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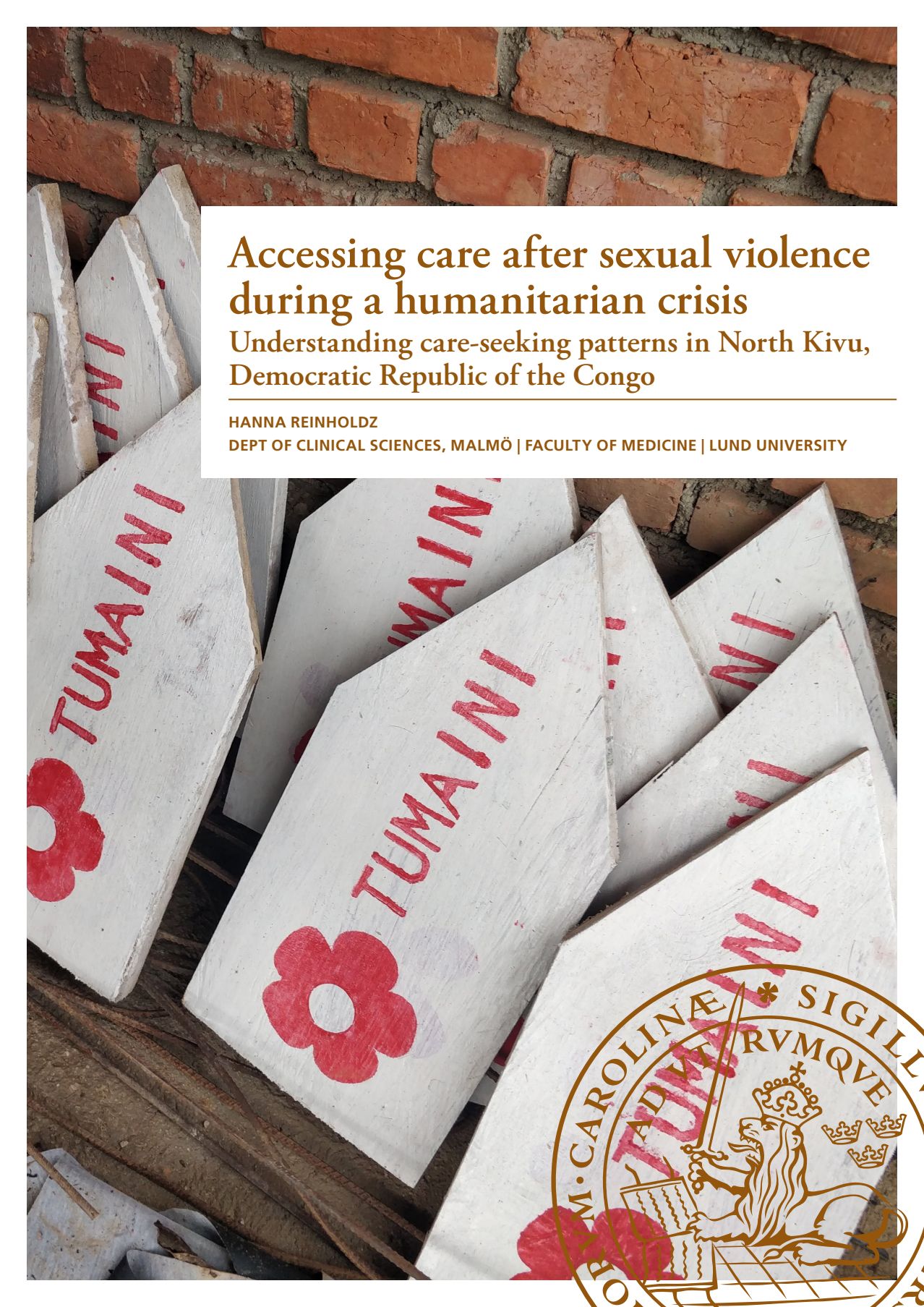
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Accessing care after sexual violence during a humanitarian crisis

Understanding care-seeking patterns in North Kivu,
Democratic Republic of the Congo

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Abstract

Background: Offering care and support to survivors of sexual violence is crucial in order to support their healing and recovery. Yet, accessing care is often challenging for survivors and especially in humanitarian settings. North Kivu, a province in the eastern part of the Democratic Republic of the Congo, has been ravaged by conflict and violence for several decades and is one of the worst humanitarian crises in the world. The aim of this thesis is to examine and explore care-seeking patterns, factors influencing timely access to care, as well as barriers and enablers to care-seeking for survivors of sexual violence in North Kivu.

Methods: In Paper I and Paper III cross-sectional study designs were used to examine file-based data containing information about survivors of sexual violence who had accessed care, collected as part of routine activities within the organisation Médecins Sans Frontières' activities in North Kivu. Descriptive statistics as well as logistic regression models were used in the analyses. In Paper II a qualitative study design was applied. Focus group discussions with community members in different areas within the study settings were conducted and analysed using qualitative content analysis.

Results: Age, sex and displacement status as well as referral pathways impact timely access to care. Lack of knowledge and fear of social consequences were the main reported barriers among survivor who accessed care and also perceived as main barriers among community members. Community members also highlighted lack of adapted healthcare facilities and respectful healthcare staff as key barriers for survivors of sexual violence to access care. Misconceptions around timing of care seeking and healthcare needs for survivors of intimate partner sexual violence could also prevent care-seeking.

Conclusion: Understanding variations in care-seeking behaviours and specific barriers experienced by the target population is key and response to survivors of sexual violence needs to be adapted to different groups of survivors using tailored models of care and entry points and targeted awareness raising messages and methods. Specific attention needs to be paid to misconceptions, harmful narratives and harmful social norms in the population which might hamper care-seeking. Raising awareness, reducing stigma and harmful actions by husbands and other community members, and ensuring that healthcare services are respectful and accessible for all survivors are key actions to improve access.

Key words: Sexual Violence, Democratic Republic of the Congo, Access to care

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Understanding care-seeking patterns in North Kivu,
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Hanna Reinholdz



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What are we to do with this war? We are tired. Give us peace.

We want peace.

Nothing but peace.

Justine Masika Bihama in Women Resist War

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Abstract

Background

Offering care and support to survivors of sexual violence is crucial in order to support their healing and recovery. Yet, accessing care is often challenging for survivors and especially in humanitarian settings. North Kivu, a province in the eastern part of the Democratic Republic of the Congo, has been ravaged by conflict and violence for several decades and is one of the worst humanitarian crises in the world. The aim of this thesis is to examine and explore care-seeking patterns, factors influencing timely access to care, as well as barriers and enablers to care-seeking for survivors of sexual violence in North Kivu.

Methods

In Paper I and Paper III cross-sectional study designs were used to examine file-based data containing information about survivors of sexual violence who had accessed care, collected as part of routine activities within the organisation Médecins Sans Frontières' activities in North Kivu. Descriptive statistics as well as logistic regression models were used in the analyses. In Paper II a qualitative study design was applied. Focus group discussions with community members in different areas within the study settings were conducted and analysed using qualitative content analysis.

Results

Age, sex and displacement status as well as referral pathways impact timely access to care. Lack of knowledge and fear of social consequences were the main reported barriers among survivor who accessed care and also perceived as main barriers among community members. Community members also highlighted lack of adapted healthcare facilities and respectful healthcare staff as key barriers for survivors of sexual violence to access care. Misconceptions around timing of care seeking and healthcare needs for survivors of intimate partner sexual violence could also prevent care-seeking.

Conclusion

Understanding variations in care-seeking behaviours and specific barriers experienced by the target population is key and response to survivors of sexual violence needs to be adapted to different groups of survivors using tailored models of care and entry points and targeted awareness raising messages and methods. Specific attention needs to be paid to misconceptions, harmful narratives and harmful social norms in the population which might hamper care-seeking. Raising awareness, reducing stigma and harmful actions by husbands and other community members, and ensuring that healthcare services are respectful and accessible for all survivors are key actions to improve access.

Populärvetenskaplig sammanfattning

Många kvinnor och flickor, men även pojkar och män, överallt i världen, utsätts för sexuellt våld varje dag och att hitta vård och stöd kan vara utmanande. Under humanitära kriser tenderar våldsutsatthet att öka samtidigt som det blir svårare att nå hjälp. Den här avhandlingen avser att undersöka hur människor som blivit utsatta för sexuellt våld under en pågående humanitär kris söker vård, vilka hinder de möter samt hur tillgången till vård kan förbättras.

Nordkivu är en provins i östra Kongo-Kinshasa, med gräns mot både Uganda och Rwanda, rik på naturresurser, framförallt i form av mineraler nödvändiga för modern teknik, men också odlingsbar mark. Området har varit drabbat av konflikt i över tre decennier och är skådeplats för en komplex geopolitisk situation som involverar över hundra olika väpnade grupper. Sexuellt våld är vanligt i området och har ofta kopplats till de väpnade konflikterna. Samtidigt som sexuellt våld kan leda till allvarliga medicinska och psykologiska konsekvenser försvåras tillgången till vård för överlevare av sexuellt våld av både konflikt och andra faktorer. Att ha tillgång till vård så snabbt som möjligt efter att ha blivit utsatt för sexuellt våld är särskilt viktigt eftersom vissa delar av den medicinska hjälp som kan erbjudas måste påbörjas inom ett specifikt tidsfönster. Det finns mediciner som kan minska risken för HIV infektion men den behandlingen måste påbörjas inom 72 timmar från att man blivit utsatt för smittan. Önskad graviditet kan också förhindras med hjälp av läkemedel, men dessa behöver tas inom 120 timmar.

Läkare utan gränser eller Médecins Sans Frontières (MSF) hade sin första insats i Kongo-Kinshasa redan 1977 och idag är insatserna i Kongo-Kinshasa organisationens största. En del av insatserna är riktade mot överlevare av sexuellt våld och år 2024 fick 46,900 överlevare av sexuellt våld vård genom MSF's insatser i landet.

Denna avhandling är uppbyggd av tre studier, alla utförda inom program som drivs med stöd av MSF i Nordkivu. Två studier är baserade på kvantitativ rutindata från hälsovårdsinrättningar stöttade av MSF där överlevare av sexuellt våld fått vård och en studie är kvalitativ, baserad på fokusgruppdiskussioner med invånare i olika områden där MSF arbetar.

Genom dessa studier fann vi att tillgång till vård inom 72 timmar för överlevare av sexuellt våld påverkas av faktorer som ålder, status som internflykting/flykting och vilken typ av sexuellt våld man har utsatts för. Det är därför viktigt att humanitära aktörer kontinuerligt utvärderar sin kontext och anpassar sina insatser därefter. Vi fann också att bland de överlevare som sökte vård var brist på information och rädsla för negativa sociala konsekvenser de största hindren de upplevt. Detta såg vi också i våra fokusgrupper, där negativa reaktioner, framförallt från äkta män, ansågs vara ett av de största hindren för att berätta vad man utsatts för och att söka vård. Det

fanns också felaktiga uppfattningar kring behovet av vård och när man kan söka vård som också hindrade vårdsökande. Att informera kring sexuellt våld, dess konsekvenser och vilken vård som är tillgänglig och samtidigt bemöta de missuppfattningar som finns är därför av högsta vikt. Att sprida mer information kring sexuellt våld och dess konsekvenser var också efterfrågat av deltagarna i fokusgrupperna. Information kring sexuellt våld in Kongo-Kinshasa har ofta varit fokuserad kring våld utfört av väpnade män, men för att alla överlevare av sexuellt våld, också de som utsatts för våld som inte är direkt kopplat till pågående konflikt, ska ha tillgång till vård, är det viktigt att informationen breddas till att också inkludera andra former av sexuellt våld, till exempel våld i nära relationer. Samtidigt behövs engagemang och arbete för att ändra sociala normer som stigmatiserar överlevare av sexuellt våld i den här kontexten, speciellt insatser riktade mot män.

En annan aspekt som vi fann i vår kvalitativa studie var behovet av välutbildad och respektfull personal. Att bli ifrågasatt eller dömd av sjukvårdspersonal ansågs utgöra en anledning till att inte söka vård efter att ha utsatts för sexuellt våld. Att utbilda sjukvårdspersonal, inte bara i de tekniska aspekterna av vård efter sexuellt våld, men framförallt i att erbjuda respektfull vård baserat på överlevares behov och önskingar måste därför vara en prioritet i alla humanitära insatser.

Résumé de vulgarisation scientifique¹

La violence sexuelle fait partie du quotidien de nombreuses femmes et filles, mais aussi de garçons et d'hommes, partout dans le monde, et il peut être difficile d'accéder à des soins et à un soutien. Lors de crises humanitaires, l'exposition à la violence sexuelle a tendance à augmenter, tandis que les obstacles à l'accès aux soins et au soutien se multiplient. Cette thèse vise à étudier comment les survivant·e·s de violences sexuelles dans le contexte d'une crise humanitaire en cours recherchent des soins, quels obstacles ils/elles rencontrent et comment l'accès aux soins peut être amélioré.

Le Nord-Kivu est une province située à l'est de la République Démocratique du Congo (RDC), à la frontière avec l'Ouganda et le Rwanda. C'est une province riche en ressources naturelles, notamment en minerais indispensables à la technologie moderne, mais aussi en terres agricoles. La région est en proie à des conflits depuis plus de trois décennies et est le théâtre d'une situation géopolitique complexe impliquant plus d'une centaine de groupes armés différents. Les violences sexuelles y sont courantes et ont souvent été associées aux conflits armés. Alors que la violence sexuelle peut entraîner de graves conséquences médicales et psychologiques, l'accès aux soins pour les survivant·e·s de la violence sexuelle est entravé tant par le conflit que par d'autres facteurs. Il est particulièrement important d'avoir accès à des soins le plus rapidement possible après avoir subi une violence sexuelle, car certaines parties de l'aide médicale qui peut être proposée sont soumises à des délais. Il existe des médicaments capables de réduire le risque d'infection par le VIH, mais ce traitement doit être commencé dans les 72 heures suivant l'exposition à l'infection. Une grossesse non désirée peut également être évitée à l'aide de médicaments, mais ceux-ci doivent être pris dans les 120 heures suivant l'exposition.

Médecins Sans Frontières (MSF) a mené sa première mission en RDC dès 1977 et, aujourd'hui, ses interventions dans ce pays constituent les plus importantes de l'organisation. Une partie de ces interventions est destinée aux survivant·e·s de violences sexuelles et de violences faites par des partenaires intimes. En 2024, 46,900 survivant·e·s de violences sexuelles ont bénéficié de soins dans le cadre des interventions de MSF en RDC.

Cette thèse s'articule autour de trois études, toutes menées dans le cadre de programmes soutenus par MSF dans le Nord-Kivu. Deux de ces études s'appuient sur des données quantitatives issues des dossiers de routine des structures sanitaires soutenus par MSF où des survivant·e·s de violences sexuelles ont reçu des soins,

¹ This popular science summary was translated from Swedish into French with the support of the machine-translation tool DeepL and subsequently edited and reviewed by the author.

tandis qu'une troisième étude est de nature qualitative et repose sur des discussions de groupe avec des habitant·e·s de différentes zones où MSF intervient.

Ces études nous ont permis de constater que l'accès aux soins dans les 72 heures pour les survivant·e·s de violences sexuelles dépend de facteurs tels que l'âge, le statut de déplacement et le type de violence sexuelle subie. Il est donc important que les acteurs humanitaires évaluent en permanence leur contexte et adaptent leurs interventions en conséquence. Nous avons également constaté que, parmi les survivant·e·s qui ont sollicité des soins, le manque d'information et la crainte de conséquences sociales négatives constituaient les principaux obstacles rencontrés. Ce constat a également été confirmé lors de nos discussions de groupe, où les réactions négatives, notamment de la part des maris, ont été identifiées comme l'un des principaux obstacles.

Il existait également des idées fausses concernant le besoin de soins et le moment où l'on peut solliciter une prise en charge, ce qui dissuadait également les personnes concernées de se faire soigner. Il est donc primordial de fournir des informations sur les violences sexuelles, leurs conséquences et les soins disponibles, ainsi que de lutter contre ces idées fausses. Les participants aux groupes de discussion ont également demandé que plus d'informations soient diffusées sur les violences sexuelles et leurs conséquences. L'information sur les violences sexuelles au RDC s'est souvent concentrée sur les violences commises par des hommes armés, mais pour que tous les survivant·e·s de violences sexuelles, y compris celles et ceux qui ont subi des violences sans lien direct avec le conflit en cours, aient accès à des soins, il est important d'élargir cette information afin d'y inclure également d'autres formes de violences sexuelles, telles que les violences au sein des relations intimes. Parallèlement, un engagement et des efforts sont nécessaires pour faire évoluer les normes sociales qui stigmatisent les survivant·e·s de violences sexuelles.

Un autre aspect que nous avons mis en évidence dans notre étude qualitative est le besoin d'un personnel bien formé et respectueux. Le fait d'être remise en question ou jugée par le personnel soignant était considéré comme une raison de ne pas solliciter de soins après avoir subi des violences sexuelles. Former le personnel soignant, non seulement aux aspects techniques des soins après des violences sexuelles, mais surtout à offrir des soins respectueux, fondés sur les besoins et les souhaits des survivant·e·s, doit être une priorité dans toutes les interventions humanitaires.

List of papers

Paper I

Reinholdz H, Agardh A, Verputten M, Byenda J, Frielingsdorf H. Care-seeking patterns and timely access to care among survivors of sexual violence in North Kivu, the Democratic Republic of the Congo: a retrospective file-based study. *Glob Health Action*. 2024 Dec 31;17(1):2336708. doi: 10.1080/16549716.2024.2336708. Epub 2024 Apr 25. PMID: 38660982; PMCID: PMC11047213.

Paper II

Reinholdz H, Palmieri J, Frielingsdorf H, Katungu Kalere E, Nteziryayo Heritier G, Verputten M, Agardh A. Community perceptions about factors influencing access to care after sexual violence in North Kivu, Democratic Republic of the Congo: a qualitative study. *Confl Health*. 2025 Apr 5;19(1):22. doi: 10.1186/s13031-025-00662-4. PMID: 40186240; PMCID: PMC11971761.

Paper III

Reinholdz H, Agardh A, Palmieri J, Katungu Kalere E, Nteziryayo Heritier G, Muzige J, Verputten M, Asamoah BO. Characteristics of violence, timely care-seeking and perceived barriers: a cross-sectional analysis of sexual violence among displaced and resident populations in North Kivu, Democratic Republic of the Congo. *BMJ Glob Health*. 2026 Jul 21;11(7):e024220. doi: 10.1136/bmjgh-2026-024220. PMID: 42481167; PMCID: PMC13404405.

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Abbreviations

aOR	Adjusted Odds Ratio
CI	Confidence Interval
DHS	Demographic and Health Survey
DRC	Democratic Republic of the Congo
GBV	Gender-Based Violence
HIV	Human immunodeficiency virus
MoH	Ministry of Health
MSF	Médecins Sans Frontières
OR	Odds Ratio
PEP	Post-Exposure Prophylaxis
STI	Sexually Transmitted Infections
UN	United Nations
UNHCR	United Nations High Commissioner for Refugees
VAW	Violence Against Women
VIF	Variance Inflation Factor
WHO	World Health Organisation

Preface

In September 2016 I crossed La Grande Barrière, the border between Rwanda and the Democratic Republic of the Congo (DRC) and entered into North Kivu for the first time, as I started my first assignment with the humanitarian organisation Médecins Sans Frontières (MSF). I was assigned to work as a medical doctor in the rural town of Walikale and during my very first week in the project there was a group of women coming for care. They had all been raped during a conflict-related event far from Walikale town and it had taken them days to arrive to the hospital. This was the first time I was faced with conflict-related sexual violence and the incident made me realise both how wide-spread and common sexual violence is and, maybe most importantly, how difficult it is for survivors in humanitarian contexts to access both medical care and additional support services. During my time in Walikale I was later able to see how the implementation of a new model of care and awareness raising activities had a positive impact on the access to care for survivors. Since then I have worked with MSF in several different humanitarian settings and have seen how sexual violence can be exacerbated by the increased vulnerabilities during conflict and displacement as well how harmful social norms and lack of adequate response from the healthcare and protection sectors contribute to the barriers which prevent survivors from accessing care and support. Since 2019 I have been working exclusively with sexual violence programmes in humanitarian contexts, and have been supporting teams in various settings with the implementation and development of adapted programmes responding to sexual violence survivors, aiming at creating access to quality comprehensive care and supporting survivors to heal and recover. During this work I have seen that research around sexual violence and specifically around access to care in specific humanitarian settings is scarce and that such research can be a valuable tool in the quest for improved access to care and in the end, for the healing and recovery for survivors. This realisation sparked the idea for this thesis. In the current situation where we see a global momentum for anti-gender movements and a general backlash against sexual and reproductive health and rights, this work seems more important than ever.

Introduction

The conflicts in the eastern parts of the Democratic Republic of the Congo (DRC) and the high prevalence of sexual violence have repeatedly been recognised among high-level stakeholders, such as the United Nations (UN) General Assembly and in media during the last decades. In 2010 the UN Secretary-General's Special Representative on Sexual Violence in Conflict, Margot Wallström, referred to DRC as the “rape capital of the world” (cited in BBC News [1]). Even though this statement is deeply problematic and has been contested [2,3], the discourse sparked international attention to the conflict and the wide-spread sexual violence linked to it. In 2018 Dr Mukwege, a Congolese gynaecologist, received the Nobel Peace Prize for his work with survivors of sexual violence in DRC, which renewed the attention for the issue. However, despite high level institution and media attention and the wide-spread knowledge on the pervasiveness of the problem, sexual violence perpetration has continued on a large scale, seemingly without any decrease, and is still heavily impacting the population of DRC. Actions to address the underlying causes and to ensure support to survivors remain largely insufficient. Structured long-term commitment from state and non-state actors is necessary to reduce sexual violence perpetration and this still seems to lie far in the future. In the meantime, offering care and support to survivors of sexual violence is crucial.

This PhD thesis focuses on access to care for survivors of sexual violence in the conflict-torn North Kivu province in eastern DRC. It explores community perceptions around enablers and barriers to care access for survivors as well as care-seeking patterns and factors influencing timely access to care. Creating a better understanding around the access to care and care-seeking pathways can guide key stakeholders to better adapt their response and increase access to quality care and support for survivors of sexual violence.

Sexual violence

Sexual violence is a medical emergency as well as a human rights violation and is pervasive throughout the world [4,5]. Rooted in inequalities and power imbalances, sexual violence affects all genders. However, as inequalities and power imbalances often negatively discriminate against women, women and girls are also disproportionately affected by sexual violence. Most prevalence rates of sexual

violence are estimates and sexual violence is often underestimated due to the sensitivity in reporting such violence [6]. Global estimates indicate that 6% of women have experienced sexual violence by a non-partner, ranging from 2% to 19% across regions [5] and the lifetime prevalence of physical and/or sexual violence by an intimate partner among women is estimated to 26% globally [4]. Research about prevalence of sexual violence perpetrated against men and boys is scarcer and results vary greatly across studies. In one systematic review the prevalence of sexual abuse against men was shown to range between 0.3–55.5% [7].

Terminology and definitions

The World Health Organisation (WHO) defines sexual violence as “any sexual act, attempt to obtain a sexual act, unwanted sexual comments or advances, or acts to traffic, or otherwise directed, against a person’s sexuality using coercion, by any person regardless of their relationship to the victim, in any setting, including but not limited to home and work” [8]. This is also the definition of sexual violence applied in this thesis. This definition includes, but also extends beyond, rape, defined by WHO as “physically forced or otherwise coerced penetration, even if slight, of the vulva or anus, using a penis, other body parts or an object” [8].

Several terms which encompass sexual violence are used by different stakeholders and researchers. One term commonly used is gender-based violence (GBV), defined by the Inter-Agency Standing Committee as “...an umbrella term for any harmful act that is perpetrated against a person’s will and that is based on socially ascribed (i.e. gender) differences between males and females. It includes acts that inflict physical, sexual or mental harm or suffering, threats of such acts, coercion, and other deprivations of liberty“ [9]. GBV is thus a broad overarching term which encompasses a wide range of violence, defined as violence that is perpetrated because of the victim’s gender. This term is commonly used in the humanitarian sector as well as in the research field and includes different forms of sexual and non-sexual violence. There has been a debate among activist and scholars as to whether men and boys, as well non-binary individuals, can or should be included under the GBV umbrella and in the GBV field. Some experts have expressed the need of broadening the GBV concept to be more inclusive, beyond women and girls, whereas others argue that including men in the GBV term risks overshadowing the needs of women and girls and diverting necessary, and already limited, resources [10–12]. When referring to systematic violence towards women and girls, rooted in patriarchal structures and perpetuated through gender inequalities and imbalanced power structures, the term “violence against women” (VAW), as described in the UN’s Declaration on the Elimination of Violence against Women [13], may be more appropriate as it minimises the risk of different interpretations around which groups to include and exclude in the definition. However, the two terms, GBV and VAW are often used interchangeably as a large degree of the violence experienced by

women is inflicted due to their gender and women are disproportionately affected by gender-based violence. Another commonly used term, also with an overlap with sexual violence, is intimate partner violence. This term is used to describe harmful actions perpetrated by a current or former intimate partner and includes both sexual violence and other forms of violence such as physical and psychological violence [8].

Even though the work represented in this thesis is focused on sexual violence, as defined above, and includes all genders, there will inevitably be an overlap with other forms of violence and definitions including GBV, VAW and intimate partner violence and some of the research referred to throughout the thesis examined GBV or VAW more broadly rather than solely sexual violence. Furthermore, survivors may experience multiple forms of violence in addition to the sexual violence studied here. Survivors experiencing sexual violence by an intimate partner might for example also be experiencing physical and psychological partner violence [14–16].

In this thesis the term ‘survivor’ has been preferentially used to describe individuals who have been victimised. Even though both the terms ‘victim’ and ‘victim-survivor’ have important places in the discourse around sexual violence the term ‘survivor’ has been primarily chosen for this work as it speaks to the resilience, strength and healing of individuals [17].

Sexual violence as a human rights violation

As mention above, sexual violence is a human rights violation and not experiencing sexual violence is a fundamental part of the right to health and wellbeing. Sexual violence, even though not specifically mentioned in the universal human rights declaration, is a violation of several different rights including the right to life, liberty and security of person and the right to not be tortured or treated in an inhumane or degrading way [18]. Additional rights may also be violated depending on the gendered aspect of the violence, the specific context of the violence, who the perpetrator is and how the law protects or does not protect the survivor of such violence. The additional rights which might be violated include the right to equality and freedom from discrimination, the right to equal protection under the law, the right to equality in the family and the right to access medical care [18].

“Sexual violence is a threat to every individual's right to a life of dignity, and to humanity's collective peace and security.”

António Guterres, UN Secretary-General [19]

Sexual violence in humanitarian crises

Sexual violence during conflict and other humanitarian crises does not arise out of a vacuum but is a result of pre-existing contextual root causes to sexual violence, such as structural gender inequalities and traditional gender norms [20] which can be exacerbated by factors linked to the crises mechanisms. Sexual violence during humanitarian crises should thus be seen in the light of a continuum of violence which ranges from pre-crisis to crisis and post-crisis and is rooted within the particular sociocultural context [3,20,21]. The same underlying causes of sexual violence exist throughout this continuum, even though there are specific circumstances during conflicts and other humanitarian crises which can contribute to increased vulnerabilities and sexual violence perpetration [22–26]. One systematic review conducted by Murphy et al. shows that risk factors for violence against women and girls, such as poverty, men's substance abuse, and lack of social support are exacerbated in settings affected by conflict and natural disasters [25]. Displacement, due to armed conflicts or natural disasters can also lead to increased risk for sexual violence [26]. Stark et al. show in a systematic review that rates of GBV appears to increase during humanitarian emergencies [27], a meta-analysis by Vu et al. shows that around 20% of female refugees and displaced women in complex humanitarian crises have experienced sexual violence [28], and a meta-analysis by Murphy et al. shows that 21% of women in conflict-affected settings have experienced sexual violence [29].

Spangaro et al. have developed a conceptual framework including the multiple mechanisms which drive sexual violence perpetration during humanitarian crises and the different forms of sexual violence they contribute to [21]. An overview of the different forms of sexual violence, their drivers and mechanisms and the main perpetrators is presented in Table 1. In armed conflicts, sexual violence can be militarised and perpetrated by the conflicting actors. Such militarised sexual violence includes deliberate and systematic violence, perpetrated with specific objectives such as to instil terror, humiliate and demoralise communities or to spread diseases [21,30–32]. Militarised sexual violence can, in addition to rape of civilians or combatants, also include other forms of sexual violence such as sexual slavery and sexual torture [33]. Sexual violence being used as a weapon of war is commonly reported from different conflicts, but in reality, it is often difficult to prove such deliberate, strategic and targeted use of sexual violence [23,31].

Sexual violence perpetrated by armed actors is not always directly militarised but can also be driven by more opportunistic factors such as the sense of 'soldier identity', group pressure within the armed group, normalisation, lack of social norms against sexual violence and hypermasculinity [21,30,31]. During armed conflicts there is also often a high degree of impunity with lack of functioning legal systems which can lead to opportunistic sexual violence not only by armed actors [31].

Table 1. Different forms of sexual violence in humanitarian crises

	<i>Militarised sexual violence</i>	<i>Opportunistic sexual violence</i>	<i>Sexual abuse and exploitation</i>	<i>Exacerbation of pre-crisis sexual violence</i>
Drivers and mechanisms	Terrorising and humiliating communities Ethnic cleansing	Taking advantage of individuals being unprotected Taking advantage of context of impunity	Abuse of positions of power and trust for sexual purposes	Increased gender inequalities Breakdown of regular social norms and structures Stress on relationships Attempts by men to reassert control
Main perpetrators	Military, armed groups	Military, armed groups, peacekeepers, security or border personnel, humanitarian aid workers, bandits	Peacekeepers, humanitarian aid workers	Civilians

Source: Based on Spangaro et al. [21]

In addition to militarised and opportunistic sexual violence, there is a risk that the humanitarian response during a crisis contributes to sexual violence through exploitation, despite efforts of risk mitigation [21,34]. This violence can for example be perpetrated by humanitarian aid workers and official peacekeepers and is driven by poverty, lack of access to basic needs and reinforced power imbalances [35].

Another important mechanism contributing to sexual violence perpetration during humanitarian crises is the breakdown of families and communities with weakened social networks, eroded support structures and protective mechanisms which can contribute to an exacerbation of the pre-existing sexual violence perpetrated in the context prior to the crisis [21,30]. This violence, rooted in the pre-existing gender inequalities and norms which tend to subjugate women, is exacerbated by the breakdown of regular social structures and social and behavioural norms [30]. This exacerbation of pre-crisis sexual violence is often highly prevalent both in conflict and post-conflict settings, but may not get as much attention as militarised sexual violence. Stark et al. show for example in their systematic review of GBV in complex humanitarian emergencies that rates of intimate partner violence were higher than rates of sexual violence directly linked to conflicts [27], highlighting an important form of violence that is commonly overlooked in more sensational reporting from conflict settings.

Consequences of sexual violence

Sexual violence causes devastating consequences for individual survivors, as well as for their families and communities. Survivors of sexual violence not only risk immediate consequences such as physical injuries, but also long term medical and psychological sequelae as well as negative and harmful social consequences.

Possible medical consequences include unintended pregnancies, unsafe abortions, sexually transmitted infections (STIs) including human immunodeficiency virus (HIV), vaginal and anal tears and fistulas [36–41].

Psychological and behavioural consequences for survivors of sexual violence include common reactions to trauma such as anxiety, depression, sleeping difficulties, post-traumatic stress disorder, drug abuse, self-harm, risky sexual behaviours, and suicidal ideation and attempts [37,40,41].

In addition, survivors of sexual violence often face severe negative social consequences, including, but not limited to, stigmatisation, mocking, shame, rejection from husband or family, isolation from family and community, forced marriage, forced abortion and additional violence [39,40,42,43]. The social consequences can also span beyond the individual survivor and impact families and communities, tearing social fabrics and breaking up family relations [42,44,45]. These negative social consequences often constitute a second victimisation and might further exacerbate the psychological trauma and negative mental health outcomes experienced by survivors [46,47].

Public health and health system response

Given the magnitude of sexual violence and the severe consequences negatively impacting health outcomes for survivors, a public health approach to sexual violence is needed [48]. The public health approach to sexual violence is to a large degree focused on prevention, and specifically on minimising risk factors and promoting protective factors for such violence [48,49]. However, in addition to primary prevention, preventing negative health outcomes and responding to survivors' needs are also necessary as part of a public health response. The healthcare system plays a crucial role as part of a multisectoral response to sexual violence [50] and the involvement of the healthcare system is imperative also in humanitarian settings. However, such response is challenging and requires both adequate funding, experienced human resources, careful design and proper coordination including local actors [51]. A gap analysis of GBV response in humanitarian settings from 2021 showed that there were substantial gaps between the needs and allocation of funds to GBV response in humanitarian crises [52] and the recent funding cuts of humanitarian aid has hit GBV programming hard, further expanding this gap [53,54].

Care and support to survivors of sexual violence

Medical care and psychosocial support to survivors of sexual violence are important to facilitate recovery and healing and to minimise negative outcomes. Considering the range of possible consequences, the care and support should be delivered in a holistic way and include different domains; medical care, psychological care, social support, protection and legal aid [55].

The medical and psychosocial care package recommended by Médecins Sans Frontières (MSF) is described in Figure 1 and includes care for urgent medical needs such as treatment of injuries and pain management, HIV post-exposure prophylaxis (PEP), emergency contraception or safe abortion care, treatment or PEP for STIs (gonorrhoea, syphilis, chlamydia, chancroid and trichomoniasis), and post-exposure vaccination against hepatitis B and tetanus [56]. Some parts of the medical care package offered can only be provided within a specific time window; the HIV PEP can only be offered up to 72 hours after the sexual violence incident and emergency contraception has to be provided within 120 hours, which makes timely access to care for survivors crucial [56,57].

Survivors of sexual violence often meet negative and harmful attitudes within their community as well as in interactions with healthcare and legal sectors. Such attitudes, from both peers and professionals, further contribute to adverse consequences for survivors and might have a more longstanding impact on access to care. To counteract this and to promote safety and healing for individual survivors, care and support should be designed and delivered through a survivor-centred approach, putting the rights, needs and wishes of the survivors first [58]. A survivor-centred approach offers choices to survivors, respect their decisions and acts to ensure their confidentiality and safety. Survivor-centred approaches have been widely implemented in response to survivors of sexual violence but the actual implementation and impact within humanitarian responses have been questioned and there has been a call for taking the approach one step further, moving to survivor-led programming where survivors are more involved and where the power is truly given to them [59].

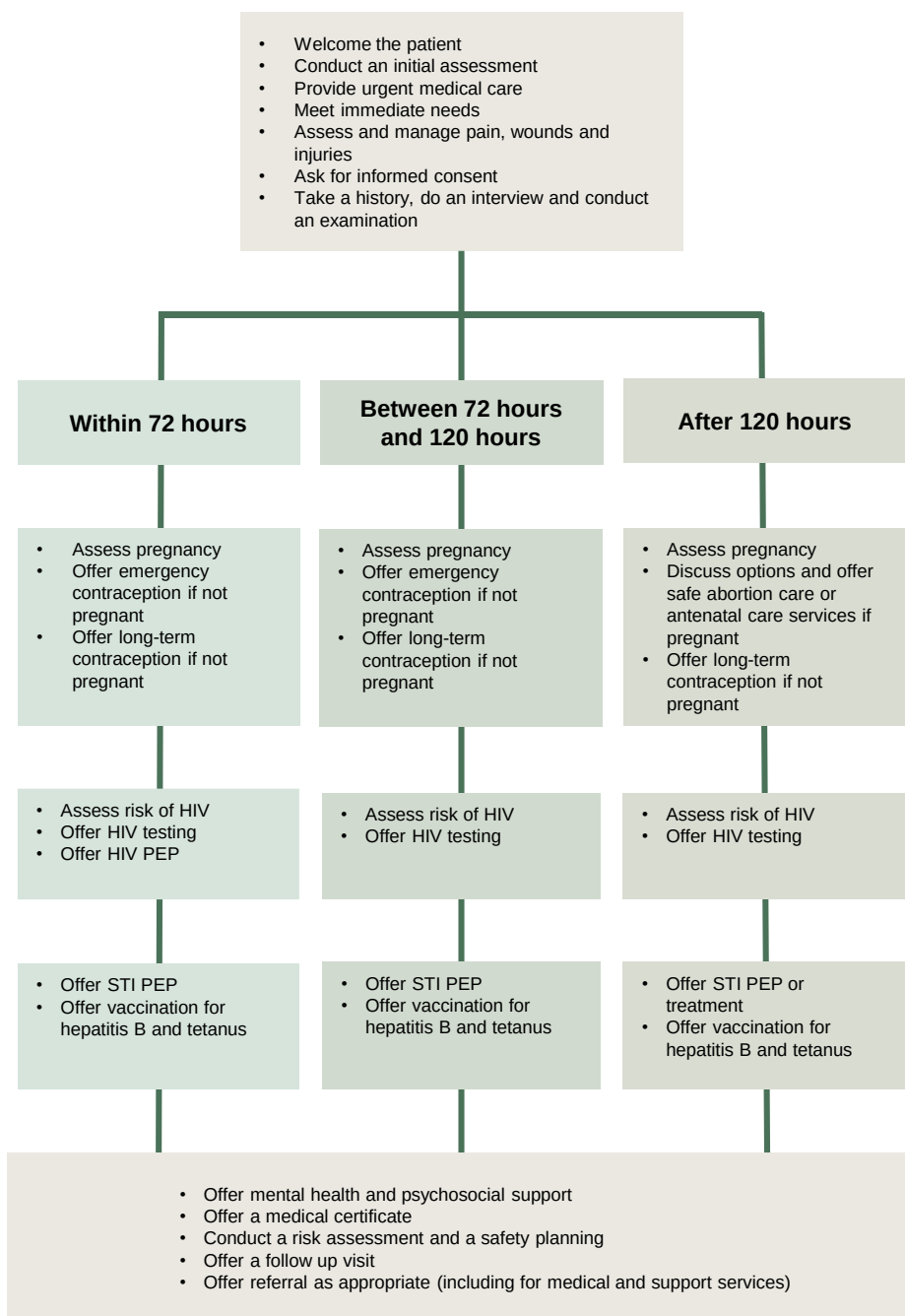


Figure 1. Care provision flowchart for survivors of sexual violence

Abbreviations: HIV, Human Immunodeficiency Virus; PEP, Post-Exposure Prophylaxis; STI, Sexually Transmitted Infection.

