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Sukyi Naing Date

Perpetual Persecution: A Systematic Literature Review on Mental and Physical Health Effects of Non-Partner Violence Among Displaced Women of Burmese Descent Residing Within and Outside of Myanmar

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Abstract

Perpetual Persecution: A Systematic Literature Review on Mental and Physical Health Effects of Non-Partner Violence Among Displaced Women of Burmese Descent Residing Within and Outside of Myanmar

By Sukyi Naing

Background: Experience of violence has long been associated with negative physical, mental and social health outcomes. In Myanmar, a country plagued by historic political unrest, persecuted ethnic minority groups have long been subject to various forms of violence. The extent to which the effect of non-partner violence on the overall health and well-being of Burmese people has been examined remains unknown.

Methods: A systematic literature review was carried out to investigate mental and physical health outcomes associated with non-partner physical, sexual, and/or psychological violence among women of Burmese descent residing within and outside of Myanmar who have been displaced due to armed conflict. Three electronic databases were searched for original peer-reviewed studies: PSYCInfo, Embase, and PubMed.

Results: Six studies were analyzed in the final review, five of which examined health effects among the Karen and other ethnic minorities in eastern Myanmar. One study focused on health outcomes of the Rohingya people in western Myanmar. Symptoms of depression, anxiety, post-traumatic stress disorder and somatization, and suicide ideation were significantly associated with reported non-partner violence, as well as anemia and symptoms of pregnancy complications. Significant gaps in outcomes under study were lack of prospective and longitudinal studies, lack of studies on internally displaced persons who lack security and health services, and missing studies on physical outcomes (i.e., non-communicable diseases, HIV/STIs).

Discussion: This review highlights the need for investment in longitudinal studies on the association between non-partner violence and health outcomes among persons of Burmese descent. The drivers of suicide ideation among conflict-affected of Burmese require further investigaton, paired with increased focus on the Rohingya and other ethnic minorities, as well as extra attention to physical health outcomes.

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CHAPTER 1

Introduction

Experience of violence has long been associated with negative physical, mental and social health outcomes. In Myanmar, a country plagued by historic political unrest, persecuted ethnic minority groups have long been subject to various forms of violence. The extent to which the effect of non-partner violence on the overall health and well-being of Burmese people has been examined remains unknown.

CHAPTER 2

Myanmar: historical and political context, and ethnic demographics

As of April 21, 2019, the country of Myanmar had a population of 54,240,979 based on estimates by the United Nations, Department of Economic and Social Affairs, Population Division (worldometers, 2019). Myanmar is located in Southeast Asia, bordered by India, Bangladesh, China, Laos, Thailand, and the Bay of Bengal (Figure 1). In 1989, the ruling military regime (i.e., Tatmadaw) declared Myanmar as the official name of the nation ("What's in a Name: Burma or Myanmar?", n.d.). While Myanmar and Burma are largely interchangeable terms in the Burmese language, Myanmar will be used to identify the country throughout this study. The majority population in Myanmar are the Burman (i.e., Bamar), making up approximately two-thirds of the population. The remaining one-third include more than 135 ethnic groups who originate from and/or reside in the states of Kachin, Shan, Karenni (Kayah), Karen (Kayin), Mon, Chin, Rakhine (Arakan) (Figure 1) ("Ethnic Groups", n.d.).

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Figure 1. Geographical context and states of Myanmar (Lanjouw, Mortimer & Bamforth, 2000)

The Rohingya, an ethnic Muslim population from Rakhine state in western Myanmar, are among the most persecuted peoples in Myanmar and the world ("Ethnic Groups", n.d.; "Rohingya Refugee Crisis: Supporting the Stateless Minority Fleeing Myanmar | USA for UNHCR", n.d.; "World Report 2019: Rights Trends in Myanmar", n.d.). Upon the Burmese military regime acquiring power in 1962, a national policy in the name of Burmanization was implemented to enforce racial purity of the Bamar ethnicity and their Buddhist religion. The policy was driven by an extreme nationalist ideology that contributed to the persecution of the Rohingya people ("Ethnic Groups", n.d.). Despite the Rohingyas' residence in Rakhine state for centuries, the Burmese government does not recognize them as lawful citizen. In the process of denying them citizenship, Tatmadaw has consistently inflicted brutal persecution, violence and dehumanizing offenses against the Rohingya people ("Ethnic Groups", n.d.; Mohajan, 2018).

On August 25, 2017, the Arakan Rohingya Salvation Army retaliated by attacking 30 Burmese security outposts in northern Rakhine on the Myanmar-Bangladesh border. The consequential deaths of at least one Tatmadaw soldier and over a dozen Burmese police officers led to the declaration of the insurgent army as a terrorist organization (Mohajan, 2018; "Myanmar: Attacks by the Arakan Rohingya Salvation Army (ARSA) on Hindus in Northern Rakhine State", 2018). Tatmadaw retaliated by deploying 30,000 - 35,000 soldiers into Rakhine state, unrolling a campaign of mass homicide, rape, other sexual violence, torture, burning of homes and villages, incessant gunfire, forced starvation, enforced disappearances, severe restrictions on movement and other crimes against humanity under international law ("Myanmar: Attacks by the Arakan Rohingya Salvation Army (ARSA) on Hindus in Northern Rakhine State", 2018; "World Report 2019: Rights Trends in Myanmar", 2019), thus initiating the current Rohingya Refugee Crisis.

Although over 730,000 Rohingya people have fled to Bangladesh to escape genocide by Tatmadaw, the Burmese government denied committing such acts of violence despite extensive evidence, all the while blocking international humanitarian aid for the Rohingya, and penalizing Burmese journalists for reporting atrocities committed by Tatmadaw ("World Report 2019: Rights Trends in Myanmar", 2019). As violence against the Rohingya continued through 2018, over 14,500 persons fled to Bangladesh between January and November. The number of Rohingyas who have fled to Bangladesh and reside in protracted camp settings cumulatively exceeds one million. Meanwhile, over 4,500 Rohingyas were trapped in land between the borders of Myanmar and Bangladesh known as “no man’s land,” and approximately 500,000 - 600,000 Rohingyas remain in Rakhine State ("World Report 2019: Rights Trends in Myanmar", 2019).

Other ethnic minorities who have historically been subjected to persecution by the military regime include the Kachin, Shan, Karenni, Karen, Chin and Mon people ("World Report 2019: Rights Trends in Myanmar", 2019). Due to lack of documentation, the amount of ethnic Chin who were forcibly displaced is unknown. Based on a study published in 2000, a pan-Chin nationalist political organization by the name of Chin National Front estimated 40,000 - 50,000 ethnic Chin removed from their homes, many of whom fled to north-eastern India (Lanjouw et al., 2000). In more recent times, thousands of Chin people were displaced as a result of active conflict in May 2018 ("World Report 2019: Rights Trends in Myanmar", 2019).

Similarly, rates of displacement in Kachin State were not well-documented. Civil war carried out by the Burmese military junta and Kachin insurgent forces between the 1960s and 1990s resulted in massive displacement of approximately 100,000 Kachin people (Mohajan, 2018). Other estimates indicate displacement of about 67,000 persons in 1994 (prior to a cease-fire agreement). Throughout 2018, conflict between Tatmadaw and ethnic insurgent groups ensued. Conflict in Kachin, Shan and Karen States were sparked by disagreement over extensive developments and dispute over allocation of resources. Civilians among these states were subjected to military attacks, forced displacement, and denial of humanitarian aid. Burmese military forces have also been known to use ethnic civilians as human shields in armed combat by forcing them lead soldiers' way ("Rights groups want probe of civilians held by Myanmar army", 2018; "World Report 2019: Rights Trends in Myanmar", 2019). In January 2018, Tatmadaw and the Kachin Independence Army erupted in combat throughout Kachin State. As military forces resorted to aerial bombings (including mortar bombs) and heavy artillery shelling, more than 3,500 civilians were trapped for long periods (some over two weeks) in the process of attempting to escape. Another combat that took place the following April led to the massacre of more than ten or more civilians. Over 2,000 civilians fled to the jungle, where they were stranded for nearly a month and faced devastating circumstances without aid ("World Report 2019: Rights Trends in Myanmar", 2019).

Since the 1950s, ethnic Shan have been exposed to mass internal displacement. Active conflict in Shan State followed into the 1990s between Tatmadaw and armed ethnic insurgents. Regardless of cease-fire agreements, internal displacement of the people resumed in March 1996. Approximately 300,000 people in 1,400 villages over an area of 7,000 square miles in central

Shan State were forcibly removed from their homes into relocation sites, resulting in loss of property and agricultural livelihood (Lanjouw et al., 2000). In more current times about 30,000 civilians were forcibly displaced in Kachin State and the northern part of Shan state due to armed conflict in 2018 ("World Report 2019: Rights Trends in Myanmar", 2019). As conflict in northern Shan State rose between ethnic militants and Tatmadaw, institutional crimes against civilians increased simultaneously: unjustifiable homicide, forced portering (i.e., forced labor), forced recruitment into insurgent groups, and detention of ethnic civilians by militants (European Union and ISDP, 2018).

