs to be discussed. As aforementioned, any proposed solution is only useful, if the solution can at the same time ensure that it does not cause any harm to the user. However, the mere existence of the app itself can be a threat. As seen in the interviews in the previous chapter, family members would often check and control their daughters’ smartphones. Other than always showing a disclaimer when the app is first downloaded (e.g. Hint saying that the app should only be used if it is safe to do so and to reach out to the CoCFM directly in immediate danger), there are two proposed solutions for an app.

- **Hidden Features:** The app is entirely masked as something else. For example, the app could be named as a weather app or an organization app and upon opening would act as a normal weather or organization app. However, affected can reach the true app and the wanted features upon clicking a hidden call-to-action or entering a specific code. This could be a text, a button, a fake “terms of use” to click on, or it could be entering a pin code in the search bar for locations. Successful implementation of this strategy are *BrightSky* and *Aspire News App*¹⁴.
- **Double Login:** The app is password protected. Upon downloading the app, the user is asked to set a pin code. If the user enters their set pin code, they will be lead to the app designed for the CoCFM. However, if they enter a specific set code (e.g. 1111), the app will lead them to a fitness app or organization app. This is an approach previously successfully used by the *myPlan* app.

Another option to ensure that nothing can be found on women’s mobile phone would to turn the app into web app. This could allow affected to access the app through their mobile or desktop without having to worry that it can be later found on their phone. However, for this to work, the web app would not only need to be protected, but the user would have to ensure to delete their browser history so that nothing can be traced back. Additionally, upon clicking a built-in panic button, the user could be automatically taken to another website in case a family member were to walk in on them. The function could be additionally accessed through a manually defined key combination. However, since both can be

¹²https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/97924/english-3-steps.pdf

¹³ <https://www.helpguide.org/articles/abuse/getting-out-of-an-abusive-relationship.htm>

¹⁴ https://play.google.com/store/apps/details?id=com.aspireapp&hl=de_CH&gl=US

implemented together, it would make sense to provide both and let the affected decide which one is more appropriate and safe for their situation.

Realization of Abuse

As identified in the previous chapter, the first hurdle can be the identification and realization of abuse. At this stage, technology could assist women in making an informed decision depending on their situation and additionally provide them with the relevant resources to further inform themselves on their rights and the process.

- **Self-Evaluation & Assessment.** This feature consists of a questionnaire designed to evaluate their current situation and the level of risk at home. Depending on their evaluation, the user is suggested a suitable action plan and directed to relevant resources. Additionally this evaluation can also be shared with bystanders, persons not directly involved in an abusive situation but falling under the circle of trust. It could provide them with necessary information needed to recognize abuse and provide them with information on how they can help. A similar idea has been implemented by *MyPlan* and *BrightSky*.

The wireframe displays two side-by-side mobile app screens for a 'Spotting Signs' self-evaluation tool.

Left Screen (Question Screen):

- Header: '< Spotting Signs'
- Section: 'Question' with subtext 'Any clarification or further instructions for the question asked above.'
- Response options (radio buttons):
 - Strongly Agree
 - Agree
 - Neutral (selected with a green checkmark)
 - Disagree
 - Strongly Disagree
- Bottom button: 'Continue'

Right Screen (Final Screen):

- Header: '< Spotting Signs'
- Text: 'There seem to be some warning signs and you could be suffering from abuse. The CoCFM recommends:'
- List of recommendations:
 - Recommendation 1
 - Recommendation 2
 - Recommendation 3
- Bottom button: 'Next Steps'

Figure 6: Wireframe of the Self-Evaluation tool, showing the question screen and the final screen.

- Reading Section.** A section consisting of different reading material such as articles and content created by professionals on different topics surrounding forced marriage, abuse, love, sexuality and relationships. It also includes selected stories and experiences from survivors, hopefully inspiring users to take action. “What to do?” could be an additional section, featuring several posts and articles on how to behave in different situations. How should you answer if your parents suggest marriage to avoid suspicion or negative consequences? How can you buy yourself time if parents propose marriage? How can you protect your finances? This section should prepare the affected for situation which can come up and how to behave smartly, so that they can avoid any negative consequences and buy themselves time so that they can safely reach out for help. This idea is based on suggestions by the CoCFM and the affected themselves.

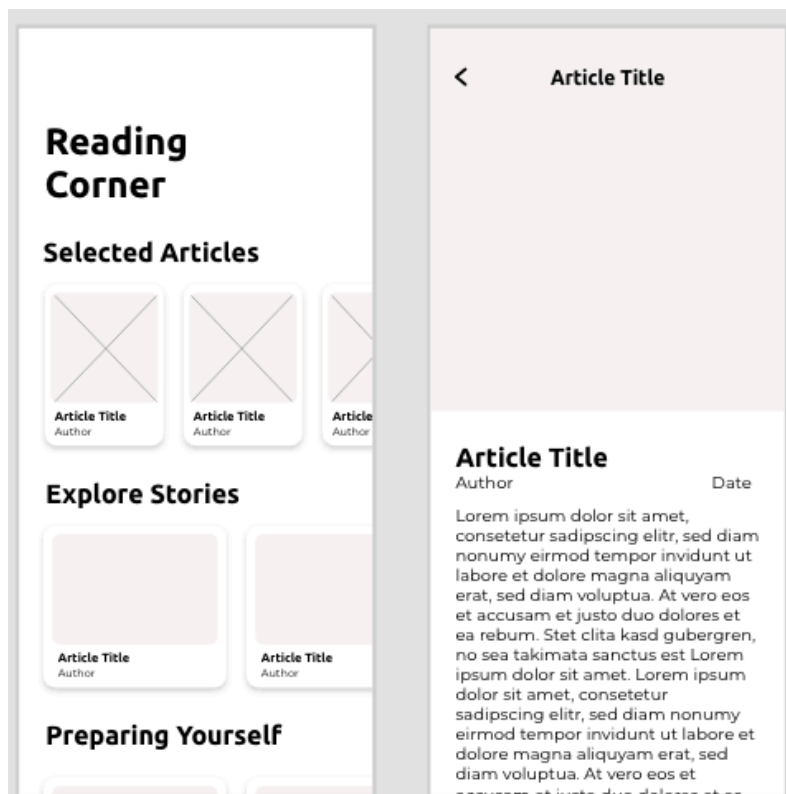


Figure 7: Wireframe of the Reading Corner showing left the overview page including different sections and on the right how one article could look like.

- Support Groups.** This community feature allows you to find and connect with other affected and share your story and experiences. Other than the built-in chat for affected of forced marriages, contact details for other support groups or help lines with different main focuses such as substance abuse, mental health, suicide or other topics could be provided. This allows the user to reach out by phone or if possible, even join support

groups live. In order to protect everyone, the built-in chat would need to be deleted after a set time or as soon as the chat is closed. Another way to ensure safety, would be to create timed chats, which only exist for a defined period of time. Otherwise, there is the risk that if one affected was exposed, information on the others affected or members of the chat would leak, leading them to be at-risk as well.

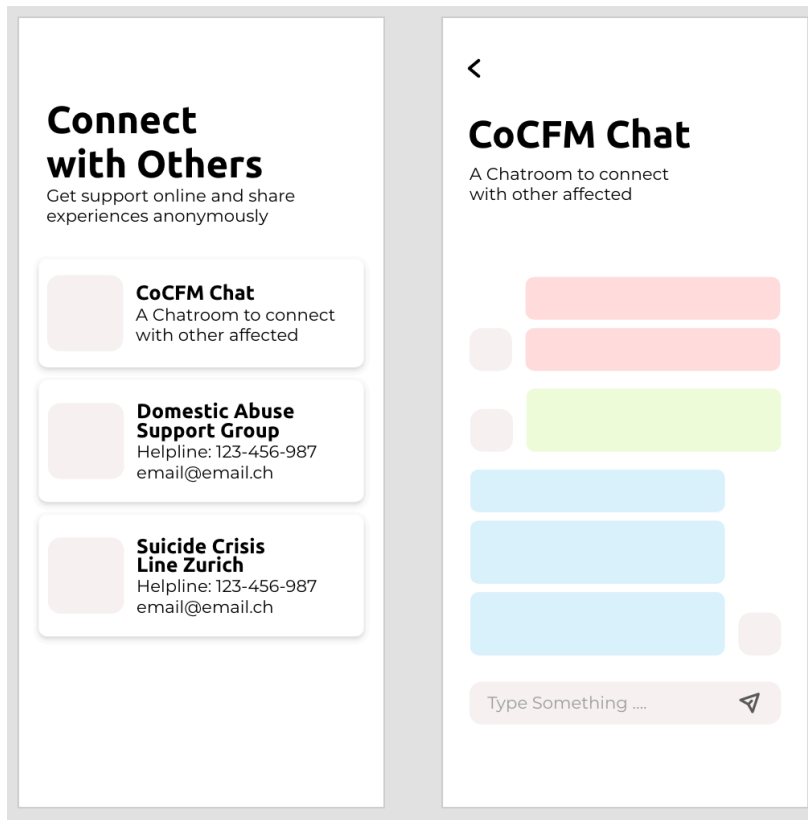


Figure 8: Wireframe of the Support Groups Section showing on the left hand side an overview of existing support groups and the CoCFM Chat.

Implementing Measures

This step includes several activities for the affected to protect themselves and change their situation. It ranges from taking steps for their protection to preparing to leaving.

- Help Map.** This map should show the user their current location and highlight relevant resources such as support centres, organizations or police stations near them and provides them with the relevant information about the institution, if the institution has to report it, what the advantages and restrictions of the specific institution is. Additionally, the institutions, such as the women's shelters, whose address cannot be disclosed, can be found in the list with the information on how to reach out to them. This could be especially useful if the affected has been taken abroad and is in an unfamiliar area.

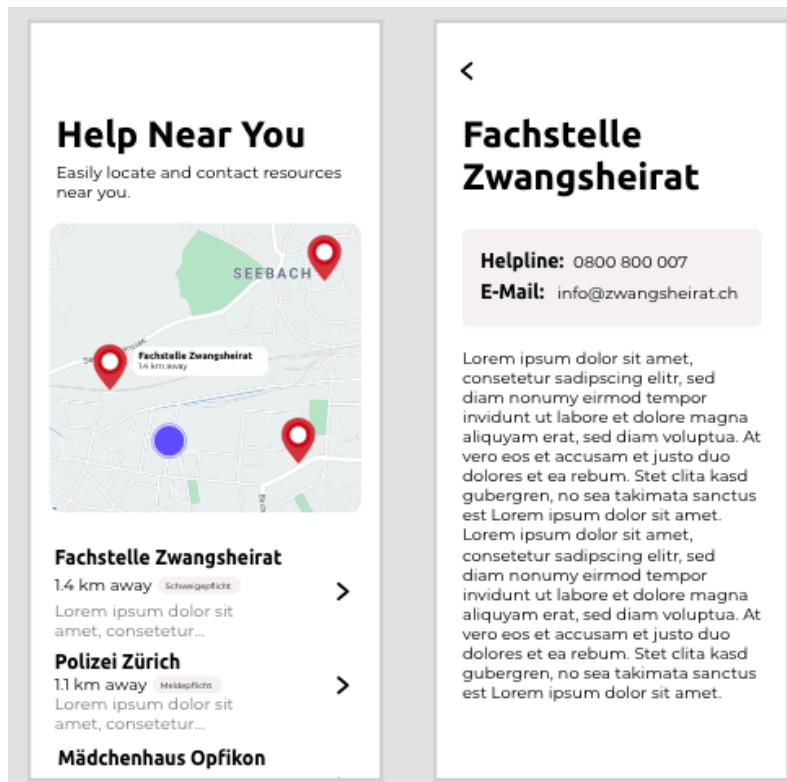


Figure 9: Wireframe of the Help Map. The left screen illustrates the map itself with red markers for different help points, including organizations, police stations or shelters. Additionally, it provides the user with a list with a short overview about the institution. On the right screen, the page on the institution tapped is shown.

- **Panic Button.** A button which upon clicking automatically sends the current GPS location through SMS to pre-saved contacts. Contacts could include institutions such as the CoCFM or police, and members of the trust circle. This feature would allow the affected to discreetly reach out for help upon facing a serious threat (e.g. parents trying to take the affected abroad).