Source: Adapted from Médecins Sans Frontières [56]

The Democratic Republic of the Congo and North Kivu

The Democratic Republic of the Congo, DRC, is by surface the largest country in Sub-Saharan Africa and hosts a population of over 110 million people [60]. DRC is a country rich in natural resources including minerals used in modern technology as well as agricultural lands [61]. The country has been plagued by decades of armed conflicts with widespread negative impact on the population, especially in the eastern parts. The protracted violence in combination with weak governance has led to a fragile infrastructure and a failed healthcare system, which have negatively impacted the population's access to healthcare [62,63]. World Bank data indicate that 85.3% of the population in DRC live in poverty (less than \$3/day) [64], and WHO indicates a maternal mortality ratio of 427 deaths per 100,000 live births and a under-five mortality rate of 76 deaths per 1,000 live births [65]. In the human development index, DRC is ranked 171 out of 193 included countries [66]. The current situation in DRC is being described by UNHCR as “one of the most complex humanitarian crises in the world” [67].

The North Kivu province is located in eastern DRC (Figure 2), bordering with Rwanda and Uganda and is a province with a vast biodiversity, not the least in the Virunga National Parc. It is also rich in minerals such as tin and cobalt. The North Kivu province has been ravaged by complex conflicts over the last decades, rooted in the Belgium colonial administration and fuelled by regional geopolitical structures, ethnic tension and access to minerals [68]. The situation in North Kivu currently constitutes a protracted crisis, with ongoing armed conflict and large displaced populations. UN High Commissioner for Refugees (UNHCR) estimated that 7.84 million people were internally displaced in DRC in January 2025, of which 2.7 million in the North Kivu province [69]. Since 2021 North Kivu has seen an increase in violence, with the armed group M23 gaining in power. This increase of violence led to large displacement of populations and many internally displaced people gathered in displacement camps around the city of Goma. In the beginning of 2025 M23 seized control of Goma, which further exacerbated the humanitarian crisis [70]. Following this event, the displacement camps in Goma were dismantled forcing the internally displaced people to leave. Some of them have returned to their villages of origin and some are still dispersed around the city [71]. North Kivu is also prone to disease outbreaks including Ebola, cholera and measles. The ongoing Ebola and cholera outbreaks [72,73] further strain the healthcare system and the humanitarian sector.



Figure 2. Map of the Democratic Republic of the Congo, with provinces
Source: Adapted from OCHA, Humanitarian Data exchange [74], licenced under CC BY IGO

Sexual violence in eastern DRC

Sexual violence in North Kivu has been pervasive during the last decades. One study analysing demographic and health survey (DHS) data from 2007 showed that 23.9% of women in North Kivu reported experience of sexual violence by an intimate partner and 20.5% reported other forms of rape [75]. Another study, based on a population-based survey from 2010, conducted in North Kivu, South Kivu and Ituri, showed that 40% of women and 24% of men reported experience of sexual violence [76]. Among those who had experienced sexual violence, 74% of the women and 65% of the men reported the violence to be conflict-related [76]. In another study, based on a population-based survey in Ituri in eastern DRC, 38% of girls and young women (age 11-23 years) reported experience of sexual violence [47]. Reports and

testimonies from a variety of organisations also highlight the pervasiveness of sexual violence in eastern DRC, and specifically in South and North Kivu over the last 30 years [77–80].

Conflict-related sexual violence in DRC is widely recognised [78,81,82], but it is imperative to understand that sexual violence in DRC cannot exclusively be attributed to militarised violence. The WHO global estimates of violence against women from 2018 showed that DRC had the highest prevalence, 36%, of physical and/or sexual intimate partner violence in the past year among all included countries [4]. Furthermore, Alexandre et al. showed in an interview-based qualitative study from South Kivu that sexual violence was common before the start of the war in 1996, and that sexual violence is deeply rooted both in discriminatory gender norms and in perceptions around masculinity [83].

Even though sexual violence is highly prevalent, access to care for survivors in DRC remains challenging and the timing of access to care in eastern DRC has shown large variations in different studies, ranging from 0.6% to 85.6% of survivors accessing care within 72 hours depending on the setting and study year [84–92].

Harmful attitudes and reactions from family and community members towards survivors of sexual violence in eastern DRC, linked to rape myths and social norms, have been reported in several studies [46,85,93]. Kelly et al. show for example in a mixed-method study from South Kivu that 29% of women who had experienced rape were rejected by their family and 6% reported being rejected by their community [85]. They further show that one of the main reasons for rejection by a husband was the fear of diseases [85]. Schmitt et al. found in a quantitative study with participants from South and North Kivu, high prevalence of rejecting attitudes towards survivors of sexual violence in general and an association between rape myths and disclosure of the sexual violence event; survivors of sexual violence living in a community with less rape myth acceptance were more likely to disclose the event [46].

Factors that have been described as preventing or delaying access to care for survivors of sexual violence in eastern DRC include waiting for physical symptoms to develop, lack of means to access care, lack of information about available services, stigma, shame, concerns that healthcare providers are not sensitive, and fear of family finding out about the violence [84,94].

Médecins Sans Frontières

Médecins Sans Frontières (MSF) is a medical humanitarian non-governmental organisation, founded in 1971 by a group of doctors and journalists [95]. MSF currently has operations in more than 70 countries and the work is guided by the

principles of medical ethics, neutrality, independence and impartiality [96]. The organisation “provides assistance to populations in distress, to victims of natural or man-made disasters and to victims of armed conflict” [95]. Responding to survivors of sexual violence is part of MSF’s work, with the aim of creating access to quality comprehensive care and support for all survivors [97].

MSF intervened for the first time in DRC in 1977 and are currently running humanitarian aid programs in several areas of the country. In 2024 DRC was the country with the largest MSF operations and MSF carried out more than two million outpatient consultations and more than 15,000 surgical interventions in the country [96]. Many of the interventions are carried out in the eastern parts of DRC, including in North Kivu. The response comprises providing primary and secondary healthcare including sexual and reproductive health services as well as responding to outbreaks and improve water and sanitation structures. The interventions also include response to survivors of sexual violence and in 2024 a total of 46,900 survivors received care through all the MSF programmes in DRC [96].

Theoretical frameworks and central concepts

Various theoretical frameworks and core concepts have been employed in the analysis and discussion of the findings of this thesis. As the main focus of this thesis evolve around access to care for survivors of sexual violence, a theoretical framework on access to care has been applied as well as a socio-ecological model which can explain access to care through different dimensions. In this chapter, the theories around rape myths, the ideal victim and stigma are also presented as these concepts are key for understanding social consequences for survivors and how these are linked to access to care, or the lack thereof.

Access to care framework

Access to care can be examined using the framework developed by Levesque et al. [98]. Levesque et al. describes the process of accessing care as divided into six steps; ‘healthcare needs’, ‘perception of needs and desire for care’, ‘healthcare-seeking’, ‘healthcare reaching’, ‘healthcare utilisation’ and ‘healthcare consequences’ as shown in Figure 3. Each of these steps is influenced by factors linked to the supply side, those who supply the healthcare services, including healthcare systems, healthcare providers and organisations and by factors linked to the demand side, those who utilise the services. There are five dimensions of accessibility linked to the supply side; ‘approachability’, ‘acceptability’, ‘availability and accommodation’, ‘affordability’ and ‘appropriateness’. There are also five abilities representing the demand side; ‘ability to perceive’, ‘ability to seek’, ‘ability to reach’, ‘ability to pay’ and ‘ability to engage’. The intersection of the dimensions of the supply side and the abilities of the demand side influences the various steps in the access process which denotes how access to healthcare is achieved, as shown in Figure 3.

The process of accessing healthcare starts when a healthcare need arises, this step is then followed by the ‘perceptions of healthcare needs and desire for care’ step which is influenced by the ‘approachability’ and the ‘ability to perceive’ which refers to knowing that services exist and how they can be reached. From a healthcare system

perspective this includes how services are promoted and how information is shared. When looking at sexual violence, an important component of the approachability dimension is also knowledge about the care needed, which will be further discussed in this thesis. Healthcare systems' ability to disseminate appropriate information is crucial for the population's ability to perceive healthcare needs. However, the ability to perceive is also dependent on individual factors such as literacy and beliefs. The factors influencing the 'healthcare-seeking' step are 'acceptability' and the 'ability to seek care'. These include cultural and social factors which impact the population's or individual's ability to seek care and can also include factors such as gender and autonomy. Regarding sexual violence, acceptability is impacted by stigma, social norms, myths around the ideal victim as well as to harmful attitudes by healthcare workers and lack of well-adapted entry points for survivors to access healthcare. 'Availability and accommodation' is the supply side dimension which influences the step 'healthcare reaching' in Levesque's model, relating to proximity to healthcare services, opening hours and transportation costs. The 'ability to reach', on the demand side, is impacted by social support and mobility. 'Healthcare utilisation' is influenced by the 'affordability' and the 'ability to pay' which are dependent upon the cost of services and the individual's capacity to pay for that cost. Utilisation is also influenced by the time it takes to utilise the services and how that impacts loss of income. The last dimension and ability presented in the model are 'appropriateness' and 'ability to engage', relating to the quality and nature of the services available and how patients can be involved in the care provision, which has an impact on the healthcare consequences and the health outcome for the patient [98].

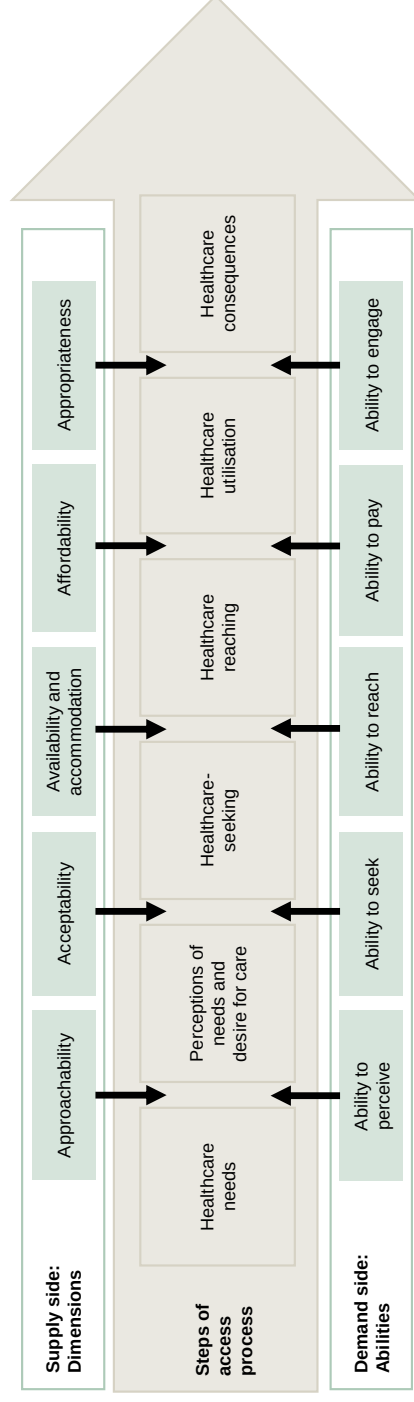


Figure 3. Framework for access to care.
Source: Adapted from Levesque et al. [98]

Socio-ecological model

Another theoretical framework which is useful when examining care-seeking behaviours and access to care for survivors of sexual violence is the socio-ecological model which was first introduced by Bronfenbrenner and illustrates how behaviour is influenced at different levels; microsystem, mesosystem, exosystem and macrosystem [99]. This model has been adapted by different scholars and for different objectives and in this thesis the model developed for health promotion by McLeroy et al. is applied [100]. This model presents five levels; individual, interpersonal, institutional/organisational, community and policy level, as illustrated in Figure 4. On the individual level, McLeroy et al. include attitudes, knowledge, skills and self-concept. The interpersonal level represents factors linked to the social networks surrounding the individual, such as family and friends. The organisational level includes institutions such as schools, workplace and authorities. For the application of the model in the analysis of access to healthcare, this level mainly concerns the healthcare system. Community level refers to the relationships between organisations, such as the coordination between actors. Policy refers to laws and policies established at different levels both locally, nationally and globally. These different socio-ecological levels both provide an analytical framework which can be applied when analysing care-seeking behaviours and access to care and a tool for organising and planning interventions to address barriers to access to care at different levels.



Figure 4. Socio-ecological model.

Source: Based on McLeroy et al. [100]

The ideal victim, rape myths and stigma

Concepts which are important for gaining an understanding of care-seeking behaviours and access to care for survivors of sexual violence are the theories concerning rape myths, the ideal victim and stigma. The ideal victim is defined by Christie as “a person or a category of individuals who – when hit by crime – most readily are given the complete and legitimate status of being a victim” [101]. There are several attributes which characterise the ideal victim of sexual violence including; being weak (e.g. being a young woman), carrying out a respectful task when victimised, being in a place where it is accepted to be when victimised and being assaulted by a big, bad and unknown assailant [101]. The perception around the ideal victim is fundamental to the understanding of reactions towards survivors of sexual violence. The ideal victim theory for example regards women who experience sexual violence perpetrated by an intimate partner as non-ideal and creates a sort of hierarchy where a woman who was sexually assaulted when harvesting her fields is seen as more ideal than a woman who was assaulted when visiting a bar at night. Furthermore, the theory inherently regards male survivors as non-ideal as they are generally not considered weak. The ideal victim theory as conceived by Christie [101] helps explain attitudes towards sexual violence and why certain myths may be wide-spread in a given population.

Rape myths are described by Gerger et al. as “descriptive or prescriptive beliefs about rape (i.e., about its causes, context, consequences, perpetrators, victims, and their interaction) that serve to deny, downplay or justify sexual violence that men commit against women” [102] (definition first presented in German by Bohner 1998 [103]). Bohner et al. categorise rape myths into four categories of beliefs; beliefs which blame the victim, disbeliefs in the claim of rape, beliefs which excuses the perpetrators and beliefs that rape is exclusive to a specific group of victims [104]. Even though most rape myths do concern sexual violence perpetrated by men towards women, there are also rape myths around male survivors [105].

Acceptance of rape myths has been shown both to put the responsibility or blame on the survivor, so called victim-blaming, and to contribute to the rationalisation of and proclivity towards male rape perpetration [106–108]. The perceptions around the ideal victim and the acceptance of rape myths are also linked to stigma and stigmatisation [46].

Many of the harmful social consequences directed towards survivors of sexual violence evolve around stigma. Stigma is a social phenomenon which occurs where there are power imbalances enabling harmful actions such as labelling and stereotyping, leading to negative outcomes such as separation, loss of status and discrimination [109]. Stigma can also be seen as a devaluation of either an individual or a group of people due to a perceived negative attribute, which leads to a different treatment of this individual or group [110]. Stigma towards survivors of sexual

violence manifested through actions and reactions by peers or society at large constitutes a secondary victimisation and can contribute to self-blame and internalised stigmatisation [42,111]. Stigmatisation of survivors of sexual violence also contributes to non-disclosure, lack of access to healthcare and poor health outcomes [42,111].

Conceptual Framework

The overall conceptual framework for this thesis, Figure 5, builds upon the access to care framework developed by Levesque et al. [98] and the socio-ecological framework developed by McLeroy et al. [100] and illustrates the intersections of the socio-ecological levels and the steps of the access to care process which have been applied in this thesis. There are three steps of the access to care process which are central to this thesis; ‘perceptions of needs and desire for care’, ‘healthcare-seeking’ and ‘healthcare reaching’, as well as three socio-ecological levels; individual, interpersonal and organisational. At each of these access to care process steps, and the dimensions and abilities which influence them, there are aspects at the different socio-ecological levels which require considerations. This conceptual framework has been used to guide the discussion section of this thesis.

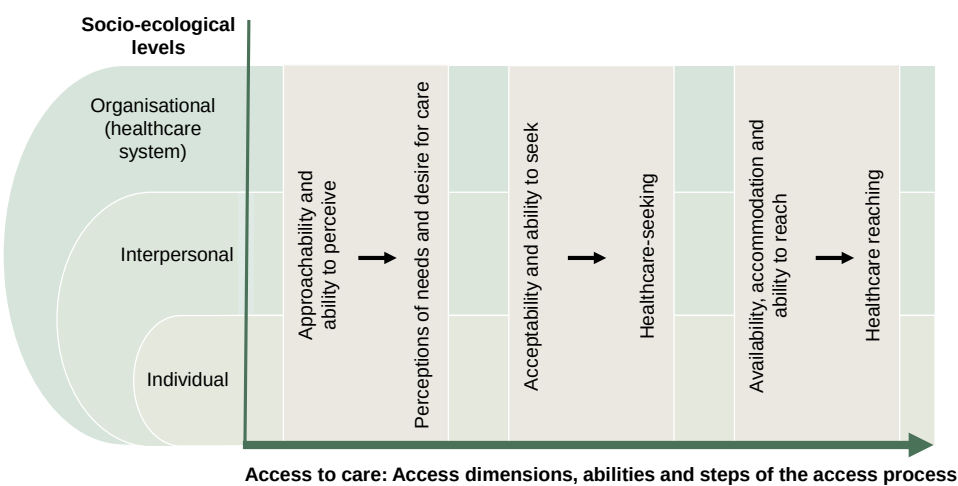


Figure 5. Overall conceptual framework.
Source: Developed by the author based on the socioecological framework by McLeroy et al. [100] and the access to care framework by Levesque et al. [98].

Rationale

Implementation of programmes to support survivors of sexual violence in humanitarian settings is challenging, insufficient and needs more attention [9,21,112]. North Kivu in DRC has been ravaged by conflict and violence for decades and constitutes a large-scale humanitarian crisis with high levels of sexual violence perpetration. Even though the knowledge about the amplitude of sexual violence in the area is wide-spread, there is a dearth of research around survivors' access to care. To be able to inform programmes responding to survivors of sexual violence in North Kivu and other humanitarian settings, more in-depth knowledge around care-seeking behaviours, barriers to access care and how access to care can be improved in this setting is needed. The overall objective of this PhD thesis is to contribute to filling this identified knowledge gap so that different actors responding to survivors of sexual violence will be able to adapt and design their interventions to increase access to care for survivors of sexual violence in North Kivu and in other humanitarian crises.

Aims

The overall aim of this thesis is to gain a deeper understanding of care-seeking patterns, the factors influencing timely access to care, barriers and enablers to seeking care and potential actions to improve access to care for survivors of sexual violence in North Kivu, DRC.

Specific aims

Paper I - To describe demographics and care-seeking patterns among survivors of sexual violence who access care in North Kivu and to assess factors that influence timely access to care.

Paper II - To explore community perceptions about access to care for survivors of sexual violence in North Kivu, the barriers they encounter and possible solutions to improve access to care for survivors of sexual violence in the area.

Paper III – To describe the characteristics of violence, care-seeking patterns and perceived barriers to care among survivors of sexual violence accessing care in North Kivu and assess how these differ between residents and displaced individuals. To examine the association between different factors and timely care-seeking and to identify factors associated with commonly reported barriers to care access.

Methods

To address the aim of this thesis, three different studies have been conducted and are presented in Papers I, II and III. An overview of these is presented in Table 2.

Table 2. Overview of papers included in the thesis

	<i>Study design</i>	<i>Data collection</i>	<i>Participants</i>	<i>Location</i>	<i>Study period</i>	<i>Analyses</i>
Paper I	Quantitative, cross-sectional	File-based	Survivors of sexual violence	Walikale and Mweso programme sites	2014-2018	Logistic regression models
Paper II	Qualitative	Focus group discussions	Community members	Walikale, Mweso and surrounding villages	June-September 2019	Qualitative content analysis
Paper III	Quantitative, cross-sectional	File-based	Survivors of sexual violence	Walikale, Mweso and Goma programme sites	2023-2024	χ^2 , Logistic regression models

Paper I is based on a cross-sectional study, using file-based data. This design was chosen as it gave an opportunity to analyse data from a large number of survivors who had accessed care in the study area. The data had been collected as part of routine activities for MSF prior to the study start.

Paper II is based on a qualitative study design, allowing to further explore the findings from Paper I, which guided the development of the topic guide used in the qualitative data collection. The qualitative study design allowed the inclusion of perspectives from community members regardless of previous experiences of sexual violence and accessing care, thus contributing to an important aspect of this thesis.

After the finalisation of Paper II there had been significant changes in the context in North Kivu, with increased violence and large displacement of populations towards Goma. MSF responded to this by starting additional programmes in Goma, including response to survivors of sexual violence within the displacement camps. Paper III was designed to analyse data from the period following this large displacement and utilises, as Paper I, a cross-sectional file-based design. This study

gives new insights on how survivors' demographics, such as displacement status, and survivors' violence experience, impact care-seeking patterns and perceived barriers to access care.

Study setting

The setting for all three studies included in this thesis is North Kivu, DRC, and more specifically within the catchment areas of three programmes implemented and run by MSF in collaboration with the Ministry of Health (MoH); 1) in and around Walikale town, in the Walikale territory, surrounded by rain forests and mining areas, 2) in and around Mweso town, located among the green hills and pastures of the Masisi territory, and 3) in two displacement camps in Goma, the North Kivu province capital city, located at the north east shore of Lake Kivu, at the foot of the Nyiragongo volcano (the approximate locations are marked in Figure 6). There has been armed conflict and displacements around each of the sites, although with variations in intensity throughout the study years and between the sites. The escalation of violence which started at the end of 2021, mainly between the armed group M23 and governmental forces, led to a high influx of internally displaced people to Goma who mainly gathered in large camps outside of the city.

For Paper I and II data were collected in the areas of Walikale and Mweso and for paper III data were collected from the programmes in Walikale, Mweso and Goma. The MSF programmes in Walikale and Mweso had been running for several years, with a sexual violence component, before the current research started, whereas the programme responding to sexual violence survivors in Goma started in 2022 in response to the large influx of internally displaced people following intensified conflict. In Mweso and Walikale the MSF supported sexual violence response has been implemented in several healthcare facilities, both within the towns of Mweso and Walikale and in surrounding administrative health areas (aires de santé). In Goma the response was implemented within two displacement camps in Goma.

During the periods covered by this thesis the response to survivors of sexual violence in the study areas was provided by MSF in collaboration with the MoH through different models; 1) integrated in health centres, 2) integrated in hospitals and 3) in Tumaini clinics. Tumaini means "hope" in Kiswahili and these clinics use a model of care offering comprehensive care to survivors of sexual violence and all forms of intimate partner violence as well as basic sexual and reproductive health services and mental health support for all patients. The services for patients who have not experienced sexual violence or intimate partner violence have been added, not only to respond to health needs but also as umbrella services to ensure both women and men can feel welcome in the clinics, as well to reduce the risk of exposure and stigma related to visiting the clinics.



Figure 6. Map of North Kivu with territories and study locations

Source: Adapted from OCHA, *Humanitarian Data exchange* [113], licenced under ODC ODbL

The care package offered to survivors of sexual violence was provided according to the MSF protocols as outlined in Figure 1, and all care was offered free of charge. In addition to the provision of medical care and psychosocial support, there were dedicated teams in each programme location who worked actively with awareness raising on the topic of sexual violence, the importance of seeking care and how care can be accessed in the programme areas. Methods employed to raise awareness included door-to-door sessions, mass sensitisations, group discussions, radio, flyers, dramas, songs etc. The dedicated MSF teams also worked with community health workers (called ‘relais communautaires’) or other trained community focal points who, in addition to raising awareness, were able to support survivors to access care through orientation, referrals and/or by accompanying survivors to healthcare facilities.

Sampling and study population

Paper I and III

Paper I and III both utilise file-based data from survivors of sexual violence who accessed care within healthcare facilities supported through the MSF programmes included in the studies. For Paper I the study period was 1st January 2014 to 31st December 2018 and for Paper III the study period was 1st January 2023 to 31st December 2024.

The number of included health structures per study site and paper is presented in Table 3. The numbers include all structures from which data were collected for each study, however, the number of structures which were supported and/or functioning varied during the study periods. All survivors of sexual violence who received care linked to their experience of sexual violence during the study periods were included. Experiences of sexual violence were self-reported.

Table 3. Health structures included in Paper I and III

	Paper I (2014-2018) ^a			Paper III (2023-2024) ^a		
	Walikale	Mweso	Goma	Walikale	Mweso	Goma
Tumaini ^b	1	2	-	1	2	2
Health centre/Health post	4	11	-	8	8	-
Hospital	1	1	-	-	-	-

^aAll structures were not functioning during the full study periods, ^bSpecialised clinic offering care to survivors of sexual violence and intimate partner violence, mental health and psychosocial support and basic sexual and reproductive health services

Paper II

In Paper II qualitative data were collected through focus group discussions (FGDs) with community members in Walikale and Mweso towns and in 9 surrounding villages/towns. Data were collected between the 14th of June and the 6th of September 2019. Convenience sampling was used to select the locations for the FGDs, based on logistic and security restrictions; however, the research team aimed to reach a variety in locations, spanning from more urban to more rural areas. Data were collected with the aim of reaching information power, which means good, rich and quality data, rather than theoretical saturation [114] and a total of 18 FGDs were conducted, with an average of 7-8 participants per group. Each location was within the catchment area of the MSF programmes in Mweso or Walikale and the location of each FGD is presented in Table 4.

In each location, participants for the focus group discussions were selected through purposive sampling, aiming to find participants who could provide rich information on the topic. The participants were selected through gatekeepers such as community

leaders ('Chef de village' or 'Mere cheffe') and community health workers ('relais communautaires') and snowballing techniques were used when needed. Participants were not selected based on previous experience of sexual violence.

Table 4. Locations of data collection for Paper II, per programme site

Walikale		Mweso	
<i>Location</i>	<i>FGDs</i>	<i>Location</i>	<i>FGDs</i>
Walikale	2	Mweso	1
Kassindi	1	Bushanga	2
Shabunda	2	Kitchanga Mungote	1
Eliba	2	Kitchanga Bweranfula	1
Mpofi	2	Mpati	2
		Kashuga	2

Abbreviations: FGDs, Focus Group Discussions

Data collection

MSF data set - Paper I and III

In the studies presented in Paper I and III data were collected from MSF databases which include data collected as part of routine medical activities. During the consultation with the survivor, healthcare workers (MSF or MoH) used a standardised medical file, specifically adapted for consultation with survivors of sexual violence, which for confidentiality and safety reasons did not contain the name of the survivor. Data elements from the medical file were subsequently transferred to a data set. During the study period for Paper I this data set was a standardised, password protected excel file and during the study period for Paper III the data set was configured by MSF in the DHIS2 (District Health Information System) data information system. Note that the standardised medical form and the collected data elements changed between the two study periods. All data in the two data sets were pseudonymised and data could not be tracked back to any individual.

Focus group discussions - Paper II

For the qualitative data collection, focus group discussions were carried out. Before each discussion started, a thorough consent process was incorporated to ensure that participants understood the purpose of the discussions, how data would be used, the potential risks and that participation was completely voluntary. Focus groups were held with females and males separately to enable more free discussions, even though the research team was not always all of the same gender as the participants. The discussions were held in the local language preferred by the participants, Kiswahili or Kinyarwanda, and live translated to French. Each discussion was led by one of the co-authors HR, EKK or NHG.

A topic guide was used to guide the discussions and vignettes were used to anchor the discussions around one or several scenarios of sexual violence. This also helped to encourage survivors to talk in general terms about sexual violence and care-seeking behaviours rather than about their potential own experiences. An overview of the main themes and examples of questions in the topic guide is presented in Figure 7.

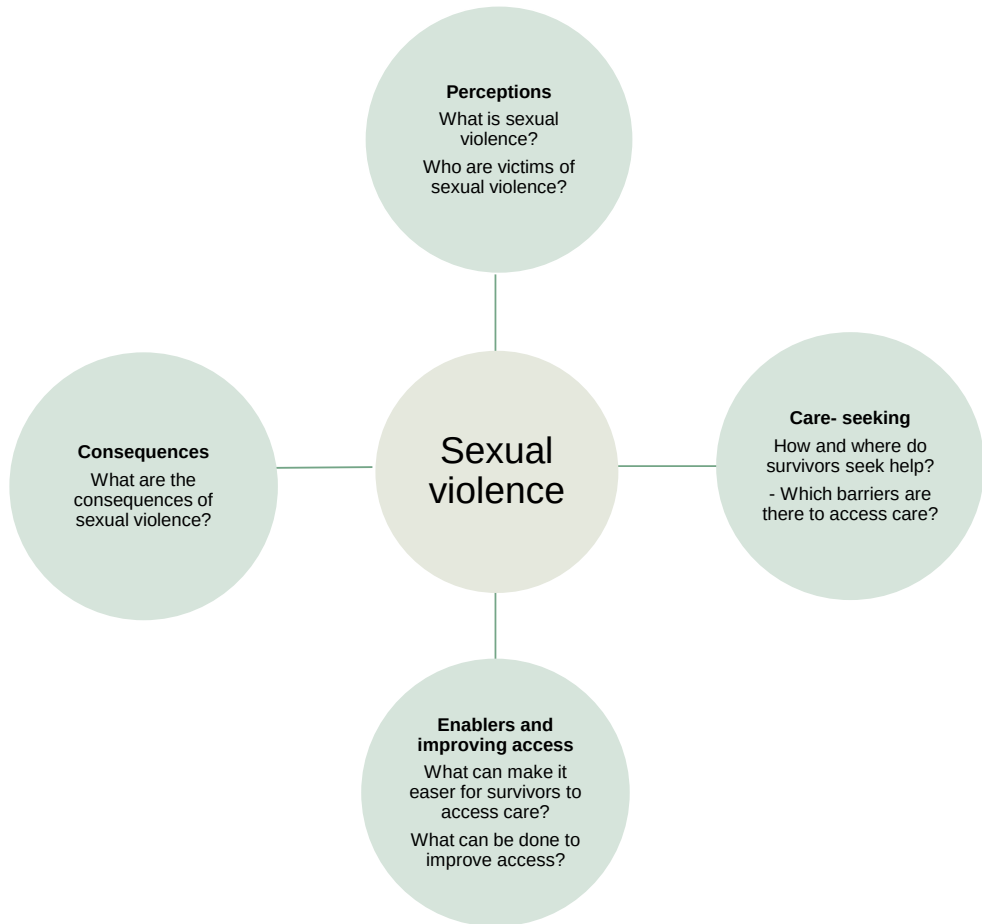


Figure 7. Main themes and examples of questions included in the topic guide used in focus group discussions (Paper II)

Variables

The variables included in the quantitative studies (Paper I and III) are presented in Table 5.

For the study presented in Paper I, the variables selected were based on previous literature and discussions with co-authors and staff in the MSF programmes included in the study. For the study presented in Paper III the variables were based on the findings in Paper I and II and on discussions with co-authors and staff in the MSF programmes. For both studies, the final variables were selected based on their capacity to answer the research questions.

Data analysis

Quantitative analysis

For Paper I the IBM SPSS Statistics software package version 25 [115] was used for all analyses and for Paper III the STATA software version 19 was used [116]. For both papers I and III statistical significance was set to $p < 0.05$.

In Paper I descriptive statistics were used to examine and describe the study sample and specific outcomes such as survivors accessing care per study location, year, and health care facility type, as well as age, sex, referral pathways and timing between the sexual violence incident and access to care. To examine how sex, age and referral pathways were associated with access to care within three days, logistic regression models were used. Bivariable logistic regression models were carried out to yield unadjusted odds ratios (OR) and a multivariable logistic regression model was carried out to adjust for the selected covariables, with results presented as adjusted odds ratios (aOR).

In Paper III descriptive statistics using frequencies were used to examine the sample characteristics stratified by resident status, timing of accessing care (within or after 72 hours), year and programme site. Pearson's χ^2 test was used to identify significant associations between the different variables, resident status, timely access to care, year and programme site. Bivariable and multivariable logistic regression models were used to analyse association between different variables and access to timely care. Several multivariable models were carried out, introducing variables stepwise; first the survivor demographics, then the violence characteristics and lastly the referral pathway. To explore the mediator effect of experience of any barriers, the 'perceived any barriers' variable was added to an additional model in the pooled model. Logistic regression models were also conducted with the two most frequently reported barriers, 'Perceived lack of knowledge as a barrier' and 'Perceived fear of social consequences as a barrier', as dependent variables.

Table 5. Overview of variables included in the analyses in Paper I and Paper III

<i>Domain</i>	<i>Variable</i>	<i>Values Paper I</i>	<i>Values Paper III</i>
General	Year	2014, 2015, 2016, 2017, 2018	2023, 2024
	Programme site	Walikale, Mweso	Walikale, Mweso, Goma
Survivor characteristics	Age	0-9 years, 10-19 years, 20-29 years, 30-39 years, 40-49 years and ≥50 years	0-9 years, 10-19 years, 20-29 years, 30-39 years, 40-49 years and ≥50 years
	Sex	Female, Male	Female, Male,
	Residential status	-	Displaced, Resident
Violence characteristics	Type of assailant	-	Non-civilian (including state army, non-state armed groups, police), Intimate partner (including current/former intimate partner), Civilian, Other/multiple types.
	Armed assailant	-	Yes, No
	Place/context of violence	-	Private/domestic setting, Movement-related/Public space, Livelihood/essential activity, Other and Not disclosed
Access to care	Time between sexual violence and care-seeking	0-3 days, 4-5 days, 6-30 days, 31-90 days, 91-180 days, >180 days	-
	Accessing care within 3 days/72 hours	Yes, No (3 days)	Yes, No (72 hours)
	Referral pathway	Self-referred, Health promotion team, Community health workers, Community, psychosocial staff, Family member, Mobile clinic, Local authorities, Partner, Other	Self-referral, Informal referral, Trained community focal point, Formal/institutional referral, Other
	Type of healthcare facility	Health centre, Hospital, Tumaini	-
Barriers	Perceived barrier	-	Lack of information, Fear of social consequences, Distance to healthcare, Insecurity, Lack of family support, Fear of mandatory reporting, Threats from the assailant, Cost of transport, Other
	Perceived any barrier	-	Yes, No

Bivariable logistic regression models were carried out initially to yield unadjusted odds ratios, then multivariable logistic regression models were carried out to adjust for different variables, using a stepwise approach first introducing only the survivor demographic variables, then the violence variables followed by the referral pathways. All logistic regression models were also conducted for each study year and each programme site separately.

Qualitative content analysis

For the qualitative analysis in Paper II a qualitative content analysis as described by Graneheim and Lundman [117] was applied. This method is well-suited when aiming to explore complex phenomena within health research [117].

The recordings from the FGDs were transcribed verbatim, in French, by a trained transcriber and translator. They were then translated to English by the first author (HR), going back to the recordings sometimes for clarifications as well discussion with the Congolese study team (EKK and NHG) when needed, to ensure the transcripts correctly captured the discussions. This process also served as the start of the familiarisation phase, where the transcripts are read several times to allow for a general understanding and sense of the data. In the next step, meaning units, key parts of the text which encompass a central idea, were identified and condensed to shorter, more manageable, texts while keeping the central concepts. The condensed meaning units were then labelled with codes, making sure that the codes captured the core meaning of the unit. The codes were subsequently organised and aggregated into sub-categories and categories. The analysis up to this step was mostly at a manifest level, keeping the explicit meaning. Categories were further examined for the development of themes, which represent the more latent content, capturing the underlying meanings and the core patterns emerging from the data [118]. Discussions between authors were held throughout the coding process and consensus was reached between all authors for the final analytical model. An example of the analysis process is presented in Table 6. The software Nvivo version 14 [119] was used to organise and structure the analysis.

Table 6. Example of the analytic process of the qualitative content analysis applied in Paper II

<i>Meaning unit</i>	<i>Condensed meaning unit</i>	<i>Code</i>	<i>Sub-Category</i>	<i>Category</i>	<i>Theme</i>
Another thing is that when you are a victim of sexual violence you are afraid to be insulted by your husband as well as other consequences, so you will stay at home	Victims of sexual violence are afraid of being insulted by their husband so they will stay at home	Fear of being insulted by husband	Husbands' reactions strongly impacting women's care-seeking	Fear of negative social consequences hindering care-seeking	Community and family attitudes playing a dual role in care-seeking behaviours

Ethical considerations and reflections

There is inherently a risk of causing harm to study participants when conducting research on the topic of sexual violence, which is commonly seen as a taboo topic. Particular risk arises when survivors of such violence are included in the research. Re-traumatisation and risk of social repercussions are examples of consequences which have to be considered and mitigated. In addition, individuals living in humanitarian contexts often lack power in relation to researchers, might be impoverished and might lack resources and/or access to healthcare and other basic needs, which potentially puts them in a position of vulnerability.

As this research concerns a sensitive and often stigmatising topic, as well as a vulnerable population, careful reflections, considerations and measures have been incorporated in all steps of the research, from planning to dissemination of results. When planning the studies, the potential risks for participants and researchers were carefully weighed against the benefits for the study population and the protocols were developed with harm reduction and risk mitigation actions in mind. The Helsinki declaration of ethical principles in medical research [120] as well as the WHO guidelines ‘Ethical and safety recommendations for researching, documenting and monitoring sexual violence in emergencies’ [121] and ‘Researching violence against women: a practical guide for researchers and activists’ [122] were taken into consideration when developing the study protocols.

