# Sexual Vulnerability, Sexual Violence, and Reproductive Health of Adolescents Girls and Young Women in Internally Displaced Persons (IDPs) Camps

*M. M. Abrha & Mirjam Van Reisen*

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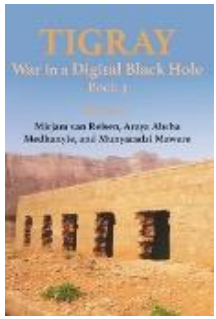


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# Contents

## Chapter 8

# Sexual Vulnerability, Sexual Violence, and Reproductive Health of Adolescents Girls and Young Women in Internally Displaced Persons (IDPs) Camps

*M. M. Abrha & Mirjam Van Reisen*

**እተደነለ ሓዊ ዝጠፍአ ይመስል።**

*A fire covered in ashes looks as if it is extinguished.*

**Abstract**

This study investigated the impact of war on female adolescents and youth in Tigray, focusing on intrapersonal, interpersonal, and institutional levels using constructs from the social ecological model of health and the theory of planned behaviour. Conducted during the Tigray war in 2020, the study used in-depth qualitative research to validate these constructs, finding them useful for analysing data and explaining the prevention and utilisation of health services by female youth in wartime. The research highlights the dire conditions in which displaced youth and adolescents in Tigray lived during the war, including food and resource shortages, forced sexual relationships, and poor sexual and reproductive health conditions. These conditions, in turn, lead to poor sexual and reproductive health outcomes for youth and adolescents, including unwanted pregnancies, sexual transmitted diseases, and unsafe abortions. The study emphasised the need for integrated services to address food insecurity, famine, and financial challenges to improve sexual and reproductive health for youth and adolescents.

**Keywords:** Tigray war, sexual and reproductive health, healthcare, social ecological model of health, IDPs, Ethiopia

## Introduction

War is associated with unsafe sexual and reproductive health outcomes (McGinn, 2000; Hedström & Herder, 2023). Displacement, military activity, economic disruption, psychological stresses, caused by war, may increase the risk of the population's exposure to sexually transmitted infections (Zwi & Cabral, 1991). Inconsistent condom use among sexually active adolescents, unwanted pregnancies, and sexual violence were common in refugee camps (Ivanova *et al.*, 2019; Ivanova *et al.*, 2018). Sexual violence and killings were also reported in a study in Nigeria (Marlow *et al.*, 2021) where the Boko Haram insurgency made young people flee their homes. Complications of unsafe abortion including death have been reported in a study in Nigeria (Marlow *et al.*, 2021) where young women took abortion pills, metronidazole, Flagyl, and salt to induce an abortion. On a similar note, adolescent girls living in refugee camps in Congo were reported to be having transactional sex in exchange for money (Harrison *et al.*, 2009) and other such gifts.

The 2020–2022 conflict in northern Ethiopia's region Tigray has resulted in the internal displacement of 2.6 million people (UNHCR, 2022). The United Nations High Commissioner for Refugees (UNHCR) reports 7 internally displaced people (IDP) sites in Mekelle, with an estimated 52,000 IDPs present (EEPA, 2021, SR 88). Tigray has been under a complete siege and in a communication blackout from the start of the war in November 2020 up to the Cessation of Hostilities Agreement signed in November 2022. The war in Tigray has destroyed health facilities and disrupted healthcare services such as maternal and child health services (Gesesew *et al.*, 2021, Medhanyie *et al.*, 2024; Niguse *et al.*, 2024). However, there is scarce information about young women and adolescents who have been displaced due to the war. This study investigated the following research question: *What were the increased risks to the sexual and reproductive health of adolescents and youth during the war in Tigray?*

## Methodology

This qualitative explorative study explored the sexual and reproductive health challenges faced by female youth and adolescents in Tigray. The study was conducted in the one Care IDP camp, called Mizer Sub-city located in Mekelle, the capital of the Tigray region, in June 2020.

### *Participants*

**Source population:** The source population for the study are all female youth and adolescents in Tigray who have been affected by the war. The respondents were adolescents and youth aged 17-22 who were displaced from their hometowns after the war broke out in Tigray in November 2020.

**Study participants:** Female adolescents and youth who have been exposed to any sexual and reproductive health problem in internally displaced people camps and sexual and reproductive health clinics.

The study followed a snowball sampling technique, which was based on recommendations from the contacted participants. The participants were selected by community mobilisers who were working close to them. The selected female adolescents and youth were willing to participate. After identifying the initial case, the next one was recommended by the initial participant.

Sampling for the study was six in-depth interviews and two key informant interviews. The study explored the situation based on these interviews to serve as a pilot for further research.

The six in-depth interviews were conducted with the female youth and adolescents and the two key informant interviews with female community mobilisers who are working on the issue of sexual and reproductive health at the camp.