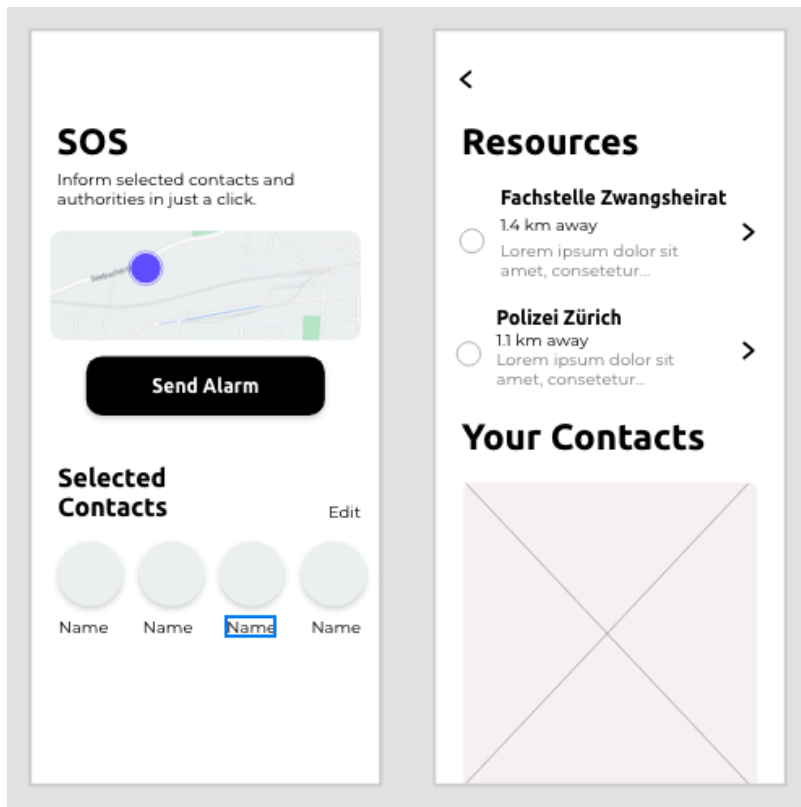


Figure 10: Wireframe of the Panic Button, showing the main screen and edit screen for contacts to be alarmed.

- **Preply.** A smart companion helping affected prepare. Preply provides affected persons with checklists and reminders created by the CoCFM. These checklists include the most important tasks to be completed for their safety. Additionally, the specific tasks to Preply can be added.

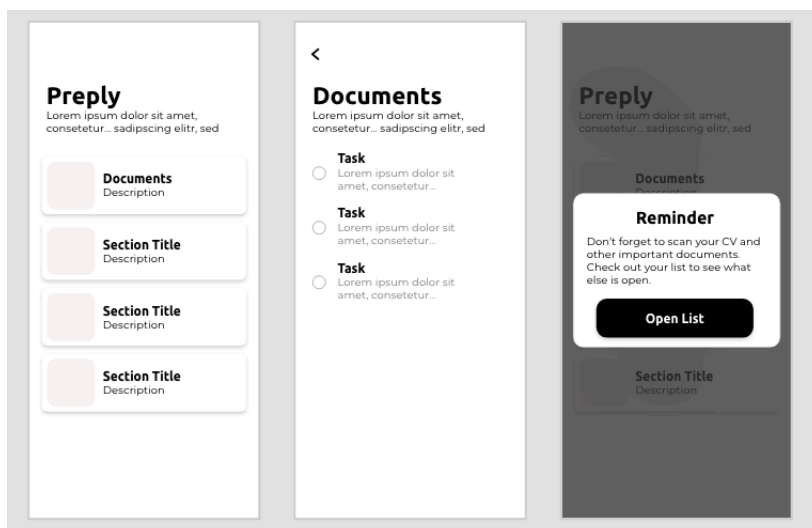


Figure 11: Wireframe for Preply, showing the main screen, in the middle, a specific list and lastly a set reminder.

Building a new life

The path to become self-reliant, independent and self-determined can be difficult. How can technology help the affected in their progress and keep them safe?

- **Geo Map.** Geo Map facilitates the observation of the affected. It allows the CoCFM to create a geofence for the affected. The geofence can not only be seen by the CoCFM, but also by the affected themselves. This allows the affected to see where their safe areas are. If the affected happens to leave the marked borders, the app automatically alarms the CoCFM and shows them the current location.

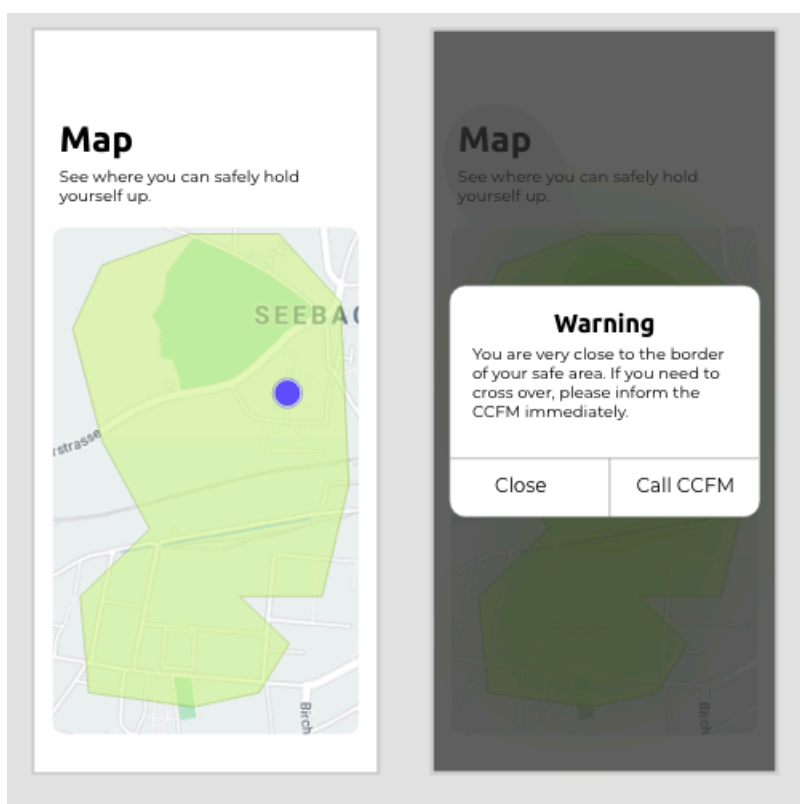


Figure 12: Wireframe of the Geo Map, illustrating the geofenced map including the blue marker for the affected and an alert if the user is near the border.

- **Chatly.** Chatly is a chatbot that helps affected find the appropriate resources and answers to the most frequently asked questions such as “How do I pay my bills?”. It allows the affected to be more independent and find solutions themselves, without creating a dependency to the CoCFM. It also provides the affected with contact details of therapists, advisors and support groups if questions surrounding mental-health, substances or emotional help are asked.

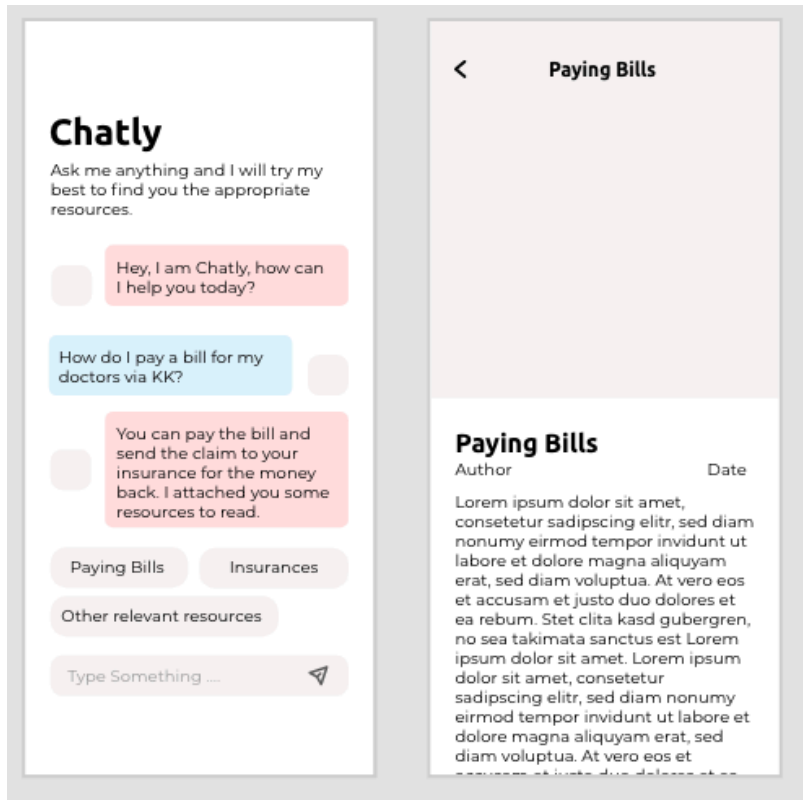


Figure 13: Wireframe of Chatly, a chatbot that users can ask their questions to. Chatly provides users with the appropriate links to resources. The right screen shows how a linked article could look like.

- **Progressly.** A companion helping affected track their progress and that helps the CoCFM with their daily check-ins. It allows the affected to track their mood on a daily basis, allowing them to manage them and see patterns. It also encourages them to write about their day and asks them to write down three positive things. These positive things are then used by Progressly as reminders, allowing users to see their achievements and progress. Progressly allows users to see their past entries, sends them reminders to fill out their entry for today, and automatically sends the CoCFM the entry at midnight.

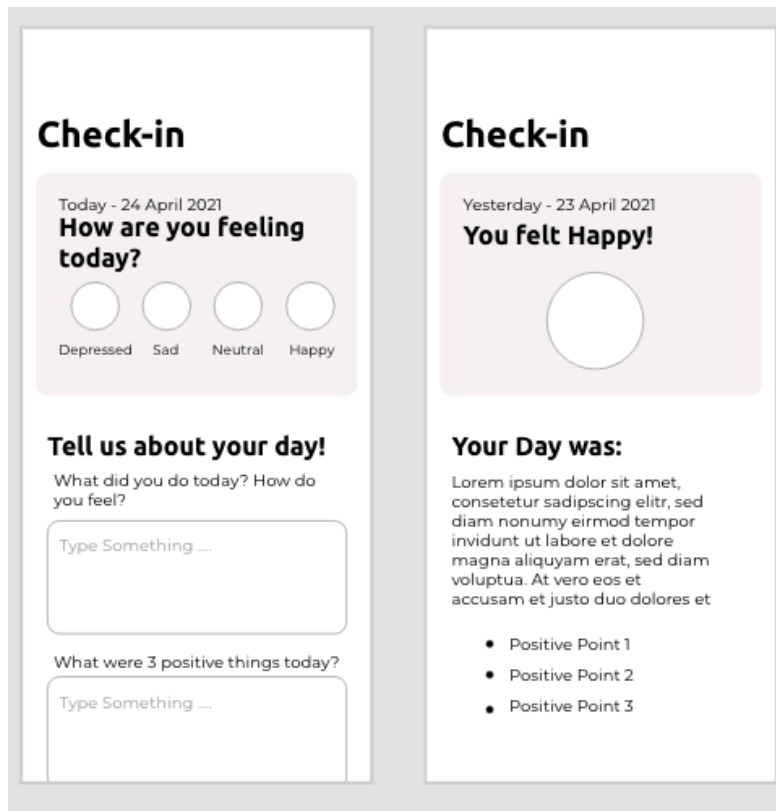


Figure 14: Wireframe of Progressly, showing left the unfilled screen for today and on the right a past filled-in screen.

5.3 Evaluation with the CoCFM

The presented wireframes were used to get the first feedback from the CoCFM. The prototypes were reviewed by multiple members of the including advisors and their other social workers. All participants were asked to evaluate each idea with the help of the findings presented in chapter 4 and the descriptions provided alongside the wireframes. Specifically, they were asked to answer the following questions:

- How useful could this idea be in your daily work with the affected? Can you see the added value?
- Is the idea feasible? (e.g. too complicated, extra workload for them). What could be problematic for the CoCFM?
- What could be problematic for the affected?
- Is there something you would add, that is currently missing?

In the next sections, the findings for each idea are presented.

Self-Evaluation & Assessment

This idea was overall met with a lot of criticism due to it being quite tricky and risky. The CoCFM explained that their assessment consist of 47 initial criteria and many other evolving criteria. Additionally, formulating those questions would be quite hard since the CoCFM often does not query affected on each of the criteria, but rather take them from

conversations. The CoCFM stated that such a self-evaluation is not feasible, since the questions could not potentially cover the whole range and their complexity. Even though it may be that affected feel less shy to answer questions if they have a sense of anonymity, due to the questions being quite complex, there is the risk that affected don't evaluate themselves as objectively and accurately as they should. Furthermore, where in real life, the advisors can adjust their questions according to their conversation with the affected, an app cannot. Therefore, there is the risk, that the evaluated score, may end up being low, giving the affected a false sense of security or the assessments failure to cover areas, and maybe even lead to the affected not reaching out for further help.

Another risk the CoCFM sees is the privacy. Where would the data go and how would it be kept secure, considering how delicate this information is? Additionally, the questionnaire is not something they would want to disclose so publicly, where anyone could get their hands on the app, even perpetrators.

Overall, it was concluded that the idea would not be pursued further.

Reading Section

The idea was well perceived and the feature seems to fulfil a need of the affected. There were no negative remarks, and a lot of the materials they already use for their website¹⁵ could be reused for this reading section. Especially the proposed section "What to Do?" was conceived well and considered useful and valuable for affected and their safety.