Conducting the studies which lay the ground for this thesis was considered to be beneficial in yielding a further understanding around sexual violence, care-seeking behaviours, and access to care which can be used to improve programmes responding to survivors of sexual violence. This research has been done in a collaboration with a humanitarian aid organisation that will be able to directly implement adaptations to the programmes, meaning that the target population potentially can benefit from the knowledge generated through these studies.

Risk mitigation

File-based studies

In the studies presented in Paper I and Paper III file-based data, routinely collected as part of MSF activities, from survivors of sexual violence who received care in selected healthcare facilities in the study area were used. This secondary data had been collected prior to the initiation of the respective study start. To ensure that the use of the data did not cause any harm, only de-identified data were used and all results were presented in aggregated form, making it impossible to link the data to any individual and thus minimising the risk of harm. Data files for Paper I are stored in password protected locations, with access limited to two of the involved

researchers, according to MSF data protection policies and regulation. Data files for Paper III were shared with Lund University through a data sharing agreement with MSF and were stored in a secure repository for storing and processing sensitive data at Lund University. Data processing and analysis, using STATA, were conducted within the same protected environment. Access to the data were limited to the researchers involved in the data analysis.

Qualitative research

For Paper II primary data collection was carried out through focus group discussions with community members. This required thoughtful consideration to minimise the risk of harm to participants as the topic of sexual violence is sensitive and there is an inherent and inevitable risk to participants. As the researchers were working for MSF there was a risk that participants felt pressured to participate linked to power imbalances between the research team and participants. There was also a risk of re-traumatisation if survivors would have been asked to repeat or share their violence experience, and/or hearing of others' experiences of sexual violence. In addition, there was risk of stigma if a participant was exposed as being a survivor of sexual violence and risk of retaliations if perpetrators would believe an experience of sexual violence was shared during the discussion.

To mitigate the risk of participants feeling pressured to participate, measures were taken to ensure that the consent process was correct, ensuring that participants had a free choice to participate or not, that all the information was provided in a language of their choice and that there was sufficient time for selected participants to ask questions before deciding on whether consenting or not.

Even though having experience of sexual violence was not an inclusion criterion it is highly likely that participants would have personal experiences of sexual violence (both as survivors and as perpetrators) or know someone who has experienced or perpetrated violence, given the prevalence of sexual violence. Asking questions around sexual violence can be re-traumatising for individuals who have been victimised. Participants were therefore informed, prior to the start of the focus group discussions, that they were not expected to talk about personal experience of sexual violence, but rather the general perceptions, to reduce the risk of someone feeling pressured to share personal information and risk re-traumatisation and stigmatisation. Participants were also reminded of this if they started to share about personal experiences during the focus group discussions. To encourage a more general discussion vignettes were used.

The research team was trained on how to react in different scenarios with upset participants, participants sharing personal experiences and on how to provide psychological first aid. There was a pre-defined referral pathway to medical and psychological care in place for participants, if that would be needed. The

participants were also offered the opportunity to talk to the research team members individually and in private after the group discussions, if they would like to.

The risk of participants' information or identity being shared or that any data could be traced back to an individual was mitigated through thorough training of the research team on the importance of confidentiality. The fact that the research team would not share any personal information and only use de-identified information in any reports and publications was highlighted to the participants. It was also discussed with the participants that the nature of the focus group does not allow for full anonymity. The participants in each group discussion were asked to not share what was shared in the discussion outside the group, but were also informed that the research team could not guarantee this, thus allowing for participants to bear that in mind, both when consenting to participation and when deciding what to share during the discussion. No names of participants were collected on the transcripts and all identifiable information mentioned during the discussions were omitted or changed in the transcripts to ensure full anonymity of the participants.

There was a potential risk that people not participating in the focus group discussions would think that the participants were chosen because they were survivors of sexual violence, which was not the case. To mitigate this, community leaders, both those who were acting as gatekeepers, and others identified in each of the location of the focus group discussions, were informed about the purpose of the study and the inclusion criteria, emphasising that participants were not selected based on previous experience of sexual violence.

Participants of discussions around sexual violence might also be at risk of reprisals and violence, especially if there is a history of or ongoing violence in their home. The perpetrator could react with violence or aggressions towards the participant. To avoid this, the community leaders were informed about the scope of the FGDs and that the aim was not to discuss personal experiences of sexual violence but only the general perceptions with focus on care-seeking behaviours and access to care and support services.

All data from the qualitative study were stored in password protected locations, with access limited to two of the co-authors, according to MSF data protection policies and regulation.

Ethical approvals

Paper I and Paper II are based on the same study protocol for which ethical approval was granted from the Ethics Review Board instituted by Médecins Sans Frontières (ID 1906), and by the Comité Ethique de l'Université Libre des Pays des Grands Lacs, Goma, DRC (reference number 003/CE/ULGL/MK/2019).

For Paper III ethical approval was granted from the ethical committees Comité National d’Ethique de la Santé, Direction Provinciale de North Kivu, DRC (CNES 030/DPNK/130PM/2025) and the Swedish Ethical Review Authority, Sweden (Dnr 025-07853-01). The study in Paper III fulfilled the exemption criteria set by the MSF Ethics Review Board for a posteriori analysis of routinely-collected clinical data and thus did not require review by the MSF Ethical Review Board. The study was conducted with permission from the MSF Medical Director, Operational Centre Amsterdam.

Main results

Survivor characteristics (Paper I and III)

In the study presented in Paper I, covering the period 2014-2018, a total of 4,684 survivors of sexual violence who had accessed care were included, and in the study presented in Paper III, covering the period 2023-2024 16,712 survivors of sexual violence who had accessed care were included. An overview of sex, age groups, resident status and the programme site of the survivors of sexual violence included in the studies is presented in Table 7. Key numbers are also presented in the infographic in Figure 8.

Table 7. Demographics of survivors of sexual violence accessing care

	<i>Paper I (2014-2018), n (%)</i>	<i>Paper III (2023-2024), n (%)</i>
Total	4,684	16,712
Sex		
Male	133 (2.8)	750 (4.5)
Female	4,551 (97.2)	15,942 (95.5)
Age group (years)		
0-9	109 (2.3)	133 (0.8)
10-19	1,219 (26.0)	3,595 (21.5)
20-29	1,554 (33.2)	6,730 (40.3)
30-39	1,117 (23.8)	4,230 (25.3)
40-49	498 (10.6)	1,350 (8.1)
>=50	186 (4.0)	674 (4.0)
Resident status		
Resident	-	2,764 (16.6)
Displaced	-	13,936 (83.4)
Programme site		
Walikale	538 (11.5)	652 (3.9)
Mweso	4,146 (88.5)	2,485 (14.9)
Goma	-	13,575 (81.2)

*Note: Including survivors who accessed care in MSF supported programmes in North Kivu, DRC (Paper I and III).
Source: Adapted from Paper I [123], licenced under CC BY 04 and Paper III [124], licenced under CC BY NC*

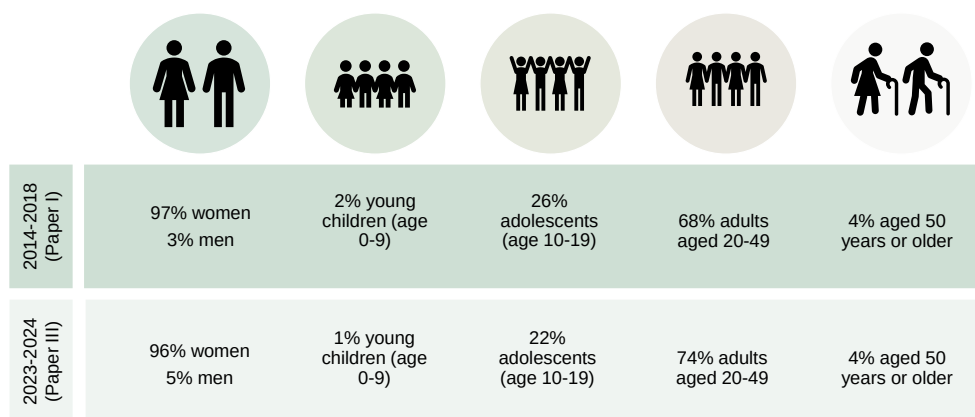


Figure 8. Key demographics (sex and age groups) of survivors accessing care.
Note: Including survivors who accessed care in MSF supported programmes in North Kivu, DRC (Paper I and III)

Violence characteristics (Paper III)

The majority of survivors of sexual violence who accessed care in 2023-2024 (Paper III) had been abused by a non-civilian (n=8,862, 53.2%) whereas 1,151 survivors (6.9%) reported an intimate partner to be the perpetrator and 6,572 another civilian (39.5%). The majority of survivors reported the perpetrator to be armed (n=11,675, 71.4%). Around half of the survivors, 50.2% (n=8,312), reported that the sexual violence had taken place during livelihood/essential activity, 30.5% (n=5,053) reported the location of the sexual violence to be in a private or domestic setting and 15.5% (n=2,567) during movement or in public. Key figures are presented in the infographic, Figure 9.

Among the survivors of sexual violence accessing care in 2023-2024 (Paper III), 13,936 (83.4%) were displaced. Compared to resident survivors, displaced survivors more frequently reported an armed assailant, the assailant to be a non-civilian or an intimate partner, multiple assailants and the sexual violence to have happened during livelihood/essential activities, Table 8.

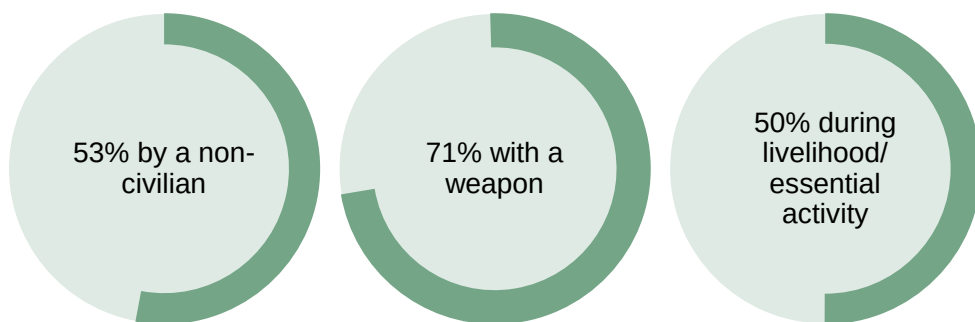


Figure 9. Most frequently reported sexual violence characteristics.

Note: As reported by survivors accessing care in MSF supported programmes in North Kivu, DRC 2023-2024 (Paper III)

Care-seeking patterns and timely access to care (Paper I and III)

The study presented in Paper I shows that most of the survivors of sexual violence who accessed care during the study period did so through one of the Tumaini clinics (n=3,081, 65.8%), and fewer in the supported health centres (n=1,361, 29.1%) or hospitals (n=242, 5.2%).

The referral pathways by which survivors of sexual violence accessed care were presented in both Paper I and III but the data sets included different options for the referral pathways in the two studies. However, both studies reported on self-referrals and in Paper I 50.7% (n= 2,375) of the survivors accessing care were self-referred whereas in Paper III the proportion was only 28.3% (n=4,705). The frequencies and proportions of survivors per referral pathway are presented in Table 9 (Paper I) and Table 10 (Paper III). Self-referral was the most common referral pathway among survivors of sexual violence accessing care in the Tumaini clinics and the health centres whereas referrals from authorities was the most common referral pathway among those who accessed care in the hospital (Paper I).

Displaced survivors were more frequently referred by a trained community focal point and less frequently self-referred compared to resident survivors (Paper III), as shown in Table 8.

Table 8. Demographics, violence characteristics and care-seeking patterns among survivors of sexual violence accessing care stratified per resident status

	Resident status		p-value ^c
	Resident, n (%) ^a	Displaced, n (%) ^b	
Total	2,764 (16.6)	13,936 (83.4)	
Project site			<0.001
Walikale	624 (22.6)	27 (0.2)	
Mweso	1,920 (69.5)	561 (4.0)	
Goma	220 (8.0)	13,348 (95.8)	
Age group (in years)			<0.001
0-9	55 (2.0)	78 (0.6)	
10-19	901 (32.6)	2,692 (19.3)	
20-29	1,080 (39.1)	5,645 (40.5)	
30-39	528 (19.1)	3,697 (26.5)	
40-49	162 (5.9)	1,188 (8.5)	
>=50	38 (1.4)	636 (4.6)	
Sex of survivor			0.911
Male	123 (4.5)	626 (4.5)	
Female	2,641 (95.5)	13,290 (95.5)	
Assailant type			<0.001
Non-civilian	1,396 (50.8)	7,459 (53.7)	
Intimate partner	163 (5.9)	988 (7.1)	
Civilian (non-partner)	1,156 (42.0)	5,411 (38.9)	
Other/multiple types	35 (1.3)	39 (0.3)	
Armed assailant			<0.001
No	860 (31.9)	3,813 (27.9)	
Yes	1,833 (68.1)	9,834 (72.1)	
Number of assailants			<0.001
Single	2,387 (86.9)	9,523 (68.5)	
Multiple	359 (13.1)	4,388 (31.5)	
Place/context of violence			<0.001
Private/Domestic Setting	901 (33.3)	4,149 (30.0)	
Movement-related/Public space	918 (33.9)	1,647 (11.9)	
Livelihood/ essential activity	731 (27.0)	7,576 (54.8)	
Other and not disclosed	157 (5.8)	454 (3.3)	
Referred by			<0.001
Self-referred	1,603 (58.3)	3,098 (22.3)	
Informal referral	614 (22.3)	2,285 (16.5)	
Trained community focal point	208 (7.6)	6,873 (49.5)	
Formal/institutional referral	317 (11.5)	1,619 (11.7)	
Other	8 (0.3)	15 (0.1)	
Accessed care within 72 hours			<0.001
No	684 (24.8)	4,429 (32.5)	
Yes	2,074 (75.2)	9,218 (67.5)	
Perceived any barriers			<0.001
No	1,530 (55.4)	658 (4.7)	
Yes	1,234 (44.6)	13,278 (95.3)	

Note: Among survivors who accessed care in MSF supported programmes in North Kivu, DRC 2023-2024 (Paper III)

^aAmong resident survivors of sexual violence, ^bAmong displaced survivors of sexual violence, ^cPearson's χ^2 test

Source: Adapted from Paper III [124] licenced under CC BY NC.

Table 9. Referral pathways for survivors of sexual violence accessing care (Paper I)

<i>Referral pathway</i>	<i>n (%)</i>
Self-referral	2,375 (50.7)
Health promotion team	808 (17.3)
Community health worker	327 (7.0)
Community	415 (8.9)
Psychosocial staff	181 (3.9)
Family member	84 (1.8)
Mobile clinic	31 (0.7)
Local authorities	287 (6.1)
Partner	5 (0.1)
Other	168 (3.6)

Note: Among survivors who accessed care in MSF supported healthcare facilities in North Kivu, DRC, 2014-2018.

Source: Adapted from Paper I [123], licenced under CC BY 04

Table 10. Referral pathways for survivors of sexual violence accessing care (Paper III)

<i>Referral pathway</i>	<i>n (%)</i>
Self-referred	4,705 (28.3)
Informal referral	2,901 (17.4)
Trained community focal point	7,085 (42.6)
Formal/institutional referral	1,936 (11.6)
Other	23 (0.1)

Note: Among survivors who accessed care in MSF supported healthcare facilities in North Kivu, DRC 2023-2024.

Source: Adapted from Paper III [124], licenced under CC BY NC

The total proportion of survivors accessing care within three days was 69.7% in the study presented in Paper I, similar to the 68.8% seen in the study presented in Paper III. There was however a large difference in timely access to care between the programme sites included in the studies; in Paper I the proportion of survivors accessing care within three days in Walikale was 26.8% compared to 75.3% in Mweso. In the study presented in Paper III, 41.5% of the survivors accessed care within three days in Walikale, 86.5% in Mweso and 66.9% in Goma.

Factors influencing timing of care-seeking

In the study presented in Paper I, the association between age, sex and referral pathways and timely access to care (within three days) was analysed; the results of the analyses are shown in Table 11. The multivariable model, adjusting for the included variables, showed that all age groups (0-9 years (aOR 3.4 [95% CI 1.9-5.9]), 10-19 years (aOR 2.1 [95% CI 1.5-2.9]), 20-29 years (aOR 2.9 [95% CI 2.1-4.1]), 30-39 years (aOR 2.2 [95% CI 1.6-3.1]) and 40-49 years (aOR 1.6 [95% CI 1.1-2.3])) had significantly higher odds of accessing care within three days, compared to survivors aged 50 years or older. Men had significantly higher odds

than women of accessing care within three days (aOR 2.7 [95% CI 1.6-4.5]) and the survivors of sexual violence who had been referred by community (aOR 0.8 [95% CI 0.6-1.0]), a family member (aOR 0.3 [95% CI 0.2-0.5]), a mobile clinic (aOR 0.1 [95% CI 0.0-0.2]) or by local authorities (aOR 0.1 [95% CI 0.1-0.1]) had significantly lower odds of accessing care within three days compared with those who were self-referred.

In Paper III the fully adjusted multivariable logistic regression model with timely access to care (within 72 hours) as the dependent variable (Table 12) shows that, being in age groups 0-9 (aOR 0.64 [95% CI 0.43-0.95]), 10-19 (aOR 0.62 [95% CI 0.56-0.68]), 40-49 (aOR 0.84 [95% CI 0.73-0.96]) and 50 years and above (aOR 0.45 [95% CI 0.38-0.53]) was associated with lower odds of accessing timely care, compared to being 20-29 years old. Having experienced sexual violence perpetrated by an intimate partner (aOR 0.66 [95% CI 0.57-0.76]) (compared to sexual violence perpetrated by a non-civilian), having experienced the sexual violence during movement or in public space (aOR 0.69 [95% CI 0.61-0.78]) (compared private/domestic setting), and being referred through informal networks (aOR 0.66 [95% CI 0.59-0.73]), by a trained community focal point (aOR 0.72 [95% CI 0.66-0.79]), through a formal/institutional referral (aOR 0.72 [95% CI 0.64-0.81]) or other referral (aOR 0.36 [95% CI 0.16-0.84]) (compared to being self-referred) were factors with significantly lower odds of accessing timely care.

Displaced survivors had 36% lower odds of accessing care within 72 hours after the sexual violence incident compared to resident survivors (aOR 0.64 [95% CI 0.57-0.71]) (Table 12), even though this did differ between programme sites. To further analyse this association, the variable 'perceived any barrier' was added to the fully adjusted model with pooled data. This addition attenuated the association (aOR 1.08 [95% CI 0.95-1.22]), suggesting that perceived barriers may partially mediate this relationship between resident status and timely access to care (data not shown in table).

In the study presented in Paper III the logistic regression models were also carried out per year and per each programme site separately. In the models conducted separately by year we largely saw the same directions and magnitude of odds ratios even though the range of confidence intervals did vary. Between the programme sites there were some variations seen; for example, being displaced, which was significantly associated with lower odds of accessing care within 72 hours in the model with the pooled data, was non-significantly associated with lower odds of accessing timely care in Goma (aOR 0.85 [95% CI 0.64-1.15]), and non-significantly associated with slightly higher odds in Mweso (aOR 1.04 [95% CI 0.78-1.39]) (data not shown in table). Having experienced violence by an intimate partner was significantly associated with lower odds ratio of accessing timely care in the model with pooled data but for both Walikale (aOR 1.40 [95% CI 0.53-3.72]) and Mweso (aOR 1.28 [95% CI 0.63-2.61]) it was non-significantly associated with higher odds of accessing timely care.

Table 11. Logistic regression models of factors associated with accessing care within three days

	Bivariable logistic regression model		Adjusted ^a multivariable logistic regression model	
	OR (95% CI)	p-value	aOR (95% CI)	p-value
Age group (in years) (Ref. = ≥50)				
0-9	2.90 (1.74-4.83)	<0.001	3.38 (1.93-5.90)	<0.001
10-19	2.38 (1.74-3.25)	<0.001	2.07 (1.48-2.90)	<0.001
20-29	3.31 (2.43-4.52)	<0.001	2.91 (2.08-4.06)	<0.001
30-39	2.60 (1.90-3.57)	<0.001	2.21 (1.58-3.11)	<0.001
40-49	1.86 (1.32-2.62)	<0.001	1.60 (1.11-2.30)	0.012
Sex (Ref. = female)				
Male	2.85 (1.76-4.70)	<0.001	2.67 (1.59-4.49)	<0.001
Referral pathway (Ref. = Self-referral)				
Health promotion team	1.13 (0.93-1.35)	0.214	1.17 (0.97-1.41)	0.104
Community health worker	1.07 (0.82-1.40)	0.615	1.16 (0.89-1.52)	0.277
Community	0.78 (0.62-0.98)	0.034	0.79 (0.63-1.00)	0.045
Psychosocial staff	1.02 (0.72-1.44)	0.903	1.03 (0.73-1.46)	0.876
Family member	0.28 (0.18-0.44)	<0.001	0.29 (0.18-0.45)	<0.001
Mobile clinic	0.09 (0.04-0.21)	<0.001	0.10 (0.04-0.24)	<0.001
Local authorities	0.09 (0.07-0.12)	<0.001	0.09 (0.07-0.12)	<0.001
Partner	0.24 (0.04-1.43)	0.117	0.24 (0.04-1.51)	0.129
Other	1.48 (1.00-2.18)	0.051	1.57 (1.05-2.33)	0.026

Note: Among survivors of sexual violence accessing care in MSF supported programmes in North Kivu, DRC 2014-2018 (Paper I). Hosmer and Lemeshow test for goodness of fit of multiple logistic regression model; p-value 0.595

^aAll variables in the multivariable model were mutually adjusted

Abbreviations: OR, Odds Ratio; CI, Confidence Interval; aOR, adjusted Odds Ratio; Ref., Reference group

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Table 12. Logistic regression models of factors associated with accessing care within 72 hours

	Bivariable logistic regression model		Adjusted ^a multivariable logistic regression model	
	OR (95% CI)	p-value	aOR (95% CI)	p-value
Residential status (Ref. = Resident)				
Displaced	0.69 (0.63-0.75)	<0.001	0.64 (0.57-0.71)	<0.001
Age group (in years) (Ref. = 20-29 years)				
0-9	0.67 (0.46-0.96)	0.031	0.64 (0.43-0.95)	0.029
10-19	0.61 (0.56-0.66)	<0.001	0.62 (0.56-0.68)	<0.001
30-39	1.16 (1.06-1.26)	0.001	1.14 (1.04-1.25)	0.004
40-49	0.86 (0.76-0.98)	0.025	0.84 (0.73-0.96)	0.010
≥50	0.45 (0.38-0.53)	<0.001	0.45 (0.38-0.53)	<0.001
Sex (Ref. = Male)				
Female	1.00 (0.85-1.17)	0.999	0.88 (0.74-1.04)	0.134
Assailant type (Ref. = Non-civilian)				
Intimate partner	0.54 (0.48-0.61)	<0.001	0.66 (0.57-0.76)	<0.001
Civilian (non-partner)	0.86 (0.80-0.92)	<0.001	1.02 (0.93-1.11)	0.709
Other or multiple types	0.72 (0.44-1.16)	0.179	0.88 (0.44-1.75)	0.719
Number of assailants (Ref. = Single)				
Multiple	1.10 (1.02-1.18)	0.014	0.97 (0.90-1.06)	0.551
Armed assailant (Ref. = No)				
Yes	1.55 (1.44-1.67)	<0.001	1.49 (1.36-1.64)	<0.001
Place/context of the sexual violence (Ref. = private/domestic setting)				
Movement-related/Public space	0.97 (0.87-1.07)	0.496	0.69 (0.61-0.78)	<0.001
Livelihood/essential activity	1.27 (1.18-1.37)	<0.001	1.04 (0.94-1.15)	0.420
Other and not disclosed	0.94 (0.79-1.12)	0.495	0.81 (0.67-0.98)	0.030
Referred by (Ref. = Self-referred)				
Informal referral	0.62 (0.56-0.68)	<0.001	0.66 (0.59-0.73)	<0.001
Trained community focal point	0.69 (0.64-0.75)	<0.001	0.72 (0.66-0.79)	<0.001
Formal/institutional referral	0.74 (0.65-0.83)	<0.001	0.72 (0.64-0.81)	<0.001
Other	0.31 (0.14-0.71)	0.005	0.36 (0.16-0.84)	0.019
Mean VIF				2.62 ^b

Note: Among survivors of sexual violence accessing care in MSF supported programmes in North Kivu, DRC 2023-2024 (Paper III).

^aAll variables in the multivariable model were mutually adjusted, ^bValue indicating there is no significant issue with multicollinearity in the model

Abbreviations: OR, Odds Ratio; CI, Confidence Interval; aOR, adjusted Odds Ratio; Ref., Reference group; VIF, Variance Inflation Factor

Source: Adapted from Paper III [124], licenced under CC BY NC

Barriers experienced by survivors accessing care (Paper III)

The vast majority of the survivors of sexual violence who received care in 2023-2024, 86.9% (n=14,520) reported experiencing at least one barrier before accessing care and the most frequently reported barriers were lack of information, reported by 47.0% (n=7,855) of all survivors accessing care and fear of social consequences, reported by 27.3% (n=4,553) (Paper III).

Factors associated with significantly higher odds of reporting lack of information as a barrier to accessing care include (Table 13); being displaced (aOR 3.90 [95% CI 3.45-4.40]) (compared to resident survivors), being 50 years or older (aOR 1.22 [95% CI 1.02-1.45]) (compared to survivors aged 20-29 years), having experienced sexual violence perpetrated by an intimate partner (aOR 1.26 [95% CI 1.08-1.47]) (compared to assault by a non-civilian), reporting multiple perpetrators (aOR 1.26 [95% CI 1.17-1.37]) (compared to single perpetrator), having experienced the sexual violence during livelihood/essential activity (aOR 1.11 [95% CI 1.01-1.22]) (compared to sexual violence happening in private/domestic setting) and being referred through informal pathway (aOR 4.12 [95% CI 3.70-4.59]), by a trained community focal point (aOR 4.27 [95% CI 3.90-4.67]), through a formal/institutional actor (aOR 3.38 [95% CI 3.00-3.82]) and other referral pathways (aOR 4.63 [95% CI 1.92-11.12]) (compared to being self-referred).

In the logistic regression models separated by year we did not detect any significant variations. In the models separated by programme site there were some differences between the programme sites and the pooled data. For example, the age group 30-39 which had significantly lower odds of reporting lack of information as a barrier in the pooled data (aOR 0.89 [95% CI 0.82-0.97]) had significantly higher odds of reporting lack of information as a barrier in Walikale (aOR 2.21 [95% CI 1.19-4.10]). Being a woman was non-significantly associated with lower odds of reporting lack of information as a barrier in the pooled data (aOR 0.96 [95% CI 0.81-1.14]) and in Goma (aOR 0.91 [95% CI 0.76-1.09]), significantly associated with lower odds of reporting lack of information as a barrier in Mweso (aOR 0.40 [95% CI 0.19-0.83]) and non-significantly associated with higher odds in Walikale (aOR 3.78 [95% CI 0.74-19.22]) (data not shown in tables).

Table 13. Logistic regression models for factors associated with reporting lack of information as a barrier to access care

	Bivariable logistic regression model		Adjusted ^a multivariable regression model	
	OR (95% CI)	p-value	aOR (95% CI)	p-value
Residential status (Ref. = Resident)				
Displaced	5.81 (5.23-6.46)	<0.001	3.90 (3.45-4.40)	<0.001
Age group (in years) (Ref. = 20-29 years)				
0-9	0.60 (0.42-0.86)	0.006	0.69 (0.46-1.05)	0.084
10-19	0.96 (0.89-1.04)	0.348	1.05 (0.96-1.16)	0.264
30-39	0.96 (0.89-1.03)	0.263	0.89 (0.82-0.97)	0.007
40-49	0.86 (0.76-0.97)	0.011	0.79 (0.70-0.90)	<0.001
≥50	1.54 (1.31-1.80)	<0.001	1.22 (1.02-1.45)	0.027
Sex (Ref. = Male)				
Female	1.06 (0.91-1.22)	0.461	0.96 (0.81-1.14)	0.672
Assailant type (Ref. = Non-civilian)				
Intimate partner	1.16 (1.02-1.31)	0.020	1.26 (1.08-1.47)	0.003
Civilian (non-partner)	0.96 (0.90-1.02)	0.180	0.96 (0.89-1.04)	0.358
Other or multiple types	1.06 (0.67-1.67)	0.813	1.14 (0.57-2.30)	0.713
Number of assailants (Ref. = Single)				
Multiple	1.48 (1.38-1.58)	<0.001	1.26 (1.17-1.37)	<0.001
Armed assailant (Ref. = No)				
Yes	0.93 (0.87-0.99)	0.028	0.74 (0.67-0.81)	<0.001
Place/context of the sexual violence (Ref. = Private/domestic setting)				
Movement-related/Public space	0.70 (0.63-0.77)	<0.001	0.92 (0.82-1.04)	0.202
Livelihood/essential activity	1.30 (1.21-1.39)	<0.001	1.11 (1.01-1.22)	0.027
Other and not disclosed	0.77 (0.65-0.92)	0.003	0.84 (0.70-1.03)	0.088
Referred by (Ref. = Self-referred)				
Informal referral	4.36 (3.94-4.83)	<0.001	4.12 (3.70-4.59)	<0.001
Trained community focal point	5.76 (5.30-6.27)	<0.001	4.27 (3.90-4.67)	<0.001
Formal/institutional referral	3.69 (3.30-4.14)	<0.001	3.38 (3.00-3.82)	<0.001
Other	4.06 (1.79-9.23)	0.001	4.63 (1.92-11.12)	0.001
Mean VIF				2.65 ^b

Note: Among survivors of sexual violence accessing care in MSF supported programmes in North Kivu, DRC 2023-2024 (Paper III).

^aAll variables in the multivariable model were mutually adjusted, ^bValue indicating there is no significant issue with multicollinearity in the model

Abbreviations: OR, Odds Ratio; CI, Confidence Interval; aOR, adjusted Odds Ratio; Ref., Reference group; VIF, Variance Inflation Factor

Source: Adapted from Paper III [124], licenced under CC BY NC

Factors associated with significantly higher odds of reporting fear of social consequences as a barriers include (Table 14); being displaced (aOR 3.40 [95% CI 2.97-3.88]) (compared to resident survivors), being 30-39 years old (aOR 1.10 [95% CI 1.00-1.20]) (compared to 20-29 years old), being a woman (aOR 1.56 [95% CI 1.29-1.90]) (compared to male survivors), reporting sexual violence perpetrated by a civilian (aOR 1.16 [95% CI 1.06-1.26]) (compared to sexual violence perpetrated by a non-civilian), and reporting an armed perpetrator (aOR 1.21 [95% CI 1.10-1.34]) (compared to an unarmed perpetrator).

Factors which were significantly associated with lower odds of reported fear of social consequences as a barrier include (Table 14); being aged 50 years or older (aOR 0.79 [95% CI 0.65-0.96]) (compared to being 20-29 years), and being referred through an informal actor (aOR 0.50 [95% CI 0.45-0.56]), by a trained community focal point (aOR 0.56 [95% CI 0.51-0.61]) or through a formal/institutional actor (aOR 0.54 [95% CI 0.48-0.62]) (compared to being self-referred).

No variation of significance was seen in the logistic regression models separated per year (data not shown in tables). In the models conducted separately per programme site there were some variations, for example with regards to displacement. Whereas in the pooled data being displaced was significantly associated with higher odds of reporting fear of social consequences as a barrier, the association for Goma was in the same direction but non-significant (aOR 1.19 [95% CI 0.86-1.65]) whereas for Walikale (aOR 0.62 [95% CI 0.08-5.04]) and Mweso (aOR 0.84 [95% CI 0.61-1.17]) being displaced was associated with lower odds although non-significant. Another factor which showed some variation between programme sites was sex. Being a woman was significantly associated with higher odds of reporting fear of social consequences in the pooled data whereas in Walikale being a woman was instead significantly associated with lower odds of reporting fear of social consequences as a barrier (aOR 0.16 [95% CI 0.03-0.75]). This was also the case for Mweso, but with a non-significant association (aOR 0.78 [95% CI 0.40-1.53]) (data not shown in tables).

Table 14. Logistic regression models for factors associated with reporting fear of social consequences as a barrier to access care

	Bivariable logistic regression model		Adjusted ^a multivariable regression model	
	OR (95% CI)	p-value	aOR (95% CI)	p-value
Residential status (Ref. = Resident)				
Displaced	3.15 (2.79-3.55)	<0.001	3.40 (2.97-3.88)	<0.001
Age group (in years) (Ref. = 20-29 years)				
0-9	0.45 (0.28-0.73)	0.001	0.62 (0.36-1.08)	0.093
10-19	0.91 (0.83-0.99)	0.037	1.03 (0.93-1.14)	0.545
30-39	1.14 (1.05-1.24)	0.002	1.10 (1.00-1.20)	0.042
40-49	1.08 (0.95-1.23)	0.239	1.02 (0.89-1.17)	0.810
≥50	0.82 (0.68-0.98)	0.033	0.79 (0.65-0.96)	0.018
Sex (Ref. = Male)				
Female	1.48 (1.24-1.78)	<0.001	1.56 (1.29-1.90)	<0.001
Assailant type (Ref. = Non-civilian)				
Intimate partner	1.04 (0.90-1.19)	0.589	1.06 (0.91-1.25)	0.454
Civilian (non-partner)	1.08 (1.01-1.17)	0.025	1.16 (1.06-1.26)	<0.001
Other or multiple types	0.43 (0.22-0.84)	0.013	0.63 (0.26-1.52)	0.302
Number of assailants (Ref. = Single)				
Multiple	1.11 (1.03-1.20)	0.005	1.01 (0.93-1.10)	0.735
Armed assailant (Ref. = No)				
Yes	1.14 (1.06-1.23)	0.001	1.21 (1.10-1.34)	<0.001
Place/context of the sexual violence (Ref. = Private/domestic setting)				
Movement-related/Public space	0.44 (0.39-0.50)	<0.001	0.48 (0.41-0.55)	<0.001
Livelihood/essential activity	1.16 (1.08-1.25)	<0.001	1.07 (0.97-1.18)	0.180
Other and not disclosed	0.71 (0.58-0.86)	0.001	0.78 (0.63-0.96)	0.022
Referred by (Ref. = Self-referred)				
Informal referral	0.62 (0.55-0.69)	<0.001	0.50 (0.45-0.56)	<0.001
Trained community focal point	0.83 (0.77-0.90)	<0.001	0.56 (0.51-0.61)	<0.001
Formal/institutional referral	0.69 (0.61-0.78)	<0.001	0.54 (0.48-0.62)	<0.001
Other	0.46 (0.16-1.36)	0.159	0.46 (0.15-1.41)	0.176
Mean VIF				2.64 ^b

Note: Among survivors of sexual violence accessing care in MSF supported programmes in North Kivu, DRC 2023-2024 (Paper III).

^aAll variables in the multivariable model were mutually adjusted, ^bValue indicating there is no significant issue with multicollinearity in the model

Abbreviations: OR, Odds Ratio; CI, Confidence Interval; aOR, adjusted Odds Ratio; Ref., Reference group; VIF, Variance Inflation Factor

Source: Adapted from Paper III [124], licenced under CC BY NC

Community perceptions around care-seeking, barriers, and enablers (Paper II)

In the study presented in Paper II, 18 focus group discussions were conducted with a total of 138 individuals, 81 women and 57 men. The qualitative content analysis resulted in an analytical model including three overarching themes, seven categories and 14 sub-categories. The final analytical model is presented in Figure 10.

The first theme, ‘Knowledge and misconceptions around medical consequences crucial for care-seeking’, illustrates that care-seeking to a large extent is driven by fear of medical consequences and simultaneously hindered by misconceptions linked to medical needs. There was generally a high level of understanding of the medical consequences of sexual violence and the fear of getting infections was commonly mentioned as a driver to seek care. There was also fear expressed around infecting others and around getting pregnant.

However, we also found that focus on medical consequences can become a barrier. As the need for medical care was perceived as the most important, or sole, reason to seek help, some participants did not perceive care- or help-seeking as important in situations where they did not think there would be any medical consequences. This was the case for both male survivors and survivors of sexual violence perpetrated by an intimate partner.

“If it was my husband who raped me, I can’t go to a healthcare structure because it is my husband. I trust him, and he can’t transmit any diseases to me.” (FGD 13, female)

There was a widespread understanding of the importance of seeking care immediately after experiencing sexual violence but there were also some participants who believed that survivors had to seek care immediately or within a specific time limit and that after a longer period there would be no need to seek care.

“After several months there is no use to seek care, that doesn’t make any sense, it is not worth it.” (FGD 4, female)

The first theme also highlights the need for awareness raising and information sharing around sexual violence and how to access care. Awareness raising activities were commonly mentioned by the participant as an effective way of increasing access to healthcare and participants also expressed the desire for increased activities aiming at spreading information around sexual violence.