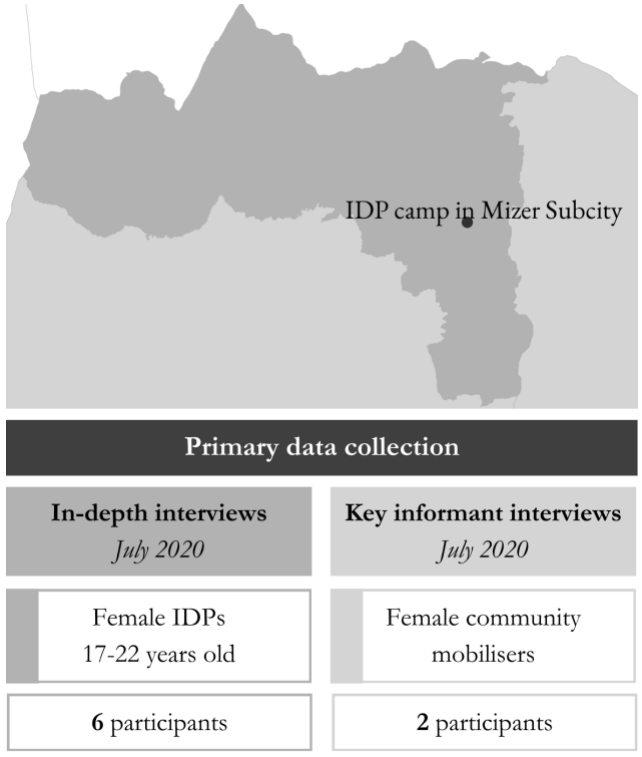


**Figure 8.1. Overview of data collected and used in the study**

The six female adolescents and youth were interviewed face-to-face for the in-depth interviews and two community mobilisers were interviewed for the key informant interviews. The interviews were conducted by the principal researcher. The interviews were conducted inside the IDP camp in the homes of the study participants, which was a safe place for the participants. The interviews were conducted in the natural setting of the participants and were done in a quiet private context.

***Data collection tool and procedure***

Qualitative data was collected using interview guides with semi-structured and open-ended questions for both the in-depth interviews and the key informant's interviews separately. Given the sensitivity of the topic, the researcher focused on creating trust and ensuring that the respondents were confident not to be judged. The researcher created a space in which the respondents were able to speak freely and narrate their situation.

Data was collected from each participant after providing verbal informed consent and was conducted by the principal investigator. In cases where interviewees were minors additional consent was obtained from the adult caretakers. Data was collected and recorded with an audio tape after obtaining consent from the participants. The interviews were of 25-40 minutes duration each.

### *Data quality assurance*

Data was collected using a semi-structured interview guide which was prepared in English and then translated into the local language Tigrinya. It was then translated back into English to ensure consistency. Data quality was ensured by the active engagement of the principal investigator throughout the whole process of the research work from preparing the interview guide, collection of data, analysis, and write-up. The principal investigator conducted the interviews and also took notes. Contents of the interviews were summarised before participants left and were verbally explained to enable them to comment or make any corrections, this is to form trustworthiness. Triangulation of the contents of the transcripts and field notes, the observation, and field notes were done to check the credibility of the information.

### *Data management and analysis*

Recorded audio of the qualitative data interviews was repeatedly heard by the principal investigator and then transcribed and translated into English language. The translated transcript was coded into themes according to the content, categorised, and organised by content with thematic analysis using Atlas.ti software. The data was thematically analysed using a back-and-forth review of the transcripts.

## Social ecological model of health and theory of planned behaviour

The study distinguishes intrapersonal (individual), interpersonal (group), and community levels of engagement (the environment) (CDC, 2002). The model emphasises that individual health is affected by the interaction between the individual, the groups to which the individual connects, as well as the broader community and

institutional environment within the broader range of ecological, physical, social, and political aspects of the environment (Salihu *et al.*, 2015).

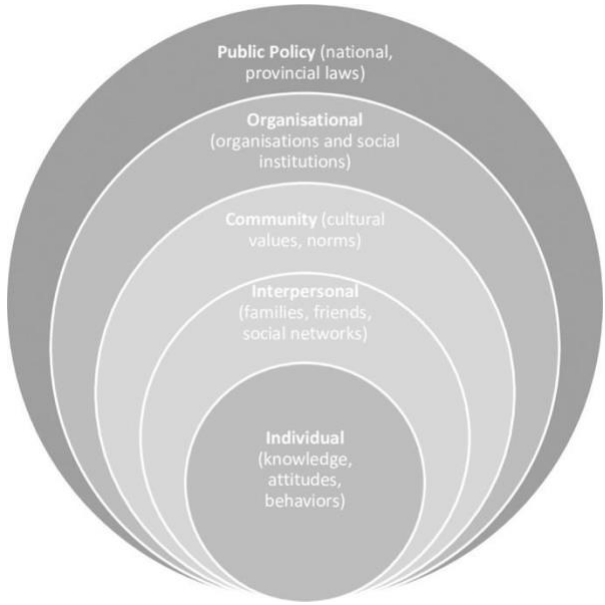


**Figure 8.2. Socio ecological model and theory of planned behaviour**
Source: Ngwenya *et al.* (2020)

The social ecological model (SEM) of Health is not dissimilar from the concepts of the theory of planned behaviour (TPB), distinguishing between attitudes, perceived social norms (the intrapersonal level) and the perceived behavioural control (factors that the individual cannot influence but which determine aspects of behaviour in the broader environment of the individual) (Ajzen, 1985; 2006).

