Prevalence of sexual violence among refugees: a systematic review

Juliana de Oliveira Araujo1, Fernanda Mattos de Souza1, Raquel Proença1, Mayara Lisboa Bastos1, Anete Trajman2,3, Eduardo Faerstein4

1 Universidade do Estado do Rio de Janeiro. Instituto de Medicina Social. Programa de Pós-Graduação em Saúde Coletiva. Rio de Janeiro, RJ, Brasil
2 Universidade Federal do Rio de Janeiro. Faculdade de Medicina. Programa de pós-Graduação em Clínica médica. Rio de Janeiro, RJ, Brasil.
3 McGill University. Montreal, QC, Canadá.
4 Universidade do Estado do Rio de Janeiro. Instituto de Medicina Social. Departamento de Epidemiologia. Rio de Janeiro, RJ, Brasil

ABSTRACT

OBJECTIVE: To synthesize data about the prevalence of sexual violence (SV) among refugees around the world.

METHODS: A systematic review was conducted from the search in seven bibliographic databases. Studies on the prevalence of SV among refugees and asylum seekers of any country, sex or age, whether in English, French, Spanish and Portuguese, were eligible.

RESULTS: Of the 2,906 titles found, 60 articles were selected. The reported prevalence of SV was largely variable (0% to 99.8%). Reports of SV were collected in all continents, with 42% of the articles mentioning it in refugees from Africa (prevalence from 1.3% to 100%). The rape was the most reported SV in 65% of the studies (prevalence from 0% to 90.9%). The main victims were women in 89% of the studies, all the way, especially when still in the countries of origin. The SV was perpetrated particularly by intimate partners, but also by agents of supposed protection. Few studies have reported SV in men and children; the prevalence reached up to 39.3% and 90.9%, respectively. Approximately one-third of the studies (32%) were carried out in refugee camps and more than half (52%) in health services using mental health assessment tools. No study has addressed the most recent migratory crisis. Meta-analysis was not performed due to the methodological heterogeneity of the studies.

CONCLUSIONS: SV is a prevalent problem affecting refugees of both sexes, of all ages, throughout the migratory journey, particularly those from Africa. Protection measures are urgently needed, and further studies, with more appropriate tools, may better measure the current magnitude of the problem.

DESCRIPTORS: Refugees. Sex Offenses. Rape. Review. Prevalence.

Correspondence: Eduardo Faerstein
Rua Sacopã,191 apto 201
22471-180 Rio de Janeiro, RJ, Brasil
E-mail: efaerstein@gmail.com

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INTRODUCTION

The world is currently experiencing the biggest migratory crisis since World War II, with an increasing number of refugees. According to the United Nations High Commissioner for Refugees (UNHCR) report, 65.6 million people were forced to move because of persecution, conflict, widespread violence or human rights violations in 2016. Of these, 22.5 million were refugees; 2.8 million, asylum seekers; and 40.3 million, internally displaced persons within their own countries1.

Sexual violence (SV), defined as a sexual act or attempt to obtain a sexual act without the voluntary consent of the victim or with someone unable to consent or refuse2, is considered a present threat during forced displacement and the search for asylum3-4. In times of war, women and girls are more vulnerable to rape and are at greater risk for other forms of SV, such as early or forced marriage, intimate partner abuse, child sexual abuse, sexual exploitation and trafficking1. SV has also been perpetrated against men and boys as a tactic of war or during detention and interrogation5; they may suffer rape, sexual torture, mutilation, humiliation, enslavement, and forced incest6. This risk persists during the escape journey and after the reception in apparently safe destinations7.

The consequences can be extremely serious. In women, it can lead to mental disorders, obstetric complications, sexual dysfunctions, unwanted pregnancies, unsafe abortions and sexually transmitted infections8-9. Among men, in addition to infections and mental disorders, sexual dysfunction, somatic complaints, sleep disorders, withdrawal from relationships, attempted suicide, alcohol and drug abuse, and violent behavior are common10. In childhood, sexual abuse may also be accompanied by guilt, shame, eating disorders, cognitive distortions, mental disorders, sexual and relationship problems, and school absenteeism11.

Two previous systematic reviews have portrayed SV in refugees and internally displaced persons in emergency humanitarian complexes12,13: a meta-analysis aimed at estimating its prevalence in women only12, and other aimed at quantifying gender-based violence in three categories: physical violence, by intimate and sexual partner13. Neither analyzed the different types, profile of perpetrators and the moment of occurrence of SV in the migratory process. No studies have been conducted on the prevalence of this violence in the total refugee population (children, adults and older adults of both sexes) in different scenarios and moments of their trajectory, for a more comprehensive understanding of the magnitude of the problem.

Thus, we aim to synthesize the literature on the prevalence of SV in refugees around the world through a systematic review, regardless of sex, age and location. With this knowledge, one may better identify the profile of refugees who are victims of SV, contributing to specific prevention, approach, treatment and monitoring strategies in the countries of origin, during migration and in the host countries.

METHODS

The bibliographic search was carried out in January 2018, using the MEDLINE (via Ovid), Embase (via Ovid), PsycINFO (via Ovid), Scopus, Web of Science, Sociological Abstracts (via ProQuest) and LILACS (via VHL) databases. No date limits or language restrictions were applied. Search strategies have involved the following MeSH and free terms: “refugee,” “asylum seek,” “exiled,” “refugee camps,” “sexual violence,” “sexual harassment,” “child abuse,” “sexual offense,” “sexual abuse,” “sexual crime,” “rape,” “sexual coercion,” “sexual assault.” Articles addressing any form of SV were included, using the connector “OR.” For the calculation by type of SV, we use the definition described in each of the articles. The search strategy is detailed in Appendix A. Articles
within the bibliographic reference lists of the review studies and those included in this study were added where applicable.