Themes	Knowledge and misconceptions around medical consequences crucial for care-seeking			Community and family attitudes playing a dual role in care-seeking behaviours		Care-seeking dependent on optimised healthcare facilities and sensitive staff
Categories	Care-seeking driven by fear of medical consequences	Undue focus on medical consequences limiting care-seeking	Highlighting the importance of knowledge to improve access to care	Fear of negative social consequences hindering care-seeking	Needing support from community and family	Respectful healthcare workers facilitating care-seeking
Sub-categories	Recognising the importance of healthcare after sexual violence	Conflicting perceptions of need for care among specific types of survivors	Believing that lack of knowledge prevents survivors from seeking care	Harmful actions from community and family negatively impacting care seeking	Acknowledging the importance of supportive community members	Negative response or actions by healthcare workers deterring care-seeking
	Fearing severe health consequences both for survivor and others	Harbouring misconceptions about timely care-seeking	Needing improved awareness raising efforts	Beliefs and practices around intimate partner violence preventing care-seeking	Families play key role encouraging survivors to access care	Perceiving trusted and respectful healthcare workers as a resource
						Recognising the importance of well-adapted healthcare facilities and systems
						Emphasising healthcare facilities adapted to survivors' needs
						Requiring affordability and physical accessibility to healthcare services

Figure 10. Analytical model presenting the themes, categories and sub-categories.

Source: Adapted from Paper II [125], licenced under CC BY 04

"I think the health promoters have to continue to sensitise and inform people, because if they continue to sensitise the people they will be informed and when they face sexual violence they can orient themselves to the healthcare structure." (FGD 11, female)

"But for the information, it doesn't reach everywhere so it would be better if you could add more people for the sensitisation, like that everyone will be informed and the victims of sexual violence can easily seek care." (FGD 13, female)

The second theme, 'Community and family attitudes playing a dual role in care-seeking behaviours', illustrates the dual role that the community plays in the care-seeking of survivors. Social consequences due to harmful attitudes and stigmatisation by community and family members were highlighted as a main barrier for care-seeking.

"Even in the community there is stigmatisation towards the persons who are raped. The stigmatisation makes the people not accessing care easily because when they are stigmatised, they are afraid to seek care." (FGF 14, male)

Negative reactions on the part of husbands of survivors of sexual violence were a particular concern. It was mentioned by both female and male participants that the fear of a husband's reactions would prevent survivors from seeking care. This included both fear of physical punishment, rejection and divorce.

"There are husbands who are like lions in their home. When the wife has been raped in the field, she can't tell the husband, because the husband is mean so she can't talk to him about it. She will stay silent." (FGD 18, male)

"Many husbands kick their wives out after incidents like this, so she will decide to keep it a secret in order to not be kicked out." (FGD 13, female)

Community beliefs around intimate partner sexual violence were also seen as preventing survivors of such violence from disclosing and seeking help. Intimate partner violence was normalised, seen as foremost a non-medical issue and as something which can be solved within the home.

"Very often, when the husband rapes his wife, he has the habit of buying pagnes [fabric] to her, buy a piece of meat, so that the anger will calm down and then it will pass." (FGD 15, female)

Shame and stigmatisation were also mentioned with regards to male survivors of sexual violence, even though some participants expressed that it would be easier for a male survivor than a female survivor to seek care.

“The biggest consequence for a man is the shame, the shame of being raped by another man like him. Instead of sharing with someone he will decide to seek care directly, without sharing with anyone else.” (FGD 5, male)

On the other hand, community members were seen as offering key support to survivors of sexual violence and often mentioned as a first point of contact. Having a supportive husband or family member was perceived as enabling care access.

“As a victim she can’t share with anyone, maybe only with her family members. They are the ones who can accompany her to the health structure for care.” (FGD 5, male)

The third theme, ‘Care-seeking dependent on optimised healthcare facilities and sensitive staff’, relates to the healthcare system design and how it impacts care-seeking. Distance to healthcare, cost for transportation and cost of care provision were mentioned as barriers as well as healthcare facilities which were not welcoming for or open to all sexual violence survivors, especially not for men. The need for direct and easy access to care was also mentioned.

“What can improve the access to care, it is when a victim of sexual violence comes to a healthcare structure and can find the care there directly, that can facilitate the access”. (FGD 17, female)

The importance of trusted healthcare providers was highlighted. Fear of negative and harmful attitudes, such as judgemental comments and lack of confidentiality by healthcare providers was perceived as preventing survivors of sexual violence from seeking care, whereas trusted healthcare providers would facilitate care-seeking. The need of focal points in the community who could support survivors to access care was also mentioned.

“There are people who don’t want to talk to the healthcare staff because there are those how don’t keep the confidentiality, so victims prefer to tell someone else who can keep the confidentiality.” (FGD 18, male)

“We think it would be good if you can have a focal point who can orient or accompany, who can accompany a person who might be ashamed to the Tumaini.” (FGD 1, female)

Discussion

The overall aim of this thesis was to gain a deeper understanding of care-seeking behaviours among survivors of sexual violence, the factors influencing care-seeking and timely access to care, barriers and enablers towards seeking care and what can be done to improve access to care after experience of sexual violence in the humanitarian context of North Kivu, DRC. This thesis has identified care-seeking behaviours, key barriers and enablers to accessing care for survivors of sexual violence and factors which impact timely access to care and perceived barriers.

This thesis confirms some previous findings from other humanitarian crises, expanding them to North Kivu where research is scarce, and also expands the knowledge with regards to how displacement impacts care-seeking, how misconceptions and focus on medical consequences can become barriers to access care and how care-seeking patterns may differ according to the age groups and sex. The thesis also explores the barriers perceived both by community members and by survivors of sexual violence who do access care. The results of the studies included in this thesis, how they relate to existing literature and the implications of the results will be further explored in this chapter. The discussion starts with a section on survivor and violence characteristics followed by sections focussing on three different aspects of access to care, structured around the conceptual framework (Figure 5).

Understanding survivor and violence characteristics

Age and sex of the survivors who accessed care were investigated in both Paper I and III. The largest age group was the 20-29 years old in both studies but there were higher proportions of children aged 0-9 years and adolescents aged 10-19 years accessing care in Paper I (2.3% and 26.0% respectively) compared to Paper III (0.8% and 21.5% respectively). In previous studies from South and North Kivu, the proportion of child and adolescent survivors accessing care varies significantly [84,86,88–90,92]. Among the studies from North Kivu, two studies analyse data from the HEAL Africa hospital in Goma and show much higher percentage of young survivors of sexual violence, 71.8% among survivors accessing care were under 18 years old during the period July 2013 to December 2017 [89] and during 2006-2008 89.1% were under 18 years and 22.3% were under the age of 10 [90]. However, a

third study from Goma examining survivors of sexual violence who accessed care in four different hospitals during 2019-2020, did not report any survivors under the age of 12 [92]. Studies from South Kivu show that survivors accessing care in the Panzi hospital ranged between 30% being under 18 years in the period of 2014-2019 [88] and 5.8% of survivors being under 16 years in the period 2004-2008 [84]. Another study from South Kivu, which analysed survivors who had accessed care in health centres supported by the organisation Malteser during 2005-2007 showed that there were no survivors aged under 10 years old accessing care, whereas 1.5% were aged 11-15 years and 11.8% aged 16-20 years [86]. This large variation between studies and periods in time indicates that the proportion of children and adolescents who access care varies over time and between contexts, even within the eastern DRC. Whether the services are offered in hospitals, specialised clinics or in the health centres might impact the access to care for younger survivors, something which needs more exploration. In Paper III we show that the proportion of children and adolescents was lower among displaced survivors, which may indicate that younger displaced survivors have less access to care.

The proportion of survivors of sexual violence aged 50 years or older was the same in both quantitative studies (Paper I and Paper III), 4.0%. This is lower compared to previous studies from South Kivu where the proportion of older survivors ranged from 8.0% of survivors being over 50 years [86] to 33.0% being over 55 years [84] and one study from North Kivu which showed that 11.0% of survivors accessing care were over 50 years old [92]. Even though sexual violence perpetrated towards individuals from different age groups can vary over time and between contexts, it is likely that the variations seen both in younger and older survivors receiving care, at least to some extent, represents a variation in access to care for different age groups, something which will need further attention in humanitarian responses.

During the study period 2023-2024 (Paper III) 4.5% of the survivors accessing care were men, whereas in 2014-2018 (Paper I) the proportion was lower, only 2.8%. The numbers are somewhat congruent with previous studies from North Kivu which have shown between 1-5% male survivors accessing care [87,89], whereas a study looking at survivors accessing care across seven African countries in 2011-2017 showed that 7.5% were male [126]. When looking at the prevalence numbers of sexual violence from the area, i.e. 39.7% of women and 23.6% of men reported experience of sexual violence [76], one can speculate that male survivors are less likely to access care compared to female survivors in this area. This theory is supported by findings from two qualitative studies conducted in eastern DRC that highlight the specific barriers to access care encountered by male survivors [127,128]. Specific barriers and enablers for male survivors are discussed later in this chapter.

Most of the sexual violence reported by the survivors who accessed care was perpetrated by non-civilians (53.2%) as shown in Paper III. Literature from South and North Kivu show large variations of military or non-civilian perpetrators

ranging from 11% to 83.4% [81,85,87,89,92], which likely indicates a variation in violence mechanisms over time and between different contexts, even if these findings only represent the survivors who managed to access care. In Paper III we also saw that 6.9% of those who accessed care reported the perpetrator to be an intimate partner. Given that the prevalence of intimate partner violence experience in the last year has been estimated at 36% in DRC, the proportion of survivors of sexual violence who report the violence being perpetrated by an intimate partner seems low, and might indicate limited access to care for this group, even though the estimated prevalence of 36% includes both physical and sexual intimate partner violence.

Among survivors of sexual violence who accessed care, 28.5% had experienced sexual violence perpetrated by several perpetrators (Paper III), a number that is congruent with one previous study from North Kivu [87] but a much lower proportion than shown in other studies from both North and South Kivu which ranges from 42.7% to 68.9% [43,81,85,92]. This might indicate a variation in sexual violence perpetration between contexts, which needs to be considered in sexual violence programming.

The study presented in Paper III explored the resident status among survivors accessing care and showed that a high proportion of the survivors accessing care were displaced. This can, at least to some extent, be explained by the set-up of the care provision within the displacement camps in Goma, but might also reflect how displaced populations are exposed to sexual violence both before and during the displacement, which has been shown in different humanitarian settings [129,130]. Displaced populations might face risk situations such as when searching for water, fire wood and food which was confirmed in Paper III where we show that 54.8% of displaced survivors of sexual violence who accessed care reported the violence to have happened during a livelihood or essential activity. Their dependence on humanitarian aid might further expose them to sexual exploitation and abuse. We further show in Paper III that displaced survivors of sexual violence who accessed care more frequently than resident survivors reported non-civilian perpetrators, armed assailants and multiple perpetrators which indicates that those who were displaced were more exposed to militarised and/or opportunistic violence, even though our data is limited to those who accessed care. However, we also show that displaced survivors were more likely than resident survivors to report intimate partner violence which can be explained by disruption of social networks and additional stress on families during displacement, as well as by destabilisation of traditional power balances and gender roles [131]. This highlights the importance of looking beyond the pure militarised sexual violence and understand the continuum of violence which populations in humanitarian settings are exposed to, in order to ensure that all survivors of sexual violence and other forms of gender-based violence have access to care and support services within displacement settings.

Perceptions of needs and desire for care: Approachability and ability to perceive healthcare needs

The first step of the access process as depicted in the conceptual framework (Figure 5), ‘perceptions of needs and desire for care’, can be linked to barriers, as well as enabling factors, at both individual, interpersonal and organisational levels. The individual survivor acknowledging the need for healthcare as well as knowing how and where to seek care is of course a key first step towards accessing care, but the level of knowledge and information among their peers can also be crucial, if the survivor chooses to disclose to someone within their own community. At the organisational level, healthcare actors as well as other institutions and organisations, play an important role by sharing correct information in an accessible manner and ensuring that the information, as well as the methods used to spread it, is well-adapted to the different target populations.

Barriers linked to information, or lack thereof, were highlighted both in the qualitative analysis presented in Paper II and in the quantitative analysis presented in Paper III. Lack of information was the most commonly reported barrier among survivors accessing care (Paper III) and strongly emphasised in the focus group discussions as a key barrier for survivors (Paper II). Lack of information on how and where to seek help has also been found to be a barrier to access care in other humanitarian settings such as among survivors of GBV in the Dadaab camp in Kenya [132] as well as among internally displaced survivors of GBV in Ethiopia [133], and among male survivors of sexual violence in refugee settings in Italy, Bangladesh and Kenya [134]. This highlights the need for intensified and targeted awareness raising activities around sexual violence in humanitarian settings.

One important aspect linked to the perception of needs, which was revealed in Paper II, is the need of correct information and how misconceptions can create barriers. We show in Paper II that misunderstanding the need of timely access to care, believing that survivors must seek care within a certain time limit and that after that limit there is no use to seek care, can prevent survivors who do not have the possibility to access care immediately from accessing care at all. This is important to be aware of and something that I have not seen reported in previous literature from North Kivu or other humanitarian settings. At an organisational level it is important that the information shared around the importance of timely access to care is correct and nuanced to ensure that it does not have the contradictory effect on access. The population needs to be aware that seeking care early is ideal to be able to receive the full medical care package, but that there are important parts of the medical care and psychosocial support which can be offered regardless of when the survivor accesses the care. In both quantitative studies included in this thesis (Paper I and Paper III) we show high proportions of survivors accessing care within 72 hours or three days, which might look like a success. However, with the findings

from Paper II, it is important to reflect over if this means that survivors who cannot access healthcare early do not access care at all and if so, how this can be mitigated. We also saw in both studies presented in Paper I and Paper III that there were large variations in timely access to care between the programme sites, which might to some extent be explained by variations in the types of messages the different communities have been reached by, even though that is likely not the sole explanation as other contextual factors presumably play a role as well. The need for medical care and fear of medical consequences were strong drivers to seeking care, as shown in Paper II, and it has been shown that awareness around the limits of HIV PEP can encourage timely care-seeking in another humanitarian setting [135]. However, based on our findings, the messages given around timely access to care need to be nuanced.

In Paper II we show that some participants would not consider it important to seek care after sexual violence perpetrated by an intimate partner, due to lack of knowledge about possible medical consequences of such violence and a sense of normalisation. In Paper III we further show that survivors of intimate partner violence were less likely to access timely care (even though this association was not seen in Mweso and Walikale) and more likely to report lack of information as a barrier, compared to survivors of non-civilian perpetrators. Normalisation around intimate partner violence as well as a high degree of acceptance of such violence in DRC has previously been described in the literature [94]. Normalisation and acceptance of intimate partner sexual violence might impact the perception of need of care and our findings indicate that this issue needs to be addressed. A study based on DHS data from 18 countries in sub-Saharan Africa shows that only 38.8% of survivors of intimate partner violence ever sought any form of help [136], and a study from DRC, conducted in the provinces of Kinshasa and Kongo Central, showed that 73.1% of survivors of intimate partner violence in the Kinshasa province and 62.3% of survivors in Kongo Central never sought any form of help and that less than 2% sought help from a formal source, including healthcare services [137]. This further highlights the need for interventions addressing this group of survivors. Militarised sexual violence has gained a lot of attention in DRC and it is time to also talk about other forms of sexual violence, and especially sexual violence perpetrated by intimate partners, to increase the knowledge around negative health outcomes of such violence and the care and support available.

As discussed above, male survivors of sexual violence seem to overall have limited access to care in North Kivu. In Paper II we show that there were misconceptions around the need of care for male survivors, which could be a contributing factor to the lack of access to care. This should be addressed with adapted, and correct, awareness raising activities with messages also including male survivors and methods designed to reach men. In Paper I we saw a positive association between being male and accessing timely care. This finding was confirmed in a study from Goma analysing data from 2013-2017 [89], but not in our study from 2023-2024

(Paper III). To be able to understand this shift, and if it represents a random fluctuation or a meaningful pattern, further research is needed.

Age was associated with timely care-seeking in both quantitative studies (Paper I and III), which can also be linked to perceptions on needs for care. Older survivors, aged 50 years and above, had lower odds of accessing care within 72 hours compared to survivors aged 20-29 in Paper III and in Paper I we show that all age groups had higher odds of accessing timely care compared to those over 50 years. Survivors aged 50 years or older also had higher odds of reporting lack of information as a barrier, compared to survivors aged 20-29 (Paper III). This might indicate a need for more information specifically targeted towards this age group, which is commonly left out of awareness raising activities and might not be included in narratives around sexual violence. Adolescent survivors constitute another group which might need adapted information and awareness raising activities, even though we could not see any significant differences in perceived barriers between adolescents and survivors aged 20-29 years.

Displaced survivors were significantly less likely to access care within 72 hours (even though there were some variations between programme sites) (Paper III). This was also shown in a study from South Kivu, although the association was non-significant [88]. We also found that displaced survivors were more likely to report lack of information as a barrier, which might be a result of the displacement in itself – being new in an area and not knowing what services are available. A scoping review of access to sexual and reproductive health services among internally displaced, migrant, asylum seeking and refugee women identified lack of information about the services as a main barrier, confirming that knowledge is challenging for displaced populations [138]. Ensuring information about services available to displaced populations should be a priority for actors responding to sexual violence. In Paper III we also saw that displaced survivors were more frequently referred by a trained community point and less frequently self-referred to the healthcare. This might indicate that having trained community focal points can help overcome the lack of knowledge barrier for displaced populations.

At an organisational level, shortcoming in raising awareness and disseminating correct information contribute to lack of information among survivors of sexual violence which impacts the ability to perceive healthcare needs. To address this, all implicated actors should actively work on raising awareness, while ensuring that different types of survivors are reached by correct messages. Sharing of information to improve knowledge among community members was one of the key recommendations by the participants in Paper II and there was a wide-spread belief in the beneficial impact of having more information. The positive impact of awareness raising on access to care for survivors has been shown from other settings [135,139]; however, it is worth noting that awareness raising activities are likely to be insufficient in addressing harmful social norms [140]. In addition to increased information sharing around the services available, it will be important to widen the

narrative around sexual violence in DRC, to include violence which is not directly militarised, such as sexual exploitation and intimate partner violence. How survivors are portrayed also needs to be expanded, including a larger variation of stories and images including children, adolescent, elderly and male survivors as well as sex workers and individuals with diverse sexual orientation and gender identities, to challenge rape myths and the image of the ideal victim. This will help to improve the perception of healthcare needs. It is key that actors invest in outreach activities, and engage with local communities when designing and carrying out awareness raising activities.

Healthcare-seeking: Acceptability and ability to seek healthcare

‘Healthcare-seeking’, the second step of the access process as presented in the conceptual framework (Figure 5), is linked to the dimension of acceptability and the ability to seek care and mainly relates to how family and community members view, accept, and respond to survivors of sexual violence on an interpersonal socio-ecological level, which is interlinked with the sense of shame and self-blame on an individual level as described by Kennedy et al. [111]. At the organisational level, attitudes by healthcare workers, as well how healthcare is offered and whether it is adapted to survivors’ needs or not play a key role for the acceptability of services and the ability to seek healthcare.

Fear of social consequences was the second most mentioned barrier among survivors of sexual violence who accessed care (Paper III) and was highlighted as a main barrier also in the qualitative study (Paper II). Stigmatisation and fear of social consequences have also been reported as barriers to access care for survivors of sexual violence in other humanitarian settings [45,133]. Different types of harmful reactions from family and community members have been extensively described in previous research from DRC, even though not specifically linked to preventing access to care [43,46,85,93,141–143], and constitute a second victimisation for many survivors. This can explain why fear of such consequences constitutes a strong barrier for survivors of sexual violence to disclose and access care or support, and needs to be addressed.

The husbands’ role has been particularly highlighted in relation to social consequences of sexual violence. Paper II shows that husbands often constitute a barrier to care-seeking for women who has experienced sexual violence as women would avoid seeking care to ensure that the husband would not find out about their experience. Rejection by husbands was mentioned as a common and severe consequence of sexual violence disclosure in the home, which has also been shown in previous literature from eastern DRC [43,46,85]. However, it was also

highlighted that husbands could have an important role in supporting survivors and enable care-seeking, something that has also been highlighted in previous studies from South Kivu [85,142].

Activities addressing the harmful attitudes and actions towards survivors of sexual violence in DRC will be needed in order to improve access to care and health outcomes for survivor. It has been shown in another humanitarian setting, within a refugee camp in Uganda, that more progressive attitudes towards survivors of sexual violence have a positive impact on care-seeking [135]. Such activities need to address men in general, and husbands in particular, to enable married women to be able to disclose without risking further harm. A change in attitude among husbands with regards to female survivors of sexual violence in general, and their wives in particular, could really have a huge impact on the possibility for female survivors to safely access care and support.

Displaced survivors of sexual violence had higher odds of reporting fear of social consequences as a barrier compared to resident survivors (Paper III). In a study from South Kivu, it was shown that displaced survivors had higher odds of being rejected after sexual violence [43] which might, at least partly, explain why displaced survivors of sexual violence were less likely to access timely care. A study among Yezidi women in Iraq showed that displaced women had less trust in community members compared to settled women and a study from Ethiopia showed that interpersonal barriers were common for displaced survivors [133,144]. This indicates that displaced survivors of sexual violence are at higher risk of harmful social consequences, which needs to be taken into consideration when responding to displaced populations.

The association we saw between timely access to care and different age groups, sex and violence characteristics might also be linked to the acceptability dimension of access to care as presented in the conceptual framework, through the theories of rape myths and the ideal victim. As mentioned above, the widespread narrative around militarised sexual violence might have a negative impact on the perception of healthcare needs for survivors of sexual violence who do not correspond to the common description of survivors. The presence of one main narrative around sexual violence, the perpetrators and the survivors of such violence, might also have a negative impact on the acceptability and healthcare-seeking as it will impact the view on what is accepted as sexual violence, or create a hierarchy between different forms of violence and impact the perception on who has the right to seek care or support [145]. Moufflet argues that the strong narrative on conflict-related sexual violence in DRC and on how rape is being used as a “weapon of war” might be harmful for those survivors who does not fit into that narrative [146]. Lambert continues the argumentation and highlights that the narratives around conflict-related sexual violence in DRC are incorporated by medical staff which contributes as a barrier to receiving respectful care [147]. Ensuring broader and more inclusive narratives around sexual violence is thus not only important for the perception of

care needs but also to address stigma and harmful norms which leads to negative consequences for survivors and impedes healthcare-seeking both at an interpersonal and an organisational level. Using a more diverse language and different stories when talking about sexual violence is thus key in awareness raising activities as well as in media and in policy. Without minimising the atrocities perpetrated by armed actors, it is crucial to nuance the discourse by highlighting that sexual violence during a humanitarian crisis is not limited to being directly conflict-related, nor a result of a specific “barbaric” culture, but a continuation of violence, rooted in inequalities and harmful gender norms, which is present in all contexts and which impacts individuals in their daily life everywhere in the world. Similar argumentation has also been applied to other conflicts such as in Iraq and Syria [145,148].

Even though sexual violence does affect women and girls disproportionately, it is important to also ensure access to care for male survivors. Stereotypes about male gender roles and stigmatisation might have a negative impact on male survivors of sexual violence and hamper disclosure and care-seeking [149,150], which has also been reported from DRC and other humanitarian settings [127,128,134]. However, our findings are not completely consistent. In Paper III we show that women were more likely than men to report fear of social consequences as a barrier and in Paper I we show that men were more likely to access care within 72 hours. In Paper III we did not see any difference in timely care-seeking between men and women. In Paper II we show that stigma and shame were mentioned as barriers for men to seek care after experiencing sexual violence, even though some participants said it would be easier for male survivors of sexual violence to seek care as they would feel less ashamed than female survivors. It is possible that stigma and shame are strong among male survivors, but that there is a group of men who manage to access care and that those men have less fear of social consequences. More research is however needed to further understand this. At an organisational level, it is important to acknowledge that male survivors do exist and that active work to create access through improved acceptability for men is needed.

At the institutional and organisational level of the socio-ecological framework there are several barriers linked to the dimension of acceptability as described by the access to care framework. As fear of stigma, rejection and other harmful social consequences for survivors of sexual violence appear to be prominent in this region, it is crucial that healthcare is organised in a way that respects survivors’ privacy and confidentiality and minimises the risk of exposure as a survivor of sexual violence when accessing care. Having well-adapted healthcare facilities was emphasised as an enabling factor for access to care in Paper II. Ensuring safe entry points, which are indeed safe for all survivors, as well adapting the models of care to suit different groups of survivors should be part of all response to sexual violence survivors in humanitarian settings, and North Kivu is no exception. Among male survivors of sexual violence in other humanitarian settings, the lack of entry points and

specialised services care has been highlighted as barriers to care [134,151]. Different models of care might be appropriate in different contexts, but given the high level of stigma and negative attitudes and reactions towards survivors of sexual violence in North Kivu, stand-alone services for sexual violence are not recommended. Care integrated within health centres or hospitals can work but careful considerations need to be taken about how to mitigate the risk of compromising privacy and confidentiality and how to ensure appropriate training and attitudes by the staff, acknowledging that there will always be many competing priorities in such facilities. Another option is the more semi-vertical model, as the Tumaini model implemented by MSF in North Kivu, where sexual violence care is integrated with a few selected services. This seems to be working well in creating access, given the numbers seen in Paper I, where 65.8% of the survivors who accessed care had done so in a Tumaini clinic. However, careful considerations must be taken to ensure all survivors feel welcome in such clinics. In Paper II it was shown that some men would not feel comfortable seeking care at the Tumaini as it was seen as a place for women. There might be a need for different models of care to be able to create access for different types of survivors, specifically men and adolescents. One study investigating male survivors of sexual violence accessing healthcare services in seven African countries showed for example that male survivors were more likely to access care if the services were integrated in programs addressing other forms of violence [126]. Additional care pathways for male survivors and a more inclusive profile of Tumaini clinics are needed to ensure all survivors of sexual violence have a safe and acceptable pathway to care.

Another barrier to healthcare-seeking on the organisational level is harmful attitudes by healthcare providers, which was brought up in Paper II. Ensuring trusted and respectful healthcare workers is a key action in ensuring access to care which was highlighted by the participants in Paper II. Adequate, continuous training of staff in both respectful care and survivor-centred principles, as well as regular supervision, mentoring and support is needed. Specific training with regards to survivors of intimate partner violence, child and adolescent survivors and male survivors is also necessary, to ensure respectful and appropriate care provision for these groups.

Healthcare reaching: Availability, accommodation and ability to reach healthcare

The third step in the access process as presented in the conceptual framework (Figure 5), 'healthcare reaching', is linked to the availability and accommodation of healthcare facilities and is mostly situated at the organisational level. Barriers linked to availability and accommodation include the geographical location of healthcare

facilities, opening hours, available medications and transportation options which will impact the individual's ability to reach healthcare.

Proximity of healthcare facilities and the ability to physically reach the healthcare facilities are crucial for the availability and accommodation dimension of access to care. In the qualitative study (Paper II) we show that having close access to a healthcare facility was perceived as a factor which could facilitate care-seeking and a study from South Kivu showed that longer distance to healthcare was associated with later care-seeking [88]. Ensuring decentralised services, close to the populations, and establishing transportation options might enable health-care reaching and improve access to care. Offering care within communities, using trusted community members to provide an adapted care package, might be one option to bring care closer to the target population [152]. Such a community-based model might also help with improving acceptability through reduced stigma and risk of exposure [153]. Community-based models do however need to be carefully designed, respecting social and cultural aspects, and should always be designed in close collaboration with the community [152].

As reflected in the findings shown in Paper I and Paper III, there was a large difference in survivors being self-referred to care, where in Paper I 50.7% of survivors of sexual violence who accessed care were self-referred and in Paper III only 28.3%. In Paper III we saw that displaced survivors were less frequently self-referred and more frequently referred by a trained community focal point, compared to resident survivors. In the displacement camps in Goma, a network of trained focal points was set up with trusted community members, which might explain this. It is possible that a community support model is effective for a displaced population which might not know how or where to access services. In Paper II, participants in the focus group discussions also identified a model with community focal points as a means of enabling access to care for survivor of sexual violence. Community focal points might be a way of reaching support without stigmatisation and can thus be effective in increasing access through both the approachability, acceptability and availability dimensions of the access to care framework.

Different referral pathways were associated with later care-seeking as shown in both Paper I and Paper III and has also been shown in one study from South Kivu [88]. We also saw that those who were referred to the care through any referral pathway (informal, formal, trained community focal point and other) were more likely to report lack of information as a barrier and less likely to report fear of social consequences a barrier, compared to those who were self-referred (Paper III). This suggests that survivors of sexual violence who do not have information about consequences or available services are more likely to seek help through another instance before accessing care, but that only those who are not afraid of social consequences are able to do so. Ensuring that all possible referral actors and first points of contact for survivors of sexual violence are informed about the need for care and the services available is key. More work is needed to also ensure all actors

adhere to survivor-centred principles, truly responding to the needs of the individual survivor, and that there is an effective coordination system between actors. To achieve this, it is key to strengthen the overall coordination mechanisms to GBV response in humanitarian settings [51].

Methodological considerations

This thesis, and the studies which constitutes it, presents a unique perspective on sexual violence and access to care for survivors of such violence in North Kivu. Among the strengths are the large number of survivors of sexual violence accessing care who were included in the study as well the qualitative data collection which was done in the midst of a humanitarian crisis. This provided a valuable opportunity to fill some of the research gaps identified.

Researcher positionality

I, myself, the author of this thesis, am a white, female medical doctor who grew up and trained in Sweden and as such I am an outsider to the study context. I also work for MSF and have been doing so during the study periods. My origin as well as my gender, race and professional background as a healthcare professional and humanitarian aid worker might have shaped the interpretations of findings in this thesis. To reduce the risk of my personal influence, I have consciously reflected over my own positionality, prejudice and assumptions and researchers native to the study locations have been included in each study. Study protocols as well as findings and interpretations have been extensively discussed between research team members and co-authors.

For the qualitative data collection (Paper II) the data collection team members were all employees of MSF and might have been perceived as individuals in a position of power. This might have influenced both the selection of participants and their responses. The three researchers leading the FGDs, one of which was myself, had extensive experience of working with survivors of sexual violence within the study area which is a strength given the sensitivity of the topic. The other two researchers leading the FGDs (EKK and NHG) are Congolese nationals, and provided valuable understanding of the cultural context. I had been working and living in North Kivu for a total period of over 12 months prior to the start of the data collection for the qualitative study, enabling an understanding of the context. All the three researchers leading the data collection had also conducted in-depth interviews, focus group discussions and community assessments on the topic in the area prior to this study.

Selection bias

A major limitation of this thesis is that both the studies presented in Paper I and III only included survivors of sexual violence who had accessed care within MSF supported healthcare facilities. This means that this data is not necessarily representative of survivors of sexual violence who did not access care or those who might have accessed care elsewhere, something that needs to be considered when interpreting the results. There might for example be groups of survivors of sexual violence who do not access care at all or barriers which not only delay care-seeking but completely prevent survivors from accessing care, which were not captured in the studies. However, by conducting the qualitative study, presented in Paper II, I aimed to also get information from community members more widely, which helped to get a more general view of the issue, and not only focus on the survivors of sexual violence who had accessed care in the MSF supported facilities.

In the qualitative study, Paper II, the use of convenience sampling to sample the study locations and the use of purposive sampling, using gate keepers for the sampling of focus group participants, might have introduced selection bias. As the sampling was conducted in the catchment areas of the MSF programmes, it is possible that participants had more knowledge about sexual violence and the services available as they were living in areas to which MSF staff had access and it is possible that they had been reached by awareness raising messages to a higher degree than other populations or groups not exposed to awareness raising efforts.

Reporting bias

All individuals included in the quantitative studies (Paper I and III) had sought care after a sexual violence incident, which they self-reported. It is not possible for medical care providers to verify if sexual violence has been perpetrated as reported as many survivors of sexual violence do not have any visible signs of violence at the time when they seek care. Such “verification” would also be against survivor-centred principles and medical ethical values. This limitation is inherent to research on sexual violence. Other data collected for Paper I and III were also based on self-reporting which might introduce recall bias, social desirability bias as well as post-hoc rationalisation. Even though I do consider the risk low given how the data was collected (during the medical consultation) and the nature of the questions, this needs to be considered in the interpretation of the results.

As gatekeepers were used for the purposive sampling of participants in the qualitative study (Paper II), both social desirability bias and collaborative consensus bias might have been introduced. This was mitigated by informing the participants about the objectives of the study, that no results would be able to link to any individual and also by avoiding questions about how the participant would act themselves.

The research team members were working for MSF, which could have impacted the nature of the discussions, especially with regards to feedback on available services. Our impression is however that participants felt free to provide both positive and negative opinions about the services available. To address possible influence by the power imbalance between participants and the research team, the voluntary nature of participation was emphasised. It was also highlighted that there would be no impact on the aid provided to the population or to individuals depending on participation or not and that aid would not be dependent on the views shared during the data collection. The research team members were not always all of the same sex as the participants and there were several research members present during the discussions which might have an impact on what was shared during the discussions, and should be considered in the interpretation, even though efforts were made to ensure a trusting and open atmosphere.

A topic guide was used to guide the discussions but also to ensure consistency even though several different facilitators, note takers and translators were involved in the data collection. The topic guide was pre-tested with a group of MSF staff, including women and men from the area.

Lack of in-depth demographical data and context variables

For both the studies presented in Paper I and Paper III, secondary data were used. This prevented the research team from freely choosing the data elements included. Some data, for example distance to healthcare facilities, socio-economic status, gender identity and sexual orientation, as well as contextual factors such as population movements, length of displacement, active conflict, and site-specific characteristics were not available in the quantitative data sets. This limited the analyses possible and might have caused residual confounding as we could not adjust for these factors in the regression models.

Detailed demographic data were also lacking from the qualitative study; thus, the exploration of gender, age, socioeconomic status, disability, diverse sexual orientation, or gender identities were not possible, limiting the possibility of analysis of potentially marginalised sub-groups and intersectionality.

Generalisability

All the data used for this thesis, both the quantitative and the qualitative, were obtained from areas in North Kivu where MSF had implemented programmes. Two areas for Paper I and II and three areas for Paper III. As care-seeking and access to care do vary across different contexts and different cultures, findings from Paper I and III might have limited generalisability, and findings from Paper II might have limited transferability to other settings (see further below). However, there are

similarities between the study sites as well as to some extent consistency with research findings from other humanitarian settings and I believe that some of the more general findings can be applicable to similar humanitarian crises. For example, that survivors of sexual violence by different types of perpetrators and survivors with different displacement status have different care-seeking patterns and varying access to timely care calls for better understanding of a specific context and specific target groups in every setting.

Trustworthiness in qualitative research

Throughout the work with the qualitative study presented in Paper II, specific considerations were taken to ensure trustworthiness. Trustworthiness encompasses four main areas; credibility, transferability, dependability and confirmability as presented by Lincoln and Guba [154] and further described by Amankwaa [155].

Credibility

Two of the co-authors of this study, EKK and NHG, are Congolese nationals, originating from North Kivu. I myself had spent a total of more than 12 months in the area before the study start. We had all also worked with the MSF sexual violence programme and provided care and support to survivors of sexual violence in the area. This gave us an understanding of the specific study context and the study topic which facilitated our understanding of the study participants' experiences shared in the focus group discussions. Each focus group discussion was led by either myself, EKK or NHG. The findings were discussed among the co-authors who were also leading the data collection. Reflections on the positionality of the authors were done throughout the research process.

There were no peer debriefings or member checking, which is a limitation.

Transferability

In order to enhance the transferability of the study we provided a detailed description of the context of the study and the process of analysis in Paper II [156]. However, a limitation is that the data were collected from a specific context and the findings may therefore not be fully transferable to other settings, outside of the current context even though some aspects might have broader relevance. For example, that misconceptions about care needs might prevent care seeking for survivors of sexual violence and the importance of identifying and counteract those misconceptions is important for other settings, but the specific misconceptions might vary between settings.

Dependability

A topic guide was used for all FGDs in order to enhance dependability. The coding and interpretation processes as well as all decision making during the research process were documented to ensure traceability.

Confirmability

The facilitators of the focus group discussions (HR, EKK and NHG) are all co-authors of Paper II and maintained an ongoing dialogue throughout the data collection process to enhance confirmability [155]. The facilitators also participated in the data analysis, ensuring that the interpretations of data reflected a collective understanding, minimising the risk of subjectivity. The involvement of multiple co-authors, both those who facilitated the group discussions and others, in continuous dialogue throughout the analysis process further enhance the confirmability. The explicit description of the role of the research team and their positions within the research context contributed to the study's reflexivity [155]. The results from our quantitative research also provide indirect confirmability of some of the findings.