Ngenwya *et al.* (2020) discussed young people's health service utilisation based on the number of youths accessing a facility, using a combination of the concepts of SEM and TPB (see Figure 8.2). This study advances their research in the validity of using these constructs in a model that links to different levels of SEM. This would shed additional understanding of the combined use of the SEM level and

TPB constructs, and the validity of using these in an African setting with its unique cultural set-up, and, in this study, in a war setting. This research builds on the findings of health service utilisation by Ngenwya (2020) which was carried out in South Africa.

## Findings

The findings were first linked to the three levels distinguished in SEM, and within these levels, specific themes were identified.

### *Intrapersonal level*

The findings show that the respondents have been separated from their parents and their families, though sometimes still being in charge of their younger siblings. They fled in fear of the heavy shelling near where they lived and left their homes by running and walking on foot. The narratives revealed the circumstances that were changing sexual and reproductive health behaviour at an individual level and the feelings surrounding these.

#### Forced displacement and trauma

Many of the respondents had a stable and calm life back home prior to the war. They lived with their families in peace and went to school, did business, and worked as teachers. But after the Tigray war broke out and attacks were coming their way, everyone had to flee without knowing where to go.

On the road from their hometowns to Mekelle, the respondents witnessed lots of civilian causalities due to the shelling and passed by many dead bodies lying in the streets. As most of the respondents reported, their journey from their hometowns to Mekelle was full of challenges. These challenges included being separated from their parents or caregivers, witnessing killings and rapes, going hungry for days, not having a change of cloth, going on foot for days, abductions of young people, and seeing many dead bodies on their way. On their journey from their hometown, they would stop at multiple towns to rest and sleep hiding in the bushes. Parents and children were separated. Since transportation was very costly, communication was not possible, and as they did not have any money at hand, they would walk for days, ending up with sore feet. While fleeing, the respondents

said that they found themselves in the middle of a war zone, saw lots of dead bodies and escaped a lot of heavy shelling and explosions. The memories of the journey were very traumatising:

> *I had never seen that many dead bodies in one place in my whole life. People were dying everywhere. They were women that were raped and gang raped and some were raped and killed.* (Interviewee 7, community mobiliser, interview by Mehari, face-to-face, 11 July 2020)

When they arrived in Mekelle many respondents were without a familiar supporting network. The context of the displacement and the displacement itself was traumatising. The uncertainty and traumatic nature of their situation created a circumstance for risky sexual and reproductive health behaviour. The negative feelings associated with the adverse circumstances account for the diminished value attached to beliefs associated with attitudes towards sexual and reproductive health. The feelings associated with the behaviour were a sense of despair, fear of not be able to survive or provide for loved ones in the care of the respondent, and a sense that other problems were of higher priority than the risks associated with sexual and reproductive health.

**Unwanted pregnancy**

Most of the respondents were unmarried young adolescents and encountered unwanted pregnancies, many of which occurred the first time a respondent had sex. They lived alone or with their younger siblings inside the camps. The reasons for the unwanted pregnancies were unplanned sex, lack of family planning medications (contraceptives) inside the camp clinics, condom tearing during sex, older men promising to provide them food and shelter, and some young women getting pregnant just to get food aid:

> *After coming to the IDP camp things got worse. The food aid that comes targets pregnant and lactating women. There weren't any benefits coming for younger girls. So some young women would get pregnant just to get food aid.* (Interviewee 7, female community mobiliser, interview by Mehari, face-to-face, 11 July 2020)

Some of the respondents who encountered unwanted pregnancy claimed that they went to the camp clinics to get contraceptives but

there was no contraceptive at that time in the clinic and they had to return home without getting contraceptives. A 17-year-old adolescent who got pregnant in one sexual encounter with her boyfriend, stated that she became pregnant due to lack of contraceptives:

> *I was a virgin and we only had sex once; my boyfriend left after that and after five months I found out that I was pregnant.* (Interviewee 3, interview by Mehari, face-to-face, 11 July 2020)

Other respondents were living with their partners and by the time the contraceptives were availed at the clinic they found out that they were already pregnant.