Historically, the Karenni National Progressive Party sought to declare Karenni State as independent from Myanmar, which was met with opposition from the Burmese government. The Karenni people have been subjected to militarization and forced displacement by the Burmese government since the 1960s, which was largely inspired by unwarranted confiscation of natural resources: teak, hydroelectric power and rights to mining (Lanjouw et al., 2000).

South of Karenni State sits Karen State, where the Karen have endured civil war with Tatmadaw since 1949. The number of Karen who have been forcibly removed from their homes is largely undocumented; however, an estimate of 100,000 - 200,000 Karen were internally displaced by 1998. Further, much of the Karen people have historically fled to neighboring Thailand. In total, approximately 480,000 persons, or 30% of the rural Karen population, were forcibly displaced by 1998 (Lanjouw et al., 2000). In current times, forced displacement induced by armed conflict continues as thousands more were displaced in Karen State in March 2018 ("World Report 2019: Rights Trends in Myanmar", 2019).

Following the 1962 military coup, a nationalist party named New Mon State Party (NMSP retaliated against the Burmese military regime. As a result, Mon civilians were affected by significant displacement. At the time of the study published in 2000, the amount of displacement in parts of Mon State had decreased since 1995 when a cease-fire agreement was established between the military government and NMSP (Lanjouw et al., 2000).

Violence (Appendix Table 1)

Standardized definitions

The World Health Organization (WHO), defines violence as "the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment, or deprivation" (World Health Organization, 2002). The WHO distinguishes between three types of violence: self-directed, interpersonal, and collective. Self-directed violence “refers to violence in which the perpetrator and the victim are the same individual and is subdivided into self-abuse and suicide” (World Health Organization, 2002). Interpersonal violence refers to violence between individuals and is subdivided into family and intimate partner violence and community violence. The former category includes child maltreatment, intimate partner violence, and elder abuse. The latter is divided into acquaintance and stranger violence, and includes youth violence assault by strangers, violence related to property crimes, and violence in workplaces and other institutions. Collective violence “refers to violence committed by larger groups of individuals and can be subdivided into social, political and economic violence” (World Health Organization, 2002).

Further, the WHO describes the nature of violence as: physical, sexual, psychological, and deprivation or neglect (World Health Organization, 2002). Sexual violence is defined by the WHO as “Any sexual act, attempt to obtain a sexual act, or other act directed against a person’s sexuality using coercion, by any person regardless of their relationship to the victim, in any setting. It includes rape, defined as the physically forced or otherwise coerced penetration of the vulva or anus with a penis, other body part or object" ("Violence against women", 2017). Physical violence accounts for “Being slapped or having something thrown at you that could hurt you, being pushed or shoved, being hit with a fist or something else that could hurt, being kicked, dragged or beaten up, being choked or burnt on purpose, and/or being threatened with, or actually, having a gun, knife or other weapon used on you” (World Health Organization, 2013). Lastly, the WHO defines psychological violence as “insults, belittling, constant humiliation, intimidation (e.g. destroying things), threats of harm, threats to take away children” ("Understanding and addressing violence against women: Intimate partner violence", 2012). This definition was intended by the WHO to describe a form of intimate partner violence; due to lack of a standardized definition of non-partner psychological violence (NPV), however, the same definition is applied to describe non-partner psychological violence in the present study. Neglect and deprivation are not assessed throughout this study.

Studies on non-partner violence

Historically, NPV has primarily been studied in the form of *non-partner sexual violence*. The first systematic synthesis of global prevalence estimates of non-partner sexual violence against women was reported by the WHO. The review included data from studies with original data on population-based estimates experienced by women age 15 and above. Six population-based

studies on sexual violence inflicted by militia, military personnel or police in conflict-affected settings were included in the review conducted by the WHO. While other studies also investigated the prevalence of non-partner sexual violence, they did not stratify analysis between violence inflicted by intimate partners and non-partners. Other studies investigating non-partner sexual violence were found to lack population-based data. Based on this review, 7.2% of women reported non-partner sexual violence internationally (World Health Organization, 2013). This statistic does not account for measurement biases and potentiality of low reporting due to fear of persecution, stigma and perpetual violence.

The six studies incorporated into the review investigated non-partner sexual violence in 13 African countries (Naudé, Prinsloo & Ladikos, 2006), the Democratic Republic of Congo (Peterman, Palermo & Bredenkamp, 2011), Liberia (Johnson et al., 2008; Swiss et al., 1998), Eastern Democratic Republic of the Congo (Johnson, 2010), East Timor (Hynes, Ward, Robertson & Crouse, 2004), and Sierra Leone (Amowitz et al., 2002). Two additional studies that examined non-partner sexual violence were part of larger multi-country studies, one of which was conducted in the Philippines as part of the International Violence Against Women Survey (IVAWS; Johnson, H., Ollus, N., & Nevala, S., 2008) and the other was specific to Sri Lanka as part of the Gender, Alcohol and Culture: An International Study (GENACIS; Hettige, S.). Rigorous research efforts on NPV affecting persons of Burmese descent are critical to interrupting the pattern of conflict victimization and human rights violations inflicted by Tatmadaw and other armed forces against ethnic minorities.

Mental and physical health impacts of violence

Experiences of violence have been shown to associate with short- and long-term adverse outcomes on mental, physical and sexual health. Based on a systematic analysis conducted by the WHO, women who globally reported non-partner sexual violence are 2.3 times more likely to have alcohol use disorders and 2.6 times more likely to experience depression or anxiety in comparison to women who did not report non-partner sexual violence (World Health Organization, 2013). The report sites clinical evidence of adverse physical and mental health outcomes among survivors of non-partner sexual violence. For example, in comparison to women who have not been raped, survivors of rape have been shown to utilize medical care at higher rates years after rape victimization (e.g., visits to the physician, hospitalizations) (World Health Organization, 2013).

Another WHO report cites the risk of Human Immunodeficiency Virus (HIV) and other sexually transmitted infections (STIs) transmission among women who are forced to migrate due to armed conflict. High rates of HIV among armed forces tends to be high; as military personnel sexually assault civilian persons as a warfare tactic or utilizes sex work, the transmission of HIV and other STIs are likely (World Health Organization, 2002). Further, military personnel are usually highly mobile and return to different geographic regions after deployment. Generally, women who have been forcibly displaced are more vulnerable to sexual violence. This is partially due to instability in the environment (e.g., loss of homes due to military-initiated arson), social structures (e.g., loss of social networks due to forced migration) and economics (e.g., perpetual poverty due to loss of livestock). Further, displaced and refugee women are more likely to resort to prostitution in order to compensate for loss of income. Young women who are

displaced may engage in sexual activity earlier in life than they would otherwise, due to instability and lack of supervision. In regard to mental health outcomes, the WHO report stated increased risk of depression, anxiety, psychosomatic symptoms, suicidal behaviour, intra-familial conflict, alcohol abuse, and antisocial behavior (World Health Organization, 2002).

The impact of conflict-induced violence among women of Burmese descent may differ from the aforementioned evidence, at least in some respects, due to the variation of human rights violations various ethnic groups have been subjected to in the past several decades. Lastly, blood utilized in emergency settings may not be screened for HIV (World Health Organization, 2002).

Forced Migration/ Displacement (Appendix Table 2)

Standardized definitions

The International Organization for Migration defines *forced migration* as "A migratory movement in which an element of coercion exists, including threats to life and livelihood, whether arising from natural or man-made causes (e.g. movements of refugees and internally displaced persons as well as people displaced by natural or environmental disasters, chemical or nuclear disasters, famine, or development projects) ("Key Migration Terms", n.d.). The United Nations Educational, Scientific and Cultural Organization refers to *displacement* as a social change in which people are forced to move from their "locality, environment and occupational activities" for a number of reasons, including armed conflict ("Displaced Person/Displacement", n.d.). Throughout this study, the terms *forced migration* and *displacement* are used interchangeably. By the Guiding Principles on Internal Displacement set by the Office for the United Nations High Commissioner for Refugees (UNHCR), *internally displaced persons* (*IDP*) are "persons or groups of persons who have been forced to flee, or leave, their homes or places

of habitual residence as a result of armed conflict, internal strife, and habitual violations of human rights, as well as natural or man-made disasters involving one or more of these elements, and who have not crossed an internationally recognised state border" ("UNHCR| Emergency Handbook", n.d.). Since the 1951 Refugee Convention by UNHCR, a *refugee* is anyone "who is unable or unwilling to return to their country of origin owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion" (UNHCR Communications and Public Information Service, n.d.). *Asylum seekers* are persons who **"**move across borders in search of protection, but who may not fulfil the strict criteria laid down by the 1951 Convention. Asylum seeker describes "someone who has applied for protection as a refugee and is awaiting the determination of his or her status" ("Asylum Seeker | UNESCO", n.d.). Based on the descriptions of internally displaced, refugee, and asylum-seeking women of Burmese descent, the inclusion criteria consist of women residing within and outside of Burmese national borders. The inclusion of these groups is important, since the experiences, access of resources, and the extent to which data is available between these groups may differ.