Studies with data available for calculating the prevalence of SV in refugees or asylum seekers (considered as single population) in any country, sex or age, and published in English, French, Spanish and Portuguese were eligible. Chapters of books, dissertations, annals of congresses, editorials, letters, notes and comments were not included.

The selection of studies was initially conducted through the search of titles and abstracts; then by reading the full texts. Decisions on study eligibility and data extraction were performed by two independent reviewers on electronic forms constructed in EpiData 3.1 (EpiData Association, Odense, Denmark), and the differences were resolved by consensus or by a third reviewer. References were managed in EndNote Web software [Thomson Reuters (SCIENTIFIC), NY, USA].

Information was collected on: (1) study methods and population; (2) prevalence of SV according to sex, age, type of SV, continent/region/country of origin, host country/region, period of occurrence and profile of perpetrators.

In studies that presented additional categories of migrants (e.g. economic migrants), only information on refugees and asylum seekers was used. Likewise, in studies that reported psychological, physical and sexual violence, only SV data were used.

The calculation of global prevalence was estimated from the information on the total cases of the studies. For the calculation of specific prevalence, the following types of SV reported by the articles were considered: rape, attempted rape, unwanted sexual contact, non-contact unwanted sexual experience, sexual harassment, sexual abuse, sexual torture, sexual assault, sexual exploitation, including enforced prostitution and sex for survival, genital mutilation, forced marriage and abortion. When only the prevalence by type were informed and more than one of these forms was inflicted on the same victims, it was not possible to estimate the overall prevalence.

RESULTS

We found 2,906 studies in the databases searched and 10 in the lists of bibliographic references (Figure 1). After the duplicates were removed (n = 1,111), 1,805 studies were selected for the reading of titles and abstracts. Of these, 1,498 were excluded by the following criteria: language (n = 29), type of publication (comments, letters, books, notes, editorials, abstracts of lectures and dissertations, n = 361), study design (most qualitative or review studies, n = 521), population not composed of refugees or asylum seekers (n = 176), out of scope (did not address SV, n = 131) or both (population and scope, n = 280).

Three hundred and seven studies were selected for the reading of full texts. After the application of the eligibility criteria, 60 studies were included for data extraction. Of the excluded ones, 15 were not original articles, 121 were review studies or with qualitative design and in 27 studies the population was not formed by refugees or asylum seekers.

Characteristics of the Studies and their Populations

The 60 articles selected were all published in English between 1990 and 2017 (45% between 2000 and 2010) and from 31 different countries (14 from the USA). Studies were of cross-sectional design (Table 1), except for two cohort studies.

The most frequent sites of data collection, according to the 54 articles that contained this information, were health services (n = 28.52%) and refugee camps (n = 17.32%). Most studies (87%) were conducted to evaluate outcomes in mental health, without the main objective of measuring the prevalence of SV cases. Among the 49 studies that informed
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the instrument used, the Harvard Trauma Questionnaire (HTQ) was the most frequently validated instrument (n = 15, corresponding to 31%), while 29% (n = 14) used questionnaires designed specifically for the research.

Studies involved 28,101 refugees and asylum seekers. The population of each study varied between 15 and 11,458 individuals. In 33% (n = 20) of the studies, the sample included less than 100 people, and in 18% (n = 11), more than 500 people. The mean age of participants ranged from 10.6 to 41.6 years old; 42% (n = 25) of the studies included those younger than 18 years. There was a general predominance of women; in 37% (n = 21) of the studies, the sample was exclusively female. The predominant religion was Muslim, in 12 (63%) of the 19 studies with data about it.

Prevalence of Sexual Violence

The global prevalence variation presented a large amplitude, regardless of the sample size: from 0% to 99.8%, with a total of 2,859 cases of SV. In 15 studies (31%), the prevalence was less than 10% (samples from 80 to 11,458 people), and in 11 (23%), more than 50% (samples from 15 to 919 people), as shown in Table 1. This wide variation occurred independently of the data collection scenario – in refugee camps (n = 12, 0.03% to 99.8%), health units (n = 25, 2.3% to 76.2%) and communities/villages (n = 6, 5.2% to 93.3%) – and assessing form – validated instruments (n = 25%; 0.0% to 99.8%) or questionnaires of the own research (n = 14; 0.03% to 93.3%).

Figure 1. Flowchart for the selection of studies included in the systematic review.
Table 1. Characteristics of the studies included in the systematic review and prevalence of sexual violence. (n = 60)