Support Groups

Not only does the CoCFM think that the exchange with others who understand is something affected desire, but also that the feature addresses this problem well and could be valuable. However, the success of such an idea highly depends on the numbers of regular users. If there are only a few users, it could be quite demotivating if an affected reaches out, and does not get a response back. One concern the CoCFM had however, was how to guarantee the anonymity and security of the affected? Especially, how to ensure that one affected does not put the other at-risk? It is a question that would need to be looked at more in-depth, but overall it is a feature that they are considering.

The idea of providing the affected with contact details of other support groups and help lines for other topics was seemed useful. The numbers and contact details could be provided in another section of the app, such as the Help Map.

Help Map

The idea and the problem it tries to solve has been perceived well and genuine. Especially useful for the CoCFM was the additional

¹⁵ www.forcedmarriage.ch

information given on each of the intuitions, how they work, how to reach out and if they are required to report to the police. As a reminder, in Switzerland, domestic abuse and forced marriage are official offenses, and so organizations and police are obligated to report it according to the article 43a (ZGB). However, organizations, such as the CoCFM, are subjected to confidentiality according to article 11 (OHG). This could be useful since some may not feel ready yet to report it, and others may want to report it.

The only concern the CoCFM raised was about the feasibility of the Help Map abroad. It requires a lot of knowledge and maintenance: what local organizations are there? Are they still active? If not many organizations are known or active in an area, it may be demotivating for affected. Depending on the individual situation and country, it may be dangerous to reach out to the police. Additionally a problem often encountered in outplacement cases is that the phone is taken away by affected. However, the idea would be partially applicable in some countries.

Panic Button

Overall, the CoCFM liked the idea. The only objection they had was that it would be even easier if the alarm could be executed without having to open the app and navigating to the button. It would be much more useful, if the button was easier available and could be accessed from the lock-screen even. This could be either done through gestures (e.g. tapping the back of the phone five times, clicking the on/off button of the phone three times) or through widgets placed on home screens. On Apple phones, this could be implemented through the newly introduced widgets¹⁶ with the iOS14, a feature that also exists on Androids.

Preply

Preply as a simple task list could be effective and valuable to use alongside regular meetings affected have with the CoCFM. However, the CoCFM noted that it needs to be defined further what kind of tasks and preparations Preply provides and for whom. Not all affected have to leave their home, some cases, can be resolved without having to. The idea was primarily conceived for affected who need to leave their home, since all of the affected interviewed had to. It would therefore be important to add to whom these are addressed to and furthermore even think about what kind of support affected who do not have to leave their home need? What tasks can be useful for them? The CoCFM mentioned that there are tasks around safety that could be relevant to them.

Furthermore, it is only difficult to make Preply individual and have the CoCFM add manually tasks for them. Whereas Preply works well for general reoccurring tasks, it is not only time consuming for the CoCFM to have to add specific ones for each affected but also risky. In cases

¹⁶ <https://support.apple.com/de-ch/HT207122>

with high risk, case dependent information is always delivered verbally so that there are no traces. However, Preply can be used as a basis which then can be supplemented through consultations.

Geo Map

The Geo Map received mixed comments from the CoCFM. One remark was to not call it safe area, but rather low-risk area, since it is unrealistic to guarantee an area to be 100% safe. Generally for low-profile cases, constant tracking and supervision is not something really needed. Furthermore, it would take the CoCFM a lot of time to identify and mark such low-risk areas. However, for high profile cases, it is something that has already been used. Integrating it in an app along-side all feature would allow the CoCFM to adjust the feature according to their needs. It has to be used along a counselling though and there needs to be an option to easily notify the CoCFM in order to inform the CoCFM in advance, when an affected person will – as an exemption – leave the low-risk area for a mutually approved purpose.

Chatly

The idea itself was well liked by the CoCFM but there were some confusion to what the extra value of a chatbot would be compared to the Reading Section and Support Groups, since the Reading Section already contains all the resources and the Support Groups would provide the affected with the sense of closeness. However, a chatbot could be used as an additional means of help and guidance on a web page. For the purpose of the app, the Reading Section could be further improved with tags and a search feature so that articles and resources can be found more easily.

Progressly

Progressly as a form of diary for self-reflection and progress tracking for the affected was considered to be a good idea. For the CoCFM themselves, check-ups via mail or phone, as they have been doing so far, is efficient enough and would not necessarily be facilitated through Progressly. However, they do see the opportunity for affected to take more control of their progress, by visualizing it to them. Progressly should not require the CoCFM to check and control the entries on daily basis. The CoCFM notes that this could create a dependency, if affected expect the CoCFM to read up on each of their daily entries.

Progressly could therefore be improved by focusing on the affected and visualizing their progress. Therefore it would take a more therapeutic role rather than a monitoring one. The affected could share their entry, if wanted or needed, with the CoCFM, but do not have to.

Chapter 6

IA & High-Fidelity Prototype

Based on the feedback from the CoCFM, the presented wireframes were turned into high-fidelity prototypes and combined into an app. The following chapter presents the final design of the app.

6.1 Interaction Architecture

Before the final designs were created, it was important to look at how the different ideas could be combined and would work together. Additionally, it was important that the app could support the affected on their path with the three-stage approach.

Figure 15 highlights the interaction architecture of the final version of the app. The yellow boxes represents different screens such as the home screen or the sign-up screen, the blue boxes illustrate sections of a screen and the white boxes with blue border illustrate subpages. Additionally, functions that can be executed on each screen are marked with text as well. In order to support the user better, the home screen was designed to adjust itself depending to the users need, illustrated with the three pink boxes. For each stage, other features and screens are important and therefore highlighted. For example, the Geo Map is only useful for users who are at the “Building a New Life”-stage. For users who are the “Realization of Abuse”-stage, the sections “Spotting Signs of Abuse” and the “Reading Corner” are much more crucial.

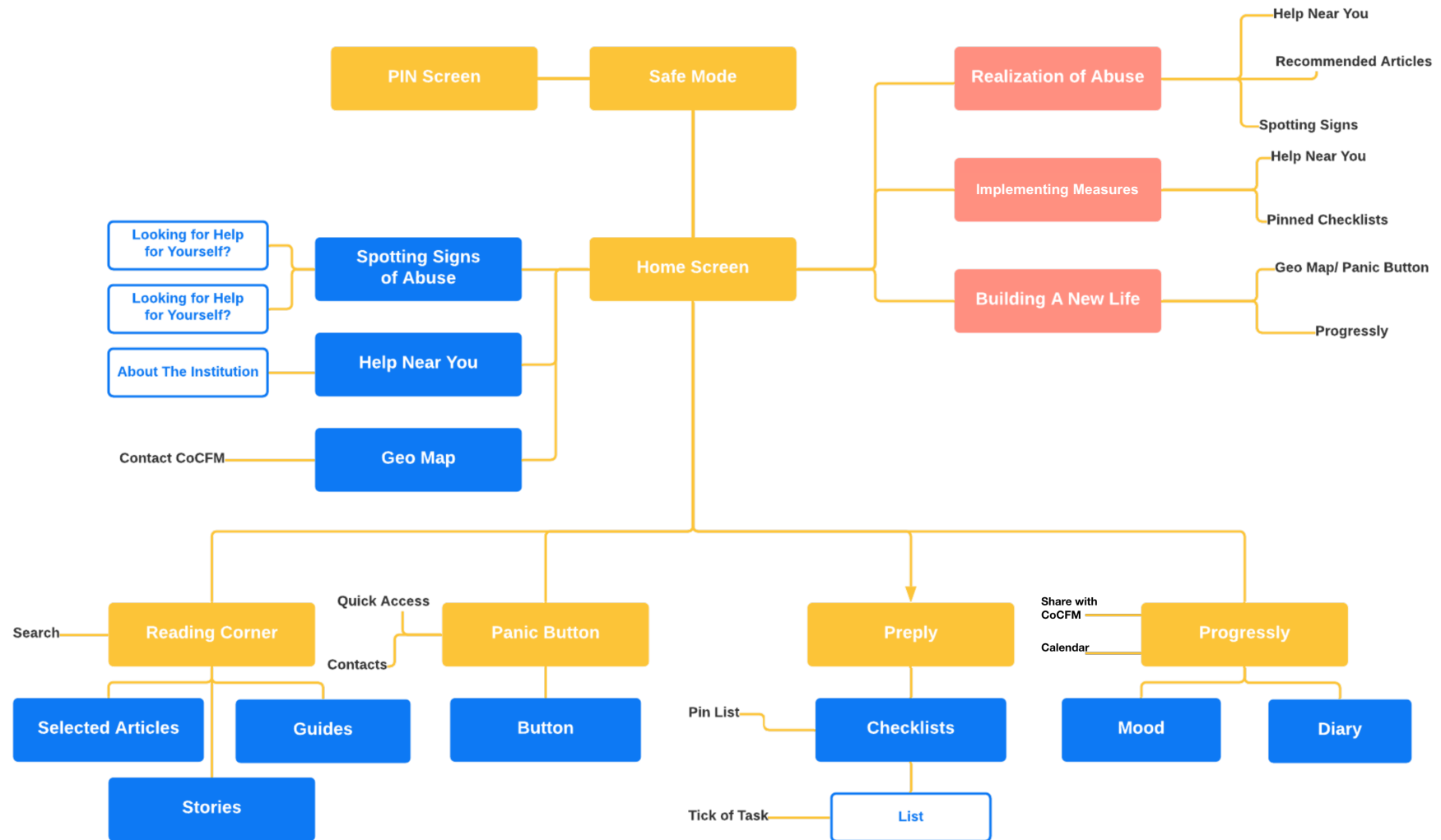


Figure 15: Interaction Architecture of the app, showing screens, sections, sub-pages and functions.

6.2 Onboarding & PIN Code

To increase the safety of the app, the approach taken by *MyPlan*¹⁷ was chosen. On the first screen, the user is made aware that the app is not meant to be used for emergencies. Additionally it provides the user with the number of the CoCFM for emergencies. This is followed by the PIN Code screen, where the user has to create a pin. Lastly, the user is made aware that if someone forces them to open the app, the PIN 1234 displays fitness content. For the purpose of this thesis, the screen of the fitness app were not designed. The Onboarding and Safe Mode screen are only shown when the app is first downloaded.

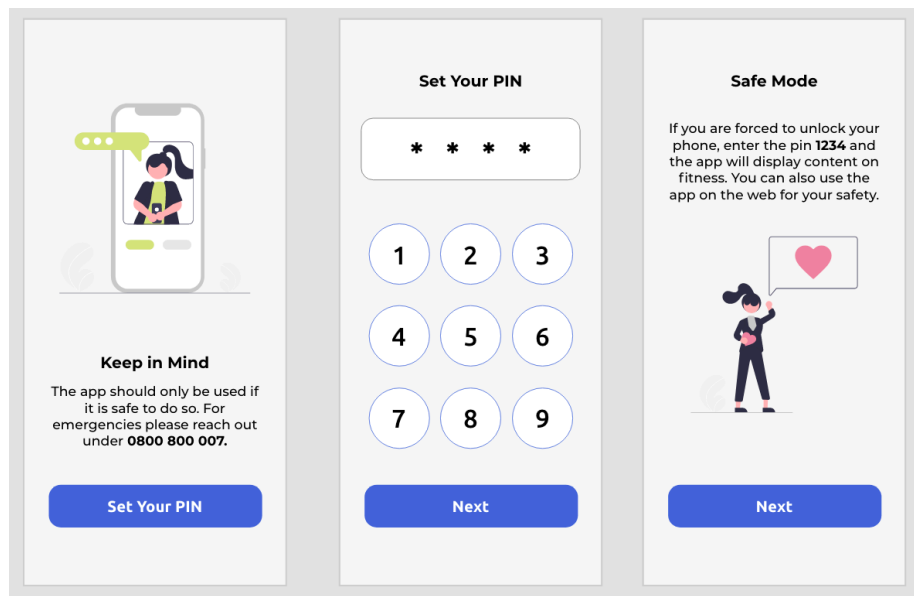


Figure 16: High-fidelity prototype of the onboarding, PIN and Safe Mode screen.¹⁸

6.3 Home Screen

As aforementioned, the home screen was designed to adjust itself to the needs of the user. The features are accessible for all users, but different parts are highlighted depending on the needs at each stage.

Realization of Abuse

For the users in the stage “Realization of Abuse”, it was determined with the help of the findings from chapter 4, that information and resources are the most important needs. Therefore, the home screen displays the Help Map at the top, giving the user a short overview. The user can click the map to expand it, leading them to the full version of the Help Map as presented later on in chapter 6.5. This section is followed by selected reading materials from the Reading Corner, providing the user with the

¹⁷ <https://www.myplanapp.org/>

¹⁸ All images for the prototypes are open-source illustrations by undraw.co

necessary knowledge and understanding on different topics. Furthermore, a section called “Spotting Signs of Abuse” is introduced. This section is addressed not only affected but also to third persons who may be worried about a friend.