> *I have a boyfriend and we were living together. I had promised myself that I would have a child once normalcy returned and I went home to my family. I was using a contraceptive, but it was already past its working time then I suddenly got pregnant because there were no contraceptives in the camp clinic. By the time I went to get contraceptives another time I had a pregnancy test first and it was positive.* (Interviewee 4, interview by Mehari, face-to-face, 11 July 2020)

The unwanted pregnancies in an environment where the adolescents and young women were lacking support, exacerbated their problems.

> *Most of the young women who got pregnant do not know they could get pregnant and they do not pay much attention. They are around 16 or 17 years of age*. (Interviewee 8, interview by Mehari, community mobiliser, face-to-face, 11 July 2020)

The scarcity of food and livelihood, the responsibilities for siblings and other younger children, were now compounded with a pregnancy and the care for a newborn baby.

**Transactional sex – sex work for survival**

Sex for survival is sex that offers a benefit or 'transaction' to the person offering sex. This is usually carried out in a circumstance where there is little if any protection and needs are high and securing necessities is difficult to achieve.

A 22-year-old female respondent said that after being displaced from her hometown, she had severe financial problems. She said back home she owned a business and was a married woman. After the war broke out, she lost everything she owned. She did not have any idea

about the whereabouts of her husband. Losing everything and being displaced led her mother to become ill.

Her 2-year-old son was diagnosed with a heart problem. Her son required frequent and long hospitalisation and he needed medications. She was buying the medicines from private pharmacies for a high price. She said that she could not afford the medications and treatments required for her son and for her sick mother simultaneously.

In order to meet these pressing demands, she felt that the only solution was to have sex for money with different men. She recalls how this started when she was renting a house, because she could not live in the camp with her sick son and sick mother. However, she could not afford to pay the house rent, she stayed with one man for two days, and he then paid the rent. Then she would go with any man who asked her for sex as long as he paid her money. This happened whenever she needed money, but she said that she does not do this regularly. She would get some money and she would use that money to meet expenses for the treatment of her child and her mother.

> *After my son was diagnosed with a heart defect, he was getting sick repeatedly and he needed a lot of medication and treatment, we also had money problems and we would go hungry. I could not afford the expenses and I had no choice. As long as I got money, I would go out with any man whether in the camp or outside the camp. I did not have the luxury to choose.* (Interviewee 6, interview by Mehari, face-to-face, 11 July 2020)

Even though this female respondent originally had a good livelihood, transactional sex for survival was used as a temporary way out, to face the combination of adverse circumstances, which she could no longer address during the war.

Having sex with different men led to her having symptoms like, a foul-smelling discharge, itching, genital soreness and pain, and bleeding during sex, and she was diagnosed with a sexually transmitted infection. She has been treated for sexually transmitted infection in the camp clinic. She took injections, vaginal tabs, and pills and she recovered. However, she still has pain and is still bleeding

whenever she engages in sexual intercourse. She went to a referral hospital and she was treated another time.

The respondent said that she is afraid to be screened for HIV/AIDS. She is afraid that she might have the infection and that she would not know what to do with her life:

> *I know that the screening for HIV/AIDS is free. However, I do not want to be checked in case I have an infection.* (Interviewee 6, interview by Mehari, face-to-face, 11 July 2020)

Engaging in risky sexual behaviour such as transactional sex led to acquiring sexually transmitted infections and fear of a routine check-up on her HIV/AIDS status.

Young girls living inside the camp encounter unwanted pregnancies and seek different types of abortion. Some of them go to government hospitals and some to private clinics. Some even try traditional means to terminate pregnancy. A young girl found out she was pregnant and her boyfriend said that the pregnancy was not his. Then she drank bleach to terminate the pregnancy. However, the community helped her to go to a referral hospital because the camp clinic was out of medication and she then had an abortion in the referral hospital.

A female youth who does sex work for survival claimed that she would go with men for money and other benefits. She said that she had an occasion where a condom was torn in the middle of sex. Later she found out that she was pregnant. She needed to have an abortion at a government hospital.

> *When I was doing this job, I had an occasion where a condom burst in the middle of sex (crying) and I got pregnant. I had an abortion. After that, I was having heavy periods for about four months. I was referred to Ayder Specialized Hospital and I am taking my medications now.* (Interviewee 4, interview by Mehari, face-to-face, 11 July 2020)

Abortion was one of the reproductive health problems encountered by the young women living in the camp. Unsafe abortion was also reported as some of the young women tried to terminate pregnancy using bleach.

A respondent who does sex work for money also said that she encountered sexual, physical violence, and verbal abuse from the men she has sex with. She said that they would agree for one time and they would refuse to give her money unless she agreed for another round. The only choice she had to get the money was to agree to have sex without her will. She would hurt during sex and she would tell the men to stop but they insult her, slap her, and assault her for asking that. She said that the men have no mercy on her:

> *The men hit me sometimes. For instance, if I have pain during sex and if I ask them to stop. They slapped me and hit me. In addition, I have no choice but to go home.* (Interviewee 6, interview by Mehari, face-to-face, 11 July 2020)

Disrespect, insults, slaps, and threats were some of the problems encountered in the context of engaging in transactional sex for survival. The respondent claimed that she was treated badly because those men were paying her for sex.