Practical implications

The research upon which this thesis is built has several practical implications and recommendations for actors working with sexual violence response in North Kivu and in other humanitarian settings. These include the following:

- Understanding target population, sexual violence characteristics and care-seeking behaviours in changing humanitarian contexts and adapt responses accordingly
- Adaption of services as contexts and target populations change
- Adaption of entry points and models of care to different groups of survivors of sexual violence (age, gender, resident status), in collaboration with the intended target population
- Ensure adequate training and support to healthcare staff, including training in survivor-centred principles and respectful care
- Implement community-based focal points for enhanced access, especially for displaced populations
- Broaden the narrative around sexual violence to include all forms of sexual violence and all forms of survivors and perpetrators, especially to include intimate partner violence, younger and older survivors and survivors of all genders

- Intensify and adapt awareness raising to different groups of survivors
- Ensuring correct awareness raising messages and exploring and addressing possible misconceptions within the target groups
- Addressing stigma, rape myths and harmful gender norms in order to improve access to care and minimise secondary victimisation, specifically addressing men's (husbands') attitudes
- Involvement of local actors and communities and enhanced coordination and referral systems

Implications for future research

This thesis helps to fill an identified knowledge gap concerning sexual violence and access to care for survivors in North Kivu, and also sheds light on additional research needs. Further research on why survivors of sexual violence choose not to or are unable to seek care and support, and how access to care can be improved is paramount. The findings from the studies in this thesis raise some issues which should be further explored;

- Continuous exploration around barriers to care in specific settings, including during active conflict and displacement
- Research including additional groups; individuals with diverse sexual orientation or gender identity, members of armed groups, sex workers, elderly and adolescents.
- Research including additional variables; socio-economic status, distance to healthcare, length of displacement, contextual factors
- Evaluation of different models of care (i.e. community-based care and Tumaini models) from survivor and healthcare worker perspectives, both in terms of access and quality of care
- Action research with implementation of interventions addressing identified barriers, and evaluation of the impact of implemented interventions
- Participatory research to ensure research follows an agenda set by survivors/target population and which in itself can enhance empowerment. Not for survivors and populations but with them.
- Research on the quality of care provision and outcome for survivors who do access care in humanitarian settings
- Evaluation of the impact of different awareness raising and norm changing activities on access to care and positive health outcomes

Conclusion

Sexual violence is pervasive in North Kivu, as in many parts of the world, and access to care for survivors is limited. Survivor characteristics, residential status, violence characteristics and referral pathways impact timely access to care and major barriers are linked to lack of knowledge, fear of negative social consequences and shortcomings in healthcare response. Understanding the differences in care-seeking behaviours and specific barriers experienced by the target population is key for actors responding to sexual violence in humanitarian settings and this needs to be considered when designing a response. Response needs to be adapted to different groups of survivors, specifically to displaced populations, to survivors of sexual violence perpetrated by an intimate partner, and to both young and old survivors, starting with proper assessment, collaborative design with the target population, adapted models of care and entry points and adapted awareness raising messages and methods. Specific attention needs to be paid to misconceptions in the population which might hamper care-seeking, e.g. with regards to the timing of care-seeking. Healthcare staff needs to be trained and supported not only in the technical aspects of care provision but also on respectful care and survivor-centred principles. In humanitarian settings, it is likely that the context will change and there is need for flexible and responsive interventions, to be able to adapt to rapid changes.

The narrative around conflict-related sexual violence in North Kivu has had a negative impact on the perception of other forms of sexual violence and fuels rape myths and stigmatising attitudes. Broadening the narrative, and actively working to change norms around sexual violence will be crucial to ensure all survivors of sexual violence, regardless of its form, can access care in a safe way, and minimise secondary victimisation. Addressing men, and particularly husbands will be key in this setting.

Even though there are many barriers to access care at the individual level the burden of solutions should not be on the shoulders of survivors. Responsibility lies within the broader society; governments, healthcare organisations and other stakeholders.

In parallel to the work to increase access to care for survivors of sexual violence, it is crucial to also address the underlying factors contributing to the violence perpetration. Traditional gender norms, inequalities and acceptance of sexual violence both in war and peace time need to be addressed, even if outside of the scope of this thesis.

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Paper I



RESEARCH ARTICLE

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Care-seeking patterns and timely access to care among survivors of sexual violence in North Kivu, the Democratic Republic of the Congo: a retrospective file-based study

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ABSTRACT

Background: Sexual violence is widespread in war-torn North Kivu province in the Democratic Republic of the Congo (DRC). Timely access to care is crucial for the healing and wellbeing of survivors of sexual violence, but is problematic due to a variety of barriers. Through a better understanding of care-seeking behaviours and factors influencing timely access to care, programmes can be adapted to overcome some of the barriers faced by survivors of sexual violence.

Objective: The aim of this study was to describe demographics, care-seeking patterns and factors influencing timely care-seeking by survivors of sexual violence.

Methods: Retrospective file-based data analysis of sexual violence survivors accessing care within two Médecins Sans Frontières (MSF) programmes supporting the Ministry of Health, in North Kivu, DRC, 2014–2018.

Results: Most survivors (66%) sought care at specialised sexual violence clinics and a majority of the survivors were self-referred (51%). Most survivors seeking care (70%) did so within 3 days. Male survivors accessing care were significantly more likely to seek care within 3 days compared to females. All age groups under 50 years old were more likely to seek care within 3 days compared to those aged 50 years and older. Being referred by the community, a family member, mobile clinic or authorities was significantly associated with less probability of seeking care within 3 days compared to being self-referred.

Conclusion: Access to timely health care for survivors of sexual violence in North Kivu, DRC, is challenging and varies between different groups of survivors. Providers responding to survivors of sexual violence need to adapt models of care and awareness raising strategies to ensure that programmes are developed to enable timely access to care for all survivors. More research is needed to further understand the barriers and enablers to access timely care for different groups of survivors.

PAPER CONTEXT

- **Main findings:** Timely access to care for survivors of sexual violence is crucial yet challenging in many places, including in North Kivu, the Democratic Republic of the Congo. This study shows that a majority of survivors access care through specialised clinics, that access is limited for male and child survivors, and highlights factors influencing timely access to care for survivors of sexual violence.
- **Added knowledge:** This study shows that age, sex, and different referral pathways impact timely care seeking among survivors of sexual violence accessing care.
- **Global health impact for policy and action:** A better understanding of care-seeking patterns and which factors influence timely care seeking is useful when designing and implementing programmes responding to survivors of sexual violence.

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Introduction

For survivors of sexual violence, timely access to medical care and psychosocial support is crucial for healing and recovery. Yet, most survivors of sexual violence never seek health care [1] and the ones who

do seek health care do not always manage to do so within the three-day window to be able to receive the full package of care [2,3]. In North Kivu, in eastern Democratic Republic of the Congo (DRC), sexual violence is pervasive and access to health care is

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limited. Prevalence estimates from the World Health Organization (WHO) indicate that 47% of women and girls above 15 years in DRC have experienced physical and/or sexual violence by an intimate partner and that 6% have experienced non-partner sexual violence in their lifetime [4]. Another study shows that around 40% of women and 24% of men in eastern DRC have experienced sexual violence and among those, 74% of the women and 65% of the men reported experience of conflict-related sexual violence [5]. The conflict-related sexual violence in DRC has been described as widespread, deliberate, strategic and systematic, with numerous reports of mass rapes as well as rapes with deliberate torture and extreme violence [6–8].

Survivors of sexual violence are at risk for several medical and psychological sequelae as well as negative social consequences [9–15]. Medical care for survivors of sexual violence in humanitarian settings includes care for wounds and injuries, post-exposure prophylaxis (PEP) of STIs, including human immunodeficiency virus (HIV) and hepatitis B, emergency contraception and management of unwanted pregnancies to the full extent of the law [16,17]. As part of quality response, survivors should also be offered psychological support and access to protection and social and legal support services [16,18]. As the HIV PEP is only effective if it is started within 72 hours of the incident and emergency contraception only effective if taken within 120 hours [17], timely access to care is crucial.

The proportion of survivors accessing care within 3 days in eastern DRC varies considerably between different studies, ranging between 1% and 86% [2,3,13,19–21]. Different barriers to seeking or accessing health care after a sexual violence incident in DRC are lack of money for transport, fear of disclosure, shame, social isolation, stigmatisation by community, fear that service providers will not be sensitive, lack of knowledge of the services available and poor quality or accessibility of the services [2,9,22].

Médecins Sans Frontières (MSF) is, in collaboration with the Ministry of Health, offering comprehensive care to survivors of sexual violence through different models of care in DRC. However, access to care still seems to be limited and in order to improve timely access to care for survivors of sexual violence, it is important to understand the current care-seeking patterns. With better understanding of the care-seeking patterns, models of care, awareness raising strategies and referral pathways can be appropriately adapted. Therefore, this study aimed to describe demographic background and care-seeking patterns as well as to assess factors that influence timely access

to care among survivors of sexual violence in MSF programmes in North Kivu, DRC. More specifically, the study sought to examine the age, sex, referral patterns, type of healthcare facility where survivors accessed care, timing of care-seeking among sexual violence survivors and the association between timely access to care and age, sex and referral pattern.

Methods

Study design

This was a retrospective file-based study, using routinely collected data from MSF programmes for survivors of sexual violence in Walikale and Mweso, North Kivu, DRC, recorded between 1 January 2014 and 31 December 2018.

Setting

The study took place in the province of North Kivu located in Eastern DRC, an area affected by protracted conflict and displacements. DRC has a population of almost 96 million people [23] and around 6 million of those live in North Kivu (2015 data) [24]. DRC is ranked 179 out of 191 countries and territories on the Humanitarian Development Index and has a poverty rate of 77% [25]. MSF is providing health care in several locations in DRC and creating access to comprehensive care for survivors of sexual violence is one of their activities. In North Kivu, MSF is working in close collaboration with the Ministry of Health and is (among other activities) supporting Ministry of Health run hospitals and primary healthcare facilities in providing care to survivors of sexual violence. MSF is also providing care to survivors of sexual violence through a specialised model of care called the Tumaini clinics ('hope' in Swahili) within their programmes in the Walikale and Mweso health zones. The Tumaini clinics are combining care to survivors of sexual violence and all forms of intimate partner violence with treatment for STIs, contraception counselling and provision, safe abortion care and mental health counselling. Integrating sexual violence care with other activities aims to create a safe entry point for survivors without exposure and ensures a well-trained team of medical staff and mental health counsellors. MSF programmes also include awareness raising activities around sexual violence, conducted both by MSF health promotion staff and community health workers who are a part of the national healthcare system.

Data were collected from two MSF programmes in North Kivu; Mweso and Walikale. The two programmes were purposively selected as they are using both the Tumaini model of care and integrated models of care in primary healthcare centres and hospitals,

giving an opportunity to examine the care-seeking patterns among survivors accessing care in the different healthcare facilities and sexual violence care models. Data from all patients registered as survivors of sexual violence (including 'rape' and 'sexual violence other than rape') in the two MSF programmes during 1 January 2014 to 31 December 2018 were included. 'rape' was defined as non-consensual penetration of anus, mouth or vagina by a penis, another body part or a foreign object. 'sexual violence other than rape' included all types of sexual violence, defined as a sexual act or attempt to obtain a sexual act without consent, excluding rape as defined above (including, for example, attempted rapes and forced masturbation). All accounts of rape and other types of sexual violence are based on self-reporting by the survivors.

Data collection

Data were collected as part of the routine medical activities. Data from individual survivors were registered on standardised medical files by the healthcare worker providing care to the survivor. Key data were transferred from the medical files to a tally sheet by the staff in each healthcare facility. The completed tally sheets were transported to the MSF office in either Mweso or Walikale and shared with the data administrator who entered the data into a password-protected Excel sheet. All data were de-identified and cannot be traced back to any individual. Quality control checks were done by the projects' medical team leaders on a regular basis, by randomly checking data entered in the data base against medical files or data tally sheets.

Sample size

Sample size calculations were made to determine the sample size needed to perform the regression analysis used. The sample size calculation was based on the work of Peduzzi et al. [26] suggesting that $N = 10k/p$ where N = minimum number of cases to be included, k = number of covariates and p = smallest proportions of cases (negative or positive). For the analysis, three covariates were used, $k = 3$ (sex, age and referral pathway), and p was set to 1% (0.01), yielding $N = 10 \times 3/0.01 = 3000$. The p was set as low as 1% to ensure that analyses could be made even if a very small proportion of the population would not be receiving care (based on knowledge from staff working in the projects).

Variables

Variables included in descriptive analyses were the total number of survivors of sexual violence, sex, age, time between the sexual violence incident and the

visit at the healthcare facility, referral pathway and type of healthcare facility visited.

In the logistic regression models, the dependent variable used was time between the incident and the visit at the healthcare facility, categorised as the dichotomous variable seeking care within 3 days (yes or no). The dichotomous variable was classified as 'yes' for survivors seeking health care on day 0, 1, 2, and 3 after the incident, even though this might include survivors seeking care up to 96 hours after the incident. This is due to the fact that no information about the exact time of the incident or the visit was available in the dataset but only the day of incident and day of visit.

The independent variables included in the logistic regression models were sex, age and referral pathways.

Sex was used as a dichotomous variable; female or male.

Age was recorded as a continuous measure categorised as groups; 0–9 years, 10–19 years, 20–29 years, 30–39 years, 40–49 years and ≥ 50 years to provide a separate group for adolescents as defined by WHO [27] and to create equal intervals.

Referral pathway was categorised according to how the survivors were referred to the healthcare facility: self-referred, health promotion team, community health workers, community, psychosocial staff, family member, mobile clinic, local authorities, partner or other.

Analysis

Bivariable and multivariable logistic regression models were used to examine the association between age, sex and referral pathway and the outcome of seeking care within 3 days of the sexual violence incident. Multivariable logistic regression models were used to adjust for age and sex. The results are shown as odds ratios (ORs) and 95% CIs. Two-tailed p -values < 0.05 were considered significant.

Missing data

Missing clinical data were assumed to be missing completely at random. The missing data in the data set varied between 0% and 0.5% for the different variables. Complete-case analysis was used since a minimal bias was believed to occur due to the low rate of missing cases [28].

Results

Total number of sexual violence survivors seeking care was 4684; among those 4655 reported being raped and 28 reported experience of sexual violence other than rape. There were 4146 survivors accessing care in the Mweso programme and 538 survivors within the Walikale programme. The number of survivors accessing care varied over the years, with the highest number of survivors accessing care in 2017 (Table 1).

Table 1. Sex and age group of survivors of sexual violence accessing care in MSF programmes in Mweso and Walikale, DRC, 2014–2018.

Year	Sex	Age						Missing data ^a	Total
		0–9	10–19	20–29	30–39	40–49	≥50		
2014	Female	14	195	232	154	66	30		691
	Male	0	4	12	7	8	1		32
	Total	14	199	244	161	74	31		723
2015	Female	24	153	186	144	88	30		625
	Male	0	0	11	10	1	0		22
	Total	24	153	197	154	89	30		647
2016	Female	20	248	309	287	116	52		1032
	Male	1	6	8	8	1	1		25
	Total	21	254	317	295	117	53		1057
2017	Female	25	316	377	291	124	50	1	1184
	Male	0	6	8	8	1	2		25
	Total	25	322	385	299	125	52	1	1209
2018	Female	24	281	402	202	90	20		1019
	Male	1	10	9	6	3	0		29
	Total	25	291	411	208	93	20		1048
2014–2018	Female	107	1193	1506	1078	484	182	1	4551
	Male	2	26	48	39	14	4	0	133
	Total	109	1219	1554	1117	498	186	1	4684

^aData concerning age of survivor missing.

Among all survivors of sexual violence accessing care, 97.2% ($n = 4551$) were women and 2.8% ($n = 133$) were men. The age range was from 1 to 80 years. The mean age was 26.95 ± 11 years and median age 26 years (IQR 18–34). Out of all survivors accessing care, 2.3% ($n = 109$) were 0–9 years old and 26% were adolescents, aged 10–19 years ($n = 1219$). The number of survivors accessing care per year, sex and age group is shown in Table 1. The largest age group, both among female and male survivors, was 20–29 years.

The majority of the survivors seeking care, 66% ($n = 3081$) sought care at a Tumaini clinic; 5%

($n = 242$) sought care at a hospital and 29% ($n = 1361$) at a health centre. The Tumaini clinics were the most commonly accessed type of healthcare facility for both sexes and all age groups. The number of healthcare facilities supported by MSF for sexual violence care provision and the number of survivors accessing care per type of facility, project and year are shown in Table 2. As shown in the table, some facilities were only running or providing care during a part of the year.

The most commonly reported referral pathways were being self-referred (50.7%, $n = 2375$), being referred by the health promotion team (MSF staff)

Table 2. Healthcare facilities offering sexual violence care with MSF support and survivors of sexual violence accessing care in those facilities in Walikale and Mweso, North Kivu, DRC 2014–2018.

Year		Number of MSF supported healthcare facilities with sexual violence care provision			Number of survivors of sexual violence accessing care		
		Health Centres	Hospitals	Tumaini (specialised sexual violence clinic)	Health Centres	Hospitals	Tumaini (specialised sexual violence clinic)
2014	Walikale	3	1	0	24	4	0
	Mweso	4	1	2 ^a	161	0	534
	Total	7	2	1	185	4	534
2015	Walikale	3	1	0	26	44	0
	Mweso	5 ^b	1	1	167	0	410
	Total	8	2	1	193	44	410
2016	Walikale	4 ^c	1	1 ^d	45	194	46
	Mweso	5	1	2 ^e	220	0	552
	Total	9	2	3	265	194	598
2017	Walikale	4	1	1	32	0	77
	Mweso	5	1	2	293	0	807
	Total	9	2	3	325	0	884
2018	Walikale	4	1	1	9	0	37
	Mweso	11 ^f	1	2	384	0	618
	Total	15	2	3	393	0	655
2014–2018	Walikale				136	242	160
	Mweso				1225	0	2921
	Total				1361	242	3081

^aOne of them only January to August.^bOne of them only in December.^cOne of them only September–December.^dOnly November–December.^eOne of them only April–December.^fSix of them only March–December.

Table 3. Referral pathways for survivors of sexual violence accessing care in different type of healthcare facilities in MSF programmes in North Kivu, DRC, 2014–2018.

	Tumaini		Health Centre		Hospital		Total	
	n	%	n	%	n	%	n	%
<i>Referral pathway</i>								
Self-referral	1459	47.22%	902	66.77%	14	5.83%	2375	50.74%
Health promotion team	803	25.99%	5	0.37%	0	0.00%	808	17.26%
Community health worker	195	6.31%	117	8.66%	15	6.25%	327	6.99%
Community	366	11.84%	49	3.63%	0	0.00%	415	8.87%
Psychosocial staff	76	2.46%	105	7.77%	0	0.00%	181	3.87%
Family member	35	1.13%	20	1.48%	29	12.08%	84	1.79%
Mobile clinic	3	0.10%	3	0.22%	25	10.42%	31	0.66%
Local authorities	71	2.30%	62	4.59%	154	64.17%	287	6.13%
Partner	0	0.00%	3	0.22%	2	0.83%	5	0.11%
Other	82	2.65%	85	6.29%	1	0.42%	168	3.59%

Table 4. Timing of care seeking among survivors of sexual violence accessing care in different healthcare facilities within MSF programmes in Walikale and Mweso, DRC, 2014–2018.

Days between sexual violence incident and receiving care	Percentage of total survivors accessing care											
	Mweso				Walikale				Total			
	Tumaini	Health Centre	Hospital	Total	Tumaini	Health Centre	Hospital	Total	Tumaini	Health Centre	Hospital	Total
0–3	70.55%	86.45%	-	75.25%	23.67%	46.03%	18.83%	26.78%	67.98%	82.68%	18.83%	69.72%
4–5	7.61%	3.18%	-	6.30%	1.78%	3.17%	10.46%	5.99%	7.29%	3.18%	10.46%	6.27%
6–30	11.04%	6.20%	-	9.61%	13.61%	18.25%	41.00%	26.97%	11.18%	7.33%	41.00%	11.59%
31–90	5.76%	2.78%	-	4.88%	15.38%	10.32%	22.18%	17.23%	6.29%	3.48%	22.18%	6.29%
91–180	2.57%	0.82%	-	2.05%	8.28%	12.70%	5.44%	8.05%	2.88%	1.92%	5.44%	2.74%
>180	2.47%	0.57%	-	1.91%	37.28%	9.52%	2.09%	14.98%	4.37%	1.41%	2.09%	3.40%

Table 5. Association between age, sex and referral pathways and access to care within 3 days of a sexual violence incident among survivors accessing care in MSF programmes in Walikale and Mweso, DRC 2014–2018.

Dependent variable: Accessing care within 3 days after the sexual violence incident	Bivariable logistic regression				Multivariable logistic regression			
	OR	95% CI		p-value	Adjusted OR	95% CI		p-value
Independent variable:								
Age								
≥50	<i>ref</i>				<i>ref</i>			
0–9	2.903	1.743	4.833	<0.001	3.375	1.931	5.897	<0.001
10–19	2.379	1.740	3.253	<0.001	2.067	1.476	2.895	<0.001
20–29	3.310	2.426	4.515	<0.001	2.907	2.081	4.061	<0.001
30–39	2.603	1.898	3.570	<0.001	2.213	1.576	3.107	<0.001
40–49	1.859	1.322	2.615	<0.001	1.597	1.108	2.301	0.012
Sex								
Female	<i>ref</i>				<i>ref</i>			
Male	2.846	1.725	4.696	<0.001	2.679	2.673	1.592	4.489
Referral pathway								
Self-referral	<i>ref</i>				<i>ref</i>			
Health promotion team	1.125	0.934	1.353	0.214	1.169	0.969	1.410	0.104
Community health worker	1.071	0.82	1.397	0.615	1.161	0.887	1.520	0.277
Community	0.783	0.624	0.982	0.034	0.791	0.629	0.995	0.045
Psychosocial staff	1.022	0.724	1.442	0.903	1.028	0.726	1.456	0.876
Family member	0.282	0.182	0.438	<0.001	0.285	0.180	0.450	<0.001
Mobile clinic	0.086	0.035	0.211	<0.001	0.097	0.039	0.239	<0.001
Local authorities	0.089	0.066	0.121	<0.001	0.091	0.066	0.123	<0.001
Partner	0.239	0.04	1.433	0.117	0.243	0.039	1.509	0.129
Other	1.477	0.999	2.184	0.051	1.566	1.054	2.326	0.026

Hosmer and Lemeshow test for goodness of fit of multiple logistic regression model; p-value 0.595. Bold indicates significant values (p-value < 0.05). OR = Odds Ratio, CI = Confidence Interval.

(17.3%, $n = 808$) or being referred by someone in the community (8.9% $n = 415$) (Table 3). Self-referral was most common in the age group 20–29 (54.0%). In both the Tumainis and the health centres, being self-referred was the most common referral pathway, whereas in the hospitals the most common referral pathway was through local authorities (Table 3).

In the Mweso programme 75.3% of the survivors accessing care sought care within 3 days and in the Walikale programme 26.8% (Table 4). An additional 6.3% sought care between 3 and 5 days after the incident. The percentage of survivors seeking care within 3 days was highest in the health centres, 82.7%, followed by 68.0% in the Tumainis. In the

hospitals only 18.8% of survivors sought care within 3 days (Table 4).

Table 5 shows the result of the bivariable logistic regression models for each independent variable as well as the result of the multivariable logistic regression model adjusting for sex, age and referral pathway. All age groups were significantly associated with higher probability of seeking care within 3 days compared to the age group ≥ 50 years ($p < 0.001$) (Table 5), the highest probability was for the age group 0–9 years. Males had a significantly higher probability of seeking care within 3 days compared to female ($p < 0.001$) (Table 5). Being referred by the community, a family member, a mobile clinic or local authorities was significantly associated with lower probability of seeking care within 3 days compared to being self-referred (p -values < 0.001 for referral by a family member, mobile clinic and local authorities, p -value < 0.005 for referral by community) (Table 5).

The associations described above were significant both in the bivariable logistic regression models for each independent variable and in the multivariable logistic regression model including age, sex and referral pattern. According to the Hosmer and Lemeshow test for goodness of fit, the multivariable logistic regression model was of good fit. However, the classification table showed 74% overall correct prediction of those who sought care within 3 days. According to the Nagelkerke test, the independent variables can explain 14.1% of the variation in the dependent variables.

Discussion

As shown in this study, the majority of the survivors seeking care, 70%, did so within the three-day window that would enable them to receive the full package of care, but this varied greatly between the two study sites. Most survivors sought care at the clinics specialised in sexual violence (Tumaini clinics) and this was true for both female and males and for all age groups. Further, among survivors seeking care, the proportion of those who were males or children was low. In addition, we show that male survivors were significantly more likely than female survivors to seek care within 3 days whereas survivors in all age groups under 50 years were significantly more likely to seek care within 3 days compared to those aged 50 years and older. Survivors being referred by the community, family member, mobile clinic or local authorities were less likely to seek care within 3 days, compared to survivors who were self-referred.

The low proportion of male survivors accessing care among the total number of survivors in our findings is in line with one previous study of survivors accessing care in North Kivu [20]. Prevalence

numbers obtained from the study area, showing that 39.7% of women and 23.6% of men had experienced sexual violence [5], indicate a ratio of 0.6 male per 1 female survivor, which leads us to speculate that male survivors are less likely to access care compared to female survivors in this area. This might have several explanations such as stigmatisation, male gender roles, and self-blaming [29,30], awareness raising activities focusing more on female survivors, the way in which care is organised and lack of confidence among staff to identify male survivors. Even though women and girls are disproportionately affected by sexual violence, the access to care for male survivors also needs attention and can be addressed by adapting services to be more acceptable to and accessible by males for example, by integrating sexual violence services with other less stigmatising services, including information about male survivors in awareness raising activities and, improving identification of male survivors. More research is needed to further explore how male survivors prefer to access and receive care.

The broad age range shown in our findings, 1–80 years, is in line with previous studies of survivors in eastern DRC [3,20] and indicates that sexual violence can happen to anyone, regardless of age. The age group most commonly accessing care was 20–29 years old, which is also congruent with previous studies [19,20] from DRC, even though one of the studies found younger survivors more commonly accessing care in one of their two study areas [20]. Self-referral was the most common referral pathway for this age group, which might indicate that this age group has the best access to information, either through awareness raising activities or by peers. Our findings show that 26% of the survivors accessing care were adolescents (10–19 years) and 2% were under 10 years old. Even though child sexual abuse has been reported as common in DRC [31], other studies of survivors accessing care also show low proportions of children, ranging from 0% of survivors being under 10 years old and between 1% and 16% of survivors being under 16 years old [3,19,32]. It is reasonable to assume that not all child survivors are accessing care, considering that children do not always have the words or the ability to recognise and describe the abuse. It has been shown that child sexual abuse in DRC is much more likely to be perpetrated by a civilian and someone known to the survivor, compared to adult sexual violence [31,33], which might make it more difficult to disclose the incident. This could be addressed through more awareness raising activities around child sexual abuse, adapting services to be more child friendly and training staff to be aware of signs and symptoms of child sexual abuse. The finding that survivors in the lower age groups were more likely to seek care

within 3 days compared to survivors aged 50 years and older is consistent with the results of other studies from DRC showing that child survivors are more likely to seek care early [3,33]. This indicates that children are overall less likely to access care but when they do, they tend to seek care early.

The proportion of survivors seeking care within 3 days varies among different studies from the surrounding areas. Most studies from DRC report lower proportions of survivors accessing care within 72 hours than those found in this study, varying from 0.6% to 46% [2,3,13,19]. One study from another MSF programme in DRC showed proportions similar to ours from one of their research sites (60%) but lower proportions from the second study location (32%) [20] and a study from South Kivu showed a high proportion of survivors accessing care within 72 hours in the healthcare centres (86%) but lower proportion (12%) in the hospital [21]. The MSF awareness raising activities in the area, especially in Mweso, have been intense in promoting the importance of seeking care within 3 days, which could have had a positive impact on knowledge about the urgency of seeking care among the population and explain the difference in timing between the two study locations. It is however important to look at this indicator critically. If the community perception is that one has to come within 3 days, there is a risk that survivors who cannot access care within 3 days will not present for health care at all. Even if it is important for survivors to access care within 3 days in order to be able to prevent HIV transmission, it is also important that survivors who for different reasons cannot access care within 3 days still access care whenever it is possible and this needs to be well communicated in awareness raising activities. Timely access to care was higher in the health centres compared to the Tumainis, which might be explained by the physical proximity to the health centres that are more densely situated in the rural areas, but might also be a result of less knowledge about the possibility to seek care after 3 days in the more remote areas. This would need further investigation to further the understanding.

Male survivors were more likely to seek care within 3 days after the sexual violence incident compared to female survivors, which might be related to the fact that women in DRC (especially in rural areas) to a greater extent than men lack power and income [34]. Another reason might be that the few male survivors who accessed care were the ones who were well informed and courageous enough to seek care and therefore also more likely to be aware of the need of timely care and having the resources to access care in time.

Most survivors were self-referred, which is congruent with another study from North Kivu [20].

However, one study from South Kivu showed that other NGOs are the most common referral pathway [3]. That was not observed in our findings but can be explained by the fact that there are very few other providers offering support services to survivors of sexual violence in the two study locations. Mapping and collaboration with other service providers as well as collaboration with local authorities for set-up of referral systems are crucial for a successful sexual violence intervention and this needs to be strengthened within the study area.

Being referred from the community, by a family member, mobile clinic or local authorities was associated with lower odds of seeking care within 3 days. This finding should be interpreted cautiously since it is not known at what moment the survivor accessed the respective instance for referral. The finding might, however, indicate that the referring instances lack information about the medical emergency of a sexual violence incident and thus do not refer the survivor immediately, but it might indicate that survivors disclosing late tend to do so to one of those instances instead of seeking care directly. More research focusing on help- and care-seeking behaviours and first point of contact for survivors as well as assessment of knowledge and willingness to refer among community members, local authorities and other service providers is needed to further understand this finding and to improve timely referrals.

Most survivors in this study sought care at one of the 3 Tumaini clinics. This was the case for female and male survivors within all age groups. Reasons for this might be that all the Tumaini clinics are located in larger villages, facilitating access from several major roads. The services provided in specialised facilities are likely to be well known and well perceived by the population, since the staff are specialised in sexual violence and the facilities are mentioned in awareness raising activities in the areas. The professional attitudes among the staff might also be more appropriate within a specialised clinic. We also show that the self-referral and referral from a health promoter was common in the Tumaini clinics, whereas referrals from local authorities were more common in the hospitals. This indicates that the specialised services are widely known among the health promoters and general population but either not well known or not preferred by authorities. This needs further exploration, as well as adapted actions to ensure survivors referred through authorities also have the opportunity to choose the healthcare facility of their preference.

There are potential negative effects of specialised clinics, e.g. increased stigmatisation of a survivor visiting a Tumaini clinic due to the nature of the clinic, even if other services are provided to decrease the risk

of exposure. However, as survivors seemed to prefer to access care at the specialised clinics in both study locations, this model of care should be further studied and more widely implemented.

Methodological considerations

The major limitation of the study is that only survivors of sexual violence who accessed health care within MSF programmes were included. Thus, nothing is known about the demographic background and help-seeking behaviours of survivors not accessing care at all or accessing care from other providers. This limitation must be kept in mind when interpreting the results.

This study uses data from medical records which were collected before the study design was developed. Information about other factors that might influence timely access to care, such as socio-economic status, education level, type of perpetrator, whether the violence was conflict-related and distance to healthcare facility was not available.

The accounts of sexual violence incidents in the study were based on self-report by survivors seeking and receiving care after sexual violence. It is possible that some patients presenting as survivors were presenting with incorrect claims, for example in order to receive free health care. However, given the high level of stigma and negative social consequences for survivors of sexual violence in the area and that primary health care including sexual and reproductive health services were free for all patients within the same healthcare facilities or nearby facilities, we believe that such false accounts were rare.

The day of the incident was based on self-report and could thus be subject to recall bias. In addition, the data did not contain any information about the exact time for the sexual violence incident nor the consultation, only the dates. Survivors arriving on day 0–3 after the incident were counted as having accessed care within 3 days, which might include some survivors seeking care up to 96 hours after the incident.

The data used for the study were obtained only from two MSF programme areas in different parts of North Kivu. It is known that care seeking behaviours vary across different contexts and different cultures; thus, the findings from this study might have limited generalisability.

The study includes data from 5 years, which provides a large sample size. However, the context in the study setting has been changing over these 5 years as has the MSF support. While the use of data covering a shorter time period might have provided a more stable context, the added value of a larger sample size was considered greater.

Conclusion

Only a small proportion of sexual violence survivors accessing care in the two MSF programmes in North Kivu are male or children and access to timely care remains a challenge. However, this study does not address the underlying factors affecting the access to care. Additional qualitative studies are needed to further understand the underlying reasons for the care-seeking patterns shown in this study and to further explore how timely access to care for survivors of sexual violence can be improved.

To overcome the barriers to seeking health care, models of care should be developed in close collaboration with communities to ensure that their needs are being met. The set-up of healthcare services need to be welcoming and accessible for all survivors. Awareness raising activities need to target different groups and include messages about different types of sexual violence as well as different types of survivors. Specialised clinics, like the Tumaini clinics, can be one model to further implement, as well as integrating the specialised clinics into already existing healthcare facilities. In addition to the set-up of the healthcare services and awareness raising activities there is also need for well-established referral pathways with support services available and coordination and collaboration between actors offering support to survivors of sexual violence.

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Author contributions

All authors reviewed and agreed upon the final manuscript. HR contributed to study conceptualisation and design, data collection, analysis, interpretation and writing of the original draft. JB contributed to the study design, interpretation of data and revision of manuscript. HF contributed to the study conceptualisation and design, analysis and interpretation of findings and revision of final manuscript. MV contributed to the study conceptualisation and design and interpretation of data. AA contributed with interpretation of data and revision of final manuscript.

Disclosure statement

The fee for ethical approval by the ethics committee in Goma was paid by the MSF North Kivu country programme, Operational Centre Amsterdam. However, MSF had no influence on the analysis or the interpretations done in this study.

Ethics and consent

Ethical approval has been granted from the Ethics Review Board instituted by Médecins Sans Frontières and by the Comité Ethique de l'Université Libre des Pays des Grands Lacs, Goma, DRC.

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Paper context

Timely access to care for survivors of sexual violence is crucial yet challenging in many places, including in North Kivu, DRC. This study shows that a majority of survivors access care through specialised clinics, that access is limited for male and child survivors and highlights factors influencing timely access to care for survivors of sexual violence. This information can be used to adapt programmes and improve access to timely care for survivors of sexual violence.

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Paper II



RESEARCH

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Community perceptions about factors influencing access to care after sexual violence in North Kivu, Democratic Republic of the Congo: a qualitative study

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Abstract

Background Sexual violence is widespread in the eastern parts of the Democratic Republic of the Congo, including in the North Kivu province. Moreover, in this region survivors of sexual violence often have limited access to care and encounter a variety of barriers when seeking care and support. The aim of this study was to explore community perceptions about access to care, barriers, enablers and possible actions to improve access to care for survivors of sexual violence in North Kivu. A deeper understanding of community perceptions about access to care can guide ongoing efforts to overcome barriers and increase access to care for survivors of sexual violence.

Methods The study utilised a qualitative design, based on focus group discussions with male and female adult community members in the study area. Previous experience of sexual violence was not a requirement. The transcripts from the discussions were analysed using manifest and latent qualitative content analysis.

Results A total of 18 focus group discussions were carried out. The analysis resulted in three main themes; Knowledge and misconceptions around medical consequences crucial for care seeking, Community and family attitudes playing a dual role in care seeking behaviours and Care seeking dependent on optimised healthcare facilities and sensitive staff.

Conclusions Lack of correct knowledge, harmful attitudes from community and healthcare staff, and poorly adapted healthcare services constitute barriers to accessing care. Improved awareness raising around sexual violence is needed to address both lack of knowledge and misconceptions. Efforts should be made to build upon the community support models and actively work to improve community attitudes towards survivors of sexual violence. In addition, there is a need for better adapted healthcare services with improved proximity, access for different groups of survivors and respectful and well-trained healthcare staff.

Keywords Gender-based violence, Sexual abuse, Sexual assault, Rape, Help-seeking behaviour, Democratic Republic of the Congo

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Introduction

The Democratic Republic of the Congo (DRC) has been plagued by several conflicts and wars that have destabilised the country and heavily impacted both individuals and communities. North Kivu province, located in the eastern DRC, is a particularly conflict-torn area. Both sexual violence (SV) and violence perpetrated by intimate partners are widespread in DRC [1, 2]. Especially high rates of sexual violence in the wake of the conflicts has been observed in the eastern parts of DRC, where according to a survey-based study, 40% of women and 24% of men have reported experience of sexual violence [3]. Even though conflict-related sexual violence in DRC is widely acknowledged [4–6], it is important to recognise that the sexual violence in DRC can not solely be attributed to militarised conflict. A qualitative interview study by Alexandre et al. showed that sexual violence was common in eastern DRC before the start of the war in 1996, and that sexual violence was embedded both in the gender norms placing women in a subordinate position and in perceptions around masculinity [7].

Sexual violence is defined by WHO as “any sexual act, attempt to obtain a sexual act, unwanted sexual comments or advances, or acts to traffic, or otherwise directed, against a person’s sexuality using coercion, by any person regardless of their relationship to the victim, in any setting, including but not limited to home and work” [8]. Survivors of sexual violence are at risk for both medical and psychological sequelae [9]. Examples of immediate medical consequences from sexual violence are sexually transmitted infections (STI), including HIV, and physical injuries such as anal tears. Medical consequences specific to female survivors include unwanted pregnancies, unsafe abortions and vaginal tears. Psychological consequences for both male and female survivors include, but are not limited to, drug and alcohol abuse, anxiety, depression and post-traumatic stress disorders [10, 11]. There is also an increased risk of death through suicide and as a result of HIV infection [12]. In addition to the medical and psychological consequences, both female and male survivors risk negative social consequences such as stigmatisation, shame and rejection by family, partner and/or community which may further exacerbate negative outcomes [11, 13, 14].

Timely access to medical and psychosocial care for survivors of sexual violence is important. Some parts of the care package offered to survivors are time sensitive which makes timely access to care crucial. HIV post-exposure prophylaxis is only effective if provided within 72 h of the violence, and emergency contraception is only effective up to 120 h after the violence [15]. Both of these prophylactic measures are more effective the earlier they are provided. However, both medical care and psychological support can be provided after these time limits, such as

post-exposure prophylaxis or treatment for other STIs, safe abortion care, testing and treatment for HIV, care for injuries, and psychological support [16]. In addition to medical and psychological care, survivors also need to be offered social support, including economic support, protection and legal aid, based on their individual needs and preferences and the options available in the context [17].

Despite the importance of timely care, a number of barriers exist that challenge care seeking behaviours. A study performed between 2004 and 2011 using Demographic and Health Survey data in 24 low-income countries showed that only 40% of women who had experienced sexual violence disclosed the event to someone, and only 3% sought medical care [18]. Among women who had experienced intimate partner violence (IPV), the numbers were even lower and only 2% of them had sought care [18]. Some of the barriers reported were embarrassment, the belief that there is no use in reporting, and normalisation of violence [18].