Implementing Measures

For this stage, the home screen tries to support the user by highlighting the Panic Button and displaying pinned checklists. It is assumed that in this stage, the user has already reached out for help. However, the Panic Button could be exchanged with the Help Map if the user still prefers so. Furthermore, the home screen reminds the affected of their pinned tasks by highlighting the section in the home screen. Clicking on it, leads the user directly to the list.

Building A New Life

For users who have already left their previous home, it is important to support their safety and their progress. In order to do so, the Geo Map is highlighted at the top with a button to contact the CoCFM. If the Geo Map is not set up for the given user, the user has the option to either display the Panic Button or the Help Map. Furthermore, a shorter version of Progressly as presented is shown. Clicking on, prompts the app to lead the user to full version of Progressly. The following *figure 17* shows the designed the proposed screens for each stage.

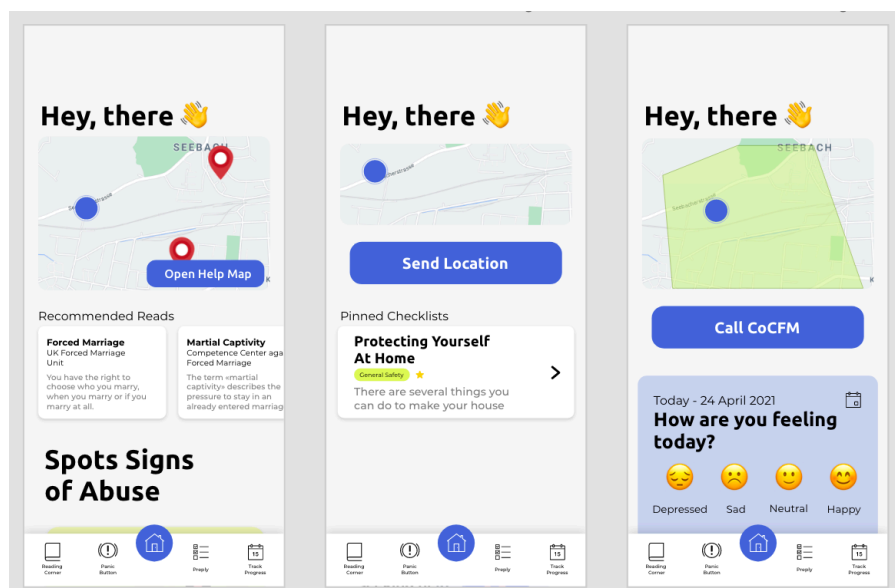


Figure 17: High-fidelity prototype of the Home Screen. LTR: Realization of Abuse, Implementing Measures & Building A New Life.

Whether the user’s stage can and needs to be detected automatically, and if so, how, are open questions that warrant future research. However, one could imagine that the use of the application itself could provide cues for determining the correct stage. For example one possibility to transfer the user from stage 1, to stage 2, if all recommended readings are completed and the Spotting Signs of Abuse- section has been

viewed. The transfer from stage 2 to stage 3 could be detected when the CoCFM sets up the Geo Map for the user, since it is something only done for users who have left their home already.

6.4 Spotting Signs of Abuse

This is a new idea which was not previously sketched in chapter 5. The CoCFM suggested in their feedback to replace the Self-Evaluation/Assessment with something that could help with the realization of abuse without having to create a complex questionnaire. *BrightSky* and the *Freedom App*¹⁹ as well as other pages on the internet such as *National Society for the Prevention of Cruelty to Children (NSPCC)*²⁰ or the *National Health Service (NHS)*²¹ provide their readers with an overview of how to spot the signs of abuse. With the help of such a guide, signs can be pointed out to the user and other concerned third persons.

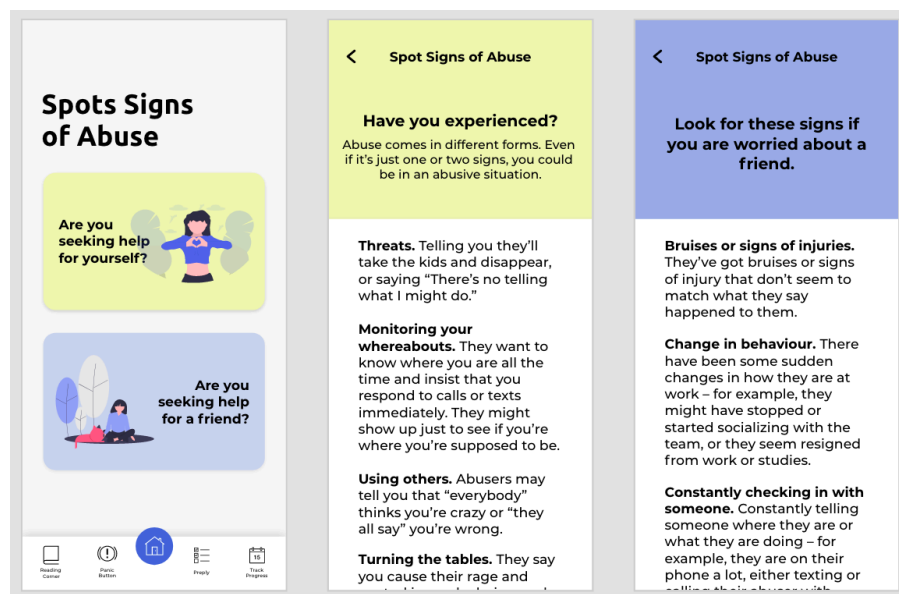


Figure 18: High-fidelity prototype of the Spotting Signs of Abuse-section. For this prototype, we reused text from the *BrightSky* (n.d) simply for illustrative purposes. In an actual deployment, this text could be adapted to address the specific issue of forced marriage.

¹⁹ <http://www.freedomcharity.org.uk/resources/freedom-mobile-app/>

²⁰ <https://www.nspcc.org.uk/what-is-child-abuse/spotting-signs-child-abuse/>

²¹ <https://www.nhs.uk/live-well/healthy-body/spotting-signs-of-child-sexual-abuse/>

6.5 Reading Corner

The Reading Corner now additionally provides the user with the option to search through resources in order to find materials currently relevant to them. The second screen in *figure 19* shows the user searching for all articles which include any of the terms “Domestic Abuse”, “Marital Captivity” or “Children”. The user has access to different reading materials such as guides, anonymous stories and articles by professionals. This is a feature many other apps, as presented in *chapter 2.5*, provide, and allows affected to make a well-thought out and well-informed decision.

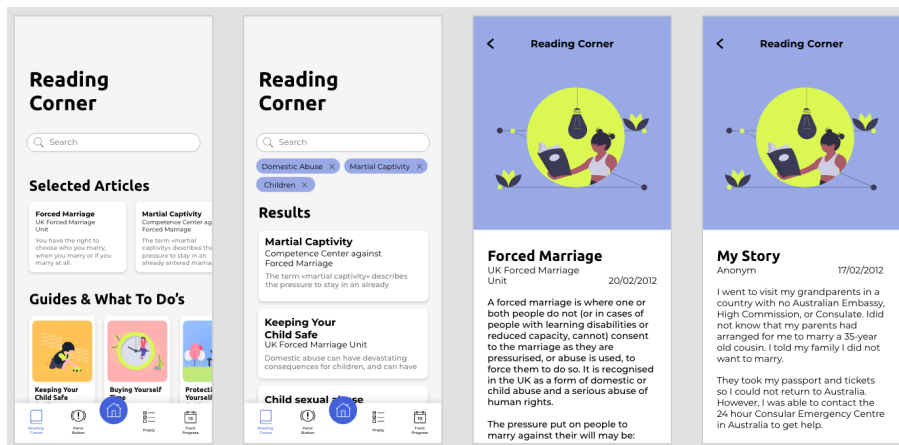


Figure 19: High-fidelity prototype of the Reading Corner. Showing the main screen with the different reading section, the search screen with the filtered articles and lastly the article screen, illustrating how an article could look like.

6.6 Help Map

The idea was improved by adding further information and sections for each institution. Furthermore, small tags, signify to the user if the institutions is obligated to report according to the law or if they are confidential. Additionally the Help Map could be extended with a section at the bottom including contact details to different help lines and support groups, allowing users to easily find people to reach out to or even join in-person support groups. Furthermore, it allows affected to address problems, such as mental-health or substance abuse to trained personals. In the next steps, a possible extension of this feature would be to find out what material could be shown to affected if there are no known organisations near them or if they are abroad. One potential idea would be to show them the best course of action to take in the event of outplacement.

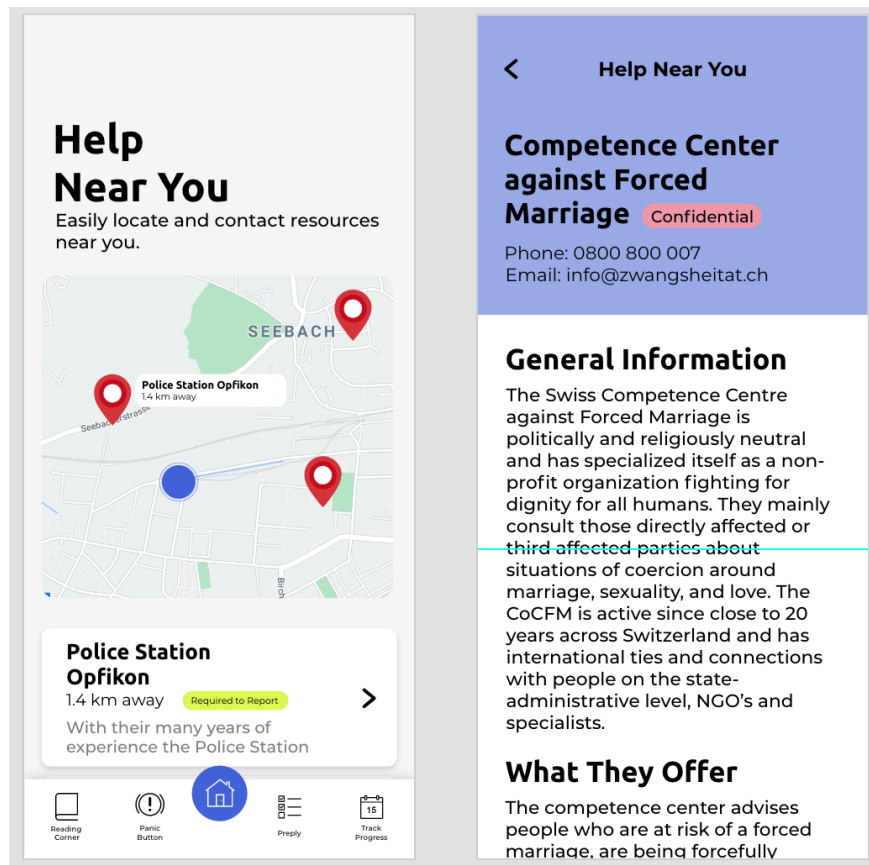


Figure 20: High-fidelity prototype of the Help Map. Showing the main screen including the map & the overview, and on the right the screen that appears once the user selects an institution, here for example the Competence Centre.

6.7 Panic Button

The Panic Button was further improved by adding the option to add a Quick Access. With this, users could activate the alarm from the lock-screen. The button automatically leads them to the designated section of the Apple or Android settings, where user can activate third-party shortcuts. Furthermore, as suggested by the CoCFM, widgets can be used. Since the app would be masked as a fitness app, one can add a widget which looks like a tracker for water intake. Double tapping on it could lead to the alarm being executed.