| First author and year of study | Country(ies)/host region | Data collection location | Period of data collection | Instrument of study | Sampling (n) | Mean age of sample (years) | Female proportion (%) | Global SV prevalence (%) | Prevalence of SV by sex |
|--------------------------------|--------------------------|--------------------------|--------------------------|--------------------|-------------|--------------------------|----------------------|------------------------|------------------------|
| Allodi et al. (1990)           | Canada                   | USS                      | 1979-1985                | NI                 | 56          | NI                       | 50.0                 | 64.3                   | 39.3                   |
| Formazzari et al. (1990)       | Canada                   | USS                      | NI NI                   | Collection in records | 36          | 37                       | 100.0               | 22.2                   | 22.2                   | NA                     |
| Mckelvey et al. (1995)         | Philippines              | USS                      | NI NI                   | RQ                 | 102         | NI                       | 33.3                 | 9.8                    | 8.8                    | 10.3                   |
| Peel et al. (1996)             | United Kingdom           | USS and detention centers | 1993-1994               | Collection in records | 92          | NI                       | 21.7                 | 33.7                   | 80                     | 20.8                   |
| Frljak et al. (1997)           | Bosnia and Herzegovina   | USS                      | 1993-1994               | Collection in records | 241         | NI                       | 100.0                | 3.3                    | 3.3                    | NA                     |
| Silove et al. (1998)           | Australia                | NI                       | NI NI                   | HTQ                | 96          | NI                       | NI                   | 0.0                    | 0.0                    | 0.0                    |
| Gorst-Unsworth et al. (1998)   | United Kingdom           | USS                      | NI NI                   | HTQ                | 84          | 39                       | 0.0                  | 14.3                   | NA                     | 14.3                   |
| Loutan et al. (1999)           | Switzerland              | USS                      | 1993-1994               | HTQ                | 573         | 27                       | 36.3                 | 2.3                    | NI                     | NI                     |
| Blair et al. (2000)            | USA                      | USS and households       | 1991-1991               | WTS                | 124         | 37                       | 60.5                 | 5.6                    | NI                     | NI                     |
| Hondius et al. (2000)          | Netherlands              | USS                      | NI NI NI                | HTQ                | 156         | NI                       | 34                   | 23.1                   | 26.4                   | 21.4                   |
| Petersen et al. (2000)         | Thailand                 | RC                       | 1999-1999               | RQ                 | 129         | 36                       | 37.2                 | 6.3                    | NI                     | NI                     |
| Iacopino et al. (2001)         | Macedonia and Albania    | RC                       | 1999-1999               | RQ                 | 11,458      | NI                       | 0.03                 | NI                     | NI                     |
| Tang et al. (2001)             | Gambia                   | RC                       | 1999-1999               | HTQ                | 80          | 41.3                     | 48.8                 | 1.3                    | NI                     | NI                     |
| Crescenzi et al. (2002)        | India                    | Villages                 | 1995-1995               | HTQ                | 150         | NI                       | 37.3                 | NI                     | NI                     |
| Sabin et al. (2003)            | Mexico                   | RC                       | 2000-2000               | HTQ                | 170         | 37.9                     | 58.2                 | 3.5                    | NI                     | NI                     |
| Cardozo et al. (2004)          | Thailand                 | RC                       | 2001-2001               | HTQ                | 495         | NI                       | 57.4                 | 2.8                    | 2.9                    |
| Sesay et al. (2004)            | Sierra Leone             | RC and villages          | 2001-2001               | HTQ                | 400         | NI                       | 100.0                | 11.3                   | 11.3                   | NA                     |
| Thomas et al. (2004)           | United Kingdom           | NI                       | NI NI NI                | HTQ                | 100         | 16                       | 41                   | 32                     | 63.4                   | 10.2                   |
| Asgary et al. (2006)           | USA                      | USS                      | 1998-2002               | Istanbul Protocol  | 89          | 34                       | 13.5                 | NI                     | NI                     |
| Avdibegovic et al. (2006)      | Bosnia and Herzegovina   | USS and RC               | 2000-2002               | Modified DVI       | 50          | NI                       | 100.0                | 30.0                   | 30.0                   | NA                     |
| Bradley et al. (2006)          | United Kingdom           | USS                      | NI NI NI                | HTQ                | 97          | 30                       | 14.4                 | 8.2                    | 28.6                   | 2.4                    |
| Schweitzer et al. (2006)        | Australia                | Community                | 2003-2003               | HTQ                | 63          | 34.2                     | 33.3                 | 11.1                   | 19                     | 7.1                    |
| Olsen et al. (2006)            | Denmark                  | USS                      | 1991-1994               | RQ                 | 221         | 35.6                     | 12.7                 | 11.3                   | NI                     | NI                     |
| Bogner et al. (2007)           | England                  | USS                      | 2004-2005               | RQ                 | 27          | NI                       | 59.3                 | 55.6                   | 68.8                   | 36.4                   |
| Edston et al. (2007)           | Sweden                   | USS                      | 1993-2005               | NI                 | 63          | 28                       | 100.0                | 76.2                   | 76.2                   | NA                     |
| Hammoury et al. (2007)         | Lebanon                  | USS                      | 2005-2005               | AAS                | 349         | 28                       | 100.0                | 26.4                   | 26.4                   | NA                     |
| Hooberman et al. (2007)        | USA                      | USS                      | 2000-2003               | HTQ                | 325         | 33.5                     | 38.8                 | 28.9                   | NI                     | NI                     |
| John-Langba et al. (2007)      | Botswana                 | RC                       | NI NI SGBV              | 402                 | 29.2        | 100.0                    | 99.8                 | 99.8                   | NA                     |
| Kir et al. (2007)              | USA                      | NI                       | NI NI CTS              | 501                 | 35.7        | 45.3                     | 1.2                  | NI                     | NI                     |
| Piwowarczyk et al. (2007)      | USA                      | USS                      | 1999-2002               | NI                 | 134         | 34                       | 65.7                 | 50.0                   | NI                     | NI                     |
| Chang et al. (2008)            | USA                      | USS                      | 2001-2001               | NI                 | 243         | 10.6                     | 51.9                 | 4.9                    | NI                     | NI                     |
| Nagai et al. (2008)            | Uganda                   | RC and villages          | 1999-2000               | RQ                 | 1,216       | NI                       | 78.0                 | 18.1                   | 16.9                   |
| Harrison et al. (2009)         | Uganda                   | RC and villages          | 2006-2006               | BSS                | 1,158       | NI                       | 52.4                 | 3.8                    | NI                     | NA                     |
| Mitike et al. (2009)           | Ethiopia                 | RC                       | 2004-2004               | RQ                 | 288         | NI                       | 100.0                | 42.4                   | 42.4                   | NA                     |
| Williams et al. (2010)         | United Kingdom           | USS                      | 2005-2005               | NI                 | 178         | 30.4                     | 35.4                 | 25.8                   | 54.0                   | 10.4                   |
| Schubert et al. (2011)         | Finland                  | USS                      | NI HTQ                 | 78                  | 37.6        | 37.2                     | NI                   | NI                     | NI                     |
| Tamblyn et al. (2011)          | USA                      | USS                      | 2004-2007               | HTQ modified       | 58          | 34.7                     | 29.3                 | 20.7                   | NI                     | NI                     |