In DRC, one study from 2008 based on household surveys and facility assessments from the Kasongo health zone showed that 58.6% of survivors of sexual violence sought medical care and that 46.1% of those who sought care did so within 72 h [19]. Barriers to accessing care for survivors have been reported from studies conducted in the DRC using a variety of methods, i.e. household surveys and individual interviews [20], focus group discussions [21] and register based data [22]. The barriers found include shame, stigma, lack of sensitive care providers, lack of knowledge of services available, lack of quality in the services available, fear that family would find out, rejection by family/husband, lack of means to access care and that survivors would wait for physical symptoms to develop before seeking care [20–22]. Only one of these studies included participants from North Kivu [20]. Barriers for male survivors of sexual violence to access care in South Kivu have also been reported in a qualitative study and include fear of social exclusion, fear of being seen as homosexual, lack of services adapted for male survivors, lack of trust in healthcare providers’ confidentiality, and cost of transportation [23].

Even though the prevalence and consequences of sexual violence in DRC have been relatively well studied, there is little research that focuses on the region of North Kivu. Thus, there is still a knowledge gap regarding specific barriers to healthcare access and how community members perceive survivors’ need for healthcare, barriers to care and how access to care can be improved. Even though some barriers may be common to many contexts, local variations exist, and it is crucial that each programme offering care and/or support to survivors of sexual violence learns from the communities themselves and understands the contextual barriers and enablers in order to optimise access to care.

In our previous file-based study of care seeking patterns and factors influencing timely care seeking among survivors of sexual violence in North Kivu, we found that age, sex and referral pathways impacted timely care seeking and that the majority of survivors accessing care did so in the clinics specialised in sexual violence care, sexual and reproductive health and mental health support [24]. Male survivors were more likely than female survivors to seek care within 72 h, and all age groups younger than 50 years old were more likely to seek care within 72 h compared to those above 50 years. Further, survivors who were referred by the community, a family member, a mobile clinic or authorities were less likely to seek care within 72 h, compared to those who sought care on their own, without a referral [24]. To further explore the reasons behind these findings and to understand how access to care can be improved, the aim of the present study was to explore community perceptions about access to care, barriers, enablers and possible solutions to improve access to care for survivors of sexual violence in North Kivu.

Methods

A qualitative study design was used, using focus group discussions (FGDs) conducted with community members in the study area. The primary research question was the following: what are community members' perceptions regarding barriers and enablers for care seeking, timely access to care and how access to care can be improved for survivors of sexual violence?

Study setting and population

Data collection was conducted in the catchment area of two Médecins Sans Frontières (MSF) programmes located in Walikale and Mweso, North Kivu, DRC, between 14th June and 6th September 2019. In both study areas, MSF in collaboration with the Ministry of Health offers care to survivors of non-partner sexual violence and sexual, physical, and emotional intimate partner violence. This care is offered in hospitals, health centres and through three 'Tumaini' clinics. The Tumaini clinics ('hope' in Swahili) are healthcare facilities that offer care to survivors of SV and IPV integrated with care for STIs, contraceptive counselling and provision, and psychosocial support. Within the two project areas there have also been awareness-raising activities about SV and IPV, both in healthcare facilities and communities. These have been carried out by MSF health promotion and community engagement teams working together with local Ministry of Health community health workers so-called "Relais Communautaires".

Sampling and data collection

Within the study area, 11 villages/towns of different sizes were selected through convenience sampling, based on being places where the research team was able to go within the study period, due to logistic and security challenges. In each location, purposive sampling was used to sample participants who could provide information on the topic of interest. As we aimed to explore general perceptions around access to care for survivors of sexual violence, participants were not required to have previous experience of sexual violence and there were no questions around this in the recruitment process. Men and women over the age of 18 who were healthy enough to participate in a focus group discussion were included. Focus groups were organized separately by gender, with men and women allocated to separate focus groups. Efforts were made to keep the age range similar within the focus groups, although this was not always possible. Those under the age of 18, not healthy enough to participate in a focus group discussion or not able to give informed consent were excluded. Participants in each village/town were selected through gatekeepers (e.g. male and female community/village leaders from each location), who informed potential participants about the study purpose. Those who were willing to participate were then provided with more information by the research team before being asked to provide consent. The FGDs were performed in the village/town from which the participants were recruited, in a relatively private area such as the home of a village leader, under a tree or under a roof built as a "community area". With the help of community leaders, we ensured that non-participants stayed away from that area, to create a space as private as possible. We aimed to obtain rich and high-quality data (information power) and did not aim for a complete description of all aspects of the studied phenomenon [25].

The FGD topic guide was based on the preliminary results from our previous quantitative study of file-based data concerning survivors' access to care within the two MSF programmes [24] and was developed in collaboration with the Congolese research team. The topic guide was pre-tested with a group of MSF staff, including both men and women from the study area. The guide was developed in French and translated into Swahili with backtranslation into French. No written translation of the guide into Kinyarwanda was deemed necessary, as persons who are literate are literate in Swahili. When Kinyarwanda was needed, the facilitators interpreted during the session. The topic guide included questions and prompts addressing perceptions around sexual violence and consequences, help and health seeking behaviours, barriers and enablers to access care and solutions to increase access to care for survivors. It also included questions about community-based care, methods for

health promotion messaging and perceptions around medical certificates for sexual violence, albeit these topics were not included in the present study and will be address in a separate manuscript. The topic guide was specifically designed to not encourage sharing of own traumatic experience, but rather to focus on community response and reactions and used vignettes to provide a context within which the topic was discussed. A story of a woman experiencing sexual violence by an unknown perpetrator was told to the participants and discussion was centred around that story. Then the participants were also encouraged to discuss what would have happened if the perpetrator would have been the husband of the survivor, if the survivor would have been a man and if the survivor would have been a child. No definition of sexual violence was provided in the focus group discussions, to allow for the definitions and perceptions of the participants to emerge during the course of the discussions. A flexible participatory technique was used, where all the main topics were covered in all discussions, but the facilitators allowed a natural flow of the discussion. Flexible prompts were used when necessary to encourage the discussions [26].

The FGDs were led by authors HR, EKK or NHG (EKK and NHG being Congolese nationals) and were conducted in Swahili or Kinyarwanda. The research team, including the FGD leaders, note takers and translators, included both males and females and two females were non-Congolese. All members of the research team received training in qualitative research, interview techniques, psychological first aid and the study protocol by HR. The FGD leaders all had extensive experience of working with survivors of sexual violence and sexual violence programming within the study context, and also had prior experience of conducting focus group discussions on the topic. Live interpretation between Swahili or Kinyarwanda and French was done by a member of the research team, to allow for understanding by non-Swahili/Kinyarwanda speaking research team members. All discussions were audio-recorded and later transcribed and translated to French by a trained transcriber/translator.

Data analysis

The data was analysed using manifest and latent qualitative content analysis as described by Graneheim and Lundman [27]. Transcripts were read through in French several times by HR to get a sense of the content before being translated into English by HR. Meaning units linked to the aim and research questions of the study were identified in 3 transcripts and condensed by HR. These were then verified by AA, and when consensus was reached, HR identified and condensed meaning units for the remaining transcripts. HR then conducted the coding

with continuous discussions with AA. When consensus was reached for the coding, HR developed the sub-categories, categories and themes, with continuous feedback from AA and JP. Consensus regarding the final analytical model, where the sub-categories and categories represent manifest content and the themes represent latent content, was achieved through discussions with all authors. The qualitative data analysis software NVivo version 14 was used for the analysis [28].

Ethical considerations

This study followed the ethical principles outlined in the Helsinki declaration [29]. Since the topic of interest is sensitive, the study team also paid particular attention to ethical issues associated with research on sexual violence, in order to ensure the physical, psychological and social well-being of the participants throughout the study. This was done in accordance with the WHO recommendations on research in the field of sexual violence [12].

Prior to asking for consent to participate in the study, the study was explained in detail, including the objectives, risks, benefits and voluntary nature of participation. Written information was provided in Swahili and oral information offered in Kinyarwanda and Swahili. Persons who are literate can read in Swahili as Swahili is the language used in schools and therefore it was deemed sufficient to translate the written information to Swahili. Individuals were asked to explain in their own words the implications of participating, giving the facilitators a chance to assess if they had fully understood the information provided. If an individual was illiterate, the facilitators ensured that the information sheet was read and explained to the individual and they were offered to ask a third party of their choosing to read for them. Participants were specifically informed about the limitations to confidentiality in focus group discussions, were asked to not share information outside the group discussions and informed that no results where an individual could be identified would be presented. They were also informed that they could withdraw their participation up to the point of publication. Written consent was obtained from all participants and no compensation was provided for participation.

The research team received training in psychological first aid and how to handle sharing of sensitive information or traumatic events by the participants. Participants were offered to speak with members from the research team in private after the group discussion if they would like. A referral pathway was put in place through MSF programmes, for both medical care and psychological support if needed by any participant in the study. Psycho-social support was also ensured for the research team, through the MSF staff health system.

Themes	Knowledge and misconceptions around medical consequences crucial for care seeking			Community and family attitudes playing a dual role in care seeking behaviors		Care seeking dependent on optimized healthcare facilities and sensitive staff	
Category	Care seeking driven by fear of medical consequences	Undue focus on medical consequences limiting care seeking	Highlighting the importance of knowledge to improve access to care	Fear of negative social consequences hindering care seeking	Needing support from community and family	Respectful healthcare workers facilitating care seeking	Recognizing the importance of well-adapted healthcare facilities and systems
Sub-categories	• Recognizing the importance of healthcare after sexual violence	• Conflicting perceptions of need for care among specific types of survivors	• Believing that lack of knowledge prevents survivors from seeking care	• Harmful actions from community and family negatively impacting care seeking	• Acknowledging the importance of supportive community members	• Negative response or actions by healthcare workers deterring care seeking	• Emphasizing healthcare facilities adapted to survivors' needs
	• Fearing severe health consequences both for survivor and others	• Harboring misconceptions about timely care seeking	• Needing improved awareness raising efforts	• Beliefs and practices around intimate partner violence preventing care seeking	• Families play key role encouraging survivors to access care	• Perceiving trusted and respectful healthcare workers as a resource	• Requiring affordability and physical accessibility to healthcare services

Fig. 1 Analytical model presenting the themes, categories and sub-categories

All data has been stored according to the data protection guides of MSF. Audio-files and transcripts do not include any personal identifiable data and have been stored with limited access only to the primary investigator (HR) and the study coordinator (MV). All data will be destroyed 5 years after the finalization of the study.

Results

A total of 18 FGDs were conducted, in 11 different locations, 9 in locations within the Mweso programme area and 9 in locations within the Walikale programme area. The number of participants in each FGD ranged from 5 to 10 and a total of 138 individuals participated, 81 women and 57 men. Ten of the FGDs were with female participants and 8 with male participants, and all participants were over 18 years. In most locations there was one FGD conducted with men and one with women; however, in two villages it was only possible to conduct FGDs with women. The median length of the discussions was 62 min. One discussion was ended prematurely due to insecurity in the area which forced the research team to leave early.

The analysis resulted in three themes: Knowledge and misconceptions around medical consequences crucial for care seeking, Community and family attitudes playing a dual role in care seeking behaviours and Care seeking dependent on optimised healthcare facilities and sensitive staff. These themes are based on seven categories and

14 sub-categories. The overall analytical model is presented in Fig. 1.

The following section presents each theme together with its supporting categories and sub-categories. Quotes from the FGDs are used to further illustrate the sub-categories. Participants are identified by the number of the FGD and whether the participants in the group were female or male.

Knowledge and misconceptions around medical consequences crucial for care seeking

The first theme describes how knowledge, and the lack thereof, impacts care seeking behaviours in different ways. Seeking care after an experience of sexual violence was perceived as an important action and fear of medical consequences was identified as motivating care seeking. However, the medicalised view of sexual violence, together with misconceptions around intimate partner violence, male survivors, and timing of care seeking, could also lead to survivors not seeking care and support. Lack of knowledge about consequences of sexual violence was identified by the participants as one of the main barriers for survivors to seek care, and to address this, the need for improved awareness-raising activities in the community was highlighted.

Care seeking driven by fear of medical consequences

Both female and male participants recognised to a great extent the need for healthcare after an incident of sexual violence and this was linked to an expressed fear of the negative medical consequences of sexual violence, mainly HIV and other STIs.

Recognising the importance of healthcare after sexual violence

When asked what a person would do after experiencing sexual violence, participants mentioned seeking healthcare as the most important action, both for men and women. Often it was presented as the one thing the survivor should or had to do, rather than what they actually would do. This indicates that the participants were aware of the need for medical care, but that they also recognised that many survivors would not seek care.

Participants mentioned that seeking care was important in order for survivors to be tested for infections, receive preventive care for infections and pregnancies or receive treatment for diseases. The need to prevent diseases was mentioned in both male and female focus group discussions whereas the need to prevent pregnancies was only mentioned in female focus groups. The need for testing and prevention of STIs was specifically highlighted throughout the discussions, even though other consequences were mentioned.

She might be contaminated by sexually transmitted diseases that she doesn't even know of. She has to go to the clinic to receive care and to know if she was contaminated or not, and if she is not contaminated she can prevent the consequences. (FGD 12, male)

Even though a great deal of focus in the discussions concerned the importance of medical care, the need for psychological support or counselling was also acknowledged by both men and women.

If Rose [an imaginary survivor of sexual violence] keeps it a secret, it might happen that she will feel tormented and even get a depression or psychological signs, but if she goes to a healthcare structure she might receive care and psychological support. (FGD 11, female)

There was also a sense of belief in the healthcare being effective, both in terms of prevention or treatment of diseases and with regard to a more general sense of promoting wellbeing.

[...] there are many here who are already victims of sexual violence, many are already victims of many diseases following sexual violence and the care really

helps us a lot; otherwise we would all be sick. (FGD 11, female)

Fearing severe health consequences both for survivor and others

There was a strong sense of fear among the participants, both males and females, especially about transmission of HIV and other STIs. Moreover, some participants meant that if a survivor does not get treatment they might die, illustrating this sense of fear.

There are those who are raped and who tell themselves "as no one saw me, I can keep quiet about this", even though she might have caught a sexually transmitted infection which will then lead to her death. (FGD 13, female)

The fear of adverse medical consequences was also identified by participants themselves to be one of the main motivators for survivors to seek care.

The fear of the possible diseases you can get during sexual violence can make the person go and seek care quickly. (FGD 17, female)

In addition to the consequences for the survivor, participants also highlighted the fear of spreading STIs to partners and how that could motivate care seeking. This was mentioned in both female and male groups. It was also mentioned that a survivor should think about the potential consequences for her children if she does not seek care.

[...]she needs to think about her two children, so that they don't become orphans; she should seek care for the sake of her children. (FGD 13, female)

Undue focus on medical consequences limiting care seeking

While knowledge of medical consequences could drive care seeking, the strong focus on the physical consequences of SV, especially on infections, in combination with misconceptions about male survivors, survivors of IPV and the time window for care seeking, could also prevent survivors from accessing care. Having some knowledge but not understanding the full extent of medical and psychological consequences or the care package that can be offered to survivors could thus constitute a barrier for care seeking.

Conflicting perceptions of care needs for specific types of survivors

There were conflicting perceptions about the need for care for female survivors of sexual violence perpetrated by an intimate partner. Some participants felt strongly

that survivors of sexual IPV do not need any care as there would be no need to prevent infections.

If it was my husband who raped me, I can't go to a healthcare structure because it is my husband. I trust him, and he can't transmit any diseases to me. (FGD 13, female)

Others believed that female survivors of sexual IPV could seek care, but only if they were actually experiencing physical symptoms. Yet others argued that female survivors of sexual IPV should always seek care, either because they would need psychological support, because their partners could have an infection or because of the risk of an unwanted pregnancy.

You can be raped by your husband, and if you are not feeling well, then you can always seek care. But if you are not feeling unwell, you can't seek care. (FGD 17, female)

The perceptions about care needs also varied with regard to male survivors. Even though many participants, both males and females, thought it would be important for males to seek care as they could also have medical consequences, some female participants argued that male survivors would not have the same consequences as female survivors, or no consequences at all, and therefore would not need healthcare.

Some participants looked at it from the survivor perspective and said that there were men who would not acknowledge their need for care and therefore would not seek care.

The man can be raped and say to himself "for me, there are no consequences, because I'm not a woman" and yet there are diseases. He can also say "me, I'm not a woman who can get an unwanted pregnancy" and imagine that there are no diseases, and that might make him stay at home. (FGD 15, female)

Harbouring misconceptions about timely care seeking

Participants were generally aware of the need for timely care, and it was repeatedly mentioned by both female and male participants that survivors should seek care immediately or as soon as possible. In some discussions the window of three days or 72 h was mentioned, but there were also participants who suggested that survivors have to seek care within one day, two days or five days.

She has to go to the clinic just after the aggression. If she is raped in the fields or in the plantation, she should not even go back home; she has to go directly

to the clinic for care, as soon as possible. (FGD 12, male)

Participants, both male and female, insisted that survivors *had* to seek care within a specific timeframe and that there would be no use seeking care if they could not make it within that limit. This was strongly related to the perception of prevention of infections being the only care or the only important care which could be provided, and that if a certain time had passed it would be too late for preventive care and thus no benefit to seeking care at all. The perception of the need for timely care seeking and the focus on STI prevention could thus become a barrier to access care for those who for different reasons could not seek care within the timeframe. However, even though some participants felt strongly that seeking care after a longer period of time was unnecessary, others recognised the importance of seeking care at any given time, highlighting that there would be both medical and psychological healthcare needs that could still be addressed.

- From my point of view, she can't [seek care after 5 months], she is already infected and it is possible that she has already infected her husband. Now, after 5 months, what can she look for at the healthcare structure? It doesn't make sense. She might already have infected her husband.

- I think that she can go after 5 months, even after a year. As she has been raped, she is afraid and she is unstable. She can talk to the nurse and the nurse can orient to a service like the mental health services, and if it is necessary, they can provide her with medications. (FGD 15, 2 females)

Highlighting the importance of knowledge to improve access to care

Even though participants themselves had an extensive understanding of the need for medical care, they thought that there were many in their surroundings who did not have this knowledge and perceived this as a major barrier to access care. When discussing how access to care could be improved, both female and male participants brought up the need for more awareness-raising activities as an important intervention.

Believing that lack of knowledge prevents survivors from seeking care

Both male and female participants expressed that one of the main reasons for both male and female survivors to refrain from seeking care was lack of information about sexual violence and the consequences, as well as where and how to seek care.

If she keeps this as a secret and doesn't inform anyone, that can lead to her not accessing the care. And all that is because she has not been informed or educated with regards to sexual violence or on how to behave in case of sexual violence. (FGD 12, male)

Similarly, being well informed about sexual violence and the medical consequences was perceived as enhancing care seeking for both male and female survivors.

Now, with the sensitisation from the nurses and the health promoters, we know that after rape, we should go to the health centre. Before there were no messages like this and we would only stay at home. (FGD 4, female)

With regard to the awareness-raising messages there was also a strong focus on the physical consequences, and a belief that if a survivor knows about the possible consequences, and most importantly the risk of infections, such knowledge will drive them to seek care.

Needing improved awareness-raising efforts

Continued and increased awareness-raising activities were highlighted by both male and female participants as one of the most important interventions to increase access to care. Enhancing knowledge and awareness among the population was suggested to reinforce the current health promotion activities. Increasing the number of people conveying messages about sexual violence in the community was considered as crucial to ensure that the information would have a broader reach. There was a request for both specific health promoters and to use community health workers (Relais Communautaires) for this purpose. The necessity of outreach to far-away areas was also pointed out.

Personally, if I was raped I can go to the Tumaini clinic, but there are several who have never heard the sensitisation sessions around sexual violence. You have to add or multiply the health promoters in several areas and in the far-away areas in order for everyone to be sensitised. (FGD 11, female)

When asked how access to care for male survivors could be improved, it was mentioned in both female and male groups, that awareness raising with messages specifically targeting men, explaining that consequences can happen to them as well, were needed.

For example, during the sensitisation, when you meet a man you can share with him about the sexual violence, explaining to him that the consequences can happen to everyone. If you share with

this man he can think about seeking care if he is victim sexual violence. (FGD 14, male)

An additional aspect of awareness raising targeting men concerned the need to address men's attitudes towards their wives who have been raped, which could then increase women's access to care. This was brought up in both female and male groups, both as a response to questions about who a survivor could talk to after experiencing rape, and as response to questions about how access to care can be improved for female survivors.

Even the men have to be sensitised, to tell them not to kick their wives out because they have been victims of sexual violence. (FGD 13, female)

Community and family attitudes playing a dual role in care seeking behaviours

Negative reactions and harmful actions from community and family members were perceived by both male and female participants as strong barriers to disclosure and care seeking. In addition, participants also mentioned practices and beliefs that could prevent survivors from seeking care. On the other hand, community and family members were also perceived as facilitating access to care. Overall, this shows the importance of the attitudes, norms, beliefs and practices within the community for care seeking behaviours among survivors.

Fear of negative social consequences hindering care seeking

Participants described many harmful and stigmatising actions by community and family members, specifically by husbands, towards female survivors of SV. It was evident that participants, both men and women, perceived that the fear of these negative consequences was a main reason for female survivors to abstain from disclosing the event and/or from seeking care.

Harmful actions from community and family negatively impacting care seeking

Harmful and stigmatising actions directed towards female survivors within the community described by the participants included being called a prostitute, being discredited in the community and being mocked.

Here, if a woman is victim of sexual violence, when she comes to the community, everyone starts to make fun of her and booing her. (FGD 9, male)

For male survivors the negative social consequences mentioned were the risk of conflict, either between families or within the family and in one male and one female focus group it was mentioned that men or boys being raped would be seen as a sorcery.

Not being able to get married was mentioned by male participants as a negative social consequence and for young women and girls, it was mentioned in both female and male focus that they would lose value after being raped as they would no longer have the status as “virgins”.

Those around her might stigmatise her, and in addition to that, if she wasn't married, she can't get married. So, the information can't be shared in the community, it has to stay a secret for her. She needs to go to the clinic without telling anyone. It can't be spread in the community. (FGD 12, male)

In one discussion it was also mentioned that stigmatisation could affect the possibility for a female survivor to earn her living.

There are also other consequences, like if she used to be a shopkeeper, now she won't know how to run her business because wherever she goes, people will point at her and say “she's the woman who was raped”. (FGD 9, male)

Being a survivor of SV was also perceived as strongly linked to shame which in addition to stigma was described as preventing female survivors from disclosing and seeking care.

It's always the shame that is the obstacle for victims to access care. Because she knows that if she talks about it, her story will be shared with the whole village. (FGD 4, female)

Shame was also mentioned as a barrier to disclose or to seek care for male survivors. This was mentioned by both male and female participants. In one female group discussion, it was however mentioned that males would not feel ashamed and could thus easily seek care.

The biggest consequence for a man is the shame, the shame of being raped by another man like him. Instead of sharing with someone he will decide to seek care directly, without sharing with anyone else. He will just explain to the nurse who will keep it confidential. (FGD 5, male)

In addition to the more general stigmatisation by community members, for female survivors the fear of negative reactions by the husband was particularly highlighted. These reactions included not believing the survivor and insulting or physically hurting the survivor. One of the strongest fears seemed, however, to be the fear of being kicked out or rejected by the husband, causing a

divorce or in other ways destroying the household. This was mentioned in both female and male focus groups.

Another barrier, there are women who live with their husbands who are very mean, and that can lead to the women not seeking care, that she doesn't dare to talk about the aggression, related to the fear of her husband. And as the husband is mean, the women can stay in the house by fear of divorcing the husband. She will judge it better to stay at home with her disease rather than having the household destroyed. (FGD 14, male)

The fear of being exposed as a survivor in the community was also apparent in the strategies described by the participants as being employed by both male and female survivors when seeking care. Different strategies about how to seek care without people around them knowing were discussed in both male and female focus groups, including how to behave in the healthcare facility and how to make up an excuse to the husband or family to be able to visit the health centre without them knowing.

[...] it is not easy to say that you are a victim of sexual violence. For example, when you arrive at the Tumaini you say that you are sick, that you have an STI or that you have a secret disease. Because it is really hard for someone to say that they have been victim of sexual violence. In the Tumaini it is a secret with the nurse, so there you can say that you are a victim of sexual violence, but outside of the consultation room, there you can only say that you are victim of an STI. The secret stays between me and the nurse. (FGD 11, female)

Beliefs and practices around intimate partner violence preventing care seeking

Perspectives were raised with regards to beliefs or practices within the community which could prevent care seeking and this was particularly mentioned in relation to sexual violence by an intimate partner. One example is the belief that a matter like IPV should stay within the family and not be shared with anyone outside.

Yes, it exists [intimate partner violence], but there is nothing to do when it happens in our home, as if you announce it, the man will beat you or the neighbours will tell you that you are sharing a family secret. (FGD 3, female)

Another belief that was brought up was that sexual violence by an intimate partner to some extent should be accepted by the woman as sexual relations are part of a marriage and that a rape by a husband cannot be

compared to a rape by another aggressor. This was expressed both by female and male participants and linked to the belief that a female survivor of sexual IPV should not seek care.

I think that she can't seek care [if raped by her husband] because it is something that she is used to going through in the marriage. Because the sexual intercourse that she has had with the husband, it is not like an intercourse with an aggressor, it is like the intercourse she is used to in the marriage, that is why I think that she can't seek care. (FGD 14, male)

In addition, private “solutions” between the partners were put forward by both male and female participants as a more appropriate action than seeking healthcare. Another type of solution mentioned was that the survivor should talk to the family of the husband or to the elderly in the community so that they could talk to the husband and ask him to stop the violence.

Needing support from community and family

Although harmful attitudes and actions from community and family were acknowledged as major issues, the role of the community and family in supporting survivors and encouraging care seeking was also evident.

Acknowledging the importance of supportive community members

Lack of support from peers was mentioned as preventing care seeking for female survivors at the same time as the positive role of community members in supporting female and child survivors was emphasised.

There is a girl in our village who was raped by FDLR. When she came back home she shared with everyone and we oriented her to the healthcare structure. When she came back no one pointed fingers or stigmatised her; instead we felt bad about what had happened to her. (FGD 5, male)

In several FGDs it was mentioned that female survivors could or would disclose to a community member, and disclosing to a trusted community member was sometimes mentioned as the first thing a survivor would do. It was commonly mentioned that female and child survivors would be oriented or accompanied to the healthcare centre by the person to whom they disclosed, in contrast to the findings mentioned above with regard to stigmatisation. Community leaders, pastors, friends and women in the community were mentioned as potential first points of contact for survivors, and it was mentioned that supporting peers is the responsibility of everyone, not only professionals.

The importance of the support from community members being respectful and discrete was also mentioned.

And another thing that we can add regarding a woman who is sensitised to go to a health centre, I might have oriented her to the healthcare structure but I need to have a sense of confidentiality. I have to keep what she shared with me a secret, and she will feel supported; she won't feel discouraged; she will feel that she is a person like all the others. (FGD 13, female)

Community health workers were specifically mentioned as trusted members of the community to whom female survivors could disclose and who would also orient survivors to the healthcare structure.

Families play key role encouraging survivors to access care

Support from family members was also expressed in both female and male focus groups as important for survivors. Having support from family and particularly from parents was perceived by participants as crucial for child survivors' access to care. Some mentioned that child survivors would disclose to the parents, and the responsibility of parents to bring the child to care was highlighted. This was particularly mentioned with regards to girls.

You are a parent, it happens that your child, 10 or 12 years old, this child can tell the parents. If you are the dad or the mom, as a parent you will reassure her and tell her to keep it secret and then you can orient her to the healthcare structure. (FGD 11, female)

However, it was also mentioned by both men and women that child survivors would not talk about their experience, but that parents would see signs or symptoms and understand what has happened and subsequently be able to help the child.

It was emphasised by both male and female participants that it is difficult for children who experience sexual violence to access care alone and that they would have to be brought for healthcare by an adult, most commonly a parent. The parents' role in informing and educating their children, and particularly girls, around sexual violence was also mentioned.

It is a bit complicated because for the child it is difficult to decide on her own to seek care or to go to the health centre, but an adult can decide herself. The child has to find a person who can orient her to the healthcare and otherwise she might not be able to receive the care. (FGD 16, male)

For adult female survivors it was mentioned that they could speak to a family member, and especially mothers were mentioned. The husband's role to support their wives in case they experience sexual violence was also brought up, despite the negative and harmful reactions from husbands mentioned above. In both female and male groups, it was mentioned that a female survivor could tell the husband. A man who would support his wife and help her receive healthcare after being raped was described as a "good man".

If the woman is well informed, she will tell her husband that what happened was against her will, that it was an unknown, and if the husband is a good man he will bring her to the healthcare structure for care. (FGD 7, male)

Care seeking dependent on optimised healthcare facilities and sensitive staff

The third theme highlights the importance of well adapted healthcare systems and healthcare staff trained for the task. The attitudes and behaviours of healthcare workers were acknowledged as highly influential for care seeking. How the healthcare facilities are set up was also recognised as impacting access to care, as well as the need for affordable and proximal services.

Respectful healthcare workers facilitating care seeking

According to both female and male participants, healthcare workers play a key role in influencing care seeking behaviours. Harmful actions by healthcare workers or lack of trust in the healthcare work force were perceived as hampering care seeking whereas ensuring trusted healthcare workers was identified as a way of improving access to care.

Negative response or actions by healthcare workers deterring care seeking

Attitudes, behaviours and personal links with healthcare workers were all perceived by participants as factors preventing care seeking among survivors. The fear of not being met with respect or that healthcare workers would not respect confidentiality was expressed.

In addition, the fear of not being believed by the healthcare worker was mentioned in one male focus group as a potential barrier, especially with regard to sexual violence by an intimate partner.

She can't seek care because she will not be able to respond to the question of who has raped her when the perpetrator is her husband. The nurse might not believe her if she says that she was raped by her husband. (FGD 14, male)

Perceiving trusted and respectful healthcare workers as a resource

Generally there seemed to be a high level of trust in healthcare workers and the care available both among males and females. Disclosing to a healthcare worker rather than to someone in the community or family was a commonly mentioned help seeking pattern for both men and women.

She can talk about the problem with a nurse because if she talks to her husband, she will first of all have problems with her husband. It is better to talk to a nurse because she will keep the secret and take care of her with confidentiality. (FGD 14, male)

That healthcare workers could keep confidentiality was perceived as especially important, and ensuring confidentiality was one of the actions suggested for improved access to care. Both male and female participants wanted healthcare workers who were respectful and welcoming, and some female participants preferred to have female care providers.

It is also good to advise the nurses, because if you say that you were raped, even before they start to provide care, they will start to say that "you were raped because you went to the fields, if you had stayed at home you would not have been raped." It would be better if they were trained to respect someone who has been raped, and to care for them without any comments. (FGD 6, female)

Recognising the importance of well-adapted healthcare facilities and systems

The need for a healthcare system that would facilitate care seeking was clear. Ensuring confidentiality and limiting the risk of being exposed as a survivor were important aspects and different models of care responding to that need were discussed. In addition, proximity to service and free healthcare for survivors were perceived as important factors to improve access to care.

Emphasising healthcare facilities adapted to survivors' needs

The importance of confidentiality was not only mentioned in relation to healthcare workers, but also when talking about the healthcare facilities. Having a healthcare facility which is designed to provide both confidentiality and privacy, thereby preventing survivors from being exposed was perceived as important by both males and females. Fear of being exposed when entering a clinic was brought up as a barrier, specifically when talking about the specialised Tumaini clinics.

There are people who don't want to seek care, especially at the Tumaini clinic, as they are afraid that people will see them enter, because they are afraid of the interpretations. The population knows that it is there these types of infections are treated and many people have bad thoughts with regard to this subject, so they will avoid seeking care at the clinic. (FGD 12, male)

In one male focus group discussion it was suggested that care of survivors of sexual violence should be integrated with other types of services, for example malaria care, and that having a healthcare facility where only sexual violence care is provided should be avoided. Ensuring that survivors would be treated as a priority when seeking care was also identified as important in both female and male focus groups.

Some female participants expressed that it was easy to access care in the Tumaini structures and that they preferred to receive the care there. The reasons for this included that they had received information about the clinic, that it was close, that the care provision was for free of charge, that survivors would be cared for directly or that the necessary drugs and tests were available there. Some participants also wanted to have more Tumaini clinics implemented, especially those who did not already live close to one.

On the other hand, in one female discussion it was mentioned that the Tumaini clinics had a low acceptance among men and were seen as only open for women. As a solution to address that, it was requested in the same focus group to create separate clinics for male survivors and also to involve men in the development of such clinics.

Sometimes men are sick. They have STIs. Sometimes you can tell them to seek treatment at the Tumaini, and they say that they can't because it is shameful and that the clinic is for women, and as a man they can't go. Most of them think that the ones who go to the Tumaini clinic are pregnant women and women who have been raped, and that is why a man who is victim of sexual violence does not want to go there to receive care. (FGD 10, female)

Requiring affordability and physical accessibility to healthcare services

Long distance to a healthcare facility offering care to survivors was identified as a factor preventing both care seeking in general and timely access to care. This was mentioned in both male and female discussions and with regards to both male and female survivors. Lack of time for care seeking was another potential barrier, brought up in a female focus group.

The difficulty to access care is also among the barriers. For example, you might want to seek care but if you have been raped in the mining areas, over there, there is no care available and the distance is a barrier as well. (FGD 6, female)

To overcome the distance barrier, it was recommended by both male and female participants to increase proximity by opening clinics like the Tumainis in more locations or by offering the care in health posts or other structures closer to the survivors. Having community health workers or other focal points in the communities ready to orient survivors to the healthcare facility was also asked for by both male and female participants.

Lack of transport opportunities was also perceived as a barrier and organising transport or paying for transport was proposed as ways to improve access to care.

At the healthcare system level, cost for the care was perceived as a barrier by both men and women. Participants described that in some facilities the care was not available for free and that the lack of free care constituted a barrier for those who could not afford to pay, and also that when the care was indeed free, the population was not always aware of this. Having access to free healthcare, including having the knowledge about it, was perceived as motivating care seeking.

When the care is free, it motivates the patient to seek care, but if you don't have the means to seek care, if you have to pay for the care, you risk to stay at home and die. (FGD 6, female)

Discussion

This study provides new and valuable insight into community members' perceptions about access to care for survivors of sexual violence in North Kivu, DRC, and how such access can be improved. These results expand and deepen the previous body of knowledge derived from eastern DRC that has mostly focussed on South Kivu. Our findings concerning the impact of negative social consequences and particularly fears of stigmatisation and rejection are in line with previous research from DRC [21, 30–32]. However, that undue focus on physical manifestations may impact care seeking adds new knowledge to the field. The community members' suggestions that access can be improved through increased awareness, greater proximity to healthcare services, adaptations of healthcare services to create safe access, more training of healthcare workers and solutions for transportation difficulties also add new insights.

No definition of sexual violence was provided to the participants, to allow for their own interpretations and definitions to emerge during the course of the discussions. However, from the discussions it was clear that

participants' perceptions mostly concerned penetrative sexual violence and this should be considered when interpreting the results.

Our findings show that there was a general knowledge about the importance of seeking care that was very much linked to medical consequences, particularly HIV and other STIs. This indicates that awareness raising has been successful in one sense. However, we also found that this focus on medical consequences, combined with some misconceptions, could constitute a barrier to seeking care. More nuanced messaging is needed regarding the benefits of support for survivors, going beyond the medical consequences and prophylaxis for infections. The lack of knowledge about risk of medical consequences for female survivors of sexual IPV and the lack of knowledge about care and support available for them indicates that more dialogue around this is needed. Scott and colleagues have shown in a mixed method study that IPV is highly normalised and accepted in eastern DRC [20]. In contexts where IPV is accepted as normal, it is essential to work actively to ensure that survivors have access to care and support.

Two qualitative studies have shown that access to care for male survivors of sexual violence is particularly limited in eastern DRC [23, 33]. The misconceptions around their need for care as shown by some participants in the current study could be one contributing factor. Stigmatisation of male survivors and shame linked to the gender role of a man and views on masculinity are known barriers to seeking care both globally [34, 35] and in DRC [23, 33]. This was also shown in our findings, even though it was expressed in one female group discussion that men would not feel ashamed as women would.

The focus on medical consequences and the need for timely access to care can also negatively impact access. When the community perception is that one *must* come within a specific time limit after the incident, there is a risk that survivors who cannot access care within this limit will not present for healthcare at all. Even if it is important for survivors to access care within three days in order to be able to prevent HIV transmission, it is also important that survivors who cannot access care within three days still seek and receive care whenever it is possible for them to come. Our previous file-based study showed that care seeking within 72 h was common, especially in the Mweso area [24]. The MSF awareness-raising activities in the area (especially in Mweso) have been highlighting the importance of seeking care within three days, which likely had a positive impact on knowledge about the urgency of seeking care among the population but can also have prevented those who were not able to access care within three days from coming at all. Correct information about which parts of the care package require urgency is important to convey to the target

population to enable them to make informed decisions about when to seek care, or if that is not feasible, to use more general messages around seeking care as soon as possible. It is thus important to understand and address misconceptions about timing in any awareness-raising activities and to focus more on the need for both medical care and psychosocial support, which can be provided at any time.

In all groups there was a strong consensus that more knowledge is needed. The need for more knowledge through awareness raising to increase care seeking among survivors of sexual violence has been shown in other studies from humanitarian settings, for example in a survey study among refugees in Uganda [36]. The participants' recommendation that the messages needs to be spread further and reach those who live far away from the main towns and villages is important to fulfil.