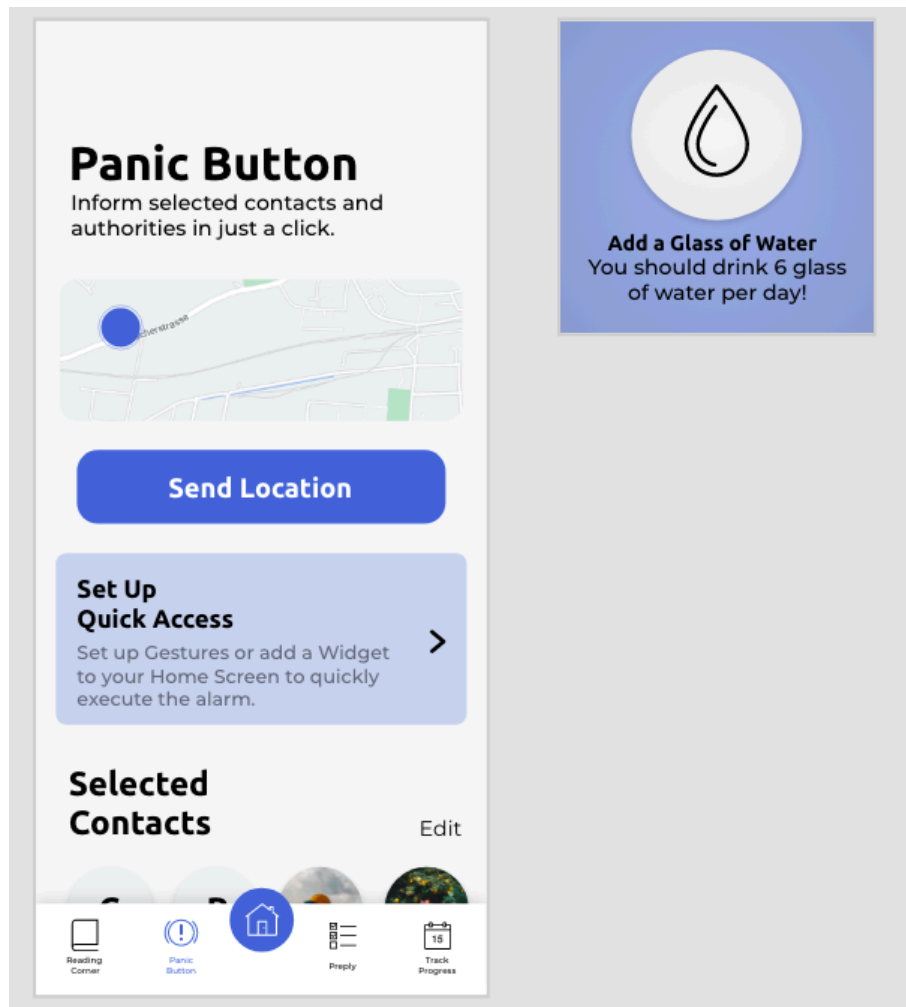


Figure 21: High-fidelity prototype of the Panic Button. On the right the proposed widget masked as a tracker for water intake.

6.8 Preply

Preply was simplified and now only includes general non user specific tasks. Preply provides different checklists to the user and categorizes them. In this way, checklists can address different kinds of affected in different situation. Checklists which regard everyone can be tagged with “General Safety”, checklists only concerning users who have to leave their home are tagged accordingly. Furthermore, checklists can be pinned and will be shown on the home screen.

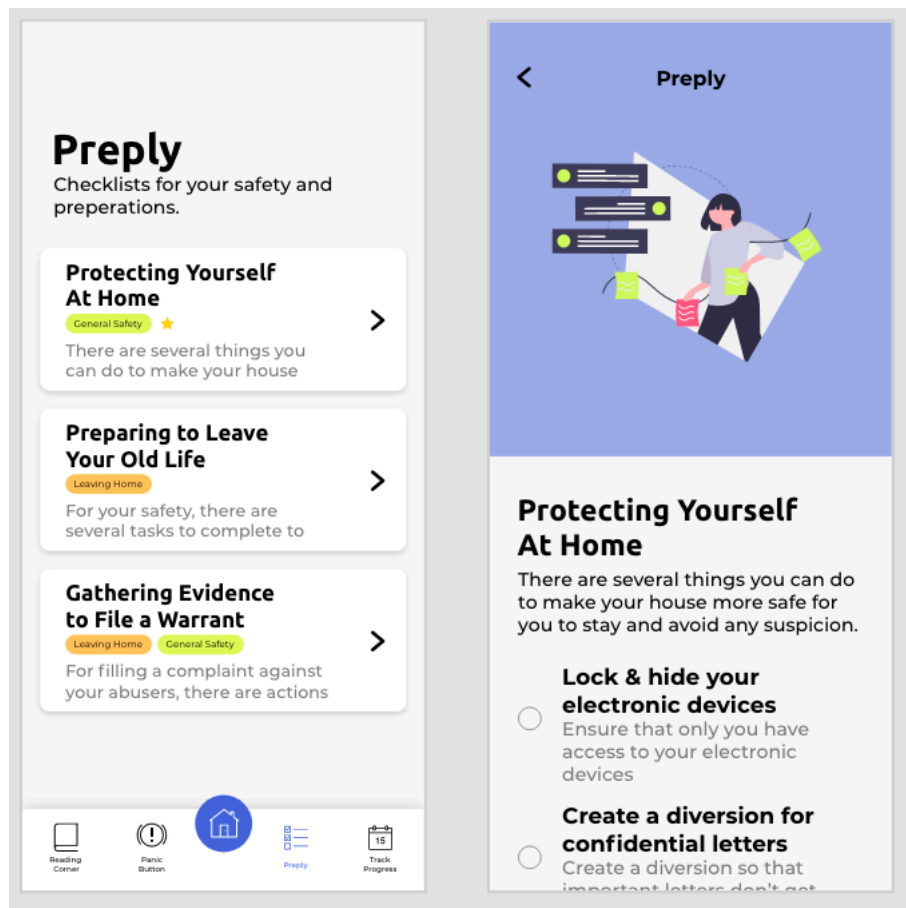


Figure 22: High-fidelity prototype of Preply. On the left are shown different checklists, and on the right a specific list is shown.

6.9 Geo Map

The Geo Map has been simplified and now only is set-up for high-profile cases according to the CoCFM. However, users who are low-profile will be shown the third screen in the *figure 23*. As previously mentioned, the Geo Map, if set-up, is now shown on the home screen. In case the user nears the marked low-risk area, the phone alarms them by vibrating and sending them a push notification.

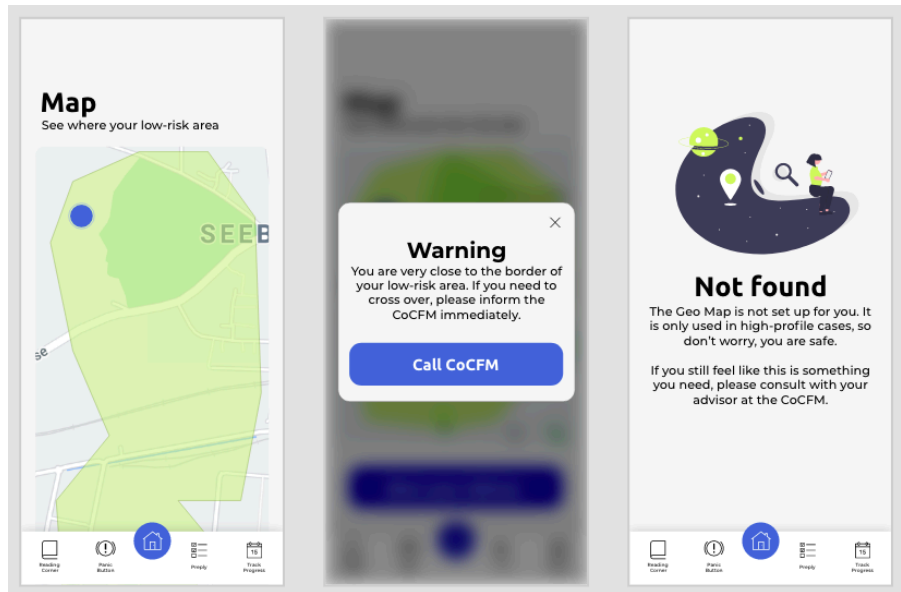


Figure 22: High-fidelity prototype of the Geo Map, showing the main screen, in-app pop-up and the screen shown if the map is not set-up for the user.

6.10 Progressly

Progressly is now focused more on the user's experience. Progressly prompts the user to fill out their daily diary entry but does not automatically send it to the CoCFM. Sending their entry is an option but not a requirement. Furthermore, the users can now view their previous entries more easily and are provided with a monthly overview where they can see their mood in one glance. Clicking on a specific date on the calendar, leads the user to the entry on the given date.

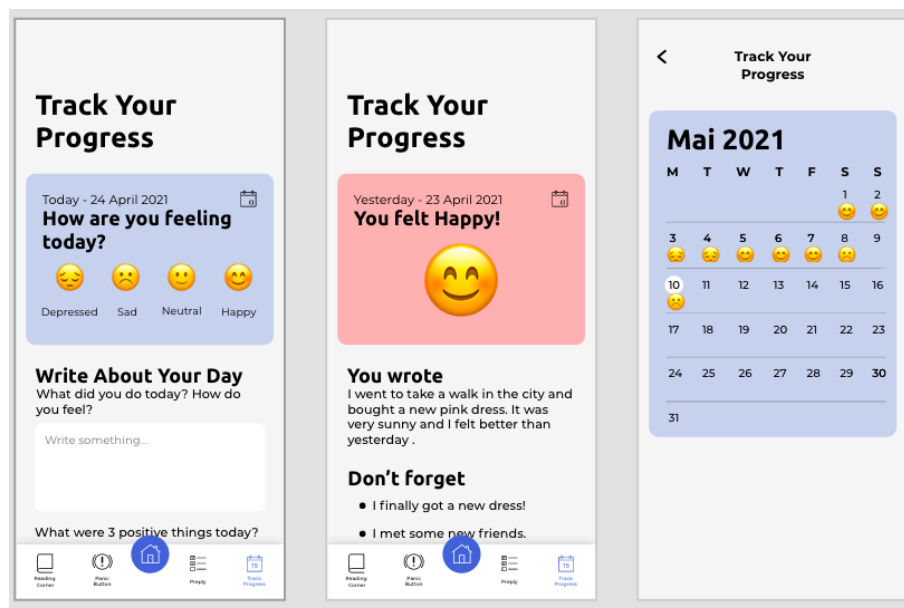


Figure 23: High-fidelity prototype of Progressly. Shown are the today's entry, previous entry and the calendar overview.

For user's in the "Building A New Life", a shorter version of Progressly is shown on the Home Screen. However, this shorter version could be replaced with an overview of past entries entailing their previous

positive things, highlighting their success even more and motivating the user further.

All designed screens can be found in the appendix in a bigger resolution. To conclude, this chapter provides a detailed prototype of an app which takes into account the needs of both the affected and the CoCFM based on iterative rounds of input and feedback. It emphasizes the importance of progression through stages that the affected go through in dealing with the challenges of forced marriage situations, and could potentially serve as a valuable tool for supporting the work of the CoCFM.

The prototype serves as the basis for future work with the CoCFM and in the next steps, an evaluation with HCI-experts could be extremely insightful. Despite the content of the app and therefore opportunities being quite constricted, the previous chapter show that with the help of experts and the advisors of the CoCFM, it is possible to implement an app which is useful and safe for the affected.

Chapter 7

Conclusion & Limitations

The overall objective of this thesis was to investigate the problem of forced marriage in Switzerland and address this issue by suggesting a prototype of an app that aids persons affected on their journey to leave their abusive past and build a new life for themselves. Despite forced marriages not being a technological problem, but rather a social problem, the author believes that as digital technologies have become an increasingly central part of our everyday lives, they can act as a mean of support. Technology can further facilitate access to and circulation of information, connectivity and to reach out for help.

This thesis first provided a comprehensive overview of the problem of forced marriages in Switzerland and thus demonstrated the need of a technological solution to tackle this issue. Despite several international and national laws such as the Universal Declaration of Human Rights or Article 181a of the Swiss Penal Code, Neubauer & Dahinden (2012) estimated around 700 cases of forced marriages per year in Switzerland. The Swiss Competence Centre against Forced Marriages reported handling 361 cases in the year 2020 (Competence Centre against Forced Marriage, 2020).

The first research question “*What are the current challenges being faced by the organization and women affected by forced marriage?*” was addressed by conducting interviews with the Swiss Competence Centre against Forced Marriage, as well as by carrying out an extensive literature review. Based on the insights, the findings suggest that there is not only a low-awareness on the topic of forced marriage among the general population in Switzerland but also quite a few misconceptions what it is and who can be affected. The term «forced marriage» needs to be distinguished from the terms «arranged marriage» and «martial captivity». The term forced marriage describes a marriage where one or both spouses do not consent to the marriage, and duress is involved (Forced Marriage Unit, 2010). In an arranged marriage, the family takes the lead to find a marriage partner for their son or daughter. Both parties are free to choose to enter the marriage, and parents respect the child’s wishes (Karma Nirvana, n.d). Moreover, affected of forced marriage can

be women or men, irrespective of race, ethnicity, religion, age, origin, and economic and educational backgrounds.

To address the second research question “*How can technology assist and address the RQ1 identified problems?*”, a total of 5 interviews with affected of forced marriage were conducted. The interviews not only revealed the problems faced by the affected but also highlight several needs. Those were mainly related to the themes of *Safety & Protection, Support, Information & Resources, Preparation & Organization and Guidance*. Due to the nature of the problem and the strict control and observation many parents exercise on the children, it is of the highest importance that any kind of designed app needs to be *inconspicuous, anonymous, protected* and *safe*. Many affected experience various kinds of abuse, including physical, emotional and financial abuse, if they go against their families’ wishes and do not comply to their ethos or code of behaviour. A technology introduced into such a tense and complex environment should ensure the users safety above all and therefore should be well-hidden and protected. It should never endanger the users’ life and is not deemed useful if it cannot ensure the user’s safety. Otherwise, users could face even more restrictions to their lives and bigger threats, such as outplacement. Apps therefore need to either be **masked as something else** or need to be protected by a **double-login**. Another possible solution is the design of be a web-app, allowing affected to use it, without having to download something onto their phone.