Continue
Six studies reported SV in children and adolescents, with prevalence varying between 4.6% and 90.9%\textsuperscript{16,44,47,52,54,72}. In 32 of the 36 (89%) studies showing prevalence by sex, the main victims were women. Of these, 12 studies reported SV in both sexes, with a difference of up to 59.2% more of prevalence in women\textsuperscript{17}. Two studies reported the opposite, but with disparities less than 2%\textsuperscript{16,29}. In men, the prevalence reached 39.3%\textsuperscript{14}.

Africa was the most frequent continent of origin in 13 (42%) of the 31 studies with information about it (Table 2). As to the moment of occurrence, approached by 18 studies, 17 (94%) reported that SV occurred in the country of origin (prevalence between 1% and 92%); in two studies, it occurred in other countries.

**Table 1. Characteristics of the studies included in the systematic review and prevalence of sexual violence. (n = 60). Continuation**

| Study | Country/City | Type of setting | Start/End | Instrument/Tool | Prevalence (n) | Number of cases | Prevalence (n) | Number of cases |
|-------|--------------|----------------|-----------|----------------|----------------|----------------|----------------|----------------|
| Bagic\textsuperscript{51} (2012) | Germany, Italy and United Kingdom | Households and communities | 2005/2006 | LSC | 854 | 41.6 | 513 | 5.2 |
| Kira\textsuperscript{52} (2012) | USA | NI | 2006/2006 | CTS | 209 | NI | 0.0 | 90.9 |
| Parmar\textsuperscript{53} (2012) | Republic of Cameroon | Villages | 2010/2010 | NI | 191 | 35.1 | 100.0 | 40.8 |
| Black\textsuperscript{54} (2013) | USA | USS and Community | 2004/2004 | CREV/SECV | 196 | 13.8 | 45.9 | 4.6 |
| Fall\textsuperscript{55} (2013) | Thailand | RC | 2008/2008 | RHA | 861 | 30.1 | 100.0 | NI |
| Tufan\textsuperscript{56} (2013) | Turkey | USS | 2005/2007 | SLESQ | 67 | 30.6 | 41.8 | 20.9 |
| Gibson-Helm\textsuperscript{57} (2014) | Australia | USS | 2002/2011 | NI | 1,279 | 31.7 | 100.0 | 5.7 |
| Idemudia\textsuperscript{58} (2014) | Polokwane, South Africa | City | NI | RQ | 125 | 28.3 | 42.3 | NI |
| More\textsuperscript{59} (2014) | Uganda | NI | 2010/2010 | HTQ/RQ | 117 | 31.6 | 100.0 | 71.8 |
| Bell\textsuperscript{60} (2015) | Ruanda | RC | 2008/2008 | RHA toolkit | 810 | 29 | 100.0 | 8.0 |
| Connor\textsuperscript{61} (2015) | USA | Community | NI | RQ | 30 | 31.8 | 100.0 | 93.3 |
| Sipsmis\textsuperscript{62} (2015) | Ruanda | RC | NI | RHA toolkit | 548 | 32 | 100.0 | 38.1 |
| Al-Modallal\textsuperscript{63} (2016) | Jordan | RC | NI | AAS | 238 | 32.7 | 100.0 | 21.0 |
| Chua\textsuperscript{64} (2016) | USA | Communities and households | 2014/2014 | RQ | 15 | NI | 100.0 | 60.0 |
| Lerner\textsuperscript{65} (2016) | USA | USS | 2010/2013 | RQ | 267 | 34 | 33.0 | 33.3 |
| Um\textsuperscript{66} (2016) | South Korea | NI | 2010/2010 | CTS2 | 180 | 39.8 | 100.0 | 25.6 |
| Wirtz\textsuperscript{67} (2016) | Ethiopia | RC | 2012/2012 | ASIST-GBV | 487 | NI | 100.0 | NI |
| Guill\textsuperscript{68} (2017) | Sweden | Schools USS | NI | WRGTI | 77 | 35.0 | 12.0 | NI |
| Hopkinson\textsuperscript{69} (2017) | USA | USS | 2008/2013 | HTQ/RQ | 61 | 28.8 | 37.7 | 62.3 |
| Logie\textsuperscript{70} (2017) | Canada | Communities and social networks | 2013/2015 | RQ | 42 | NI | 100.0 | 52.0 |
| Riley\textsuperscript{71} (2017) | Bangladesh | RC | NI | HTQ | 148 | 34 | 52.8 | 13.0 |
| Stark\textsuperscript{72} (2017) | Ethiopia | RC | 2015/2015 | NI | 919 | 14.6 | 100.0 | 65.3 |
| Wright\textsuperscript{73} (2017) | USA | Agencies of settlement | 2011/2012 | HTQ | 298 | NI | 45.0 | NI |

SV: sexual violence; NA: not applicable; NI: not informed; RC: refugee camps; USA: United States of America; USS: health services units; RQ: research questionnaire; HTQ: Harvard Trauma Questionnaire; STAR: Resettlement Stressor Scale; WTS: War Trauma Scale; DVI: Domestic Violence Inventory; AAS: Abuse Assessment Screen; SBGV: Sexual and Gender-based Violence Scale; CTS: Revised Conflict Tactics Scales; CREV: Children’s Report of Exposure to Violence; SECV: Survey of Exposure to Community Violence; BSS: Behavioral Surveillance Surveys Questionnaire; SLESQ: Stressful Life Events Screening Questionnaire; LEC: Life Events Checklist; ASIST-GBV: Assessment Screen to Identify Survivors Toolkit for Gender Based Violence; LSC: Life Stressor Checklist; RHA: Reproductive Health Assessment; WRGTI: War/refugee and general trauma inventory.