It is also important to design messages that not only focus on the consequences of SV and that might instil fear, but instead to talk about the care and support, including both psychological and social support, that can be provided and how peers and partners can be a support to survivors rather than causing more harm. It is clear from the current findings that awareness-raising activities are appreciated by the communities and should be continued, augmented and adapted to different target groups, including different types of violence.

Many of the social consequences cited in this study are devastating for survivors and constitute a second victimization as well a barrier for seeking help. Stigmatisation and judgement of survivors as well as rejection by family and husband can have severe consequences and further impact the wellbeing of survivors. Stigma and the negative social consequences faced by survivors of SV in DRC have been found in many studies, as well as their association with the decision to avoid seeking care [21, 30–32], which our study further corroborates. That different community members were also mentioned as possible enablers for care seeking shows that there is a strong potential in the use of community as supportive peers rather than stigmatising and further harming survivors. The dual role of the community depicted in the analysis indicates that there is to some extent already a support system within the community and we believe that this can, and should, be built upon. The discrepancy between the attitudes of community members towards survivors, being mostly negative, and the perceptions that community members also can or should support survivors was also noted by Babalola and colleagues [37] who in their study highlight the conflict around descriptive and prescribed norms. Both our results and their findings show the same discrepancy, that community members know that survivors should be treated with respect, but that in reality there are still strong negative perceptions and

attitudes towards survivors. However, the recognition within the community that there are negative and harmful attitudes that may result in lack of access to care may also represent an opportunity. This recognition is already a first step towards working actively to further influence attitudes and foster more acceptance for survivors of both SV and IPV and should be further built upon in SV/IPV programming.

Husbands were specifically highlighted as hindering care seeking among female survivors even though they were also mentioned as potential support persons. The importance of a supportive husband needs to be included in work addressing sexual violence in the area. As proposed by participants in this study, there is also a need for specific activities targeting men with the objective of being more supportive of women who are raped. This is crucial to ensure a safe environment where women feel safe to disclose their experiences and access care and support after sexual violence. The importance of key family and community members as well programmes which could help community members, male relatives and husbands to accept survivors of rape has also been discussed in previous studies from South Kivu [21, 38].

Negative and harmful attitudes and how they negatively impact care seeking does not only apply to community and family members but also to healthcare workers. Having trusted health care providers who respect survivors and maintain confidentiality was highlighted as important and shows the need for targeted training to all healthcare providers who are in contact with survivors.

As SV survivors fear negative social consequences, it is important to ensure that they can access care in a safe and discrete way. Rapid and discrete care pathways were highlighted by participants in this study as important measures to improve access to care. Stand-alone services for SV/IPV or specific care provision rooms with only SV/IPV care provision are not recommended in this context for this specific reason. However, integrating services fully within an emergency department or outpatient department would risk comprising privacy and confidentiality and might pose obstacles towards appropriate training and attitudes by the staff, as there will be many competing priorities. Therefore, integration with a few selected services might be a better alternative. However, careful considerations must be taken to ensure all survivors are welcome and different models of care may be needed for different types of survivors, i.e. men, women, and children. The semi-vertical Tumaini model was appreciated by many women but was perceived as being for women only and not welcoming for male survivors. Additional care pathways for male survivors or a more inclusive profile of Tumaini clinics are needed to ensure all survivors of SV have a safe pathway to care. The barriers mentioned on a healthcare structure level also

indicate a need for complementary models, closer to the communities as distance was highlighted as a barrier and proximity as an enabler. Offering care for survivors at the health centre and health post level is needed, but likely not sufficient. Offering care within the communities using community-based models, with a trusted community member, possibly a community health worker, can be one way to reduce the distance barrier as well as some of the stigmatisation or risk of exposure [39]. However, community-based care models need to take sociocultural aspects into account and be designed in close collaboration with the community to ensure acceptability and feasibility [40]. Another model to consider is the holistic, one-stop care model, where medical care, psychosocial support, legal aid and socioeconomic support is provided in one location, as the model implemented in the Panzi hospital in South Kivu [41]. Careful consideration needs to be taken in the design of models of care, such as integrated in existing services or health centres, semi-vertical clinics like the Tumaini, one-stop care centres or a more community-based model and should be done in collaboration with the target population as there is no one size fits all.

Distance and transportation costs were identified as barriers for survivors seeking care, and in addition to bringing the care closer to survivors, systems for ensuring transportation should also be considered. However, this is not simple, as ensuring transportation for survivors can compromise confidentiality and further expose and harm survivors. Cash reimbursement might be an alternative but has to be implemented with great care to mitigate risk of misuse and exploitation, ensuring that safeguarding is at the heart of the activity.

Methodological considerations

This study has strengths as well as limitations. The three authors leading the FGDs have extensive experience of working with survivors of SV and IPV within the study area. Both EKK and NHG are Congolese nationals with a deep understanding of the cultural context in North Kivu, and HR had been working and living in North Kivu for more than 12 months prior to the data collection and had conducted several interviews, group discussions and community assessments in the area. However, the fact of being an “outsider” can never be completely disregarded and this might have impacted the discussions. Among the other research team members (note takers and translators) the majority were Congolese and one were of another nationality.

Both convenience and purposive sampling methods were used, and gatekeepers in the specific villages were used to identify participants. This might have introduced a bias in the selection of participants. By working in catchments areas of MSF programmes there is

a risk that participants may have more awareness and knowledge of this topic. In addition, the use of gatekeepers could introduce power imbalances leading to social desirability bias as well as potentially limiting the diversity of participation. To mitigate these factors a diversity of gatekeepers were used. The aims of the project were thoroughly discussed, and the voluntary nature of participation was clearly communicated both to gatekeepers and participants.

The fact that all members of the research team were working for the humanitarian organisation MSF, active in the study area, might have increased the risk of social desirability bias and collaborative consensus bias. To minimise the risk of desirability bias the research team avoided questions about how the individual participants would act, but focussed rather on how other community members would behave in case of sexual violence and a vignette was used for this purpose. The fact that the research team was working for MSF can have had an impact on the discussions, especially those concerning the services available. However, our impression is that participants could speak freely and we received both negative and positive feedback, but this fact needs to be taken into consideration when interpreting the results. Moreover, there is inevitably a power imbalance between the participants and the facilitators. To address this, care was taken to explain the voluntary basis of participation and that there was no impact on the aid provision for individuals or the community based on the participation or the views expressed during the discussions.

Several data collectors were involved, as well as note takers and translators, and discussions were led by three different members of the research team. This might have had an impact on the nature of the discussions. However, the use of a topic guide and the same vignette in all discussions helped ensure a consistent approach across discussion groups and that the different topics of interest were addressed. The vignette was a story of a female survivor and the participants were later asked to reflect around what would be different if the survivor was a man or a child. This might have focussed the discussions more on female survivors.

The FGDs were conducted separately by gender to allow participants to be able to speak more freely about this sensitive topic, but the research team (FGD leader, note takers and translators) did include both males and females for most of the discussions and the FGD leaders were not always of the same sex as the participants in the group which might have had a negative impact. For the same reason we also aimed to create focus groups based on age similarity among the participants, but this was not possible for all FGDs, which might also have had an impact on the discussions.

In addition to the FGD leaders there were additional research team members present, one for translation and one for note taking and additional support/input. Having several members of the research team present might impact the sense of speaking freely and efforts were made to ensure a trusting and relaxed atmosphere where the participants could feel comfortable speaking.

To enhance confirmability, the facilitators maintained an ongoing dialogue throughout the data collection process [42]. All facilitators participated in the data analysis, to ensure that the interpretations reflected a collective understanding among both the data collectors and colleagues who were not directly involved in the data collection. Additionally, the involvement of multiple team members, continuous dialogue and explicit description of the research team's roles and positions contributed to the study's reflexivity [42].

Effort was made to enhance transferability by providing a detailed description of the study's context and of the analysis process followed [43]. However, as the data were collected from only two areas in different parts of North Kivu, the findings may not be fully transferable to other settings.

In-depth analysis of gender, age, socioeconomic status, disability, diverse sexual orientation or gender identities or the intersection between these factors, was not possible due to lack of information about these aspects. Thus, the methodology did not allow for further exploration of potentially marginalized groups. The lack of an intersectional analysis may pose some limitations. Despite these limitations, we believe that this study provides valuable insights concerning community perceptions around access to care for survivors of sexual violence in the study area.

Conclusion

Even though the community members recognise the importance of seeking care after the experience of sexual violence, it is evident that survivors face a plethora of different barriers and that many survivors will never seek care. Misconceptions and a high degree of focus on the physical consequences of sexual violence can limit care seeking, and more awareness raising, focusing on the broader consequences and the opportunities to receive both medical and psychosocial support, is needed. While community and family attitudes and norms may prevent survivors from seeking care, there is also a great potential for the community to provide support for survivors, an aspect that needs to be addressed in programmes targeting sexual violence in the area. Services should be adapted to different groups of survivors, to ensure that healthcare workers are supportive and that services are provided with discretion. Addressing access to care is crucial when setting up care for SV survivors and must

be a core part of the activities. Awareness raising, community engagement, transforming harmful attitudes and norms, addressing stigma, training of healthcare workers and careful design of models of care in collaboration with the target population, are key strategies for improving access. Further research is needed to explore barriers and enablers for specific vulnerable groups as well as the intersection between different demographic and individual factors. Future research efforts should also aim at exploring the perspectives of survivors of sexual violence, including minors, and the perspectives of healthcare providers in the area.

Abbreviations

DRC	the Democratic Republic of the Congo
FGD	Focus group discussion
IPV	Intimate partner violence
MSF	Médecins Sans Frontières
STI	Sexually transmitted infection
SV	Sexual violence

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Author contributions

HR contributed to the conceptualisation and study design, played a leading role in the data collection, lead the data analysis and interpretation of results and was the major contributor in writing the manuscript. JP contributed to the analysis of data, interpretation of the results and the writing and revision of the manuscript. HF and MV contributed to the conceptualisation and study design, interpretation of results and revision of the manuscript. EKK and NHG participated in the data collection and contributed to the analysis of the data, interpretation of the results and revision of the manuscript. AA contributed to the data analysis, the interpretation of results and the writing and revision of the manuscript. All authors read and approved the final manuscript.

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Data availability

No datasets were generated or analysed during the current study.

Declarations

Ethics approval and consent to participate

Ethical approval was granted by the Ethics Review Board instituted by Médecins Sans Frontières (MSF) (ID 1906) as well as by the Comité Ethique de l'Université Libre des Pays des Grands Lacs, Goma, Democratic Republic of Congo (Reference number 003/CE/ULGL/MK/2019). Consent was provided by all participants.

Consent for publication

Non applicable.

Competing interests

The authors declare no competing interests.

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Paper III



Characteristics of violence, timely care-seeking and perceived barriers: a cross-sectional analysis of sexual violence among displaced and resident populations in North Kivu, Democratic Republic of the Congo

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ABSTRACT

Introduction Sexual violence is highly prevalent in North Kivu, the Democratic Republic of the Congo and access to care for survivors remains challenging. This study aims to analyse characteristics of violence, barriers to care and timely access to care among survivors of sexual violence who accessed care in North Kivu following the increase of violence and displacement 2023–2024. Furthermore, it examines how violence characteristics differ between survivors with different residential status and factors associated with timely access to care and main barriers.

Methods This cross-sectional study uses data collected, as part of routine programme monitoring, from survivors of sexual violence who received care in three Médecins Sans Frontières programmes in North Kivu, 2023–2024. χ^2 tests were conducted to explore differences between residents and displaced survivors, and multivariable logistic regression models were performed to explore factors associated with timely access to care and the main perceived barriers.

Results A total of 16 712 survivors were included, of whom a majority were females (95.5%) and displaced (83.4%). Displaced survivors more commonly reported multiple assailants, violence during livelihood activities and being referred by a trained community focal point compared with residents. Lack of information and fear of social consequences were the main reported barriers to access care. Several factors, including resident status, age, assailant type and whether the assailant was armed, were significantly associated with care-seeking within 72 hours and experience of the main barriers.

Conclusion This study provides new insights regarding the impact of increased violence and displacement on sexual violence characteristics and care-seeking patterns. The main barriers, lack of knowledge and fear of social consequences, call for responses which specifically address these challenges. As changes in context impact both violence and care-seeking patterns, responses to

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Sexual violence is known to be widespread in the eastern parts of the Democratic Republic of the Congo (DRC). However, access to care for survivors of sexual violence remains challenging. The situation in DRC is constantly changing with active conflict and displacements of populations. Knowledge around how displacement and other factors impact access to care is limited.

WHAT THIS STUDY ADDS

⇒ This study shows how displacement impacts violence characteristics as well as access to care for survivors and explores factors associated with the perceived barriers among survivors accessing care in Médecins Sans Frontières supported programmes in North Kivu.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ This knowledge will be key for actors responding to sexual violence, to be able to better adapt and adjust their responses to meet survivors' needs in an evidence-based manner.

sexual violence need to be flexible to be able to meet survivors' needs during humanitarian crises.

INTRODUCTION

The province of North Kivu, located in eastern Democratic Republic of the Congo (DRC), has been ravaged by conflicts, violence and displacement for several decades which has resulted in high levels of humanitarian needs^{1,2} and widespread sexual violence.³

Survivors of sexual violence are at risk for several medical and psychological sequelae.^{4,5} In addition, they might experience social consequences including stigmatisation, shame and rejection.⁶ To prevent some of the consequences and support survivors to heal and recover, access to healthcare is crucial. Certain components of the medical care package have time limits (72 hours for HIV post-exposure prophylaxis and 120 hours for emergency contraception), therefore, timely access to care is important, even though other parts of the care package can still be delivered after these time limits. Despite the need for timely access to care, it remains a challenge in DRC and the proportion of survivors accessing care within 72 hours varies between studies from eastern DRC, ranging from 0.6% to 85.6%.^{7–16} Barriers to accessing care reported from DRC include fear of social consequences, lack of information and lack of adapted, respectful and available care.^{7,16–18}

The escalation of violence in North Kivu in 2022 led to an influx of internally displaced people to Goma, many of whom were concentrated in large camps. By October 2024, the United Nations Office for the Coordination of Humanitarian Affairs reported a total of 2.4 million internally displaced persons in North Kivu.¹⁹ In the context of armed conflict and displacement, sexual violence is known to be highly prevalent,^{20,21} a pattern that has also been reported from DRC in recent years.^{22–24} A recent study from North Kivu, examining survivors who received care at four different hospitals in Goma shows that 38.6% of the survivors reported the assailants to be military or police and 60.7% reported the assailant to be armed, indicating a high rate of militarised violence.¹⁴ A change in context may influence patterns of violence as well as access to care. One study from South Kivu showed a non-significant negative association between being displaced and accessing care within 72 hours,¹¹ and it has been suggested that displaced survivors' care-seeking might be limited due to fear of social retaliations.²⁵ However, the impact of displacement on sexual violence patterns, barriers to care and care-seeking behaviours is not well understood. The current study builds on our previous research conducted in North Kivu,^{16,26} adding understanding around violence characteristics and care-seeking following the surge of violence and displacement. We also aim to examine barriers experienced by survivors who access care, an aspect which to our knowledge has not been previously studied. The analysis is informed by the socio-ecological model adapted by McLeroy *et al*,²⁷ applied here to explain how care-seeking and access to care is influenced by factors at different levels (individual, interpersonal, organisational, community and policy) and the interplay between those factors and levels.

Aim

This study aims to describe the characteristics of violence, patterns of care-seeking and perceived barriers to care among survivors of sexual violence accessing care in North Kivu 2023–2024 and how these differ between residents

and displaced persons. It also aims to examine factors associated with timely care-seeking and factors associated with commonly reported barriers to care access.

METHODS

A register-based observational cross-sectional study design was used.

Study setting and study population

The study used data routinely collected in medical facilities supported by Médecins Sans Frontières (MSF) in three programme locations, that is, Walikale, Mweso and Goma, in North Kivu, DRC. During the study period MSF, in collaboration with the Ministry of Health, offered care and support to survivors of sexual violence integrated in health centres and health posts (8 in Walikale, 8 in Mweso) and through semi-vertical clinics, called Tumainis (1 in Walikale, 2 in Mweso and 2 in Goma). The Goma response to survivors of sexual violence started at the end of 2022 following the creation of camps for internally displaced people in the area, whereas the sexual violence responses in Walikale and Mweso have been established since 2010 and 2013, respectively. There was displacement around Walikale and Mweso prior to and during the study period but not to the extent that was seen in Goma during the study period. The Tumaini is a model where care is offered in a standalone building or part of a building situated in the compound of a hospital or health centre, equipped with a separate entrance and reception. With the aim of reducing risk of exposure and stigma, in addition to care offered to survivors of sexual violence and intimate partner violence, the Tumainis provide basic sexual and reproductive healthcare, mental healthcare and psychosocial support to everyone. The care offered to survivors of sexual violence includes treatment of injuries, pain management, HIV post-exposure prophylaxis, prevention of unwanted pregnancies, post-exposure prophylaxis or treatment of other sexually transmitted infections and tetanus, safe abortion care, psychosocial support, medical certificates and referrals to other actors for legal aid, protection or other support services whenever possible.²⁸ Even if the intention is to always have an up-to-date mapping of available support services and a referral system in place, that has not always been possible due to lack of other actors, lack of capacity of actors and lack of coordination. All care is provided for free and with respect for survivor-centred principles, putting the survivors' safety, confidentiality, well-being and wishes first.²⁹ Awareness raising activities were conducted by dedicated teams in and around the healthcare facilities, including door-to-door campaigns, mass sensitisation events and distribution of print materials.

Data from all survivors of sexual violence who received care between 1 January 2023 and 31 December 2024 were included in the study. Individuals who self-reported experience of sexual violence and received care due to the

sexual violence event were considered as sexual violence survivors.

Three of the co-authors of this study are living and working in the study area but there was no further involvement of the public or patients in the design of this study.

Data collection

Data were collected prior to the study start, as part of the MSF routine medical activities. During medical consultations, information was recorded on standardised medical forms by the healthcare worker (MSF or Ministry of Health staff) providing the care. Data were then transferred to a data collection form which was subsequently entered into the district health information system (DHIS2), an electronic data set configured by MSF, by trained data encoders. All recorded information was self-reported by survivors during the medical consultation. The data set used was pseudonymised and no data could be tracked back to individuals.

Data variables included

Variables included encompass four domains; survivor characteristics, violence characteristics, access to care and perceived barriers. For some of the variables, values have been combined to facilitate analysis and enhance their relevance for the context and the objectives of this study.

Survivor characteristics

Age was recorded in years and categorised as age groups with 10-year increments. We tested a 5-year categorisation but did not see any important difference and used the 10-year categorisation to increase the power of the analysis. The 10-year categorisation allowed for the identification of a group aged 10–19 years old, which corresponds to the WHO definition of adolescents,³⁰ relevant for the analysis.

Information on sex was recorded as female, male, unknown/unspecified and refers to sex assigned at birth. The values 'Unknown/unspecified' were treated as missing values.

Residential status was recorded as resident, internally displaced, refugee/asylum seeker, migrant and unspecified. There were no instances of migrant or unspecified status in the data set. Internally displaced and refugee/asylum seeker were combined into one item, 'Displaced'.

Violence characteristics

The type of assailant was categorised as: non-civilian (including state army, non-state armed groups, police); intimate partner (including current/former intimate partner); civilian (recorded as: family member, known civilian, unknown civilian, teacher, supervisor/employer, UN/NGO staff, supervisor/employer UN/NGO, member of criminal gang) or other/multiple types. These categorisations were created to avoid groups with small numbers and to capture the main different types of assailants.

Whether the assailant was armed was recorded as firearm, machete/knife, blunt object, other, unarmed and unknown. The variable was dichotomised as armed 'Yes' or 'No', since the type of weapon was not considered important for the current analysis. Unknown values were treated as missing values.

The variable 'place/context of violence' was categorised as: private/domestic setting (recorded as: survivor's home, friend/relative's home, assailant's home), movement-related/public space (recorded as: path/road while travelling, flight/migration/in transit), livelihood/essential activity (recorded as: collecting wood/water/food, working in/on the way to the fields), other and not disclosed (recorded as: other/not disclosed, at a check-point, detention/captivity, school, workplace). This categorisation allows for the comparison of assaults occurring in domestic contexts versus those during movement, commonly associated with exposure to armed groups, insecurity or lack of safe passage and during activities linked to survival and livelihood. The category 'Other and not disclosed' represents heterogeneous locations which do not fit exactly into the other categories and represents small numbers and grouping them retains data completeness while avoiding sparse categories that could distort statistical tests.

Access to care

Time of care-seeking was recorded as <72 hours, 72–120 hours, >120 hours and uncertain. Values recorded as 'Uncertain' were treated as missing values. The items were dichotomised as timely access within 72 hours 'Yes' or 'No'. The cut-off of 72 hours was chosen as this represents the time-frame when survivors of sexual violence can receive the full medical care package, including post-exposure prophylaxis for HIV.

The referral variable was categorised as: self-referral (recorded as: self-referral), informal referral (recorded as: friend, family, community), trained community focal point (recorded as: health promoter/community health worker, sexual violence community-based care model), formal/institutional referral (recorded as: MSF healthcare facility, non-MSF healthcare facility, other humanitarian actor/non-governmental organisation, authorities, hotline) and other (recorded as: other). This allows referrals made by formally trained community-based persons to be distinguished from those made by untrained community members as well as to combine all referrals from formal actors.

Perceived barriers

During the consultation, the survivors were asked if they had encountered any barriers before accessing the care. Multiple answers, from a pre-defined list, were possible and each listed barrier has been treated as a binomial variable. The options in the pre-defined list included lack of information, fear of social consequences, distance to healthcare, insecurity, lack of family support, fear of mandatory reporting, threats from the assailant, cost of

transport and other. A variable indicating if any perceived barrier(s) were reported ('Yes' or 'No') was created.

Data analysis

Data were analysed using STATA software, V.19.³¹ As the amount of missing data was low (proportion ranging from 0 to 2.2% across variables) and appeared to be random, we conducted complete-case analyses, only excluding cases with missing values in the variable used for a given model.

Descriptive analyses were used to describe and explore the sample and χ^2 tests were used to identify significant differences between displaced and resident survivors as well as between those accessing care within or after 72 hours, between year 2023 and 2024 and between programme sites.

Correlation between variables planned to be included in the multivariable logistic regression models was analysed using correlation matrix. As programme site and residential status were highly correlated ($r=0.81$), programme site was excluded from the multivariable models due to collinearity. In order to analyse the specifics of each site, the logistic regression models were instead carried out for each site separately. Moderate correlation was found between armed assailants and type of assailants ($r=0.45$) and between armed assailant and place/context of violence ($r=0.4$), but not deemed to be problematic as they capture distinct aspects of the assaults. The variable 'perceived any barrier' was conceptualised as a potential mediator in the association between residential status and timely access to care. A moderate correlation between residential status and 'perceived any barrier' ($r=0.56$) supported its consideration as a mediator. This potential mediator effect was subsequently assessed in the analysis.

To examine factors associated with timely care-seeking, as well as with the two most commonly reported barriers (lack of information and fear of social consequences) bivariable logistic regression models were carried out for each independent variable. We then performed step-wise multivariable regression models where the survivor demographic variables were first introduced, followed by violence-related variables and then referral pathways in the fully adjusted models. The fully adjusted models had the lowest Akaike Information Criterion, indicating the best fit, and the fully adjusted models are therefore presented in this paper (all models are available as online supplemental appendix). The logistic regression models were also conducted for each programme site and for each year specifically. To explore the potential mediating role of barriers in the relationship between residential status and timely access to care, we conducted an analysis in which the variable 'perceived any barrier' was added as a covariate to the pooled fully adjusted model to estimate the direct effect, whereas the model without the barrier variable estimated the total effect. This approach allows assessment of how barriers may partially mediate the association between residential status and timely access.

Statistical significance was considered when p values were <0.05 .

RESULTS

Sample description and comparison between resident and displaced survivors

Table 1 presents a description of the study sample, with stratification per residential status, timely access to care, year and programme site. Some key findings include that a total of 16 712 survivors of sexual violence accessed care in one of the programme sites during the full study period. Of these 21.5% ($n=3595$) were adolescents (age 10–19) and 95.5% ($n=15 942$) were female. More than half of the survivors reported the assailant to be a non-civilian (53.2%, $n=8862$), armed (71.4%, $n=11 675$) and the violence to have taken place during livelihood/essential activities (50.2%, $n=8312$) (table 1).

Displaced survivors were less frequently in the 0–9 and 10–19 years age groups and more frequently reported an armed assailant, the assailant to be a non-civilian or an intimate partner, multiple assailants and the violence to have happened during livelihood/essential activities, compared to resident survivors (table 1).

Compared to 2023, more survivors accessed care in Goma and more displaced survivors accessed care in 2024. A larger proportion of survivors had timely access to care in 2024 at the same time as a larger proportion reported that they had experienced one or more barriers (table 1).

The two main barriers encountered before accessing care were lack of information and fear of social consequences, reported by 47.0% ($n=7855$) and 27.3% ($n=4553$) of all the survivors, respectively (table 2).

Factors associated with care-seeking within 72 hours

Table 3 shows the results of the fully adjusted multivariable logistic regression models with adjusted ORs (aORs), 95% CIs and p values. The mean variance inflation factors (VIFs) for the fully adjusted models ranged between 2.61 and 3.85, indicating that multicollinearity was not a concern.

As shown in table 3, displaced survivors had 36% lower odds of accessing timely care compared with residents (aOR 0.64 (95% CI 0.57 to 0.71)). Children aged 0–9 years (aOR 0.64 (95% CI 0.43 to 0.95)), adolescents aged 10–19 (aOR 0.62 (95% CI 0.56 to 0.68)), survivors aged 40–49 (aOR 0.84 (95% CI 0.73 to 0.96)) and 50 years and older (aOR 0.45 (95% CI 0.38 to 0.53)) had significantly lower odds of accessing care within 72 hours compared with survivors aged 20–29. These results were broadly similar for each year and programme site, with some small variation in magnitude and precision.

Survivors of intimate partner sexual violence had 34% lower odds of accessing care within 72 hours compared with those experiencing violence by a non-civilian (aOR 0.66 (95% CI 0.57 to 0.76)) in the analysis of pooled data. In both Mweso (aOR 1.28 (95% CI 0.63 to 2.61))

Table 1 Demographics, violence characteristics, assailant characteristics and care-seeking pathways among survivors of sexual violence accessing care in MSF supported programmes in North Kivu, DRC 2023–2024, stratified per residential status, timing of care-seeking to care (within 72 hours), year and programme site

	Total		Residential status		Timing of care-seeking				Year		Programme site	
	n (%)		Resident, n (%)	Displaced, n (%)	After 72 hours, n (%)	Within 72 hours, n (%)	P value§		2023, n (%)		2024, n (%)	
N	16 712		2764 (16.6)	13 936 (83.4)	5116 (31.2)	11 301 (68.8)	<0.001		6395 (38.3)		10 317 (61.7)	
Year of visit												
2023	6395 (38.3)		1388 (50.2)	4999 (85.9)	2249 (44.0)	3874 (34.3)						
2024	10 317 (61.7)		1376 (49.8)	8937 (64.1)	2867 (56.0)	7427 (65.7)						
Programme site												
Walikale	652 (3.9)		624 (22.6)	27 (0.2)	380 (7.4)	270 (2.4)	<0.001		356 (5.6)		296 (2.9)	
Mweso	2485 (14.9)		1920 (69.5)	561 (4.0)	334 (6.5)	2147 (19.0)			1237 (19.3)		1248 (12.1)	
Goma	13 575 (81.2)		220 (8.0)	13 348 (95.8)	4402 (86.0)	8884 (78.6)			4802 (75.1)		8773 (85.0)	
Age group												
0–9	133 (0.8)		55 (2.0)	78 (0.6)	48 (0.9)	81 (0.7)	<0.001		64 (1.0)		69 (0.7)	
10–19	3595 (21.5)		901 (32.6)	2692 (19.3)	1397 (27.3)	2134 (18.9)			1304 (20.4)		2291 (22.2)	
20–29	6730 (40.3)		1080 (39.1)	5645 (40.5)	1889 (36.9)	4748 (42.0)			2430 (38.0)		4300 (41.7)	
30–39	4230 (25.3)		528 (19.1)	3697 (26.5)	1063 (20.8)	3093 (27.4)			1592 (24.9)		2638 (25.6)	
40–49	1350 (8.1)		162 (5.9)	1188 (8.5)	415 (8.1)	901 (8.0)			647 (10.1)		703 (6.8)	
≥50	674 (4.0)		38 (1.4)	636 (4.6)	304 (5.9)	344 (3.0)			358 (5.6)		316 (3.1)	
Sex of survivor												
Male	750 (4.5)		123 (4.5)	626 (4.5)	232 (4.5)	513 (4.5)	0.999		258 (4.0)		492 (4.8)	
Female	15 942 (95.5)		2641 (95.5)	13 290 (95.5)	4875 (95.5)	10 778 (95.5)			6124 (96.0)		9818 (95.2)	
Resident status												
Resident	2764 (16.6)				684 (13.4)	2074 (18.4)	<0.001		1388 (21.7)		1376 (13.3)	
Displaced	13 936 (83.4)				4429 (86.6)	9218 (81.6)			4999 (78.3)		8937 (86.7)	
Assailant type												

Continued

Table 1 Continued

	Residential status		Timing of care-seeking		Year		Programme site	
	Total n (%)	Resident, n (%)	Displaced, n (%)	P value\$	After 72 hours, n (%)	Within 72 hours, n (%)	P value\$	Year
Non-civilian	8862 (53.2)	1396 (60.8)	7459 (53.7)		2510 (49.3)	6185 (54.9)		2023, n (%)
								2024, n (%)
								P value\$
								Goma, n (%)
								Mweso, n (%)
								Walikale, n (%)
								P value\$
								P value\$
Intimate partner	1151 (6.9)	163 (5.9)	988 (7.1)		490 (9.6)	651 (5.8)		2023, n (%)
								2024, n (%)
								P value\$
								Goma, n (%)
								Mweso, n (%)
								Walikale, n (%)
								P value\$
Civilian (non-partner)	6572 (39.5)	1156 (42.0)	5411 (38.9)		2070 (40.6)	4386 (38.9)		2023, n (%)
								2024, n (%)
								P value\$
								Goma, n (%)
								Mweso, n (%)
								Walikale, n (%)
								P value\$
Other/multiple types	74 (0.4)	35 (1.3)	39 (0.3)		26 (0.5)	46 (0.4)		2023, n (%)
								2024, n (%)
								P value\$
								Goma, n (%)
								Mweso, n (%)
								Walikale, n (%)
								P value\$
Assailant armed								2023, n (%)
								2024, n (%)
								P value\$
								Goma, n (%)
								Mweso, n (%)
								Walikale, n (%)
								P value\$
No	4676 (28.6)	860 (31.9)	3813 (27.9)		1759 (35.2)	2872 (25.9)		2023, n (%)
								2024, n (%)
								P value\$
								Goma, n (%)
								Mweso, n (%)
								Walikale, n (%)
								P value\$
Yes	11 675 (71.4)	1833 (68.1)	9834 (72.1)		3241 (64.8)	8208 (74.1)		2023, n (%)
								2024, n (%)
								P value\$
								Goma, n (%)
								Mweso, n (%)
								Walikale, n (%)
								P value\$
Number of assailants								2023, n (%)
								2024, n (%)
								P value\$
								Goma, n (%)
								Mweso, n (%)
								Walikale, n (%)
								P value\$
Single	11 917 (71.5)	2387 (86.9)	9523 (68.5)		3726 (73.1)	8027 (71.2)		2023, n (%)
								2024, n (%)
								P value\$
								Goma, n (%)
								Mweso, n (%)
								Walikale, n (%)
								P value\$
Multiple	4751 (28.5)	359 (13.1)	4388 (31.5)		1374 (26.9)	3247 (28.8)		2023, n (%)
								2024, n (%)
								P value\$
								Goma, n (%)
								Mweso, n (%)
								Walikale, n (%)
								P value\$
Place/context of violence								2023, n (%)
								2024, n (%)
								P value\$
								Goma, n (%)
								Mweso, n (%)
								Walikale, n (%)
								P value\$
Private/domestic setting	5053 (30.5)	901 (33.3)	4149 (30.0)		1678 (33.2)	3325 (29.7)		2023, n (%)
								2024, n (%)
								P value\$
								Goma, n (%)
								Mweso, n (%)
								Walikale, n (%)
								P value\$
Movement-related/ public space	2567 (15.5)	918 (33.9)	1647 (11.9)		863 (17.1)	1651 (14.8)		2023, n (%)
								2024, n (%)
								P value\$
								Goma, n (%)
								Mweso, n (%)
								Walikale, n (%)
								P value\$
Livelihood/essential activity	8312 (50.2)	731 (27.0)	7576 (54.8)		2306 (45.6)	5821 (52.0)		2023, n (%)
								2024, n (%)
								P value\$
								Goma, n (%)
								Mweso, n (%)
								Walikale, n (%)
								P value\$
Other and not disclosed	613 (3.7)	157 (5.8)	454 (3.3)		212 (4.2)	395 (3.5)		2023, n (%)
								2024, n (%)
								P value\$
								Goma, n (%)
								Mweso, n (%)
								Walikale, n (%)
								P value\$
Referred by								2023, n (%)
								2024, n (%)
								P value\$
								Goma, n (%)
								Mweso, n (%)
								Walikale, n (%)
								P value\$
Self-referred	4705 (28.3)	1603 (58.3)	3098 (22.3)		1186 (23.3)	3486 (31.0)		2023, n (%)
								2024, n (%)
								P value\$
								Goma, n (%)
								Mweso, n (%)
								Walikale, n (%)
								P value\$
Informal referral	2901 (17.4)	614 (22.3)	2285 (16.5)		1014 (19.9)	1841 (16.3)		2023, n (%)
								2024, n (%)
								P value\$
								Goma, n (%)
								Mweso, n (%)
								Walikale, n (%)
								P value\$
Trained community focal point	7085 (42.6)	208 (7.6)	6873 (49.5)		2283 (44.8)	4629 (41.1)		2023, n (%)
								2024, n (%)
								P value\$
								Goma, n (%)
								Mweso, n (%)
								Walikale, n (%)
								P value\$
Formal/institutional referral	1936 (11.6)	317 (11.5)	1619 (11.7)		599 (11.8)	1295 (11.5)		2023, n (%)
								2024, n (%)
								P value\$
								Goma, n (%)
								Mweso, n (%)
								Walikale, n (%)
								P value\$
Other	23 (0.1)	8 (0.3)	15 (0.1)		12 (0.2)	11 (0.1)		2023, n (%)
								2024, n (%)
								P value\$
								Goma, n (%)
								Mweso, n (%)
								Walikale, n (%)
								P value\$

Continued

Table 1 Continued

Total n (%)	Residential status		Timing of care-seeking		Year		Programme site		P value§
	Resident, n (%)†	Displaced, n (%)‡	After 72 hours, n (%)§	Within 72 hours, n (%)¶	2023, n (%)††	2024, n (%)‡‡	Waikale, n (%)§§	Mweso, n (%)¶¶	
Accessed care within 72 hours									<0.001
No	5116 (31.2)	684 (24.8)	4429 (32.5)		2249 (36.7)	2867 (27.9)	380 (58.5)	334 (13.5)	4402 (33.1)
Yes	11 301 (68.8)	2074 (75.2)	9218 (67.5)		3874 (63.3)	7427 (72.1)	270 (41.5)	2147 (86.5)	8884 (66.9)
Perceived any barriers									<0.001
No	2192 (13.1)	1530 (55.4)	658 (4.7)	283 (5.5)	1382 (21.6)	810 (7.9)	208 (31.9)	1705 (68.6)	279 (2.1)
Yes	14 520 (86.9)	1234 (44.6)	13 278 (95.3)	4833 (94.5)	5013 (78.4)	9507 (92.1)	444 (68.1)	780 (31.4)	13 296 (97.9)

*Among all survivors of sexual violence.

†Among resident survivors of sexual violence.

‡Among displaced survivors of sexual violence.

§Pearson's χ^2 test.

¶Among survivors accessing care after 72 hours.

**Among survivors accessing care within 72 hours.

††Among survivors accessing care in 2023.

‡‡Among survivors accessing care in 2024.

§§Among survivors accessing care in Waikale.

¶¶Among survivors accessing care in Mweso.

***Among survivors accessing care in Goma.

DRC, Democratic Republic of the Congo; MSF, Médecins Sans Frontières.