Based on the aforementioned findings, the three-stages were identified: realization of abuse, implementing measures, building a new life, reflecting the real life process many affected go through. For each stage, three ideas were presented as a wireframe and evaluated by the Competence Centre against Forced Marriage. Based on their feedback, promising wireframes were combined together into one app. An interaction architecture is first created, acting as a basis for the final prototype. Based on the three-stages, the home screen was designed to adjust itself, highlighting features which were considered extra valuable for the user in their stage.

This thesis made several contributions: first, as a case sui generis, it provided an extensive overview of the problem of forced marriage in Switzerland as well assist causes and consequences for affected. Second, through conducting interviews with affected the needs and problems of affected were identified. Furthermore, the resulting design implications for the development of a technology were presented and put to use by creating several prototypes of app features, which were validated and evaluated by the Swiss Competence Centre against Forced Marriage.

Those contributions support the future development of technologies for forced marriages.

However, the resulting prototype of this thesis is bound to a set of limitations. To ensure the safety of the affected and minimize the contact

to only allow the most necessary communication between the author and the affected, the wireframe were evaluated by different members of the Swiss Competence Centre against Forced Marriage. Even though this is highly valuable, it does leave out some big and significant viewpoints

For one, it would be not only insightful but also important to evaluate the prototypes in the next steps with affected. Additionally, to account for the aforementioned limitations, and further evaluate the effectiveness, a long-term study could provide valuable learnings about the adoption and perception of the implemented app in a more realistic setting.

Secondly, since only the Swiss Competence Centre against Forced Marriage and affected were consulted, viewpoints of the prototypes by other parties, such as the police, organisations occupying themselves with affected of forced marriage or third-parties often consulted by the centre, are missing.

Additionally, one big limitation is that all the affected interviewed were women which had to leave their home. However, CoCFM made me aware of the fact that not all women have to leave. To accommodate the app to these women more, the third stage could be left out, and the second stage could be further tailored to their needs. The selection is further biased since only women were interviewed and all of them grew up here. Additionally, only in one case, the forced marriage took place. None of the affected had children. These are all extra variables which were therefore missed in this thesis and could be looked at in future work.

Chapter 8

Future Work

In this last chapter potential future works are discussed.

This thesis lays the groundwork so the in this thesis prototyped app can be implemented in the next step. At the beginning the author tried to reach out to Karma Nirvana and the Freedom Charity, to see if the author can incorporate their learnings and insights from their organisation and work with affected into this thesis and app. Since Freedom Charity had their own app addressing forced marriage, it would be valuable to see their learnings and incorporate them in the purposed app.

However, in a conversation with the CoCFM, a member mentioned how in her opinion, a big part of realizing the abuse takes place before downloading such a proposed app. Furthermore, it leads to the question how the app can effectively reach these women then without alarming the perpetrators. Unfortunately, due to time constraints, addressing this question was out of the scope for this thesis but is indeed an crucial part of the problem. One way to accomplish this would be to raise awareness of the app at schools, universities, police, organisations and other point of contacts. Additionally, the link to the app can be provided online at sites such as www.forcedmarriage.ch or www.maedchenhaus.ch/.

As aforementioned, for future work, it would be crucial to create a working prototype and evaluate it with the centre, affected and evaluate with HCI- experts. The long-term goal of the author is to create a functioning app which affected all over Switzerland can use and therefore proposes a long-term study where the work between he advisors with the affected can be observed first-hand. It would be furthermore interesting to interview more affected, including men, and women from different situations, such as women who were already forcibly married or who later on fled on their own, or were outplaced. This would additionally provide insights which may currently be missing.

Chapter 9

Appendices

9.1 Table of Safety Apps

Name	Type	Content
bSafe ²²	Emergency Assistance Apps	SOS button, location sharing with selected contacts, recording of incidents, voice activation.
Circle of 6 ²³	Emergency Assistance Apps	Sends location upon activation to six chosen contacts with GPS location.
Pukar ²⁴	Emergency Assistance Apps	SOS button, shares location with selected contacts and police. Dims phone and puts it on silent mode to not draw attention to itself.
Panic Button ²⁵	Emergency Assistance Apps	Sends location to contacts upon pressing the phone's power button.
Lifeline Response ²⁶	Emergency Assistance Apps	Allows users to create an alarm. App automatically sends GPS location to contacts if the alarm isn't

²² <https://getbsafe.com/>

²³ <https://www.circleof6app.com/>

²⁴ <https://apkpure.com/pukar/com.pukar>

²⁵ <https://www.amnesty.org/en/latest/campaigns/2015/07/panic-button-one-year-on/>

²⁶ <https://kineticglobal.com/>

disarmed in a stipulated time.

React Mobile ²⁷	Emergency Assistance Apps	Allows users to send app and contacts to keep a virtual watch on their activity for a set period of time.
Guard my Angel ²⁸	Emergency Assistance Apps	Allows users to assign an 'Angel' who can keep a virtual watch for a set time. If user doesn't confirm that they are safe once the timer runs out, the location is automatically sent to chosen contacts.
Hollaback! ²⁹	Crowdsourcing Reporting App	Users can make online reports of incidents experienced or witnessed by sharing text, pictures or videos.
HarassMap ³⁰	Crowdsourcing Reporting App	Users can report incidents in text, select the type of harm applicable in their situation, & the location of incidents.
myPlan ³¹	Self-help/Assessment App	Self-evaluation tool to help assess safety, resources, support, and tips for safety
Smartsafe+ ³²	Evidence collection App	Evidence collection such as documents, pictures, voice recordings for family abuse victims.

²⁷ <https://reactmobile.com/>

²⁸ https://play.google.com/store/apps/details?id=com.secugo.myangelguard&hl=de_CH&gl=US

²⁹ <https://www.ihollaback.org/take-action/get-app/>

³⁰ <https://harassmap.org/en/>

³¹ <https://www.myplanapp.org/>

³² <https://www.dvrcv.org.au/file/smartsafe-mobile-app>

Bright Sky ³³	Self-help/Assessment App	Assessment of safety, list of help services, guides, and information about domestic violence
Aspire App ³⁴	News Evidence collection App	A camouflaged app that allows evidence collection such as pictures, documents, and video/audio recordings.

Table 3: Extended list of safety apps

³³ <https://www.hestia.org/brightsky>

³⁴ https://play.google.com/store/apps/details?id=com.aspireapp&hl=de_CH&gl=US

9.2 Approval Letter



**University of
Zurich** ^{UZH}

Human Subjects Committee of the
Faculty of Economics, Business Administration,
and Information Technology

Department of Economics

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Zurich, August 18, 2020

Authorization of research project “App Conception for the swiss department against forced marriage” (OEC IRB # 2020-052)

To whom it may concern,

The Human Subjects Committee of the Faculty of Economics, Business Administration and Information Technology at the University of Zurich authorizes the research described in Nimra Ahmed's research proposal “App Conception for the swiss department against forced marriage” (OEC IRB # 2020-052).

Specifically, we have reviewed the information regarding the procedures and protocols that will be implemented to conduct the experiments involving human subjects. We confirm that they comply with all applicable regulations.

We therefore approve the planned research outlined in the proposal.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'M. Maréchal'.

Prof. Dr. Michel Maréchal
Member of the Human Subjects Committee
Head of Human Subjects Committee

9.3 Consent Forms



**University of
Zurich** ^{UZH}

People and Computing Lab

University of Zurich
Department of Informatics
Binzmühlestr. 14
CH-8050 Zurich

Contact person:
NIMRA AHMED
Phone +41 76 392 30 35
nimra.ahmed@uzh.ch

Informed Consent Form

App Conception for the Swiss Department against Forced Marriage

Dear Sir or Madam,

The purpose of this study is to gain insight into your daily work as well as to understand the background as well as a deeper understanding of forced marriages. Our findings from this study will help to design an app, which can be used as an additional tool to your daily work.

What will I be asked to do?

If you choose to participate in this study, you will be asked to answer the questions which were provided to you and are otherwise in the attachment.

The total duration of this study is approximately 1.0-1.5 hour.

What information will be collected?

The interview will be audio-recorded and may be partially or fully transcribed. We will also take notes throughout the study.

What happens to the data?

All of your original data will be saved on password-protected devices or locked in university filing cabinets at the University of Zurich. Your anonymized data won't be published anywhere.

Are there risks to participating?

Participation in the study is voluntary and confidential. Your data will be anonymized. If it is ever shared with anyone outside of the research team, including any written publications or oral presentations based on this research, you will be identified only by a participant number (e.g. P12) or a pseudonym.

You are free to withdraw your participation at any point during the study, without needing to provide any reasons. However, unless you request otherwise, any information you contribute up to the point at which you choose to withdraw will be retained and may be used in the study.



**University of
Zurich** UZH

People and Computing Lab

University of Zurich
Department of Informatics
Binzmühlestr. 14
CH-8050 Zurich

Contact person:
NIMRA AHMED
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nimra.ahmed@uzh.ch

Permissions

Please read below if you agree with the following statements. You will be asked to verbally agree to the questions below before your interview.

Audio recording: I allow the use of audio-recording of myself in the interview environment:
_____ for purposes of data analysis by researchers affiliated with this study.

Further use of anonymized data

_____ I permit the use of my anonymized data by other researchers affiliated with the University of Zurich People and Computing Lab for further study and analysis.

Consent

By verbally consenting, you confirm the following statements:

- A researcher explained the study and the listed conditions to me.
- I had the opportunity to ask questions.
- I understood the answers and accept them.
- I am at least 18 years old.
- I had enough time to make the decision to participate.
- I agree to the participation.

In no way does consenting waive your legal rights or release the investigators or involved institutions from their legal or professional responsibilities. You are free to withdraw from this research project at any time. Please feel free to ask for clarification or new information at any time during your participation.

Questions or Concerns?

A copy of this consent form has been given to you to keep. The researcher has kept a copy of the consent form. If you have further questions regarding our research, and/or your participation in this study, please contact:

Nimra Ahmed
Nimra.ahmed@uzh.ch
University of Zurich

Prof. Elaine M. Huang, Ph.D.
huang@ifi.uzh.ch
University of Zurich



Migration & Menschenrechte
CH-8000 Zürich

Migration & droits humains
Migration & Human Rights

contact@migration.org
www.migration.org

Einverständniserklärung Interview

<u>Vorname:</u>	<u>Name:</u>
<u>Strasse und Nummer:</u>	
<u>PLZ und Ort:</u>	
<u>Bildungsabschluss:</u>	
<u>Aktuelle Tätigkeiten:</u>	
<u>Migrationserfahrung: Nationalität(en), Herkunft...</u>	<u>Evtl. Religion:</u>
<u>Telefon 1:</u>	<u>Telefon 2:</u>
<u>Email:</u>	<u>Geburtsdatum:</u>

Hiermit gebe ich der Organisation Migration & Menschenrechte mein Einverständnis, die von mir gemachten Aussagen anonym zu verwenden, auch zu wissenschaftlichen Zwecken. Ich verzichte auf eine Honorierung. Im Falle eines Widerrufs können keine rückwirkenden Forderungen gestellt werden.

Der Verein Migration & Menschenrechte fungiert durch die Fachstelle Zwangsheirat auch als Kompetenzzentrum mit Beratungsangeboten und befolgt eine strenge Schweigepflicht (vgl. Art. 11 OHG, SR 312.5). Es wird ausdrücklich darauf hingewiesen, dass bei Missachtung der Schweigepflicht bis zu drei Jahren Gefängnis drohen können (vgl. Art. 11 Abs. 4 OHG).

Die unterzeichnende Person erklärt durch ihre Unterschrift, diese Einverständniserklärung erhalten und gelesen zu haben sowie mit deren Inhalt einverstanden zu sein. Die Einverständniserklärung tritt mit der Unterzeichnung in Kraft und kann jederzeit schriftlich widerrufen werden.

Ort und Datum

Unterschrift

PC 60-676380-5
IBAN CH73 0900 0000 6067 6380 5

9.4 Interview Protocol for Advisors

Consists of two parts, one on general questions about forced marriage and the problem in Switzerland & the second half consists of concrete questions about the work they do with women in need. What the process is, what the problems faced are.

1. General/Overview Questions

- The topic of forced marriage and how your organization is dealing with it. Can you tell me about the situation in Switzerland from your experience?
- What would you say is the awareness about this topic in Switzerland?
- Speaking in numbers, how many cases per year do you see? Has there been a change?
- How can this happen in Switzerland? What are the Laws?
- From your experience, what age group do you most see and what is her life/situation like, what are the challenges she faces? (Teenagers, yet to be married, married...) & does your support differ depending on that?
- What makes it difficult for these persons to leave?
- What can these women do to protect themselves? What options do they have?
- How do women in need usually contact you? Through what channels do you try to reach them?
- What can you tell me about your organization & how it addresses the problem of woman's forced marriage?
- Are there other issues you try to address with the woman, and how do you address them?
- How many cases have you addressed? Ideology/Their believes/Goals?
- Can you tell me about your role in the organization; what is a typical day for you working here?
- What risks do you yourself face? How do you ensure your own security?
- Generally speaking, how long do you work on such a 'case'?