*The global prevalence of SV was calculated from the total number of cases reported by the studies or, when there was no such information, by the total sum of the specific cases reported (e.g. cases of rape, sexual harassment, etc.). However, in five studies\textsuperscript{12,49,51,53,54}, the global prevalence could not be estimated since the authors did not report the total number of cases. It was not possible to calculate it from the sum of the typified prevalence because there were victims who suffered more than one type of SV, which would overestimate the calculation of the global prevalence.
studies (11%), it occurred during the course (prevalence of 5.2% in both)\textsuperscript{53,68}; and two (11%) reported SV at the host site (prevalence of 39% in Cameroon\textsuperscript{53} and 46.1% in Uganda\textsuperscript{59}).

The most frequent type of SV was rape (65%) (Table 3). The perpetrators were identified in 18 studies: 10 (55%) reported the occurrence of SV by intimate partner (prevalence from 4.3% to 30%)\textsuperscript{33,39,45,53,55,59,62,63,66,72}, five by military personnel (prevalence from 1% to 74.6%)

Table 2. Prevalence of sexual violence in refugees according to place of origin. (n = 31)

| Continent(s) of origin | Region of origin | Country of origin | First author and year of study | Sampling (n) | Prevalence of SV |
|------------------------|------------------|-------------------|-------------------------------|--------------|-----------------|
| Africa (n = 13)        | Central Africa   | Cameroon           | Parmar\textsuperscript{53} (2012) | 77           | 57.1            |
|                        |                  | RDC                | Peel\textsuperscript{17} (1996)  | 92           | 33.7            |
|                        |                  | RDC                | Edston\textsuperscript{14} (2007) | 3            | 100.0           |
|                        | West Africa      | Senegal            | Tang\textsuperscript{29} (2001)  | 80           | 1.3             |
|                        |                  | Sierra Leone       | Sesay\textsuperscript{60} (2004) | 400          | 11.3            |
|                        |                  | NI                 | Gibson-Helm\textsuperscript{57} (2014) | 45           | 6.7             |
|                        |                  | Sudan              | Schweitzer\textsuperscript{61} (2006) | 63           | 11.1            |
|                        | North Africa     | Sudan and South Sudan | Stark\textsuperscript{52} (2017) | 919          | 65.3            |
|                        |                  | NI                 | Gibson-Helm\textsuperscript{57} (2014) | 1,147        | 5.1             |
|                        |                  | Uganda             | Edston\textsuperscript{14} (2007) | 9            | 66.7            |
|                        | East Africa      | Somalia            | Mitike\textsuperscript{47} (2009) | 248          | 49.2            |
|                        |                  | NI                 | Gibson-Helm\textsuperscript{57} (2014) | 87           | 13.8            |
| Asia (n = 8)           | Southern Asia    | Sri Lanka          | Silove\textsuperscript{19} (1998) | 92           | 0.0             |
|                        |                  | Bangladesh         | Edston\textsuperscript{14} (2007) | 13           | 84.6            |
|                        | South Asia       | Myanmar            | Petersen\textsuperscript{44} (2000) | 129          | 2.3             |
|                        |                  | Myanmar            | Riley\textsuperscript{71} (2017)  | 148          | 13.0            |
|                        | Southeastern Asia| Vietnam            | McKelvey\textsuperscript{44} (1995) | 102          | 9.8             |
|                        |                  | Cambogia           | Blair\textsuperscript{12} (2000) | 124          | 5.6             |
|                        | East Asia        | North Korea        | Um\textsuperscript{66} (2016) | 180          | 25.6            |
| Europe (n = 8)         | Middle East      | NI                 | Olsen\textsuperscript{44} (2006) | 221          | 11.3            |
|                        |                  | NI                 | Wright\textsuperscript{71} (2017) | 133          | 1.5             |
| Middle East Asia       | Iraq             | Gorst-Unsworth\textsuperscript{20} (1998) | 84           | 14.3            |
|                        | Iraq             | Kira\textsuperscript{31} (2007) | 501          | 1.2             |
|                        | Iraq             | Kira\textsuperscript{31} (2012) | 209          | 90.9            |
|                        | Iraq             | Black\textsuperscript{31} (2013) | 196          | 4.6             |
|                        | Iran             | Edston\textsuperscript{14} (2007) | 11           | 45.5            |
|                        | Syria            | Edston\textsuperscript{14} (2007) | 3            | 66.7            |
|                        | Turkey           | Bradley\textsuperscript{44} (2006) | 97           | 8.2             |
|                        | Turkey           | Edston\textsuperscript{14} (2007) | 3            | 100.0           |
| NA (n = 2)             | Palestine        | NA                 | Hammoury\textsuperscript{39} (2007) | 349          | 26.4            |
| America (n = 1)        | Central America  | Guatemala          | Sabin\textsuperscript{49} (2003) | 170          | 3.5             |
| Europe (n = 1)         | Bosnia           | Frljak\textsuperscript{49} (1997) | 241          | 3.3             |