Mental and physical health (Appendix Table 3)

Standardized definitions

Based on the WHO's definition, "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" ("World Health Organization Constitution", n.d.). *Mental disorder* is "A combination of abnormal thoughts, perceptions, emotions, behaviour and relationships with others" ("Mental disorders", 2018). Common mental disorders are *depressive disorders* and *anxiety disorders*. *Depressive disorders* are

“Characterized by sadness, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, feelings of tiredness, and poor concentration. Depression can be long-lasting or recurrent, substantially impairing an individual’s ability to function at work or school or cope with daily life. At its most severe, depression can lead to suicide” ("Mental disorders", 2018). *Anxiety disorders* are characterized by one or more of the following: emotional symptoms (i.e., feelings of apprehension or dread; feeling tense or jumpy; restlessness or irritability; anticipating the worst and being watchful for signs of danger) and/or physical symptoms (pounding or racing heart and shortness of breath; sweating, tremors and twitches; headaches, fatigue and insomnia; upset stomach, frequent urination or diarrhea) ("Anxiety Disorders | NAMI: National Alliance on Mental Illness", n.d.). Post-traumatic stress disorder (PTSD) is “A mental health condition that's triggered by a terrifying event — either experiencing it or witnessing it. PTSD symptoms are generally grouped into four types: intrusive memories, avoidance, negative changes in thinking and mood, and changes in physical and emotional reactions” ("Post-traumatic stress disorder (PTSD)", n.d.). Somatic symptom disorder (SSD) is characterized by one or more somatic symptoms (e.g., pain or fatigue) that are distressing or cause problems in daily life, having excessive and persistent thoughts about the seriousness of symptoms, having persistently high level of anxiety about health or symptoms, or devoting too much time and energy to symptoms or health concerns ("Somatic symptom disorder", n.d.).

The present study

There are currently no published systematic literature reviews investigating physical and mental health effects of non-partner physical, sexual, and/or psychological violence among women of Burmese descent residing within and outside of Myanmar who have been displaced due to armed conflict. The aims of this study were to: 1) summarize the mental and physical health outcomes

of NPV among women of Burmese descent that have been identified in published peer-reviewed literature to date, 2) potential gaps in the mental and physical health outcomes studied, and 3) potential gaps in study designs that have been used to assess the mental and physical health outcomes.

The author focuses on the present systematic literature review on health outcomes of women (age 15 and above) due to greater availability of data on violence against women. Regardless, violence against men and children is prevalent and of equal critical public health concern. The review was conducted with the overall aim of informing a future research agenda and violence prevention and support programs for Burmese women.

CHAPTER 3

Methods

Literature Search

Three electronic databases (PsycINFO, PubMed, and Embase) were searched using contextually relevant keywords informed by a preliminary review of literature and developed in collaboration with the author's advisor and a librarian at Emory University who specializes in health research. The following inclusion criteria and study outcomes (Appendix Table 4) were accordingly developed to systematically fulfill the research question and aims. The researcher's attendance and engagement in the International Conference on Protection and Accountability in Burma were critical in the development and refinement of search terms (Appendix Table 5). The conference was organized by the Free Rohingya Coalition on February 8 – 9, 2019, at Barnard College, New York, United States of America (*The International Conference on Protection and Accountability in Burma*, 2019).

Searches were restricted to human studies written in English, presenting original data and published in peer-reviewed journals from any year until March 8, 2019. Article searches were not confined to the most recent decade in order to capture the maximum number of relevant studies. Original individual studies from systematic and integrative reviews and meta analyses were investigated for relevance. The study population of interest were women of Burmese descent aged 15 and above. The age criteria was established in congruence with the Myanmar Demographic Health Survey's sample of women aged 15-49 and the WHO's report, *Global and Regional Estimates of Violence Against Women,* in which the prevalence and health effects of non-partner sexual violence among women aged 15 and above were reported (Ministry of Health and Sports and ICF, 2017; World Health Organization, 2013). By the Child Rights International Network's definition, survivors of violence aged 15-18 are simultaneously considered survivors of child abuse ("Article 1: Definition of the child", n.d.). Studies examining violence among all women of Burmese descent who were internally displaced, refugees, asylum seekers due to armed conflict in Myanmar were included. Therefore, the population of interest may reside or have resided within and outside of Myanmar national borders. The inclusion criteria further consist of exposure of physical, sexual, and/or psychological violence inflicted by anyone who is not an intimate partner. The outcomes of interest were mental or psychological health, and physical health.

Excluded from the search were studies written in any other language but English, studies presenting non-original data, post-mortem data, grey literature, commentaries and editorials, and data aggregated by gender, age and/or country of participants' origin. Systematic and integrative

reviews, and meta analyses were excluded, although the individual studies in the reviews were considered. Animal studies were excluded from the search. Populations excluded from the search were those who experienced forced migration from any country other than Myanmar, who were not descendants of Myanmar, who experienced nature-disaster-induced displacement (e.g., due to flooding), female survivors of violence below age 15, and persons identified as any gender other than female. Excluded forms of exposure were victimization of any form of violence perpetrated by intimate partners and husbands.

Conduct of search

The literature search was conducted by a single reviewer. Initially, the PRISMA 2009 Flow Diagram for systematic identification and screening of relevant studies (*PRISMA 2009 Flow Diagram*, 2009). Upon applying search terms in three selected search engines (PsychINFO, PubMed, Embase), results were downloaded into three .csv files, all of which were uploaded into Rayyan in order to systematically de-duplicate results (Ouzzani, Hammady, Fedorowicz & Elmagarmid, 2016). Throughout this process the researcher's mentor and collaborating health sciences librarian at Emory University assisted to ensure that combinations of search terms in each search engine produced optimum numbers of results that may contain relevant studies.

Title and abstract relevance

De-duplicated results were merged into one spreadsheet for title and abstract review. Inclusion and exclusion criteria were applied to titles of each study. Irrelevant results were removed with specified reasons (i.e., irrelevant study type, irrelevant population, irrelevant outcome, irrelevant predictor), and the were noted. In cases where the author was unsure of relevance of a title, the

study abstract review. Next, the author applied the inclusion and exclusion criteria to review remaining abstracts. Irrelevant results were removed once more with specific reasons, and the amount were noted. The numbers of irrelevant studies form title and abstract reviewed were combined into one number.

Full text review

Articles that appeared relevant based on title and abstract review were set aside for full-text review, and the total number for this category was recorded. The inclusion and exclusion criteria were applied once more in the process of reviewing articles in full. Eligible studies were kept, and ineligible studies were excluded with specific reasons. The number of articles in each group were recorded. In cases where the researcher was unsure of articles' eligibility, her mentor was consulted, and the eligibility of the particular study based on inclusion criteria was discussed until consensus was reached.

Data extraction

Data extraction was also conducted by a single reviewer. If questions arose regarding relevancy of data to include, the author discussed the question with her research mentor until consensus was obtained. Characteristics of each study that were relevant to data analysis were extracted into a spreadsheet: authors, year of publication, aims and objectives, study design, method of data collection, proportion of female (age 15 and above) participants in study sample, sample size of female (age 15 and above) participants, sample size of female (age 15 and above) participants, current and/or past experience of NPV, age of survivor, ethnic groups among participants, setting of NPV, forms of violence reported, characteristics of instruments used to

assess modes of violence, context of migration, mental health outcomes assessed, physical health outcomes assessed, and measure of association and significance for each outcome, and translation of instruments (if applicable). Additional extracted characteristics were quality assessment of studies, IRB approval, training of staff, support of participants, informed consent and consideration for participants' confidentiality and anonymity. Biases and other limitations were also recorded (Table 6).