- What would be the worst case scenario? What is the best case scenario? What are the risks & dangers for these women?
 - Walk me through best & worst
- When/How does a case “end” – what constitutes “success” or “failure” and is there a point at which you no longer need to have contact with a woman? Or do you continue to have contact?
- What is it like from your experience for the women and how do they usually respond?
- People who are organizing or trying to make the marriage happen – are there ever any consequences, legal or otherwise?
- Is there anything else significant we haven’t discussed and you would want to touch on?

The point of these and follow up questions depending on the answer should help me see how the work is being done now, and what points could be solved better with the help of an app. Which aspects or information would be useful to put in an app? What issues (collaboration, communication, self-help, security) can be solved more efficiently with the help of an app?

2. Specific Questions

- So to start off, can you describe how one case with a woman looks like? What is the process?
- How many cases per day do you handle? How do you organize these?
- How many women is one worker responsible for? Do multiple people work on one case?
 - Collaboration?
- What is the process from the initial meeting to the end?
 - Is there a timeline to be followed?
- How do you communicate with these woman?
 - What are the problem faced in communication?
Solutions you have considered or opted for so far?
- Can you tell me about a situation where you had difficulties in communication or collaboration with a person?

- From your experience, what could be problems the other side could face during these process in communication or collaboration?
- When taking a new case, what information do you need? What is the process?
 - How do you gather them?
 - How do you organize these?
- What kinds of things do you typically talk about/do with a woman during one of your meetings?
- What are your goals in helping a woman/during an individual meeting? What do you try to achieve with a meeting?
- What are the things you as a department can do or provide support for these women? Where do you need the collaboration of the women, as in what are steps they have to do on their own?
- How do you ensure the security of this person despite the many restrictions the people may face at home?
 - What problems are faced?
- Considering these women live in a dangerous home every day where they are at risk, how do you keep an eye on them or ensure they are ok?
 - What are red flags? When do you have to worry?
- Forced marriage or domestic violence is a punishable crime, therefore, is it beneficial for the women to gather as much proof of the occurrences as possible? What kind of evidence is useful?
- What other steps do you feel are necessary that these women can take other than seeking your assistance?
- Can you describe the technology and systems you use currently? How do you make use of these?
- What features could be beneficial to you?
- What features could be beneficial for the women?
- Is it realistic that they would be able to use such a technology or app?
- What kind of risk do you think a technology like that can bring?

9.5 Interview Protocol for Affected

Start off with a short introduction and giving them an overview of the project. Explain to them that they can stop anytime and have the right to decline to answer any of the questions. They can request break and to stop the recording any time.

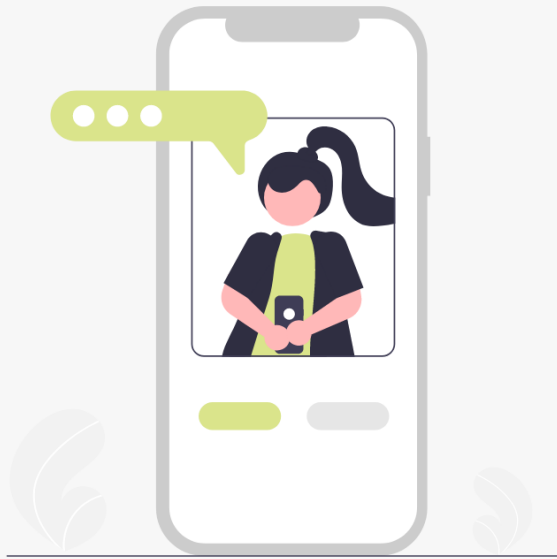
1. Life before leaving

- Tell me about your life at home in as much detail as you feel comfortable
 - Family?
 - Structure?
 - Abuse?
 - Friends?
 - Education?
 - Marriage Plans?
- What were parts of your life which suffered due to your situation?
- What do you think about the situation you lived in?
- When did you realize that what was happening was wrong?
 - How did you feel? How were your feelings towards your family?
- How did your behaviour change once you came to the realization?
- How did you protect yourself?
- Can you describe to me the process from coming to the realization, getting in touch with the Competence Centre till effectively leaving your past life behind?
 - What were challenges?
 - What was important?
 - What preparation did you have to do?
 - Any difficult situations with your family?
- If you had to give advice to a fellow affected who may still be in this situation, what would it be?

2. Life after leaving

- How were your first few days like?
 - Expectations/Reality? Feelings? Thoughts?
- Did you feel safe? What proactive measures did you have to take?
- Did you ever hear anything from your family again?
 - Did you ever want to?
- Was everything like you expected?
 - Problems? Breakdowns?
- What are your plans for your life now?
 - Education?
 - Dreams?
 - Carrier?
 - SUS?

9.6 High-Fidelity Screens



Keep in Mind

The app should only be used if it is safe to do so. For emergencies please reach out under **0800 800 007**.

Set Your PIN

Set Your PIN

* * * *

1

2

3

4

5

6

7

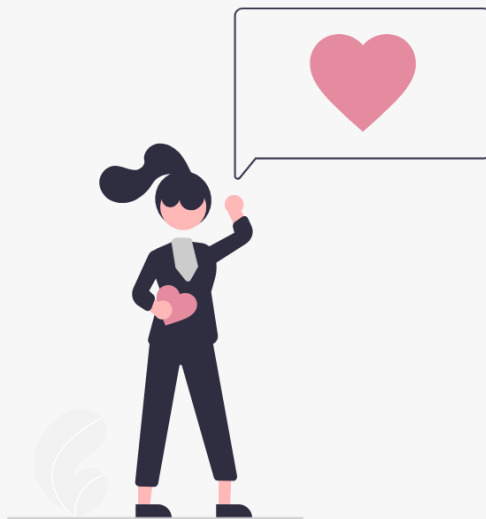
8

9

Next

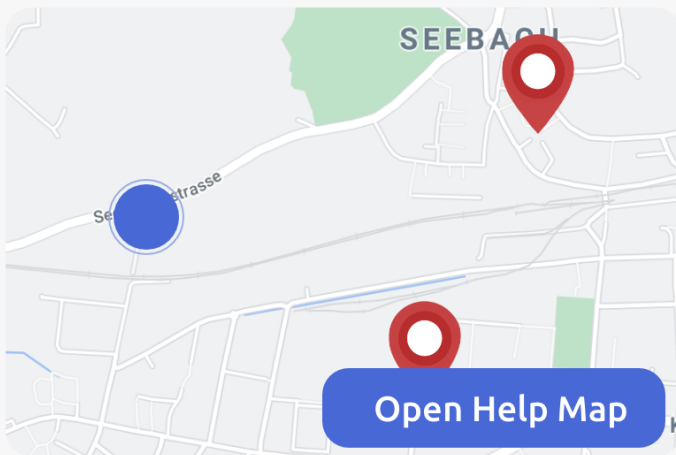
Safe Mode

If you are forced to unlock your phone, enter the pin **1234** and the app will display content on fitness. You can also use the app on the web for your safety.



Next

Hey, there 🖐️



Recommended Reads

Forced Marriage

UK Forced Marriage Unit

You have the right to choose who you marry, when you marry or if you marry at all.

Martial Captivity

Competence Center against Forced Marriage

The term «martial captivity» describes the pressure to stay in an already entered marriage.

Spots Signs of Abuse



Reading Corner



Panic Button

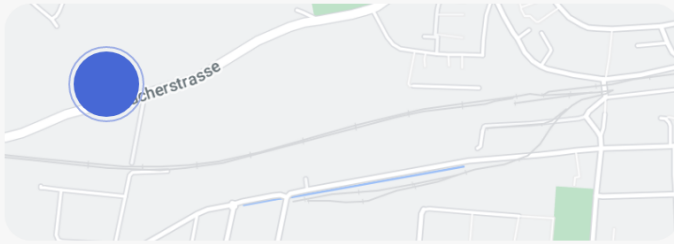


Preply



Track Progress

Hey, there 🖐️



Send Location

Pinned Checklists

Protecting Yourself At Home

General Safety ★



There are several things you
can do to make your house



Reading
Corner



Panic
Button



Preply



Track
Progress

Hey, there 🖐️



Call CoCFM

Today - 24 April 2021



How are you feeling today?



Depressed



Sad



Neutral



Happy



Reading
Corner



Panic
Button



Preply



Track
Progress

Spots Signs of Abuse

Are you seeking help for yourself?



Are you seeking help for a friend?



Reading
Corner



Panic
Button



Preply



Track
Progress

< Spot Signs of Abuse

Look for these signs if you are worried about a friend.

Bruises or signs of injuries.

They've got bruises or signs of injury that don't seem to match what they say happened to them.

Change in behaviour. There have been some sudden changes in how they are at work – for example, they might have stopped or started socializing with the team, or they seem resigned from work or studies.

Constantly checking in with someone. Constantly telling someone where they are or what they are doing – for example, they are on their phone a lot, either texting or calling their abuser with

< Spot Signs of Abuse

Have you experienced?

Abuse comes in different forms. Even if it's just one or two signs, you could be in an abusive situation.

Threats. Telling you they'll take the kids and disappear, or saying "There's no telling what I might do."

Monitoring your whereabouts. They want to know where you are all the time and insist that you respond to calls or texts immediately. They might show up just to see if you're where you're supposed to be.

Using others. Abusers may tell you that "everybody" thinks you're crazy or "they all say" you're wrong.

Turning the tables. They say you cause their rage and

Reading Corner

 Search

Selected Articles

Forced Marriage

UK Forced Marriage Unit

You have the right to choose who you marry, when you marry or if you marry at all.

Martial Captivity

Competence Center against Forced Marriage

The term «martial captivity» describes the pressure to stay in an already entered marriage.