SV: sexual violence; NI: not informed; NA: not applicable; DRC: Democratic Republic of the Congo

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Table 3. Prevalence according to the type of sexual violence in refugees. (n = 51)

| Type of sexual violence | First author and year of study | Continent/region/country of origin | Host country/region | Prevalence (%) |
|------------------------|---------------------------------|------------------------------------|---------------------|----------------|
| **Rape** *(n = 33)*    |                                 |                                     |                     |                |
| Rape                   | Allodi et al. (1990)             | Latin America                      | Canada              | 30.4           |
|                        | Fornazzari et al. (1990)         | Latin America                      | Canada              | 22.2           |
|                        | Peel et al. (1996)               | RDC                                | United Kingdom      | 33.7           |
|                        | Frijka et al. (1997)             | Bosnia                            | Bosnia              | 3.3            |
|                        | Silove et al. (1998)             | Sri Lanka                          | Australia           | 0.0            |
|                        | Loutan et al. (1999)             | Africa, Asia and Europe            | Switzerland         | 2.3            |
|                        | Petersen (2000)                  | Myanmar                            | Thailand            | 2.3            |
|                        | Tang (2001)                      | Senegal                            | Gambia              | 1.3            |
|                        | Crescenzi (2002)                 | Tibet                              | India               | 0.7            |
|                        | Cardozo (2004)                   | Myanmar                            | Thailand            | 2.8            |
|                        | Sesay et al. (2004)              | Sierra Leone                       | Sierra Leone        | 11.3           |
|                        | Thomas et al. (2004)             | Africa, Middle East, Western Europe and Asia | United Kingdom | 32.0           |
|                        | Asgary et al. (2006)             | Africa and Asia                    | USA                 | 6.7            |
|                        | Bradley et al. (2006)            | Turkey                             | United Kingdom      | 1.0            |
|                        | Schweitzer et al. (2006)         | Sudan                              | Australia           | 11.1           |
|                        | Avdibegovic (2006)               | NI                                 | Bosnia              | 34.0           |
|                        | Bogner et al. (2007)             | Middle East, Europe, Africa and Latin America | England   | 44.4           |
|                        | Edston (2007)                    | Africa, Asia and Middle East       | Sweden              | 76.2           |
|                        | Hammoury et al. (2007)           | Palestine                          | Palestine           | 26.4           |
|                        | Hooberman (2007)                 | Africa, Asia, Europe and Central and South America | USA | 18.2           |
|                        | Harrison et al. (2009)           | Africa                             | Uganda              | 2.0            |
|                        | Williams et al. (2010)           | Africa and Middle East             | United Kingdom      | 16.3           |
|                        | Schubert et al. (2011)           | Middle East, Southeast Europe, South Asia and Central Africa | Finland   | 21.8           |
|                        | Kira (2012)                      | Iraq                               | USA                 | 90.9           |
|                        | Falb et al. (2013)               | Myanmar                            | Thailand            | 0.3            |
|                        | Morof et al. (2014)              | Somalia and DRC                    | Uganda              | 54.7           |
|                        | Idemudia et al. (2014)           | Zimbabwe                           | Polokwane, South Africa | 56.8          |
|                        | Bell et al. (2015)               | RDAC                               | Ruanda              | 8.0            |
|                        | Lerner et al. (2016)             | Africa, America and Western Europe | USA                 | 33.3           |
|                        | Wirtz et al. (2016)              | Somalia                            | Ethiopia            | 20.1           |
|                        | Hopkinson et al. (2017)          | Africa, Asia, America and Eastern Europe | USA | 42.6           |
|                        | Logie et al. (2017)              | NI                                 | Canada              | 52.0           |
|                        | Stark et al. (2017)              | Sudan and South Sudan              | Ethiopia            | 16.1           |
|                        | Asgary et al. (2006)             | Africa and Asia                    | USA                 | 6.7            |
|                        | Avdibegovic et al. (2006)        | NI                                 | Bosnia              | 2.0            |
|                        | Schubert et al. (2011)           | Middle East, Southeast Europe, South Asia and Central Africa | Finland   | 46.2           |
|                        | Falb et al. (2013)               | Southeast Asia                     | Thailand            | 0.7            |
|                        | Idemudia et al. (2014)           | Zimbabwe                           | Polokwane, South Africa | 63.2          |
|                        | Hopkinson et al. (2017)          | Africa, Asia, America and Eastern Europe | USA | 24.6           |
|                        | Stark et al. (2017)              | Sudan and South Sudan              | Ethiopia            | 22.0           |
| **Unwanted sexual contact** *(n = 7)* |                         |                                     |                     |                |
| Unwanted sexual contact | Asgary et al. (2006)             | Africa and Asia                    | USA                 | 6.7            |
| Unwanted sexual contact | Avdibegovic et al. (2006)        | NI                                 | Bosnia              | 2.0            |
| Unwanted sexual contact | Schubert et al. (2011)           | Middle East, Southeast Europe, South Asia and Central Africa | Finland   | 46.2           |
| Unwanted sexual contact | Falb et al. (2013)               | Southeast Asia                     | Thailand            | 0.7            |
| Unwanted sexual contact | Idemudia et al. (2014)           | Zimbabwe                           | Polokwane, South Africa | 63.2          |
| Unwanted sexual contact | Hopkinson et al. (2017)          | Africa, Asia, America and Eastern Europe | USA | 24.6           |
| Unwanted sexual contact | Stark et al. (2017)              | Sudan and South Sudan              | Ethiopia            | 22.0           |
| **Sexual coercion** *(n = 1)* |                         |                                     |                     |                |
| Sexual coercion         | Stark (2017)                     | Sudan and South Sudan              | Ethiopia            | 27.3           |
Table 3. Prevalence according to the type of sexual violence in refugees. (n = 51). Continuation