Within the uncertainty of the situation and the insecure livelihoods, youth and adolescents opt for transactional sex to survive in the difficult circumstances they face. This leads to unwanted pregnancies, need for abortions which provide further health risks, and they also experience physical, verbal, and sexual violence. The violence experienced as a consequence of the war, translates to violence at an individual level affecting sexual and reproductive health. The respondents felt diminished and faced a lack of confidence in their ability to cope with the situation in which they felt divorced from support mechanisms.

### *Interpersonal level: Lack of support, discrimination and mental health challenges*

Being a young single mother, being a teen and pregnant, and being a caregiver at a young age makes it hard to take care of a baby as well as themselves.

> *I fled home when the shelling started. I left with two friends and I had my baby with me. My parents were living in another town and they fled later. On the road, there was hunger, thirst, not having clothes to change and so many problems.* (Interviewee 6, interview by Mehari, face-to-face, 11 July 2020)

Some of them had to support their younger siblings on top of that. This led to going hungry for days, not having clothes, not having food on the table and not being able to buy medications when they were sick. A 17-year-old pregnant female narrated that her boyfriend broke up with her after the pregnancy happened. She had her two young sisters living with her. She said that she was sad when she found out that she was pregnant because her parents were not with her. They fled to a neighbouring country after the war broke out. She was vomiting and experienced severe nausea and morning sickness during the first four months and she did not have enough food to eat at home. The food she ate was wheat that was given as food aid. Then she became anaemic. She received iron supplements from the camp clinic that was run by a local Non-Governmental Organisation (NGO):

> *I would have been happy if my parents were with me. (crying) I felt really sad when I found out I was pregnant.* (Interviewee 1, interview by Mehari, face-to-face, 11 July 2020)

Being far away from home, lacking parental support and living in an IDP camp while not having enough food on the table was very hard. Being an unaccompanied adolescent pregnant girl becoming a single mother was a very difficult situation. Being young and pregnant, having a boyfriend at a young age, and doing sex work for survival, subject the young women to judgment, pointed fingers, and discrimination from the community in which they live. Having sex at a young age can be considered a sign of promiscuity by the community. The community mobiliser told the story of a young pregnant girl who cried continuously for being pregnant and being away from her family. She claimed that she wanted to help her wash her, do her hair, and provide her emotional support but some women were blaming the young girl for sleeping around and getting pregnant:

> *She wouldn't listen to us when we told her. She should have kept put. She was sleeping around and it's only her fault that she got pregnant, said the woman.* (Interviewee 7, community mobiliser, interview by Mehari, face-to-face, 11 July 2020)

The community mobiliser helped young women who encounter pregnancy by linking them to clinics and professionals for care and support. She also mobilised the community to provide emotional support for the girls. But she said that sometimes some people judged the young women and blamed them for being pregnant. A respondent who carried out sex work for money said that she felt very shy in her community and that she was scared that they may find out what she does for survival. She was worried about being frowned upon:

> *I don't feel confident while living here. I am afraid that people might find out what I do.* (Interviewee 6, interview by Mehari, face-to-face, 11 July 2020)

The norms of the community towards the sexual behaviour of the young women, resulting in societal judgment and leading to negative attitudes and behaviour of community members, unsupportive comments toward the young women who were engaged in risky sexual behaviours created conflicts in the minds of the victims.

The respondents of the study say they are subjected to a lot of emotional distress and worry because of their sexual and reproductive health problems. They worry about what to eat, how to care for the infants, how to face their communities' judgment, and how to care for their young siblings when to return home to their families:

> *I didn't want to get pregnant. But I found out I was pregnant. I wasn't able to take care of myself and the idea of adding a baby made me have suicidal ideations. But then my husband told me it was okay.* (Interviewee 3, interview by Mehari, face-to-face, 11 July 2020)

The respondents of the study faced difficulties in taking care of themselves, their younger siblings, and their children. Having to live away from family support and being unable to go to school or play with their peers created psychological distress and negative impacts on their mental health.

They feel their priority is to survive and that the sexual behaviour and challenges are the results of the circumstances they are in. They fear negative appreciation by the people around them while lacking support from the people whom they care about. This feeds loneliness and indifference and the sense that their situation clashes with what is expected of them from the people living around them. The study

suggests that lack of support caused psychological distress, mental health problems and thoughts of suicide among the participants of the study.

### *Institutional level: Living conditions*

After they arrived in Mekelle the female adolescents and youth - who participated in this study, settled in an internally displaced peoples' camp in a school setting. They reported that they lived in a classroom full of people, of around 40-60 people. Men and women were sleeping in one room. The host community was very generous and helped the people in the IDP camp with food, clothes, and sanitary materials.