Data analysis

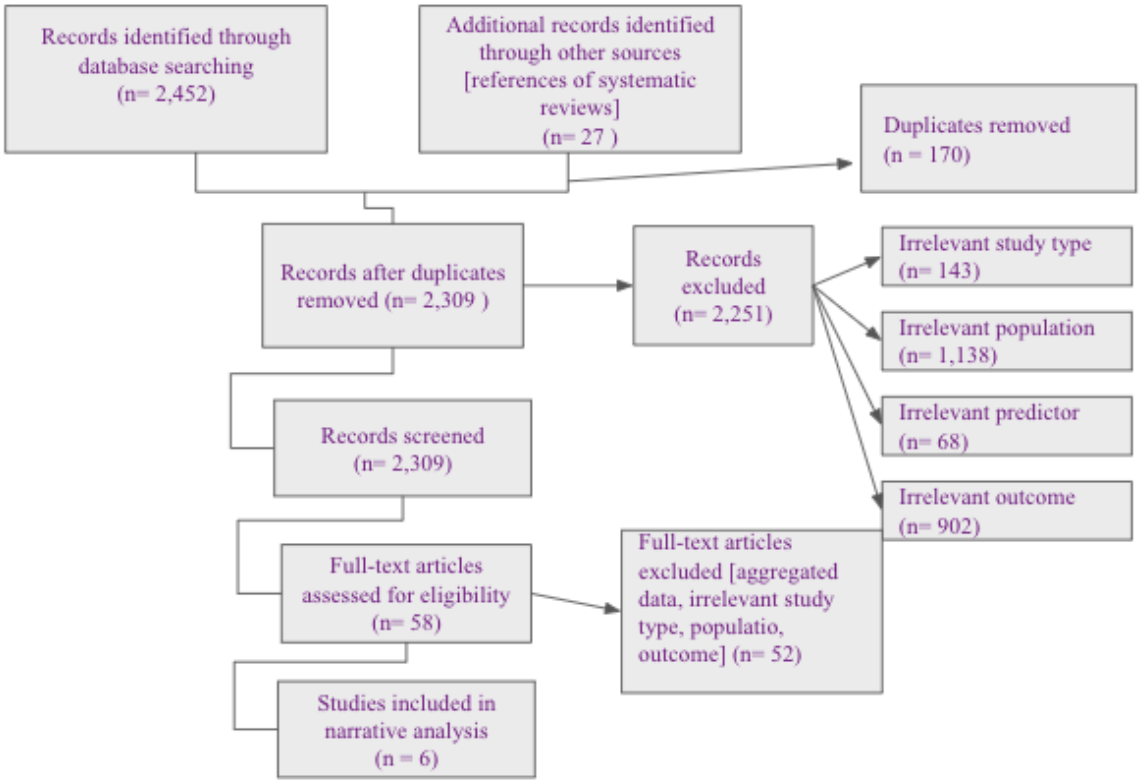
Once relevant data were extracted into a spreadsheet, the data were divided into four spreadsheets based on category: study properties, characteristics of non-partner violence, mental and physical health outcomes assessed, and quality assessment of studies. Next, relationships in data were explored by comparing data in each column between studies. For example, the data collection method of each study was compared from one study to another. Commonalities and heterogeneity of each variable were investigated. Once descriptive analysis was complete, the measures of association and significance of mental health outcomes and physical health outcomes were examined and a quality assessment using the STROBE Statement was performed (*STROBE Statement - Checklist of items that should be included in reports of cross-sectional studies*, n.d.).

Results

Article yield

In the initial stage of literature search the investigator identified 2,452 peer-reviewed articles of original studies from three databases: PSYCInfo, PubMed, EMBASE (Figure 2). The 27 additional records identified through other sources were studies found in systematic and integrated reviews from the initial stage of the search. Upon removing 170 duplicate records through title screening, 2,309 records remained for title and abstract screening. The researcher screened titles and abstracts of these records for relevancy based on the predetermined inclusion criteria and excluded 2,251 records with specific reasons: irrelevant study type (n = 143), irrelevant population (n = 1,138), irrelevant predictor (n = 68), and irrelevant outcome (n = 902). The remaining 58 articles were full-text reviewed for relevance, 52 of which were excluded. Due to time constraints, authors of articles who reported aggregate data were not contacted to request disaggregated data. The final yield after application of the eligibility criteria was six peer-reviewed articles which were included in the narrative analysis.

Figure 2. PRISMA 2009 Flow Chart



Study Properties

All six studies utilized cross-sectional design and utilized surveys as the primary means of data collection (Table 7). The majority of studies (n = 4) assessed the association between self-reported NPV victimization and mental health outcomes. The remaining studies (n = 2) assessed the association between self-reported NPV victimization and physical health outcomes. Half of the studies (n = 3) sampled women only, and the remaining half (n = 3) sampled men in addition to women. All studies included in the study sampled persons aged 15 and above. The female-only studies sampled women of reproductive age only (15-49 years), while the mixed-gender studies included persons aged 18 and above. Among the mixed-gender studies, the female gender made up 52.70% (n = 78) of the sample in the Riley et al. study, 57.10% (n = 40) in the

Schweitzer et al. study, and 66.50% (n = 392) in the Meyer et al. study. In comparison to mixed-gender studies, female-only studies had larger sample sizes overall. The sample sizes of women in these studies were 337 (Falb et al., 2014), 848 (Falb et al., 2013), as well as 3,000 (Mullany et al., 2008). In the study by Mullany and colleagues (2008) the association between experiences of human rights violations and health outcomes (i.e., selected maternal health indicators and access to antenatal interventions) was measured among Karen households only; thus, the sample size of Karen participants (n = 1,800; 180 clusters of ten in four areas of Karen communities) is most relevant for the purpose of this review.

Five studies sampled women from ethnic groups of eastern Myanmar: Karen, Mon, Chin, Kachin, Karenni, and Shan. The Karen were included in all five studies that sampled ethnic groups from eastern Myanmar, and comprised the majority of female-only samples: 59.8% Karen (n = 1,728) (Mullany et al., 2008); 78.8% Karen (n = 668) (Falb et al., 2013); 76.2% Karen (n = 276) (Falb et al., 2014). One study sampled Rohingya refugees who fled from northern Rakhine State to southeastern Bangladesh following persecution by the Burmese military regime (Riley et al. 2017).

Included in the present review are three categories of participants who were forced to migrate due to armed conflict in Myanmar: refugees, and internally displaced persons (IDP). Mullany and colleagues (2008) surveyed IPD's in the Karen, Karenni, Mon and Shan states of eastern Myanmar. Meyer and colleagues (2015) surveyed self-identified migrant workers in and around Mae Sot, Thailand, who had been working in their industry for the past year. The only study that surveyed women from refugee backgrounds who resettled in Australia was conducted by Schweitzer and colleagues (2011). In the remaining studies (n = 3) researchers surveyed women

residing in refugee camps along the Thai-Myanmar border (Falb et al. 2013; Falb et al. 2014) and southeastern Bangladesh (Riley et al., 2017).

Characteristics of NPV Victimization

The majority of studies included in the present review (n = 4) measured lifetime experience of NPV (Table 8). The remaining studies (n = 2) measured NPV as pre-migration traumatic experience (Schweitzer et al., 2011) and exposure to human rights violations inflicted by non-partners in the past 12 months (Mullany et al., 2008). The settings in which NPV victimization occurred varied between each study; Meyer and colleagues (2015) inquired on NPV experienced by the migrants in agricultural, factory and sex work settings in Mae Sot, Thailand, in the form of "Have you ever…" questions. Riley and colleagues (2017) inquired Rohingya refugees on NPV victimization in northern Rakhine state and Bangladesh. The studies conducted by Falb and colleagues (2013 & 2014) do not specify the settings in which NPV experiences occurred. In one study women from refugee backgrounds who resettled in Australia were inquired on NPV victimization in the pre-migration context with no further specification (Schweitzer et al., 2011). Lastly, Mullany and colleagues (2008) surveyed participants on exposure to human rights violations in eastern Myanmar.

Five studies included in the review reported all three forms of NPV: physical, psychological, and sexual. Definitions of NPV and measurement of NPV varied greatly across the six studies examine. For example, the Meyer study examine NPV among Burmese migrant workers in Mae Sot reported *Workplace stressors* (i.e., sexual assault and abuse, coercive working conditions, daily hassles and stressors, and barriers to exit job position and workplace conditions) and

Security-related stressors (having ever experienced a workplace raid by authorities, having ever been arrested by authorities, having ever been deported by authorities) (Meyer et al., 2015). *Workplace stressors* were assessed with 18 items compiled from the International Labour Organization definition of *forced labor* and qualitative findings from a preceding research phase. The survey instrument contained four work-related stressor factors: *sexual assault and abuse* (three items), *coercive working conditions* (six items), *daily hassles and stressors* (five items) , and *barriers to exit* (i.e., stressors associated with migrants' agency to change jobs or modify working conditions; four items).

Riley and colleagues' (2017) study reported physical, psychological, and sexual modes of NPV in the form of *Lifetime exposure to potentially traumatic events* (i.e., confiscation or destruction of personal property; beating; extortion or robbery; forced to hide; interrogation by soldiers or police; threats made against you and/or your family; someone was forced to betray you and placed you at risk of death or injury; torture [in captivity, deliberate infliction of physical or mental suffering]; forced evacuation under dangerous conditions; disappearance or kidnapping of family member or friends; exposure to frequent gunfire; forced labor [like animal or slave]; present while someone forcibly searched for people or things in your home; other [frightening situation or time you felt your life was in danger]; death of family or friend while fleeing/hiding, because of illness or starvation; enforced isolation from others; intentionally stabbed or cut with object [e.g., knife, axe, sword, machete]; serious physical injury from combat [e.g., shrapnel, burn, bullet, landmine]; sexual abuse, humiliation or exploitation [e.g., forced sexual favors]; prevented from burying someone; imprisonment; kidnapped; turned back from a country while trying to flee; murder of family member or friend; rape [forced, unwanted sex with a stranger,

acquaintance, or family member]; witness physical or sexual violence/abuse; forced to betray someone, placing them at risk of death or serious injury; forced to physically harm someone [friend, family or stranger]; forced abortion [only asked of women]; forced to find and bury bodies). Due to the mixed-gender characteristic of this study and the lack of gender stratification within *Lifetime exposure to potentially traumatic events*, the investigator of the current study was unable to differentiate the number of female participants who were subject to each trauma event. However, the top three reported trauma events were: *confiscation or destruction of personal property* (n = 111, 75.0%), *beating* (n = 83, 56.1%, and *extortion or robbery* (n = 81, 54.7%). The only trauma event Riley and colleagues (2017) noted as asking women only was *forced abortion* (n = 2, 2.4%). Further, two trauma events were excluded from the current analysis due to the inclusion of intimate partner violence in the descriptions: a) verbal abuse (e.g., threats, abuse anger) by spouse or other family member, b) beaten by spouse or family member.