| Type of Sexual Violence | Study Year                  | Location                        | Prevalence % |
|-------------------------|-----------------------------|---------------------------------|--------------|
| Attempted rape (n = 2)  | Idemudia\(^{58}\) (2014)    | Zimbabwe                        | 44.8         |
|                         | Morof\(^{55}\) (2014)       | Somalia and South Africa        | 64.1         |
| Forced pregnancy (n = 1)| Wirtz\(^{47}\) (2016)       | East Africa                     | 15.6         |
|                         | Hondius\(^{25}\) (2000)    | Turkey and Iran                 | 23.1         |
|                         | Asgary\(^{55}\) (2006)     | Africa and Asia                 | 9.0          |
|                         | Bradley\(^{46}\) (2006)    | Turkey                          | 2.1          |
|                         | Olsen\(^{56}\) (2006)      | Middle East                     | 11.3         |
|                         | Bogner\(^{27}\) (2007)     | Middle East, Europe, Africa and | 11.1         |
|                         |                             | Latin America                   |              |
|                         | Tamblyn\(^{30}\) (2011)    | Africa                          | 20.7         |
| Sexual torture (n = 6)  | Gorst-Unsworth\(^{20}\) (1998) | Iraq                            | 14.3         |
|                         | Iacopino\(^{23}\) (2001)  | Kosovo                          | 0.03         |
|                         | Bradley\(^{46}\) (2006)    | Turkey                          | 8.2          |
|                         | Hooberman\(^{46}\) (2007)  | Africa, Asia, Central and South | 10.8         |
|                         |                             | America and Europe              |              |
|                         | Williams\(^{46}\) (2010)   | Africa and Middle East          | 12.9         |
|                         | Asgary\(^{55}\) (2006)     | Africa and Asia                 | 2.2          |
|                         | Bradley\(^{46}\) (2006)    | Somalia                         | 1.0          |
|                         | Mitike\(^{47}\) (2009)     | Ethiopia                         | 42.4         |
|                         | Gibson-Helm\(^{57}\) (2014) | Africa and Middle East          | 5.7          |
|                         | Connor\(^{25}\) (2015)     | Somalia and Ethiopia             | 93.3         |
|                         | Chu\(^{46}\) (2016)        | Africa                          | 60.0         |
| Sexual Assault (n = 5)  | Cardozo\(^{25}\) (2004)    | Myanmar                         | 1.0          |
|                         | Nagai\(^{55}\) (2008)      | Sudan                           | 82.0         |
|                         | Idemudia\(^{58}\) (2014)   | Zimbabwe                        | 44.0         |
|                         | Wirtz\(^{47}\) (2016)      | Somalia                         | 27.3         |
| Genital mutilation (n = 6)| Crescenzi\(^{27}\) (2002)  | Tibet                           | 24.6         |
|                         | Asgary\(^{55}\) (2006)     | Africa and Asia                 | 4.5          |
|                         | Avdibegovic\(^{35}\) (2006)| NI                              | 2.0          |
|                         | Fall\(^{55}\) (2013)       | Myanmar                         | 1.5          |
|                         | Hopkinson\(^{46}\) (2017)  | Africa, Asia, America and Eastern Europe | 29.8 |
| Sexual exploitation (n = 4)| Allodi\(^{25}\) (1990)    | Latin America                   | 21.4         |
|                         | McKelvey\(^{36}\) (1995)   | Vietnam                         | 9.8          |
|                         | Blair\(^{37}\) (2000)      | Cambodia                        | 5.6          |
|                         | Kira\(^{45}\) (2007)       | Iraq                            | 1.2          |
|                         | Chang\(^{44}\) (2008)      | Cambodia                        | 4.9          |
|                         | Nagai\(^{55}\) (2008)      | Sudan                           | 85.0         |
|                         | Black\(^{65}\) (2013)      | Iraq                            | 4.6          |
|                         | Riley\(^{75}\) (2017)      | Myanmar                         | 13.0         |
| Non-contact unwanted sexual experiences (n = 5)| Alledi\(^{44}\) (1990)    | Latin America                   | 21.4         |
|                         | McKelvey\(^{36}\) (1995)   | Vietnam                         | 9.8          |
|                         | Blair\(^{37}\) (2000)      | Cambodia                        | 5.6          |
|                         | Kira\(^{45}\) (2007)       | Iraq                            | 1.2          |
|                         | Chang\(^{44}\) (2008)      | Cambodia                        | 4.9          |
|                         | Nagai\(^{55}\) (2008)      | Sudan                           | 85.0         |
|                         | Black\(^{65}\) (2013)      | Iraq                            | 4.6          |
|                         | Riley\(^{75}\) (2017)      | Myanmar                         | 13.0         |
| Sexual Abuse (n = 8)    | Allodi\(^{25}\) (1990)    | Latin America                   | 21.4         |
|                         | McKelvey\(^{36}\) (1995)   | Vietnam                         | 9.8          |
|                         | Blair\(^{37}\) (2000)      | Cambodia                        | 5.6          |
|                         | Kira\(^{45}\) (2007)       | Iraq                            | 1.2          |
|                         | Chang\(^{44}\) (2008)      | Cambodia                        | 4.9          |
|                         | Nagai\(^{55}\) (2008)      | Sudan                           | 85.0         |
|                         | Black\(^{65}\) (2013)      | Iraq                            | 4.6          |
|                         | Riley\(^{75}\) (2017)      | Myanmar                         | 13.0         |
| Forced marriage (n = 2) | Asgary\(^{55}\) (2006)     | Africa and Asia                 | 2.2          |
|                         | Wirtz\(^{47}\) (2016)      | Somalia                         | 19.5         |
| Sexual Harassment (n = 4)| Asgary\(^{55}\) (2006)     | Africa and Asia                 | 12.4         |
|                         | Bogic\(^{15}\) (2012)      | Bosnia                          | 5.2          |
|                         | Idemudia\(^{58}\) (2014)   | Zimbabwe                        | 52.8         |
|                         | Wright\(^{73}\) (2017)     | Middle East                     | 1.5          |