At the time of the research, the adolescents and youth had been relocated to another camp and had the freedom to live in separate shelters. They reported that they had more freedom as opposed to their initial shelters. But they claim that they live far from the host community and that they receive minimum support now. Since they live alone people don't share food, drinks or clothes anymore and they would get hungry and they would feel lonely. There is a problem with the shelters since they are made with temporary materials. There would be flooding into the shelters and they get cold and children get sick.

#### Security problems

While living in the IDP camps there were security issues with people from the host community and from the IDP fighting and some people trying to steal jewellery and money. Some of the respondents claimed that they felt uncomfortable sleeping alongside strange men and reported that they felt inappropriate touching while others reported that they heard and saw some drunk men rape young women inside the camp. A participant from the in-depth interviews claims the following.

> *Men and women slept in one room together and due to that there were problems because girls were being raped inside the camp; those survivors of rape were given health education and counselling, but I don't think those who committed the violence were caught.* (Interviewee 1, interview by Mehari, face-to-face, 11 July 2020)

While another participant added that sleeping arrangements caused inappropriate touching from men:

> *With men and women sleeping in one room, there were problems like unwanted and inappropriate touching, adult men luring very young women into sex with money, and a lot of rape cases of young women.* (Interviewee 6, interview by Mehari, face-to-face, 11 July 2020)

The respondents who fled their hometowns in fear of violence and heavy shelling had to live in a school compound in Mekelle. Since there were a lot of people the living conditions were exposed to different security problems.

**Interrupted health services in the camp**

The findings show that there was some health service provided in the camp and there were also referral linkages to health facilities outside the camp. The respondents of the in-depth interviews claimed that they had gone to the clinics inside the camps in need of antenatal care, family planning, and treatment of sexually transmitted infections. They also went to other higher government and private health facilities for delivery, child immunisation, cervical cancer screening, and abortion.

Despite the existence of health services and health education in the camp, there were interruptions of medications and medical supplies. The respondents of the in-depth interviews claim that they encountered unwanted pregnancy because there was no contraceptive at the camp clinic and, they also had to go to private clinics at a higher price for laboratory services.

The community mobiliser claimed that some of the young women living inside the IDP camp felt too shy to go to the camp clinics for family planning services or condoms. They were afraid that they would be judged by the community and the health providers if they were seen getting a condom or a contraceptive. So, they would skip going to the health facilities for those services. Then they encounter unwanted pregnancy and abortions.

## Discussion

This study explored the increased risks to sexual and reproductive health among youth and adolescents during the war in Tigray in an IDP camp in Mekelle, Tigray. It was found that unwanted pregnancy, sexually transmitted infections, abortion, and sex work for survival were some of the increased risks. The study assessed what problems were encountered at the individual, interpersonal, and institutional levels by youth and adolescents and that in turn affected their sexual and reproductive health. The participants in the study encountered different sexual and reproductive health problems. The problems that arose were associated with:

- unplanned sex
- lack of access to health facilities
- engaging in risky sexual behaviour
- sex for survival due to a financial problem and uncertain livelihoods, including hunger

Young women living IDP camps faced the emotional burden of responsibility for younger siblings, in the absence of parents or older caregivers, and were afraid that they would be unable to care for them due to famine and lack of various items essential for survival. This responsibilities, in circumstances of hardship, came on top of the traumatic events that they went through when fleeing from their place of origin and the continued traumatic situations of the war.

The respondents were focused on survival, but realised that lack of care for sexual and reproductive health was resulting in problems, exacerbating their difficult situation. The youth and adolescents reported many challenges, including unwanted pregnancy. The most common cause of pregnancy was unplanned sex followed by lack of access to contraceptives. Having casual and unplanned sex and not using a condom or contraceptive was also a cause of unwanted pregnancies in this study.

Studies in Ethiopia and the Democratic Republic of Congo found that unwanted pregnancies were common in refugee camps among adolescent girls and the cause was usually sexual violence (Ivanova *et al.*, 2018). The study in Congo indicated that around 70% of sexually

active female adolescents did not use condoms the first time they had sex and around half of them encountered unwanted pregnancies (Ivanova *et al.*, 2019). This is also reported in the current study, in which unwanted pregnancies were reported by some respondents the first time they had sex. The causes of unwanted pregnancies in the current study were unplanned sex, lack of access to contraceptives, and condom-breaking during a sexual encounter. The youth and adolescents in the current study reported that they wanted to use contraceptives to avoid unwanted pregnancies, but there was poor access to contraceptives in the camp clinic. Although it is encouraging that youth and adolescents wanted to use contraceptives, the war affected access to contraceptive methods.