Riley and colleagues (2017) applied a 14-item binary (yes/no) Checklist for Daily and Environmental Stressors, and a locally constructed tool to assess daily/environmental stressors (i.e., problems with attaining food, water, shelter, fair access to services, safety or protection, legal services, harassment by police, harassment by the local population, healthcare services, sanitation facilities, employment, education, freedom of movement, and feeling humiliated or disrespected). The contents of the Checklist were a compilation of items from the Humanitarian Emergency Settings Perceived Needs Scale (HESPER) that were modified to fit the local context, and researcher-developed items informed by key informant interviews with agency partners and internal staff. The study team also applied a 32-item binary Trauma Events Inventory, which contained 21 questions from Part 1 of the Harvard Trauma Questionnaire

(HTQ) and an additional 11 items (e.g., forced abortion and beaten by spouse or family member) informed by a literature review and key informant interviews. Investigator-developed questions in the Trauma Events Inventory addressed traumatic circumstances specific to humanitarian and safety concerns that participants were subject to in Myanmar and Bangladesh.

Falb et al. (2013) assessed lifetime psychological, physical, and sexual NPV victimization via eight items from the Reproductive Health Toolkit for Conflict-Affected Women (Centers for Disease Control and Prevention, 2007). The survey was conducted in three refugee camps along the Thai-Myanmar border by the American Refugee Committee and inquired on binary "ever experience" of the following: physically hurt, such as slapped, hit choked, beaten, or kicked; threatened with a weapon of any kind; shot at or stabbed; detained against will; subjected to improper sexual comments; forced to remove or stripped of your clothing; subjected to unwanted kissing or touching on sexual parts of your body; forced or threatened with harm to make you give or receive oral sex or have vaginal or anal sex. Eighty participants (9.4%) in the study reported conflict victimization.

In another study by Falb and colleagues (2014) the study team utilized the same survey, Reproductive Health Toolkit for Conflict-Affected Women, to assess lifetime psychological, physical, and sexual conflict victimization via the aforementioned eight items (Centers for Disease Control and Prevention, 2007). Twenty-three women in the study (6.8%) reported lifetime experience of conflict victimization (Falb et al. 2014).

In their assessment of psychological, physical and sexual NPV victimization among resettled ethnic minority women from Myanmar, Schweitzer et al. (2011) applied the HTQ and the Post-

Migration Living Difficulties (PMLD) Checklist. The 17-item HTQ was utilized to assess participants' experience and witness of trauma events: lack of food or water; ill health without access to medical care; lack of shelter; imprisonment/detention; serious injury; combat situation; brain washing; rape or sexual abuse; forced isolation from others; being close to death; forced separation from family members; murder of family or friend; unnatural death of family or friend; murder of stranger or strangers; lost or kidnapped; torture; threatened by dangerous animals. As with the study conducted by Riley and colleagues (2017), the data on prevalence of conflict victimization are not stratified by gender; thus, the researcher of the current study was unable to determine the number of female participants who were subject to each listed trauma event. Riley and colleagues (2017) assessed post-migration living difficulties on a continuum with the PMLD Checklist; participants described the extent of each challenge from *none, small, moderate,* or *serious*. The seven items consisted of: communication difficulties; worrying about family not in Australia; difficulties with employment; difficulties accessing health and welfare services; difficulties in the immigration/asylum process; difficulties adjusting to the cultural life in Australia; racial discrimination (verbal, physical). Schweitzer and colleagues did not stratify the prevalence of NPV by gender. Among both genders, the top three highest reported as having experienced were: *lack of food or water* (n = 50, 73.5%*), ill health without access to medical care* (n = 38, 55.9%), and *lack of shelter* (n = 47, 69.1%) (Schweitzer et al., 2011).

The study conducted by Mullany et al. (2008) was the only study that did not assess the sexual component of NPV victimization among women of Burmese descent who were affected by armed conflict. Authors reported prevalence of exposure to human rights violations (HRV) inflicted by non-partners among internally-displaced ethnic Karen on the Thai-Myanmar border.

The survey items were developed by the Back Pack Health Worker Team, a multi-ethnic organization of mobile health providers in conflict-affected areas in the Karen, Karenni, Mon, and Shan states of eastern Myanmar. A module in the survey instrument contained questions on physical and psychological modes of HRV: forced labor, loss of food security, forced displacement. These variables were noted by Mullany and colleagues (2008) as pertaining directly to specific rights highlighted in the international human rights law: forced labor (Int'l Convention for Civil and Political Rights, Article 8), targeting of noncombatants (Geneva Convention IV, Article 3 & 27), theft and/or destruction of food supplies and other material goods essential for survival (Protocols Additional to Geneva Conventions (II), Article 14), forced displacement or relocation of civilian population (Protocol II, Article 17; Universal Declaration of Human Rights Article 13). These instances of HRV register as acts of violence based on the WHO's definition (Appendix Table 1) (World Health Organization, 2002).

In the category of *food security,* 28 Karen participants (1.2%) reported that their fields were destroyed, burned, or mined; fifty-three (3.1%) reported stolen or destroyed livestock; thirty-nine (2.3%) reported food stores were stolen or destroyed; thirty-two (1.9%) reported food taxation or theft by soldiers; seventy (4.1%) reported any of the aforementioned security-related violations. In the category of *forced labor*, 26 (1.5%) of participants reported that individual(s) were forced to work by soldiers or another authority. In the category of *forced relocation,* 180 *10.5%) of participants reported their households were forced to move. No participants reported being shot, beaten or stabbed in the category of *direct physical attacks by soldiers/authorities*. In the category of *landmines*, seven (0.4%) of participants reported ever landmine death/injury within household. One person (0.1%) reported injury/death occurred in previous 12 months due to

landmines (Mullany et al., 2008). Since associations between reported HRVs and health outcomes were assessed among only Karen women, prevalence of HRVs among only the Karen are reported.

Physical and mental health outcomes assessed

The majority of studies (n = 4) in the present systematic review assessed mental health outcomes. Physical health outcomes were assessed in the remaining studies (n = 2) (Table 9). Meyer et al. (2015) evaluated *depression* and *anxiety* symptoms with the Hopkins Symptom Checklist-25 (HSCL-25), which was adapted for use in the Mental Health Assessment Project (MHAP), a mental health intervention for survivors of structural violence in Mae Sot. The adaptation was informed by free listing and key informant interviews, which informed the addition of two items each to the depression ("Don't talk to anyone" and "Disappointed") and anxiety ("Distrust, feel suspicious" and "Feel stress") scales, and removal of one item from the anxiety scale. The resulting adaptation included 17 items in the depression scale and 11 items in the anxiety scale. The single item removed from the anxiety scale was undisclosed by the authors.

The prevalence of depression symptoms and anxiety symptoms were reported in a manner that was not stratified by gender. Among female agricultural workers surveyed by Meyer et al. (2015), *daily stressors* ($\beta = 1.5$, $p = 0.000$), *barriers to exit* ($\beta = 3.0$, $p = 0.005$), and *security-related stressors* ($\beta = 0.9$, $p = 0.010$) were significantly associated with increased *depression* symptoms. Among factory workers *barriers to exit* ($\beta = 1.9$, $p = 0.001$) were significantly associated with an increase in *depression* symptoms. *Daily hassles and stressors* ($\beta = 1.4$, $p = 0.027$) and *security-related stressors* ($\beta = 1.9$, $p = 0.031$) were significantly associated with increased *depression* symptoms among sex workers. Among female migrant workers overall,

daily hassles and stressors (β = 1.5, p = 0.000), *barriers to exit* (β = 1.5, p = 0.004) and *security stressors* (β = 0.7, p = 0.030) were significantly associated with increased *depression* symptoms. For every increased exposure to a given factor (e.g., *security-related stressors*), total depression symptoms increase by the beta coefficient.

Coercive working conditions (β = 0.4, p = 0.011), and *daily hassles and stressors* (β = 0.5, p = 0.027) were significantly associated with increased anxiety symptoms in the female agricultural worker sample. Among factory workers no stressors were significantly associated with anxiety symptoms. *Daily hassles and stressors* (β = 1.1, p = 0.007) were significantly associated with increased symptoms of anxiety, and *coercive working conditions* were significantly associated with slightly decreased symptoms of anxiety (β = -0.4, p = 0.020) among migrant women in sex work. Among female migrant workers overall, *sexual assault and abuse* (β = 0.9, p = 0.004) and *daily hassles and stressors* (β = 0.9, p = 0.000) were significantly associated with increased anxiety symptoms.