Table 2 Perceived barriers as reported by survivors of sexual violence accessing care in MSF supported programmes in North Kivu, DRC 2023–2024, stratified per residential status, year and programme site, with χ^2 test of association results

	Total		Resident status		Year		Programme site			
	n (%*)	Resident, n (%†)	Displaced, n (%‡)	P value\$ 2023, n (%¶)	P value\$ 2023, n (%¶)	2024, n (%**)	Walikale, n (%††)	Mweso, n (%‡‡)	Goma, n (%\$\$\$)	P value\$
Lack of information	7855 (47.0)	451 (16.3)	7404 (53.1)	<0.001	2783 (43.5)	5079 (49.2)	227 (34.8)	191 (7.7)	7444 (54.8)	<0.001
Fear of social consequences	4553 (27.3)	335 (12.1)	4218 (30.3)	<0.001	1410 (22.0)	3143 (30.5)	53 (8.1)	289 (11.6)	4211 (31.0)	<0.001
Distance to healthcare	626 (3.7)	248 (9.0)	378 (2.7)	<0.001	181 (2.8)	446 (4.3)	88 (13.5)	165 (6.6)	374 (2.8)	<0.001
Insecurity	293 (1.8)	64 (2.3)	229 (1.6)	0.014	102 (1.6)	191 (1.9)	8 (1.2)	78 (3.1)	207 (1.5)	<0.001
Lack of family support	185 (1.1)	72 (2.6)	113 (0.8)	<0.001	108 (1.7)	77 (0.7)	50 (7.7)	35 (1.4)	100 (0.7)	<0.001
Fear of mandatory reporting	160 (1.0)	27 (1.0)	133 (1.0)	0.912	114 (1.8)	46 (0.4)	8 (1.2)	23 (0.9)	129 (1.0)	0.766
Threats from the assailant	147 (0.9)	45 (1.6)	102 (0.7)	<0.001	60 (0.9)	87 (0.8)	20 (3.1)	23 (0.9)	104 (0.8)	<0.001
Cost of transport	70 (0.4)	29 (1.0)	41 (0.3)	<0.001	34 (0.5)	36 (0.3)	17 (2.6)	10 (0.4)	43 (0.3)	<0.001
Other	808 (4.8)	31 (1.1)	777 (5.6)	<0.001	317 (5.0)	491 (4.8)	5 (0.8)	13 (0.5)	790 (5.8)	<0.001

*Among all survivors of sexual violence.
†Among resident survivors.
‡Among displaced survivors.
\$Pearson's χ^2 .
¶Among survivors accessing care in 2023.
**Among survivors accessing care in 2024.
††Among survivors accessing care in Walikale.
‡‡Among survivors accessing care in Mweso.
\$\$\$Among survivors accessing care in Goma.
DRC, Democratic Republic of the Congo; MSF, Médecins Sans Frontières.

Table 3 Fully adjusted multivariable logistic regression models of factors associated with accessing care within 72 hours, among survivors of sexual violence accessing care in MSF supported programmes in North Kivu, DRC 2023–2024. Models including all pooled data and separated by year and programme site

Adjusted* multivariable logistic regression models																		
	Full data set			2023			2024			Walikale			Mwesio			Goma		
	aOR (95% CI)	P value	aOR (95% CI)	P value	aOR (95% CI)	P value	aOR (95% CI)	P value	aOR (95% CI)	P value	aOR (95% CI)	P value	aOR (95% CI)	P value	aOR (95% CI)	P value		
Residential status (Ref=Resident)																		
Displaced	0.64 (0.57 to 0.71)	<0.001	0.61 (0.52 to 0.71)	<0.001	0.66 (0.56 to 0.76)	<0.001	0.05 (0.01 to 0.39)	0.005	1.04 (0.78 to 1.39)	0.804	0.85 (0.64 to 1.15)	0.295						
Age group (in years) (Ref=20–29 years)																		
0–9	0.64 (0.43 to 0.95)	0.029	0.80 (0.44 to 1.44)	0.456	0.60 (0.35 to 1.03)	0.064	1.43 (0.45 to 4.57)	0.543	1.86 (0.43 to 8.13)	0.41	0.50 (0.30 to 0.82)	0.006						
10–19	0.62 (0.56 to 0.68)	<0.001	0.66 (0.57 to 0.78)	<0.001	0.58 (0.52 to 0.65)	<0.001	0.82 (0.52 to 1.29)	0.386	0.58 (0.42 to 0.78)	<0.001	0.62 (0.56 to 0.69)	<0.001						
30–39	1.14 (1.04 to 1.25)	0.004	0.91 (0.79 to 1.06)	0.222	1.35 (1.19 to 1.52)	<0.001	0.48 (0.25 to 0.93)	0.029	0.85 (0.61 to 1.20)	0.352	1.18 (1.07 to 1.30)	0.001						
40–49	0.84 (0.73 to 0.96)	0.01	0.90 (0.74 to 1.09)	0.278	0.96 (0.79 to 1.16)	0.653	0.35 (0.10 to 1.20)	0.095	0.53 (0.34 to 0.83)	0.005	0.87 (0.76 to 1.01)	0.064						
>50	0.45 (0.38 to 0.53)	<0.001	0.50 (0.39 to 0.64)	<0.001	0.52 (0.41 to 0.66)	<0.001	0.49 (0.09 to 2.61)	0.403	0.28 (0.13 to 0.61)	0.001	0.48 (0.40 to 0.58)	<0.001						
Sex (Ref=Male)																		
Female	0.88 (0.74 to 1.04)	0.134	0.69 (0.51 to 0.94)	0.018	0.97 (0.79 to 1.21)	0.815	0.98 (0.26 to 3.78)	0.982	0.85 (0.43 to 1.70)	0.653	0.98 (0.82 to 1.18)	0.861						
Assailant type (Ref=Non-civilian)																		
Intimate partner	0.66 (0.57 to 0.76)	<0.001	1.04 (0.80 to 1.36)	0.769	0.61 (0.51 to 0.74)	<0.001	1.40 (0.53 to 3.72)	0.498	1.28 (0.63 to 2.61)	0.503	0.64 (0.54 to 0.75)	<0.001						
Civilian (non-partner)	1.02 (0.93 to 1.11)	0.709	1.14 (1.00 to 1.31)	0.049	1.09 (0.97 to 1.23)	0.128	1.65 (0.79 to 3.46)	0.183	0.96 (0.67 to 1.39)	0.845	1.12 (1.02 to 1.23)	0.015						
Other or multiple types	0.88 (0.44 to 1.75)	0.719	0.55 (0.20 to 1.56)	0.263	1.19 (0.43 to 3.30)	0.745	0.76 (0.10 to 5.94)	0.798	†	†	0.89 (0.38 to 2.08)	0.787						
Number of assailants (Ref=Single)																		
Multiple	0.97 (0.90 to 1.06)	0.551	0.77 (0.68 to 0.87)	<0.001	1.30 (1.16 to 1.46)	<0.001	1.61 (0.80 to 3.22)	0.182	1.01 (0.70 to 1.46)	0.962	1.10 (1.01 to 1.20)	0.035						
Armed assailant (Ref=No)																		
Yes	1.49 (1.36 to 1.64)	<0.001	1.49 (1.26 to 1.76)	<0.001	1.60 (1.42 to 1.80)	<0.001	3.09 (1.76 to 5.40)	<0.001	1.05 (0.68 to 1.63)	0.824	1.23 (1.11 to 1.36)	<0.001						
Place/context of the sexual violence (Ref=Private/domestic setting)																		
Movement-related/ public space	0.69 (0.61 to 0.78)	<0.001	0.76 (0.63 to 0.92)	0.004	0.76 (0.65 to 0.90)	0.001	1.10 (0.62 to 1.96)	0.747	0.92 (0.66 to 1.29)	0.642	0.46 (0.40 to 0.53)	<0.001						
Livelihood/essential activity	1.04 (0.94 to 1.15)	0.42	0.99 (0.84 to 1.17)	0.934	1.11 (0.98 to 1.26)	0.088	1.30 (0.72 to 2.35)	0.379	1.34 (0.92 to 1.96)	0.129	0.95 (0.86 to 1.06)	0.387						
Other and not disclosed	0.81 (0.67 to 0.98)	0.03	1.09 (0.78 to 1.53)	0.611	0.71 (0.56 to 0.89)	0.004	2.30 (0.98 to 5.38)	0.055	1.83 (0.87 to 3.82)	0.11	0.65 (0.53 to 0.80)	<0.001						
Referred by (Ref=Self-referred)																		
Informal referral	0.66 (0.59 to 0.73)	<0.001	0.61 (0.51 to 0.72)	<0.001	0.69 (0.60 to 0.79)	<0.001	0.39 (0.22 to 0.67)	0.001	0.63 (0.46 to 0.86)	0.004	0.74 (0.65 to 0.84)	<0.001						
Trained community focal point	0.72 (0.66 to 0.79)	<0.001	0.42 (0.37 to 0.49)	<0.001	0.92 (0.82 to 1.04)	0.197	0.18 (0.09 to 0.34)	<0.001	1.49 (0.70 to 3.16)	0.296	0.87 (0.79 to 0.97)	0.008						
Formal/institutional referral	0.72 (0.64 to 0.81)	<0.001	0.56 (0.46 to 0.67)	<0.001	0.82 (0.69 to 0.97)	0.02	0.31 (0.15 to 0.65)	0.002	0.52 (0.38 to 0.71)	<0.001	0.84 (0.73 to 0.97)	0.016						
Other	0.36 (0.16 to 0.84)	0.019	0.28 (0.10 to 0.77)	0.014	0.48 (0.10 to 2.25)	0.355	†	†	†	†	0.27 (0.09 to 0.82)	0.021						
Mean VIF for the model	2.62		2.61		2.71		2.80		2.71		2.71		3.85					
*All variables in the multivariable model were mutually adjusted.																		
†Insufficient observations for reliable model estimation.																		
OR, adjusted OR; DRC, Democratic Republic of the Congo; MSF, Médecins Sans Frontières; Ref, reference value; VIF, variance inflation factor.																		

*All variables in the multivariable model were mutually adjusted. †Insufficient observations for reliable model estimation.

aOR, adjusted OR; DRC, Democratic Republic of the Congo; MSF, Médecins Sans Frontières; Ref, reference value; VIF, variance inflation factor.

and Walikale (aOR 1.40 (95% CI 0.53 to 3.72), survivors of intimate partner violence had higher odds of accessing care within 72 hours although these results were non-significant.

To further understand the association between resident status and timely access to care, we added the variable 'perceived any barrier' to the fully adjusted model. This attenuated the association between residential status and timely access to care (aOR 1.08 (95% CI 0.95 to 1.22)), suggesting that perceived barriers may partially mediate this relationship (data not shown in table).

Factors associated with the main perceived barriers to accessing care

Tables 4 and 5 present the results from the fully adjusted multivariable logistic regression models for the dependent variables 'lack of information' and 'fear of social consequences', with aOR, 95% CI and p values. Mean VIF for the models ranged between 2.61 and 3.89, indicating that there are no significant issues with multicollinearity in the models.

As shown in table 4, displaced survivors had 3.9 times higher odds of reporting lack of information as a barrier compared with resident survivors (aOR 3.90 (95% CI 3.45 to 4.40)). The same direction is seen also for each year and programme site, although non-significant in the model for Mweso.

Survivors of violence perpetrated by an intimate partner had 1.26 times higher odds of reporting lack of information as a barrier compared with those who reported a non-civilian (aOR 1.26 (95% CI 1.08 to 1.47)), the same direction is also seen in the analysis for each year and programme site, except in Mweso.

As shown in table 5, women had 56% higher odds than men to perceive social consequences as a barrier (aOR 1.56 (95% CI 1.29 to 1.90)), however in both models for Walikale and Mweso women were less likely to report this barrier (significant for Walikale, non-significant for Mweso). Displaced survivors had 3.4 times higher odds of reporting fear of social consequences as a barrier compared with resident survivors (aOR 3.40 (95% CI 2.97 to 3.88)). This result varied between programme sites; in both Mweso and Walikale displaced survivors were less likely to report this barrier (non-significant).

Survivors of violence perpetrated by a civilian (not intimate partner) had significantly higher odds of reporting fear of social consequences as a barrier compared with those who reported the assailant to be a non-civilian (aOR 1.16 (95% CI 1.06 to 1.26)).

DISCUSSION

This study of 16 712 survivors of sexual violence accessing care in North Kivu shows that there are significant differences between displaced and non-displaced survivors in terms of the sexual violence they report and their access to care, as well as some local differences between programme sites. It also identifies factors associated with

timely access to care and perceived barriers operating at different socio-ecological levels.

The distribution of age and sex among survivors accessing care, with the largest age group being 20–29, is congruent with previous studies from North Kivu,^{14 26} indicating little change in age distribution among survivors accessing care over the years, despite contextual changes. However, the proportion of both adolescent and child survivors was lower in the current study compared with our previous study²⁶ and lower among displaced survivors, suggesting that they lack access to care.

Most of the reported violence was perpetrated by non-civilians (53.2%), by armed assailants (71.4%) and during livelihood/essential activities (50.2%) and 28.5% reported multiple assailants. In a study examining data from survivors of sexual violence accessing care in a hospital in Bukavu, South Kivu, during 2014–2019, 43.2% of the survivors reported an armed assailant and 50.0% multiple assailants¹¹ whereas in a study examining data from survivors accessing a hospital in Goma, during 2013–2017 only 13.8% of survivors reported a military assailant.¹² In a more recent study from Goma, including survivors who accessed care during 2019–2020, 38.6% of the survivors reported the assailant to be military or police.¹⁴ The differences seen between studies indicate that violence characteristics change over time and are likely linked to contextual factors. The high level of violence perpetrated by non-civilians and armed assailants indicate high levels of militarised and/or opportunistic violence by armed actors even though our sample does not represent the general population. The high proportion of violence reported to be linked to livelihood/essential activities and the large percentage of female survivors accessing care illustrates the gendered aspect of conflict and displacement which needs to be recognised and addressed.

The large number of displaced survivors accessing care can be explained by the physical setup of the care model in Goma, allowing for a large displaced population to have geographical access to care within the camps. The model of care, the Tumaini, might also have been a suitable model for this context, even though this study does not allow for a comparison with other models. Displaced populations are exposed to violence before and during displacement as shown in other humanitarian contexts^{25 32} and may be exposed to unsafe situations linked to livelihood activities in the camps, such as seeking food or water in unsafe areas. Their dependency on humanitarian responses further increases risk for sexual abuse and exploitation.

Displaced survivors more frequently reported non-civilians, armed and multiple assailants which indicates that those who were displaced were more exposed to conflict-related violence. However, displaced survivors were also more likely to report intimate partner violence which likely links to the disruption of social networks, destabilisation of traditional power balances and gender roles and the impact of stress on families within

Table 4 Fully adjusted multivariable logistic regression models for factors associated with the perceived barrier lack of information, among survivors of sexual violence accessing care in MSF supported programmes in North Kivu, DRC 2023–2024. Models including pooled data and separated by year and programme site

Adjusted* multivariable logistic regression model														
	Full data set			2023		2024		Walikale			Mweso		Goma	
	aOR (95% CI)	P value	aOR (95% CI)	P value	aOR (95% CI)	P value	aOR (95% CI)	P value	aOR (95% CI)	P value	aOR (95% CI)	P value		
Residential status (Ref=Resident)														
Displaced	3.90 (3.45 to 4.40)	<0.001	4.59 (3.80 to 5.54)	<0.001	3.30 (2.81 to 3.88)	<0.001	3.20 (1.25 to 8.22)	0.015	1.18 (0.81 to 1.70)	0.390	1.56 (1.17 to 2.07)	0.002		
Age group (in years) (Ref=20–29 years)														
0–9	0.69 (0.46 to 1.05)	0.084	0.72 (0.38 to 1.36)	0.314	0.67 (0.38 to 1.18)	0.168	0.33 (0.08 to 1.29)	0.111	1.76 (0.56 to 5.48)	0.330	0.77 (0.47 to 1.26)	0.295		
10–19	1.05 (0.96 to 1.16)	0.264	1.14 (0.96 to 1.34)	0.129	1.02 (0.91 to 1.14)	0.729	1.24 (0.79 to 1.96)	0.347	0.87 (0.58 to 1.31)	0.508	1.06 (0.96 to 1.17)	0.273		
30–39	0.89 (0.82 to 0.97)	0.007	0.97 (0.84 to 1.13)	0.721	0.85 (0.77 to 0.95)	0.003	2.21 (1.19 to 4.10)	0.012	0.97 (0.64 to 1.47)	0.874	0.88 (0.80 to 0.96)	0.004		
40–49	0.79 (0.70 to 0.90)	<0.001	0.95 (0.78 to 1.16)	0.598	0.67 (0.56 to 0.79)	<0.001	1.71 (0.62 to 4.70)	0.297	0.59 (0.29 to 1.23)	0.161	0.80 (0.70 to 0.92)	0.002		
≥50	1.22 (1.02 to 1.45)	0.027	1.36 (1.05 to 1.76)	0.018	1.08 (0.84 to 1.38)	0.559	2.04 (0.52 to 8.03)	0.309	1.18 (0.34 to 4.15)	0.792	1.16 (0.97 to 1.39)	0.111		
Sex (Ref=Male)														
Female	0.96 (0.81 to 1.14)	0.672	1.28 (0.94 to 1.73)	0.117	0.84 (0.68 to 1.03)	0.091	3.78 (0.74 to 19.22)	0.109	0.40 (0.19 to 0.83)	0.014	0.91 (0.76 to 1.09)	0.288		
Assailant type (Ref=Non-civilian)														
Intimate partner	1.26 (1.08 to 1.47)	0.003	1.00 (0.76 to 1.32)	1.000	1.37 (1.14 to 1.66)	0.001	1.61 (0.62 to 4.18)	0.325	0.99 (0.43 to 2.27)	0.985	1.18 (1.00 to 1.39)	0.045		
Civilian (non-partner)	0.96 (0.89 to 1.04)	0.358	1.01 (0.88 to 1.16)	0.870	0.93 (0.84 to 1.03)	0.166	1.38 (0.64 to 2.94)	0.408	0.78 (0.47 to 1.30)	0.343	0.86 (0.79 to 0.94)	0.001		
Other or multiple types	1.14 (0.57 to 2.30)	0.713	1.40 (0.45 to 4.41)	0.564	1.00 (0.41 to 2.44)	0.991	1.53 (0.22 to 10.73)	0.670	†	†	1.14 (0.50 to 2.59)	0.756		
Number of assailants (Ref=Single)														
Multiple	1.26 (1.17 to 1.37)	<0.001	1.54 (1.35 to 1.75)	<0.001	1.12 (1.01 to 1.25)	0.026	0.78 (0.39 to 1.58)	0.499	1.43 (0.92 to 2.24)	0.112	1.12 (1.03 to 1.21)	0.011		
Armed assailant (Ref=No)														
Yes	0.74 (0.67 to 0.81)	<0.001	0.67 (0.56 to 0.80)	<0.001	0.78 (0.69 to 0.87)	<0.001	0.82 (0.47 to 1.44)	0.500	0.70 (0.38 to 1.29)	0.256	0.84 (0.76 to 0.93)	0.001		
Place/context of the sexual violence (Ref=Private/domestic setting)														
Movement-related/public space	0.92 (0.82 to 1.04)	0.202	0.88 (0.72 to 1.08)	0.228	0.95 (0.81 to 1.12)	0.551	0.66 (0.37 to 1.18)	0.164	1.53 (0.93 to 2.54)	0.097	1.28 (1.11 to 1.47)	0.001		

Continued

Table 4 Continued

	Adjusted* multivariable logistic regression model													
	Full data set			2024			Walikale			Mweso			Goma	
	aOR (95% CI)	P value	aOR (95% CI)	P value	aOR (95% CI)	P value	aOR (95% CI)	P value	aOR (95% CI)	P value	aOR (95% CI)	P value	aOR (95% CI)	P value
Livelihood/essential activity	1.11 (1.01 to 1.22)	0.027	1.11 (0.93 to 1.32)	0.242	1.12 (1.00 to 1.26)	0.051	0.73 (0.41 to 1.30)	0.287	1.96 (1.15 to 3.34)	0.013	1.13 (1.03 to 1.25)	0.015	1.13 (1.03 to 1.25)	0.015
Other and not disclosed	0.84 (0.70 to 1.03)	0.088	0.90 (0.63 to 1.28)	0.558	0.84 (0.66 to 1.05)	0.131	0.56 (0.24 to 1.33)	0.192	0.52 (0.15 to 1.78)	0.296	0.94 (0.77 to 1.16)	0.591	0.94 (0.77 to 1.16)	0.591
Referred by (Ref=Self-referred)														
Informal referral	4.12 (3.70 to 4.59)	<0.001	3.84 (3.22 to 4.59)	<0.001	4.21 (3.67 to 4.83)	<0.001	1.83 (1.09 to 3.08)	0.022	3.85 (2.55 to 5.83)	<0.001	4.12 (3.65 to 4.65)	<0.001	4.12 (3.65 to 4.65)	<0.001
Trained community focal point	4.27 (3.90 to 4.67)	<0.001	5.70 (4.90 to 6.62)	<0.001	3.71 (3.30 to 4.16)	<0.001	2.72 (1.65 to 4.47)	<0.001	2.50 (1.18 to 5.30)	0.017	3.83 (3.48 to 4.22)	<0.001	3.83 (3.48 to 4.22)	<0.001
Formal/institutional referral	3.38 (3.00 to 3.82)	<0.001	2.82 (2.32 to 3.42)	<0.001	3.84 (3.28 to 4.49)	<0.001	1.59 (0.82 to 3.10)	0.168	4.95 (3.28 to 7.48)	<0.001	3.50 (3.06 to 4.02)	<0.001	3.50 (3.06 to 4.02)	<0.001
Other	4.63 (1.92 to 11.12)	0.001	4.86 (1.67 to 14.16)	0.004	5.08 (1.03 to 25.09)	0.046	7.23 (0.56 to 94.04)	0.131	6.14 (0.67 to 56.62)	0.109	4.31 (1.43 to 13.03)	0.010	4.31 (1.43 to 13.03)	0.010
Mean VIF for the model	2.64		2.65		2.71		2.71		2.71		2.61		3.89	
*All variables in the multivariable model were mutually adjusted.														
†Insufficient observations for reliable model estimation.														
‡OR, adjusted OR; DRC, Democratic Republic of the Congo; MSF, Médecins Sans Frontières; Ref, reference value; VIF, variance inflation factor.														

*All variables in the multivariable model were mutually adjusted.

†Insufficient observations for reliable model estimation.

aOR, adjusted OR; DRC, Democratic Republic of the Congo; MSF, Médecins Sans Frontières; Ref, reference value; VIF, variance inflation factor.

Table 5 Fully adjusted multivariable logistic regression models for factors associated with the perceived barrier fear of social consequences, among survivors of sexual violence accessing care in MSF supported programmes in North Kivu, DRC 2023–2024. Models including pooled data and separated by year and programme site

Adjusted* multivariable logistic regression model												
Full data set			2023		2024		Walikale		Mweso		Goma	
	aOR (95% CI)	P value	aOR (95% CI)	P value	aOR (95% CI)	P value	aOR (95% CI)	P value	aOR (95% CI)	P value	aOR (95% CI)	P value
Residential status (Ref=Resident)												
Displaced	3.40 (2.97 to 3.88)	<0.001	7.67 (5.84 to 10.08)	<0.001	2.11 (1.80 to 2.48)	<0.001	0.62 (0.08 to 5.04)	0.651	0.84 (0.61 to 1.17)	0.313	1.19 (0.86 to 1.65)	0.288
Age group (in years) (Ref=20–29 years)												
0–9	0.62 (0.36 to 1.08)	0.093	0.63 (0.26 to 1.53)	0.302	0.67 (0.33 to 1.34)	0.256	0.79 (0.08 to 7.57)	0.842	0.75 (0.17 to 3.27)	0.699	0.63 (0.34 to 1.17)	0.140
10–19	1.03 (0.93 to 1.14)	0.545	0.84 (0.70 to 1.02)	0.081	1.11 (0.98 to 1.24)	0.089	1.81 (0.81 to 4.06)	0.151	1.28 (0.91 to 1.80)	0.149	1.01 (0.91 to 1.13)	0.789
30–39	1.10 (1.00 to 1.20)	0.042	1.02 (0.87 to 1.20)	0.783	1.13 (1.01 to 1.26)	0.028	0.25 (0.03 to 2.07)	0.200	1.43 (1.03 to 1.99)	0.034	1.08 (0.98 to 1.19)	0.103
40–49	1.02 (0.89 to 1.17)	0.810	0.94 (0.75 to 1.17)	0.557	1.12 (0.94 to 1.34)	0.197	2.78 (0.52 to 14.86)	0.233	1.11 (0.67 to 1.86)	0.681	1.02 (0.88 to 1.18)	0.782
≥50	0.79 (0.65 to 0.96)	0.018	0.87 (0.65 to 1.16)	0.345	0.80 (0.61 to 1.05)	0.102	1.42 (0.12 to 16.41)	0.778	0.94 (0.28 to 3.19)	0.924	0.77 (0.63 to 0.94)	0.012
Sex (Ref=Male)												
Female	1.56 (1.29 to 1.90)	<0.001	1.05 (0.75 to 1.47)	0.780	1.90 (1.49 to 2.42)	<0.001	0.16 (0.03 to 0.75)	0.020	0.78 (0.40 to 1.53)	0.465	1.78 (1.45 to 2.19)	<0.001
Assailant type (Ref=Non-civilian)												
Intimate partner	1.06 (0.91 to 1.25)	0.454	1.26 (0.93 to 1.69)	0.133	1.02 (0.84 to 1.24)	0.826	0.59 (0.10 to 3.60)	0.566	1.72 (1.02 to 2.91)	0.043	0.98 (0.82 to 1.16)	0.789
Civilian (non-partner)	1.16 (1.06 to 1.26)	<0.001	1.31 (1.12 to 1.52)	0.001	1.15 (1.04 to 1.28)	0.009	0.86 (0.23 to 3.15)	0.816	0.91 (0.63 to 1.32)	0.628	1.13 (1.04 to 1.24)	0.007
Other or multiple types	0.63 (0.26 to 1.52)	0.302	†	†	0.91 (0.35 to 2.35)	0.839	†	†	0.64 (0.085,33)	0.681	0.63 (0.23 to 1.70)	0.361
Number of assailants (Ref=Single)												
Multiple	1.01 (0.93 to 1.10)	0.735	1.02 (0.88 to 1.18)	0.791	1.06 (0.95 to 1.18)	0.281	0.71 (0.18 to 2.87)	0.635	1.14 (0.78 to 1.68)	0.503	0.96 (0.88 to 1.05)	0.347
Armed assailant (Ref=No)												
Yes	1.21 (1.10 to 1.34)	<0.001	1.16 (0.95 to 1.40)	0.144	1.26 (1.12 to 1.42)	<0.001	1.85 (0.67 to 5.08)	0.232	0.93 (0.58 to 1.49)	0.750	1.26 (1.14 to 1.40)	<0.001
Place/context of the sexual violence (Ref=private/domestic setting)												
Movement-related/ Public space	0.48 (0.41 to 0.55)	<0.001	0.46 (0.36 to 0.60)	<0.001	0.54 (0.45 to 0.64)	<0.001	0.38 (0.12 to 1.20)	0.100	0.64 (0.43 to 0.94)	0.025	0.56 (0.47 to 0.65)	<0.001

Continued

Table 5 Continued

Adjusted* multivariable logistic regression model																		
	Full data set			2023			2024			Walikale			Mweso			Goma		
	aOR (95% CI)	P value	aOR (95% CI)	P value	aOR (95% CI)	P value	aOR (95% CI)	P value	aOR (95% CI)	P value	aOR (95% CI)	P value	aOR (95% CI)	P value	aOR (95% CI)	P value		
Livelihood/essential activity	1.07 (0.97 to 1.18)	0.180	1.20 (0.99 to 1.46)	0.057	1.04 (0.92 to 1.17)	0.524	0.42 (0.13 to 1.30)	0.133	1.84 (1.26 to 2.68)	0.002	1.04 (0.94 to 1.16)	0.423	1.04 (0.94 to 1.16)	0.423	1.04 (0.94 to 1.16)	0.423		
Other and not disclosed	0.78 (0.63 to 0.96)	0.022	0.58 (0.37 to 0.92)	0.020	0.89 (0.69 to 1.13)	0.341	0.69 (0.17 to 2.82)	0.604	0.42 (0.18 to 1.02)	0.054	0.90 (0.72 to 1.14)	0.390	0.90 (0.72 to 1.14)	0.390	0.90 (0.72 to 1.14)	0.390		
Referred by (Ref=Self-referred)																		
Informal referral	0.50 (0.45 to 0.56)	<0.001	0.59 (0.48 to 0.72)	<0.001	0.44 (0.38 to 0.50)	<0.001	1.20 (0.54 to 2.68)	0.653	0.90 (0.63 to 1.29)	0.571	0.40 (0.35 to 0.45)	<0.001	0.40 (0.35 to 0.45)	<0.001	0.40 (0.35 to 0.45)	<0.001		
Trained community focal point	0.56 (0.51 to 0.61)	<0.001	0.48 (0.41 to 0.56)	<0.001	0.56 (0.50 to 0.62)	<0.001	0.28 (0.08 to 1.02)	0.053	0.85 (0.45 to 1.58)	0.598	0.46 (0.42 to 0.51)	<0.001	0.46 (0.42 to 0.51)	<0.001	0.46 (0.42 to 0.51)	<0.001		
Formal/institutional referral	0.54 (0.48 to 0.62)	<0.001	0.69 (0.55 to 0.85)	<0.001	0.46 (0.39 to 0.54)	<0.001	0.43 (0.10 to 1.93)	0.270	1.27 (0.88 to 1.84)	0.197	0.45 (0.39 to 0.52)	<0.001	0.45 (0.39 to 0.52)	<0.001	0.45 (0.39 to 0.52)	<0.001		
Other	0.46 (0.15 to 1.41)	0.176	0.41 (0.09 to 1.93)	0.261	0.83 (0.15 to 4.49)	0.831	3.19 (0.22 to 46.29)	0.396	†	†	0.35 (0.10 to 1.27)	0.111	0.35 (0.10 to 1.27)	0.111	0.35 (0.10 to 1.27)	0.111		
Mean VIF for the model	2.64			2.75			2.71			2.80			2.62			3.89		
*All variables in the multivariable model were mutually adjusted,																		
†Insufficient observations for reliable model estimation.																		
aOR, adjusted OR; DRC, Democratic Republic of the Congo; MSF, Médecins Sans Frontières; Ref, reference value; VIF, variance inflation factor.																		

*All variables in the multivariable model were mutually adjusted.

†Insufficient observations for reliable model estimation.

aOR, adjusted OR; DRC, Democratic Republic of the Congo; MSF, Médecins Sans Frontières; Ref, reference value; VIF, variance inflation factor.

displacement settings as also shown in a qualitative study from refugee camp settings in South Sudan, Kenya and Iraq.³³ It is therefore important to look beyond militarised violence within displacement settings to ensure that survivors of all forms of gender-based violence have access to care and support.

The perceived barriers to access care are influenced by intersections between factors at different socio-ecological levels. The main perceived barrier, lack of information, is situated at the individual level but is highly influenced by interpersonal relations and the information and knowledge levels of peers. In addition, the responsibility to share information lies at the organisational level and that lack of information is perceived as a barrier does reflect an organisational shortcoming. Our data does not specify what type of information is lacking, however, our previous qualitative study shows that information around the services available, the possibility to seek care at any moment after the incident and information around the need for care for male survivors and survivors of intimate partner violence were lacking.¹⁶

Displaced survivors were more likely to be referred by a trained community focal point and less frequently self-referred which might be linked to displaced survivors being more likely to report lack of information as a barrier. When survivors lack information, seeking help through a trusted community focal point might be a key pathway to access care, which illustrates how solutions at an organisational and/or interpersonal level of the socio-ecological model can address barriers found at an individual level. Creative ways of widely sharing information to newly displaced populations are needed and using trusted community focal points who can both share information and support survivors can be a suitable model. The influence of the interpersonal level is represented by the negative social consequences and harmful actions which have been described in the literature as common and severe among survivors in eastern DRC^{8 18 34} and which can explain our current finding of fear of social consequences being a major barrier to access care. Extensive norm-changing work is needed to address this, which will need strong commitments and actions involving both organisational and policy level stakeholders. Transforming social norms, and especially gender norms has been shown in a scoping review to have a positive impact on gender-based violence reduction and access to sexual and reproductive healthcare services³⁵ and has potential to also positively impact care-seeking behaviours among survivors of sexual violence.

Even though access to care at any point in time is important, having access to care as soon as possible, and preferably within 72 hours, is key to be able to receive the full medical care package. Displaced survivors were less likely to access care within 72 hours which may, in part, be explained by survivors experiencing violence prior to displacement when they did not have geographical access to care. This aligns with evidence from eastern DRC demonstrating that distance and isolation significantly

reduce timely access to care.¹¹ However, our findings show that displaced survivors had higher odds of experiencing barriers which may further contribute to delayed care-seeking. As displaced survivors were also more likely to report fear of social consequences, specific actions need to be taken to ensure that responses to displaced populations address negative attitudes and harmful norms and enable discrete pathways to care, ensuring survivors can access care while limiting risk of exposure.

Survivors who experienced violence by an intimate partner were less likely to access timely care and more likely to report lack of information as a barrier. This is congruent with findings from a previous study from South Kivu¹¹ and might be explained by the strong narrative around conflict-related violence in DRC, commonly describing sexual violence as perpetrated by unknown armed men which might impact perceptions around violence and limit access to care for survivors of violence that does not fit that narrative. At an individual level, internal stigma and shame are likely impacted by such narratives. It might be less harmful for a survivor to disclose a rape by an armed actor in the context of war rather than exposure to sexual violence by a partner or other known civilian, which mainly relates to interpersonal level barriers.

Referral pathways as compared with being self-referred were negatively associated with timely access to care, which confirms previous findings from North and South Kivu^{11 26} and indicates organisational and community level barriers which need to be addressed in humanitarian responses.

The associations between residential status and the main outcomes were observed in both 2023 and 2024 and remained in the same direction as those observed in the pooled analyses, although some variation in the magnitude of the associations was noted, suggesting that the overall results are not driven by a single year of data collection.

The site-specific analyses suggested variation in the associations between residential status, as well as of other factors, and study outcomes across programme sites. While some associations showed broadly similar directions across sites, differences in the magnitude and precision of estimates indicate that local contextual factors may influence the relationship between displacement and care-seeking behaviours, highlighting the importance of contextual influences and calls for locally conducted assessments and adaptations of programmes.

Policy and research implications

Based on the findings from this study, context-specific assessments are needed and should be used to guide interventions. Awareness-raising activities need to be adapted to the different demographic groups and the specific barriers identified, with clear, inclusive and concrete messaging. Models of care, entry points and referral pathways need to be established in a way which allows for all survivors to access care in an acceptable

and safe way. More decentralised and community-based models should be considered, but decisions should be made together with the intended target population. Activities addressing harmful social norms are needed to reduce stigmatisation of survivors.

Further research is needed to better understand barriers specific to populations including displaced populations, children and adolescents and more importantly how these can be addressed. Further research is also needed to explore intersectional vulnerabilities such as disabilities and diverse sexual orientation and gender identities. How violence perpetrated by specific perpetrators can impact care-seeking and how violence perpetrated during livelihood activities can be mitigated also requires further research. Research comparing the impact of different models of care, concerning both access and quality of care, would also be useful, ideally designed and conducted in collaboration with survivors themselves.

Methodological considerations

This study presents a uniquely large set of data from survivors accessing care in an ongoing humanitarian crisis. The main limitation of this study is that data solely concerns survivors who accessed care in MSF-supported healthcare facilities rather than all survivors of sexual violence in the population. It introduces a selection bias and poses a challenge for understanding violence patterns, care-seeking and access to care among the general population. There is a possibility that the nature of the included healthcare facilities might have impacted who accessed care, which needs to be considered when interpreting the results. All data collected were self-reported by survivors when accessing care, which may introduce recall bias, social desirability bias and post-hoc rationalisation. Although we consider this risk to be low given the nature of the questions asked during the consultation, it should be taken into consideration when interpreting the findings. The data were collected before the research study began, which prevented the research team from conducting on-site data quality checks or including certain variables, such as survivors' socioeconomic status, marital status, education level, distance to healthcare facilities, sexual orientation, gender identity and the specific affiliations of non-civilian assailants. This limited the scope of the analyses and may have resulted in residual confounding, as we were unable to adjust for these factors. Several potentially relevant contextual factors, such as site-specific characteristics, changes in security conditions, population movements, service availability, community awareness of services and other contextual or temporal influences that may have affected care-seeking behaviour and perceived barriers to care, are also missing from the analysis. While year-specific and site-specific sensitivity analyses were conducted, residual confounding from unmeasured contextual factors cannot be excluded. The data on perceived barriers were based on a pre-defined list, defined by MSF sexual violence experts which limit

the range of possible responses and might have led to different additional barriers being overlooked in our analysis. In addition, the barrier 'lack of information' does not allow for further detail on what information is lacking, which further limits interpretation. Considering that both violence characteristics and access to care are dependent on context and contextual changes, the generalisability of these findings, collected in three sites in North Kivu, to other humanitarian settings might be limited.

CONCLUSION

Increased violence and displacement might impact sexual violence characteristics and care-seeking. Lack of information has been highlighted as one key barrier to access care, which implies that different forms of awareness raising activities are necessary. Fear of negative social consequences, another main barrier reported by survivors, calls for more transformative norm changing work to reduce stigma and harmful attitudes towards survivors. Humanitarian actors need to acknowledge the differences in care-seeking, access and perceived barriers among different contexts and groups of survivors. Ensuring flexible and responsive interventions can improve services for survivors of sexual violence and specifically their access to care.

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Ethics approval This study involves human participants and was approved. This study has been granted ethical approval from the ethical committees Comité National d'Éthique de la Santé, Direction Provinciale de North Kivu, DRC (CNES 030/DPNK/130PM/2025) and Swedish Ethical Review Authority, Sweden (Dnr 025-07853-01). This research fulfilled the exemption criteria set by the MSF Ethics Review Board (ERB) for a posteriori analyses of routinely-collected clinical data and thus did not require MSF ERB review. It was conducted with permission from the Medical Director, Operational Centre Amsterdam, MSF. Secondary register-based data was used for this study. Data had been collected as part of routine medical activities and data collection within Médecins Sans Frontières programmes. No data used for the current analysis could be linked back to any individual.

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Data availability statement Data are available upon reasonable request. MSF has a managed access system for data sharing that respects MSF's legal and ethical obligations to its patients to collect, manage and protect their data responsibly. Ethical risks include, but are not limited to, the nature of MSF operations and target populations being such that data collected are often highly sensitive. Data are available on request in accordance with MSF's data sharing policy.

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