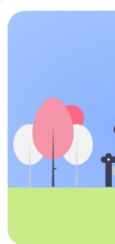
Guides & What To Do's



Keeping Your Child Safe



Buying Yourself Time



Protect Yourself



Reading Corner



Panic Button



Preply



Track Progress

Reading Corner

 Search

Domestic Abuse X

Martial Captivity X

Children X

Results

Martial Captivity

Competence Center against
Forced Marriage

The term «martial captivity» describes
the pressure to stay in an already

Keeping Your Child Safe

UK Forced Marriage Unit

Domestic abuse can have devastating
consequences for children, and can have

Child sexual abuse



Reading
Corner



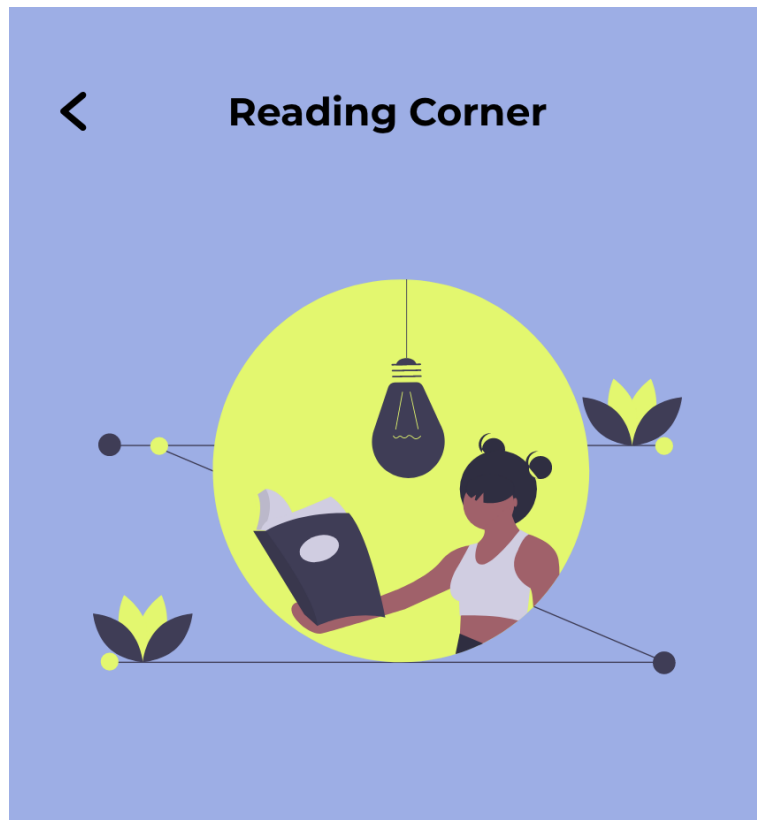
Panic
Button



Preply



Track
Progress



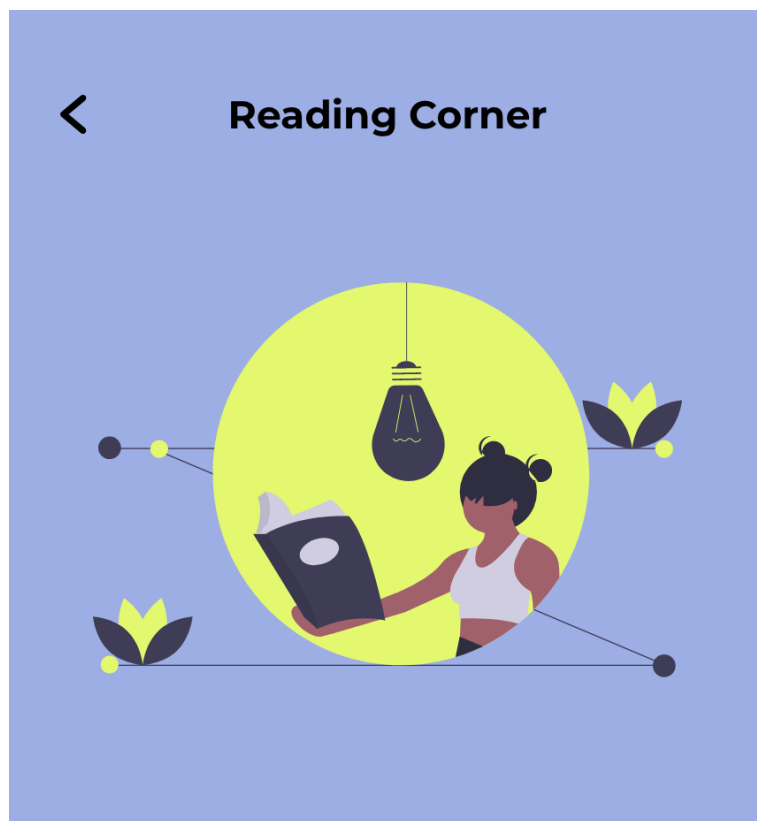
Forced Marriage

UK Forced Marriage
Unit

20/02/2012

A forced marriage is where one or both people do not (or in cases of people with learning disabilities or reduced capacity, cannot) consent to the marriage as they are pressurised, or abuse is used, to force them to do so. It is recognised in the UK as a form of domestic or child abuse and a serious abuse of human rights.

The pressure put on people to marry against their will may be:



My Story

Anonym

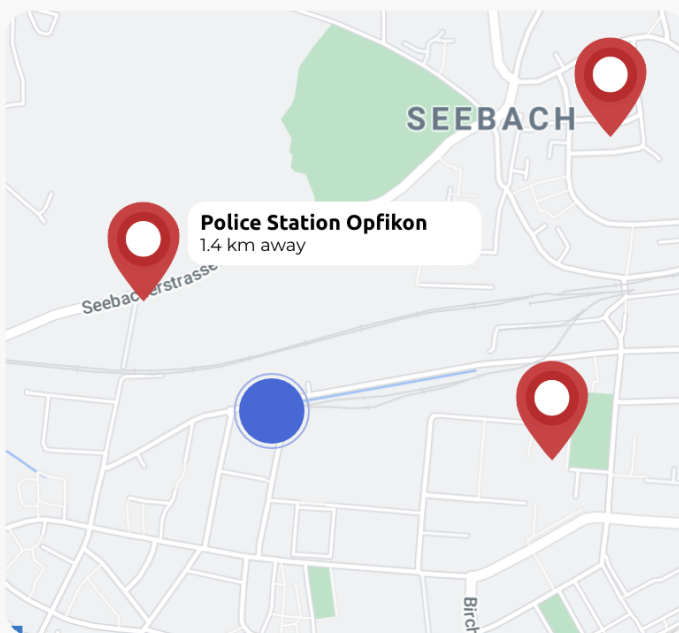
17/02/2012

I went to visit my grandparents in a country with no Australian Embassy, High Commission, or Consulate. I did not know that my parents had arranged for me to marry a 35-year old cousin. I told my family I did not want to marry.

They took my passport and tickets so I could not return to Australia. However, I was able to contact the 24 hour Consular Emergency Centre in Australia to get help.

Help Near You

Easily locate and contact resources near you.



Police Station Opfikon

1.4 km away

Required to Report



With their many years of
experience the Police Station



Reading
Corner



Panic
Button



Preply



Track
Progress



Help Near You

Competence Center against Forced Marriage

Confidential

Phone: 0800 800 007

Email: info@zwangsheitat.ch

General Information

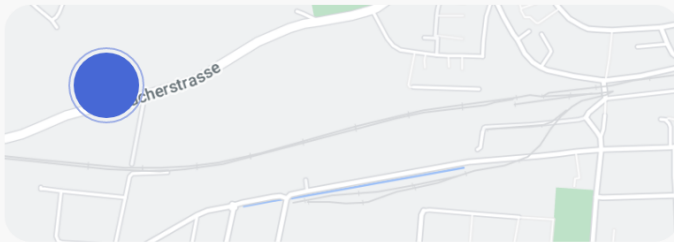
The Swiss Competence Centre against Forced Marriage is politically and religiously neutral and has specialized itself as a non-profit organization fighting for dignity for all humans. They mainly consult those directly affected or third affected parties about situations of coercion around marriage, sexuality, and love. The CoCFM is active since close to 20 years across Switzerland and has international ties and connections with people on the state-administrative level, NGO's and specialists.

What They Offer

The competence center advises people who are at risk of a forced marriage, are being forcefully

Panic Button

Inform selected contacts and authorities in just a click.



Send Location

Set Up Quick Access

Set up Gestures or add a Widget to your Home Screen to quickly execute the alarm.



Selected Contacts

Edit



Reading
Corner



Panic
Button



Preply



Track
Progress

Preply

Checklists for your safety and preparations.

Protecting Yourself At Home

General Safety ★



There are several things you can do to make your house

Preparing to Leave Your Old Life

Leaving Home



For your safety, there are several tasks to complete to

Gathering Evidence to File a Warrant

Leaving Home

General Safety



For filling a complaint against your abusers, there are actions



Reading
Corner



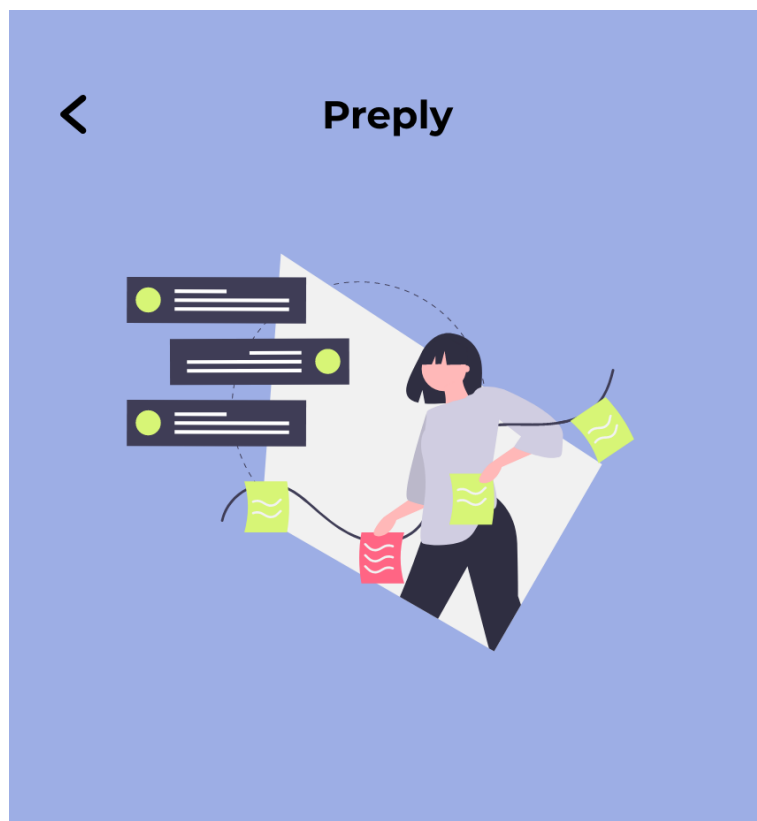
Panic
Button



Preply



Track
Progress



Protecting Yourself At Home

There are several things you can do to make your house more safe for you to stay and avoid any suspicion.

- ☐ **Lock & hide your electronic devices**
Ensure that only you have access to your electronic devices
- ☐ **Create a diversion for confidential letters**
Create a diversion so that important letters don't get

Map

See where your low-risk area



Reading
Corner



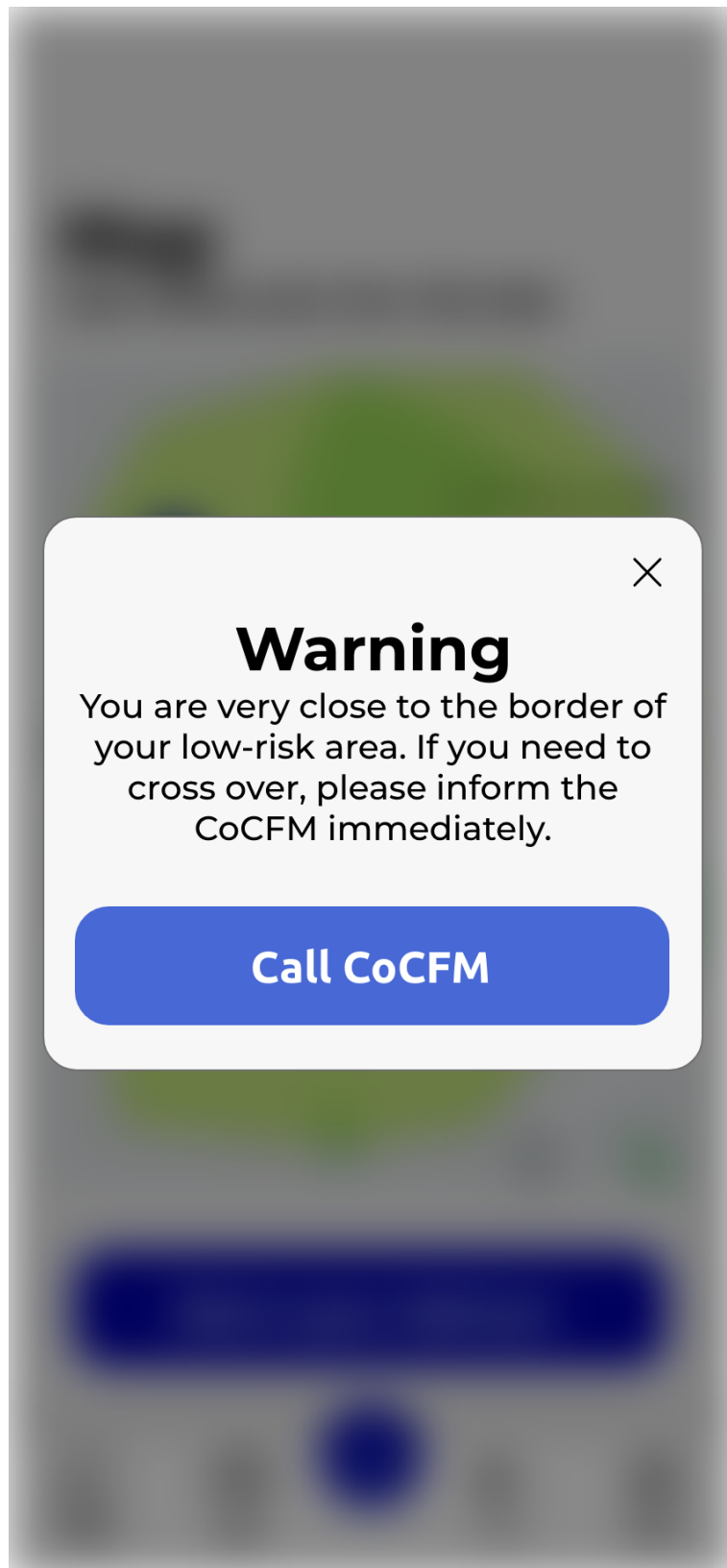
Panic
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Track
Progress





Not found

The Geo Map is not set up for you. It is only used in high-profile cases, so don't worry, you are safe.

If you still feel like this is something you need, please consult with your advisor at the CoCFM.



Reading
Corner



Panic
Button



Preply



Track
Progress



Track Your Progress

Mai 2021

M	T	W	T	F	S	S
					1 	2 
3 	4 	5 	6 	7 	8 	9
10 	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Track Your Progress

Today - 24 April 2021



How are you feeling today?



Depressed



Sad



Neutral



Happy

Write About Your Day

What did you do today? How do you feel?

Write something...

What were 3 positive things today?



Reading
Corner



Panic
Button



Preply



Track
Progress

Track Your Progress

Yesterday - 23 April 2021



You felt Happy!



You wrote

I went to take a walk in the city and bought a new pink dress. It was very sunny and I felt better than yesterday .

Don't forget

- I finally got a new dress!
- I met some new friends.



Reading
Corner



Panic
Button



Preply



Track
Progress

Chapter 10

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