The occurrence of unwanted pregnancy also led to abortion among young women. These abortion generally occurred in government hospitals using pills, which caused side effects. Another respondent drank bleach to terminate the pregnancy and later she was referred to a hospital due to complications. Complications of unsafe abortion, including death, have been reported in a study in Nigeria (Marlow *et al.*, 2021), where young women took abortion pills, metronidazole, Flagyl, or salt to induce an abortion. Similarly, in the current study, it was reported that young women who had unsafe abortions had complications and had to be referred to referral hospitals. This shows that unwanted pregnancies in young women may lead to abortion and in a difficult conflict setting, where abortion services are not provided inside the camp, young women may opt for unsafe abortions. Collaborative efforts to enhance access to safe abortion services at camp clinics should be sought to alleviate this problem.

The study found that the youth and adolescents faced a lot of challenges like hunger, saw corpses on the street, and witnessed killings and rape while fleeing from their hometown to Mekelle after the war broke out. These traumatic feelings informed their sense of desperation and negative feelings, leading to greater risk-taking behaviour.

Being unable to feed themselves and their family, having a sick child and family members with urgent needs, and living unsupported in poverty in a displacement camp led to the practice of sex work for

survival. Transactional sex (sex for survival) was defined as the exchange of money, gifts, or favours for sex. This was also reported in the study in Congo (Harrison *et al.*, 2009), where adolescent girls living in refugee camps were reported to be having transactional sex in exchange for money.

Sex for survival in the current study led to unwanted pregnancies, abortion, and sexually transmitted infections. This can increase the risk and vulnerability of those adolescents and youth being exposed to HIV and other sexually transmitted infections. The practice of transactional sex, having multiple sexual partners, and the occurrence of condoms tearing during sex has led to youth and adolescents acquiring sexually transmitted infections. Foul-smelling vaginal discharge, genital soreness and itching, pain, and bleeding during sex were reported as symptoms of sexually transmitted infection in this study.

After the Tigray war broke out female adolescents and youth and their families were forced to leave their hometowns due to heavy shelling. The war had effects at an interpersonal level, with participants encountering challenges, such as travelling on foot for days, separation from parents, hunger, security problems, sleeping, and hiding in bushes. This exposed youth and adolescents to rape, sleeping with older men for survival, having unplanned sex, as well as witnessing killings and abductions. Rapes and killings were also reported in a study in Nigeria (Marlow *et al.*, 2021) where the Boko Haram insurgency forced young people flee their homes. Young girls were reported to have witnessed killings and rape of their close family members and they also followed older men around and slept with them for money due to hunger. Displacement and disruptions of lives traumatised the respondents and led to many health challenges. On top if those challenges, participants were afraid of discrimination, and feared being negatively judged by the surrounding communities for the health and reproductive challenges they were facing. This induced a sense of inadequacy to fulfil the standards of the immediate community, a fear of being treated negatively, and a fear that they would not receive the respect they deserve as human beings.

At the institutional level, due to the war, health facilities were destroyed, and healthcare services such as maternal and child health services were disrupted. The study participants said that they were unable to obtain services at the camp clinic and had to go to private clinics for higher prices.

The problems that were encountered due to lack of contraceptives at the camp clinic resulted in unwanted pregnancies. This shows how problems at various levels are related, and that what happened at the institutional level influenced what happened at the intrapersonal level. This can be referred to as panarchy. The protection of health facilities in war zones and the provision of unhindered health services to adolescents should, therefore, be a key priority of humanitarian agencies.

For this explorative research, which used the SEM, distinguishing intrapersonal, interpersonal and institutional levels, was a useful starting point. It allowed the researcher to distinguish the problems that were identified in the interviews at each level. It also helped to determine the inter-relationship between these three levels.

This study confirmed the usefulness of combining the concepts of SEM and TPB, as proposed by Ngwenya *et al.*, 2020, with the adaptation that the institutional level focused on the control beliefs.

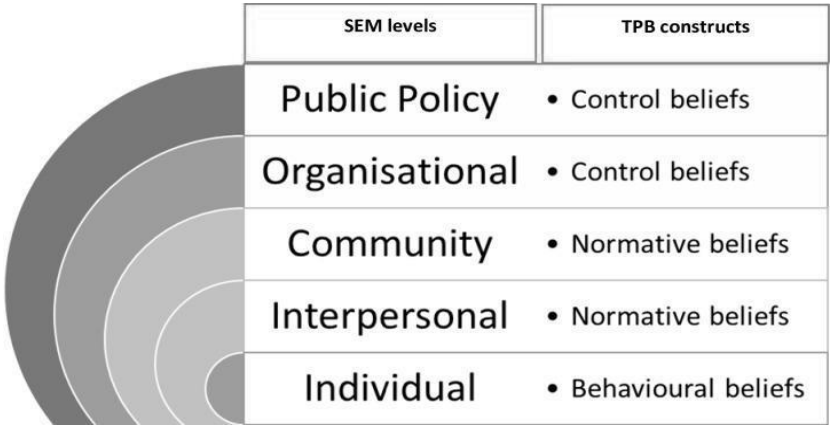


**Figure 8.3. Constructs of SEM and TPB combined**

Source: Ngwenya *et al.* (2020)