Falb et al. (2013) assessed *past-month suicide ideation* among refugee women of Burmese descent along the Thai-Myanmar border. The outcome variable was derived from a single binary inquiry: "In the past four weeks, has the thought of ending your life been on your mind?" Crude data indicates that 9.4% participants (n = 90) reported *conflict victimization*. Of the 80 participants who reported conflict victimization, 17.5% (n = 14) reported *past-month suicide ideation*. Lifetime *conflict victimization* was associated with 3.11 higher odds of *past-month suicide ideation* (95% CL 1.91 - 5.07, p <0.001). Upon adjusting for demographic variables (i.e., age, ethnicity, religion, marital status, literacy) and clustering at the camp level, the association between *conflict victimization* and *past-month suicide ideation* remained significant (adjusted

odds ratio = 3.06; 95% CL 1.79 - 5.21, $p < 0.001$). Once reported *past-month suicide ideation* was adjusted between participants who reported suicide ideation and those who did not, there was a null association with *conflict victimization*.

Schweitzer and colleagues (2011) assessed symptoms of *traumatization*, *anxiety, depression,* and *somatization* symptoms among Burmese refugees resettled in Australia via HSCL-37 subscales: ten items attributed to anxiety symptoms, 15 for depression and 12 for somatization. Gender was not significantly associated with pre-migration trauma events, post-migration living difficulties (PMLDs), or any symptom variables. Traumatization, anxiety, depression and somatization symptoms were positively and significantly associated with one another ($p <0.01$). Pre-migration trauma events was significantly correlated traumatization ($p< 0.01$), somatization symptoms ($p< 0.05$), and PMLDs ($p< 0.01$). After controlling for gender and PMLDs, the number of pre-migration events remained significantly associated with traumatization ($\beta = 0.31$, $p < 0.05$). However, the number of pre-migration events was no longer significantly associated with depression, anxiety or traumatization.

The fourth study from the current review in which mental health outcomes were assessed was conducted by Riley et al. (2017). The study team assessed *posttraumatic stress disorder* (*PTSD*) symptoms via 16 items in the HTQ *PTSD* subscale based on the Diagnostic and Statistical Manual of Mental Disorder, fourth edition (DSM-IV) PTSD criteria. *Depression* symptoms were measured via the Depression subscale in the HSCL (15 items). The average score across each subscale signified severity of psychological distress. Other *serious mental health symptoms* (i.e., symptoms of severe distress and impaired functioning not covered by the HTQ and HSCL) were

measured via five additional research-developed questions: disabling fear and anxiety ("About how often during the last 2 weeks… did you feel so afraid that nothing could calm you down?"); uncontrollable anger ("... did you feel so angry that you felt out of control?"); auditory hallucinations ("...have you heard voices that were not real?"); visual hallucinations ("... have you seen things that were not real?"); delusions ("... have you been told by family or friends that your firmly held beliefs or suspicious were strange?"). An investigator-developed instrument, the Somatic Symptom Scale (five items), was used to assess *somatic* symptoms among participants: burning sensation in head, stomach, or all over the body; headaches; back pain; pain all over the body; gastrointestinal complications (i.e., digestive issues, chronic constipation). The instrument was informed by key informants from the Ministry of Health (MOH) staff and mental health professionals in southeastern Bangladesh. The study team specified *somatic* symptoms as those that "cannot be fixed/resolved by a doctor or medication." Riley and colleagues (2017) also developed the Local Idioms of Distress Scale following key informant interviews with MOH staff, mental health professionals in southeastern Bangladesh, and a review of literature. Three items evaluated with the Local Idioms of Distress Scale were: "About how often during the last month… did you believe or feel you were under a spell?; "... did you believe or feel you were possessed by a bad spirit/demon?"; "...did you believe or feel you were controlled by an unidentified black shadow or black magic?"

Reported symptoms of *PTSD*, *depression*, *somatization*, additional *serious mental health outcomes*, and *local idioms of distress* were not stratified by gender (Riley et al., 2017). Thirty-six percent of participants (including males) reported symptoms diagnostic of *PTSD* based on a cut-off score of 2.5 on the HTQ PTSD subscale ($M = 2.2$, median = 2.3, $SD = 0.56$). The four

symptoms with greatest mean severity were: “feeling as if [they] didn’t have a future” (*M* = 3.4, range 1 - 4); “recurrent thoughts or memories of the most hurtful or terrifying events” (*M* = 3.1); “feeling on guard” (*M* = 2.8); “less interest in daily activities (*M* = 2.5). Using a cut-off score of 1.75 on the HSCL Depression subscale, 89% of participants reported *depressive* symptoms (*M* = 2.5, median = 2.5, *SD* = 0.54). Among symptoms with the greatest mean severity were: feeling hopeless about the future (*M* = 3.4, range 1 - 4); “feeling low in energy/slowed down” (*M* = 3.1); “feeling worthless” (*M* = 3.1). Thirteen percent of all participants in the study reported suicide ideation (Riley et al., 2017). The authors found that regardless of gender, trauma exposure was significantly associated with PTSD symptoms. However, the degree of association was not noted. When gender was controlled, trauma exposure was not significantly associated with depression symptoms (Riley et al., 2017).

Mullany and colleagues (2008) evaluated physical health outcomes among internally-displaced Karen women in eastern Myanmar along the Thai-Myanmar border. Assessed physical indicators were: hemoglobin levels (≤ 11.0 g/dl indicates prevalence of anemia); *falciparum parasitemia* (malaria) status (positive/negative), and mid-upper arm circumference (MUAC < 22.5cm indicates malnutrition).

Results of the survey indicated 7.4% of participating women Karen, Karenni, Shan and Mon women (n = 171) were positive for falciparum malaria: 10.4% pregnant women (n = 40), and 6.5% non-pregnant women (n = 117) (OR = 1.67, 95% CI 1.11-2.51). Hemoglobin levels were ≤ 11.0 g/dl among 61.1% of women (n = 1,403/2,297), which was associated with malaria parasitemia (OR = 2.59, 95% CI 1.70-3.95). Low levels of hemoglobin were not significantly different between pregnant and non-pregnant participants. The number of women with MUAC

measurements below 22.5 cm was 19.3% (n = 444). The mean MUAC measure was 24.4 cm with a standard deviation of 2.5, and interquartile range of 23.0-25.8 cm.

Falb and colleagues (2014) assessed the prevalence of adverse pregnancy outcomes by inquiring all women who reported a live birth or still birth within the last two years: "Thinking back about that pregnancy, before you started or went into labor, did you have a problem or complication during pregnancy (not labor or delivery)?" Participants who answered *Yes* were asked the types of problems or complications they endured and whether they sought medical help. Participants reported the following problems or complications: feeling weak or tired, severe abdominal pain, bleeding from vagina, fever, swelling of hands and face, blurred vision, or other complications. Since only five women reported stillbirths, they were removed from the analyses (Falb et al., 2014).

Among the 23 women in the study (6.8%) who reported lifetime experience of conflict victimization, seven (30.4%) of the women reported symptoms of pregnancy complications. Lifetime report of conflict victimization was significantly associated with 3.6 times higher odds of reporting pregnancy complication symptoms (95% CI 1.9 – 6.6., $p < 0.001$). After adjusting for lifetime intimate partner violence victimization and covariates, women who reported conflict victimization were 3.0 times more likely to report pregnancy complication symptoms, compared to women who did not report conflict victimization (95% CI 2.4 – 3.7, $p < 0.001$) (Falb et al., 2014).

Quality assessment of studies

The quality of each study was validated with the STROBE Statement for cross-sectional studies (Table 10) (*STROBE Statement - Checklist of items that should be included in reports of cross-sectional studies*, n.d.). Each study was investigated to determine whether the following were noted: IRB or a local ethics board approval; training of staff; psychological support for participants provided; inclusion of informed consent; confidentiality and anonymity of participants. Ethics board approval was noted in the majority of studies (n = 4) and was not mentioned in studies by Falb et al. (2014) and Mullany et al. (2008). Training of staff was noted in most studies (n = 5) and was not mentioned in the study by Schweitzer et al. (2011). Psychological support for participants were not provided in the majority of studies (n = 4); however, the two studies that reported psychological support for participants measured mental health outcomes (Meyer et al., 2015; Riley et al. 2017). Inclusion of informed consent was noted in all six studies. Confidentiality and/or anonymity was accounted in half of the studies (n = 3), including those by Falb et al., (2014), Meyer et al. (2015), and Riley et al. (2017).