NI: not informed; USA: United States of America; DRC: Democratic Republic of the Congo
four by acquaintances, four by relatives, two by unknowns, two by rebel soldiers, one by police officers, one by armed groups, and one by guards in prison.

In five studies, the authors did not report the number of victims, and it was not possible to estimate the overall prevalence. Estimating the sum of prevalence by specific type would overestimate the overall prevalence due to cases that suffered more than one type of SV.

**DISCUSSION**

Previous studies have shown that SV is a constant threat throughout the refugee migration pathway, which has been confirmed in the present review. Although most of the studies identified here revealed a higher prevalence among adult women, SV was also a serious problem in men and children. In addition, we observed the SV is perpetrated mainly by intimate partners, but also by military, guards and police. Most cases occur in the country of origin, in the form of rape and in refugees from Africa. In some refugee camps, such as Uganda and Cameroon, the frequency was alarming.

It is possible that prevalence may be underestimated in some studies, since many victims – especially men – do not report SV because of shame, threats by perpetrators, fear of being found guilty or suffering from stigma and exclusion from family and community, with consequent low demand for health care and case records. In addition, the humanitarian crisis caused by armed conflicts in the refugees’ countries of origin leads to large displacements of people and demands incompatible with the availability of health services and resources, which may further reduce the chances of case identification. On the other hand, studies focused on the evaluation of mental trauma in health services may overestimate the prevalence.

In the meta-analysis of SV prevalence in women in emergency humanitarian complex scenarios, which also included internally displaced persons and excluded genital mutilation, the mean prevalence was 21.4% and higher in refugees from Africa. In our review, we found several studies with a much higher prevalence. Regardless of the actual prevalence, SV was frequent in the populations studied, and deserves special attention in the health services and the reception of this population already weakened by traumas of war and persecution.

Young women are the main victims of SV, but men, children and adolescents are also victims, a reality little discussed in the literature. Men and unaccompanied minors are also exposed to the risk of sexual exploitation and abuse during migration and arrival in destination countries. Nevertheless, the predominance in women is not surprising. The immigration process is accompanied by difficulties such as economic insecurity, language barriers and acculturation, which lead to the imbalance of power between women and partners, leading to increased tensions. Because of economic, political, and social changes during wars and postwar periods, many men use violence to control women and reestablish their status of power. Such conditions may explain the higher frequency of SV perpetrated by intimate partners.

SV occurs mainly before migration, in the countries of origin of the refugees. This suggests a relation with the conditions generated by the armed conflicts, which potentiate cultural norms of superiority of the masculine power present in these places, even before the condition of search of refuge. High prevalence in Africa supports this view. The Democratic Republic of Congo, where armed conflicts over natural resource reserves have lasted since independence in 1960, is marked by atrocities including group rape, sexual slavery, forced family involvement in rape, genital mutilation, among others. More shocking is the fact that, even when hosted in refugee camps, this already fragile population still faces insecurity and suffers SV perpetrated by those from whom they expect protection, such as officers and police.
Rape was the most mentioned form of this violence. This can be explained by the more concrete definition, by the most remarkable experience, and because most studies have used the HTQ instrument, which has a specific question about rape and sexual abuse, but not about other forms of SV. Rape is considered the cruelest type because it brings serious and severe consequences to the health of the victims. War survivors diagnosed with posttraumatic stress disorder and rape victims report more somatic symptoms than those without a rape experience. Rape also increases the chances of acquiring HIV infection, as reported in sub-Saharan African refugee women in Paris, and is related to social difficulties and lack of fixed residence due to the risk of transactional sex or sexual harassment during lodging by relatives or acquaintances.

Several studies included in this review had many limitations, such as lack of detail on the population, outcome of interest, timing of the occurrence, profile of the perpetrators, gender and age of the victims. In addition, the studies did not include victims of the most recent migratory crisis, which began in 2015.

Our review also has limitations. The literature search did not include the terms “sexual torture” and “genital mutilation,” which may have resulted in low sensitivity and explained the number of articles found in reference lists. We did not include the gray literature and no methodological quality evaluation of the selected studies was performed. In addition, we did not restrict the sample size of the articles, which resulted in imprecise estimates in studies with few individuals. Finally, methodological differences between the studies (different data collection sites, such as mental health services and refugee camps; different data collection instruments; studies focusing on mental disorders rather than SV prevalence; and unequal sampling) have contributed to the diversity of the rates found and heterogeneity between the studies, which prevented a meta-analysis to summarize the information.

In summary, results of this review show that SV is a frequent problem among refugees, both women and men, mainly those from Africa, and occurs at all times in the migratory process, including in places of supposed reception and protection. The SV problem among refugees from the most recent migratory crisis must be investigated in unselected scenarios and with more appropriate methods to better guide the necessary protection measures.

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