The matching of levels and constructs found in the current study was the following:

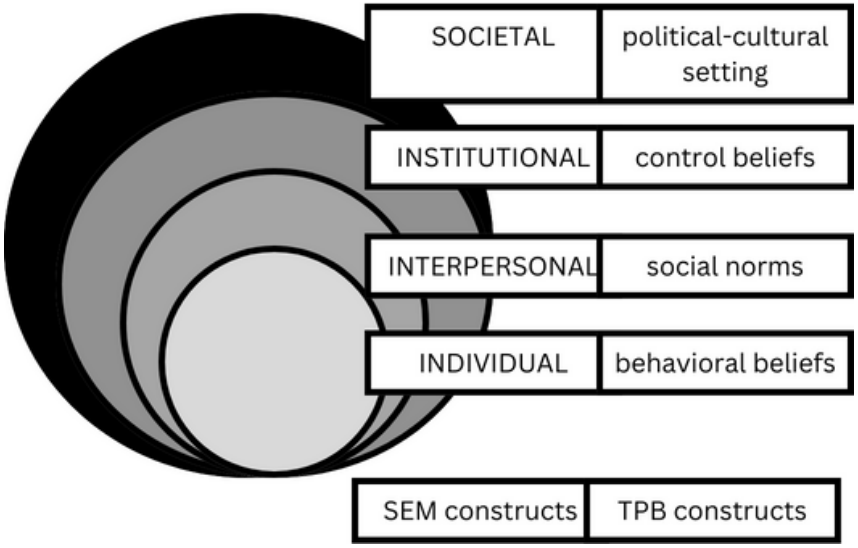


**Figure 8.4. Matching of constructs of SEM and TPB**

The study found that the individual level matched with the construct of attitude or behavioural beliefs from the TPB. The interoperation level matched the perceived social norms affecting individuals and the institutional level matched the perceived control, relating to enabling factors of behaviour. The importance of this finding is that it links the SEM to constructs predicting health behaviour. In addition, this research was carried out in a qualitative setting, an African cultural setting, and a war setting. The exploration of these constructs in this research found that it is valid for these combined settings. Further studies with larger sample sizes and diversity may be needed to address this further, particularly to explain the burning issue of poor sexual and reproductive health outcomes among female adolescents and youth living in IDP camps.

## Conclusion

This study investigated the increased risks to the sexual and reproductive health of adolescents and youth during the war in Tigray. To do so it looked at what happened to female adolescents and youth at intrapersonal, interpersonal, and institutional levels, using the constructs of attitudes, perceived social norms and perceived behavioural control associated with these levels. The study was carried out in northern Ethiopia, using interviews carried out in 2020 during the war in Tigray.

The validity of the use of these constructs was confirmed across the SEM of health, which is not dissimilar from the concepts in the TPB in terms of levels and beliefs. The study tested the use of these theories in combination, in an emic explorative in-depth qualitative research, and within the specific circumstance of war in an African setting. It can be concluded that, for this small-scale study, the constructs were useful and helped in the analysis of the data. The constructs pointed to relationships with the social-ecological levels of analysis identified in SEM. Together, these concepts were found to hold explanatory power for the study in relation to the prevention and utilisation of health services by female youth in the situation of war, as studied in this research.

This study highlights the adverse conditions in which young IDP youth and adolescents lived during the Tigray war. The challenges were particularly related to food and resources. Due to family disruptions, lack of adequate health service access, hunger, and poverty, adolescents and young women in the IDP camp were forced into sexual relationships and transactional sex. These conditions in turn led to poor sexual and reproductive health outcomes for young women, including unwanted pregnancies, sexual transmitted diseases, and unsafe abortions.

The study explored the sexual and reproductive health challenges of young women, living in an IDP camp during a period of war. While some services were available, they were reported as not being enough to address the respondents' sexual and reproductive health needs. Collaborative and integrated services must address food insecurity,

safety, and financial insecurity these young women face, leading to sexual vulnerability and poor sexual and reproductive health outcomes.

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**Authors' contributions**

The first author designed the research, collected and processed the data, organised and conducted the coding and labelling, analysed the data, wrote the manuscript, and reviewed all the article versions. The second author reviewed and strengthened all versions of the manuscript including the theoretical framework.

**Ethical considerations**

This research was carried out under ethical clearance obtained from Mekelle University, reference number MU-IRB 1979/2022.

This chapter should be read in conjunction with the 'Note on Content and Editorial Decisions'.

**Disclosure statement**

No potential conflict of interest was reported by the authors.

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