CHAPTER 4

Discussion

Based on the findings of the present systematic literature review it is evident that few published studies are dedicated to reporting mental and physical health outcomes experienced by women of Burmese descent who were forcibly displaced due to armed conflict. All six studies included in the review utilized cross-sectional studies, which limits the temporality assessment of exposures and outcomes. On the other hand, this research topic is not one that can ethically be conducted in an experimental setting. Prospective cohort studies are also not suitable for researching this topic, since researchers are ethically obligated to intervene if adverse health outcomes are apparent following conflict victimization. In cases where funding and time are available, conducting a longitudinal study on health outcomes among survivors of conflict victimization would be most appropriate. In relation to the cross-sectional study design, data were collected in all six studies included in the review through interviews. Data collection through interviews permit opportunities for contextualized probing; however, respondents may also be affected by interviewers' biases that are communicated verbally and non-verbally (e.g., body language).

Half of the studies included in the review (n = 3) sampled women only, and the remaining half were mixed-gender studies. There is a trend in which the mixed-gender studies had lower numbers of female participants in the studies, even when the percentage of female participants were only about half. The Meyer study had the largest number (n = 392) and percentage of female participants (66.50%) among mixed-gender studies (Meyer et al. 2015). Although the reason for this pattern is unknown, it may be due to sampling strategies that enable recruitment of more participants in female-only studies. Specifically, the study conducted by Mullany and

colleagues (2008) drew their sample from a set of communities pre-determined by the Mobile Obstetric Maternal Health Workers (MOM) Project. The MOM Project is an organization of health workers who are local to eastern Myanmar and relying on their previous work may have saved the study team funds and enabled them to recruit more participants.

Another evident trend is in the age ranges of participants in mixed-gender studies versus female-only studies. All the mixed-gender studies recruited persons aged 18 and above; the female-only studies targeted females aged 15 through 49, which was likely due to interest in gathering data on women of reproductive age. Collecting data on women of reproductive age enables comparison of data with those of the Myanmar Demographic Health Survey and the WHO.

The majority of studies in this review (n = 5) included ethnic Karen participants. Ethnic Karen comprised the majority of female-only studies, which may be an attribute of the long-standing between Karen militants and the Burmese military regime. As described in the introduction section of this review, militarized conflict between led by Tatmadaw, and with ethnic insurgents have perpetually resulted in forced displacement of ethnic civilians. The sole study of this review in which Rohingya were the focus was conducted by Riley and colleagues (2017). The study was published in 2017, the same year when a mass displacement of the Rohingya due to genocidal tactics employed by the Burmese government. Hopefully, the most recent exodus of the Rohingya has inspired a new wave of rigorous research aimed to prevent further conflict victimization and improve health among survivors. It is for this reason that ensuring the Rohingya people and other ethnic minorities are well-represented in public health research is important.

Internally displaced persons, asylum seekers and migrants in general were part of our inclusion criteria precisely because these categories of displaced persons are often left out of the conversation of forced migration. The experiences of refugees and their health outcomes post conflict victimization are an equally critical public health concern; however, *refugee, IDP, asylum seeker* and *migrant* are not synonymous as their legal rights differ. Thus, their experiences and health outcomes may also differ.

Among the four studies in the review that examined mental health outcomes, three investigated depression symptoms measured by the Hopkins Symptom Checklist (Meyer et al., 2015; Riley et al., 2017; Schweitzer, 2011). Depression was the mental health challenge most explored throughout this review, likely due to available research on depression as a mental health outcome associated with conflict victimization and non-partner violence. Considering the anxiety and depression subscales in the HSCL are validated for survivors of trauma in Myanmar and translated into Burmese, Karen and Kachin languages, it is no surprise that depression was the most measured mental health outcome in this review ("Assessment Tools for Programs & Research", n.d.). However, only two studies investigated anxiety symptoms among participants, which was also measured with the HSCL.

The only study that investigated local idioms of distress was conducted by Riley and colleagues (2017). The authors included three items on local idioms of distress in addition to inquiring on symptoms of PTSD, depression and severe stress and impaired functioning. Regardless of the contextually validated aspect of the HSCL subscales, measuring local idioms of distress

informed by key informant interviews may offer unique insight into the nuanced health outcomes and health needs of conflict victimization survivors. Only one study investigated suicide ideation among violence survivors, and no other mental health outcomes were investigated (Fabl et al., 2013). In a sense, measuring prevalence of suicide ideation in the past month does not offer insight into underlying causes or mental health issues. Yet, the prevalence of suicide ideation indicates underlying mental health challenges, such as depression, anxiety, or others. In future studies where prevalence of suicide ideation is explored, investigating the association with symptoms of certain mental health challenges (e.g., depression) would offer a step forward to developing prevention and intervention efforts. This review also demonstrated gaps in knowledge of association between NPV victimization and physical health outcomes.

Quality assessment highlighted major gaps in representative sampling of displaced women of Burmese descent. Migrants, refugees, and IDPs who are most affected by displacement and NPV may be left out of studies due to safety and/or health-related concerns. Considering the vulnerable position of persons who flee from ethnic cleansing efforts, the feasibility and best practices of reaching and obtaining data from the most vulnerable populations is limited and calls for further investigation. Lastly, future investigators ought to ensure availability of adequate psychological or emotional support for study participants who disclose not only mental health outcomes, but also physical health outcomes. Participants' recall of traumatic experiences associated with health outcomes may be triggering.

Limitations

This research process was led and completed by a sole investigator. Having only one researcher systematically review the literature threatened the validity of results. The researcher maintained objectivity to the best of her ability; however, conscious and unconscious biases exist among the most objective and experienced public health professionals. On the other hand, the researcher made sure to review the eligibility of articles she was unsure of with her advisor and the two discuss the article eligibility in the context of inclusion criteria until consensus was reached prior to determining whether the study was eligible for inclusion. The researcher also worked with a health sciences librarian to ensure that data collection operated within the project framework established between the researcher and her advisor. For a future systematic review of this topic and related contexts, the researcher will work with a larger team to minimize bias and strengthen validity.

Article searches were conducted in three search engines; Embase, PSYCInfo, and PubMed. The availability of extensive peer-reviewed studies in the databases was promising; however, a greater yield may have been possible by utilizing additional social sciences search engines. Importantly, to counteract this obstacle, the researcher attended the International Conference on Protection and Accountability in Burma at Columbia University in New York, New York, and examined references of systematic reviews to identify relevant articles not hosted on the above search engines.

As noted in earlier sections, this research was limited to women. Studies where data was not disaggregated by gender (combined results on male and female), age (e.g., studies that reported results on adolescents age 12-16), or only included male participants. In not contacting the

authors for disaggregated data, all relevant data may not have been captured. Further, grey literature, where a significant amount of literature exists on NPV experience among women of Myanmar, was outside the scope of the review. However, relevant findings from grey literature were incorporated into the introduction and discussion portions of this thesis.

Conclusions

In spite of these limitations, the systematic review significantly furthers our understanding of what is known about NPV among women of Burmese descent who have been displaced due to armed conflict. Specifically, we highlighted gaps in health outcomes assessed and the study designs used to determine the association between NPV and health outcomes. We also found conclusive evidence that NPV has been associated with adverse health outcomes across studies (i.e., anemia, pregnancy complication symptoms, suicide-ideation, PTSD symptoms, depression symptoms and anxiety symptoms).

Recommendations

Violence against women is a public health epidemic that is exacerbated in conflict-affected settings. Ethnic groups of Burmese descent have long endured psychological, physical and sexual forms of violence that amount to human rights violations and adverse health outcomes among survivors. As a result of genocidal tactics and other dehumanizing efforts enforced by Tatmadaw, the Burmese military, civilians of ethnic minority groups have been unjustly murdered and massively displaced. Many internally displaced persons, asylum seekers, refugees and other migrants of Burmese descent are survivors of conflict victimization, and are faced with adverse mental and physical health outcomes. Rigorous research on these health outcomes is

recommended, paired with data analysis stratified by age groups (e.g., girls below age 15), gender (male, female and trans persons), and geographical and/or cultural contexts of Myanmar. Studies on violence among Burmese persons is largely focused on the male and female genders; however, the inclusion of trans populations may prove fruitful in the process of developing preventive efforts. Results from further research on health outcomes of conflict victimization can be utilized to improve programs geared toward treating or otherwise working with survivors. Lastly, research developments on this topic can be referenced to gather increasing international attention and prosecute perpetrators of violence under international law.

Table 6. Data extraction variables

Authors
Year of publication
Aims and objectives
Study design
Method of data collection
Proportion of female (age 15 and above) participants in study sample
Sample size of female (age 15 and above) participants
Current and/or past experience of NPV
Age of survivor
Ethnic groups among participants
Setting of NPV
Forms of violence reported
Characteristics of instruments used to assess modes of violence
Context of migration
Mental health outcomes assessed
Mental health outcomes – measures of association and significance
Physical health outcomes assessed
Physical health outcomes – measures of association and significance
Translation of instruments
Quality assessment
IRB approval (Y/N)
Training of staff (Y/N)
Support of participants (Y/N)
Informed consent (Y/N)
Consideration for participants' confidentiality and anonymity (Y/N)
Biases
Other limitations

Table 7. Study properties

Authors, year	Aims/Objectives	Study design	Data collection method	Proportion of female (15+) participants in study sample	Sample size of female (15+) participants	Age of survivor
Meyer, S., Decker, M., Tol, W., Abshir, N., Mar, A., & Robinson, W. (2015). Workplace and security stressors and mental health among migrant workers on the Thailand–Myanmar border. Social Psychiatry And Psychiatric Epidemiology, 51(5), 713-723. doi: 10.1007/s00127-015-1162-7	assess influence of work-related and security-related stressors on common mental disorders (depression and anxiety) in a migrant population in 3 migrant worker-dominated industries on the Thai-Myanmar border: 1) explore workplace and security-related stressors among migrants from Myanmar working in agriculture, factory and the sex industry; 2) evaluate workplace and security-related stressors as determinants of depression and anxiety symptoms; 3) identify variants in exposures and outcomes according to gender	cross-sectional	survey, (in-depth interviews in preliminary phase), respondent-driven sampling (informed by formative phase)	66.50%	n = 392 (3 subsamples: agricultural workers, factory workers, sex workers)	18 and above
Schweitzer, R., Brough, M., Vromans, L., & Asic-Kobe, M. (2011). Mental Health of Newly Arrived Burmese Refugees in Australia: Contributions of Pre-Migration and Post-Migration Experience. Australian & New Zealand Journal Of Psychiatry, 45(4), 299-307. doi: 10.3109/00048674.2010.543412	1) identify mental health status of newly arrived refugees from Burma; 2) determine contributions of gender, pre-migration trauma and post-migration living difficulties to mental health status	Cross-sectional	structured interviews	57.10%	n = 40	18 and above
Riley, A., Varner, A., Ventevogel, P., Taimur Hasan, M., & Welton-Mitchell, C. (2017). Daily stressors, trauma exposure, and mental health among stateless Rohingya refugees in Bangladesh. Transcultural Psychiatry, 54(3), 304-331. doi: 10.1177/1363461517705571	Clarify the role of postemergency (in refugee camps) daily stressors in mediating the relationship b/w emergency-related trauma exposure and current mental health symptoms among stateless populations, including those in protracted refugee settings	Cross-sectional	key informant interviews, structured individual inerviews	52.70%	n = 78	18 and above

Falb, K., McCormick, M., Hemenway, D., Anfinson, K., & Silverman, J. (2014). Symptoms Associated with Pregnancy Complications Along the Thai-Burma Border: The Role of Conflict Violence and Intimate Partner Violence. Maternal And Child Health Journal, 18(1), 29-37. doi: 10.1007/s10995-013-1230-0	1) describe prevalence of self-reported symptoms associated with pregnancy complications among refugee women along the Thai-Burma border; 2) assess association b/w any form of lifetime violence victimization and symptoms during the most recent pregnancy; 3) determine specific relationships b/w symptoms and experiences of lifetime conflict victimization and lifetime IPV victimization in order to guide maternal health programmatic efforts among refugee women	Cross-sectional	survey	100%	N = 337	16-47 (median 27.0 years)
Falb, K., McCormick, M., Hemenway, D., Anfinson, K., & Silverman, J. (2013). Suicide Ideation and Victimization Among Refugee Women Along the Thai-Burma Border. Journal Of Traumatic Stress, 26(5), 631-635. doi: 10.1002/jts.21846	identify prevalence of suicide ideation, the factors increasing the odds of suicide ideation, and possible interplay among IPV and conflict victimization. Are conflict victimization and past-year IPV related to past-month suicide ideation among refugee women along the Thai-Burma border?	Cross-sectional	survey	100%	N = 848	15-49 (mean 32.12 years)
Mullany, L., Lee, C., Yone, L., Paw, P., Oo, E., & Maung, C. et al. (2008). Access To Essential Maternal Health Interventions and Human Rights Violations among Vulnerable Communities in Eastern Burma. Plos Medicine, 5(12), e242. doi: 10.1371/journal.pmed.0050242	1) estimate coverage of maternal health services prior to Mobile Obstetric Maternal Health Workers (MOM) Project implementation; 2) describe in a quantitative manner the association b/w exposure to human rights violations and access to such services	Cross-sectional	survey	100%	n = 2,889 women	15-49 y

Table 8. Characteristics of non-partner violence

Authors, year	Experience of NPV (current/past)	Setting of NPV	Forms of violence reported
Meyer, S., Decker, M., Tol, W., Abshir, N., Mar, A., & Robinson, W. (2015). Workplace and security stressors and mental health among migrant workers on the Thailand–Myanmar border. Social Psychiatry And Psychiatric Epidemiology, 51(5), 713-723. doi: 10.1007/s00127-015-1162-7	Lifetime experience ("have you ever...")	Agricultural, factory and sex work settings in Mae Sot, Thailand [other studies did not provide this level of detail]	Psychological, physical, sexual - Workplace stressc (sexual assault and abuse, coercive working conditions, daily hassles and stressors, barriers to e job position and workplace conditions); security stressors (having ever experienced a workplace raic by authorities, having ever been arrested by authorities, having ever been deported by authoritie
Riley, A., Varner, A., Ventevogel, P., Taimur Hasan, M., & Welton-Mitchell, C. (2017). Daily stressors, trauma exposure, and mental health among stateless Rohingya refugees in Bangladesh. Transcultural Psychiatry, 54(3), 304-331. doi: 10.1177/1363461517705571	Lifetime experience	Myanmar (norther Rakhine state) and Bangladesh	Psychological, physical, sexual - lifetime exposure potentially trumatic events: confiscation or destruct of personal property, beating, extortion or robbery, forced to hide, interrogation by soldiers or police, threats made aginst you and/or your family, someor was forced to betray you and placed you at risk of death or injury, torture (in captivity, deliberate infliction of physical or mental suffering), disappearance or kidnapping of family member or friends, exposure to frequent gunfire, forced labor (like animal or slave), present while somone forcibl searched for people or things in your home, other (frightening situation or time you felt your life was danger), death of family or friend while fleeing/hiding, because of illness or starvation; enforced isolation from others; intentially stabbed c cut with object (eg knife, axe, sword, machete); serious physical injury from combat (eg shrapnel, burn, bullet, landmine); sexual abuse, humiliation, exploitation (eg coerced sexual favors); prevented from burying someone; imprisonment; kidnapped; turned back from a country while trying to flee; murder of family member or friend; rape (forced, unwanted sex with a stranger, acquaintence, or fam member); witness physical or sexual violence/abuse forced to betray someone, placing them at risk of death or serious injury; forced to physically harm someone (friend, family or stranger); forced abortic (only asked of women); forced to find and bury boc
Falb, K., McCormick, M., Hemenway, D., Anfinson, K., & Silverman, J. (2014). Symptoms Associated with Pregnancy Complications Along the Thai-Burma Border: The Role of Conflict Violence and Intimate Partner Violence. Maternal And Child Health Journal, 18(1), 29-37. doi: 10.1007/s10995-013-1230-0	Lifetime experience ("have you ever...")	Unlisted	Conflict victimization: psychological, physical, sex (being physically hurt, threatened with a weapon, being shot at or stabbed, detainment against will, subjected to improper sexual comments, forced to remove clothing, subjected to unwanted kissing or touching, forced or threatened with harm to have se
Falb, K., McCormick, M., Hemenway, D., Anfinson, K., & Silverman, J. (2013). Suicide Ideation and Victimization Among Refugee Women Along the Thai-Burma Border. Journal Of Traumatic Stress, 26(5), 631-635. doi: 10.1002/jts.21846	Lifetime experience ("have you ever...")	Unlisted	Conflict victimization: pyschological, physical, sex (1)physically hurt, such as slapped, hit, choked, beaten, or kicked; 2) threatened with a weapon of a kind; 3) shot at or stabbed; 4) detained against will; subjected to improper sexual comments; 6) forced t remove or stripped of your clothing; 7) subjected to unwanted kissing or touching on sexual parts of you body; 8) forced or threatened with harm to make yc give or receive oral sex or have vaginal or anal sex)

Schweitzer, R., Brough, M., Vromans, L., & Asic-Kobe, M. (2011). Mental Health of Newly Arrived Burmese Refugees in Australia: Contributions of Pre-Migration and Post-Migration Experience. Australian & New Zealand Journal Of Psychiatry, 45(4), 299-307. doi: 10.3109/00048674.2010.543412	Pre-migration traumatic experience (past)	Pre-migration context (presumably Burma only)	Psychological, physical, sexual - Inprisonment/detention, combat situation, brainwashing, rape/sexual abuse, forced isolation fr others, forces sepratation from family members, murder of family/friend, murder of stranger(s), lost/kidnapped, torture,
Mullany, L., Lee, C., Yone, L., Paw, P., Oo, E., & Maung, C. et al. (2008). Access To Essential Maternal Health Interventions and Human Rights Violations among Vulnerable Communities in Eastern Burma. Plos Medicine, 5(12), e242. doi: 10.1371/journal.pmed.0050242	exposure to human rights violations inflicted by non-partners in the 12 mo prior to survey	eastern Myanmar	Physical, psychological - human rights violations (forced labor, loss of food security, forced displacement)