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MENSTRUATION STIGMA: A QUALITATIVE EXPLORATORY STUDY OF THE  
LIVED EXPERIENCES OF NEPALI WOMEN

BY

Imisha Gurung

B.A., Mountain State University, 2012

MPH., Marshall University, 2016

A Dissertation

Submitted to the Faculty of the  
School of Public Health and Information Sciences  
of the University of Louisville  
in Partial Fulfillment of the Requirements for the  
Degree of  
Doctor of Philosophy in Public Health Sciences

Department of Health Promotion and Behavioral Sciences

University of Louisville

Louisville, Kentucky

May 2023

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A Dissertation Approved on

April 3, 2023

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## DEDICATION

This dissertation is dedicated

To

My Mom Mamata Gurung

My Dad Indra Bir Gurung

My Sister Miyasha Gurung

I love you all more than you can imagine

I could not have possibly done this without you all three

To

All Nepali women and girls

Thank you for inspiring this study

## ACKNOWLEDGMENTS

To my dissertation chair and mentor Dr. Muriel Harris !!!! Thank you. To my committee advisors Dr. Brown, Dr. Peiper, Dr. Zhao, and Dr. Shah for all the tremendous support and all love you guys continue to give me. Dr. Brown, you have been amazing to me, you taught me how to self-care and love my self and just love life. Dr. Peiper, you are the coolest professor I know and the best guy that knows the mixed methods that I know of !!! You have been so good to me from the time I was in your classes until now. I got never stressed around you. Dr. Zhao, I would have never known then world of ethnography and the world of anthropology without you. You taught me how to actually write actual research questions and the whole process of constructing an actual interview guide. I am so happy to have you in my committee. And Dr. Shah, how can I complete this dissertation with you? Throughout my whole time in Nepal, you helped me in every step that I can never repay you. You have been my best friend since childhood, and we are still going strong. I love you. Thank you for coming into my journey and giving all your precious time and effort for me to succeed. I wish you all the longest, happiest and a wholesome life ahead. Thank you all again!!!

## ABSTRACT

### MENSTRUATION STIGMA: A QUALITATIVE EXPLORATORY STUDY OF THE LIVED EXPERIENCES OF NEPALI WOMEN

Imisha Gurung

April 3, 2023

Despite the numerous challenges and barriers that menstruation taboos and stigma pose to the health and well-being of Nepali women and girls, this problem has received little attention in Nepal and has been under-researched. This study fills a critical gap in our understanding of the lived menstruation experience of Nepali women utilizing a qualitative descriptive approach in Kathmandu, Nepal. The data collection comprised in-depth, semi-structured interviews with 22 Nepali women. The findings provide various influencing socio- cultural factors at multiple levels of socioecological model that shapes the lived menstruation experiences of Nepali women and the impact on their mental, social, and physical health. Participants recommended targeted education programs and strategies, awareness programs, increasing mental health professionals, female health providers, and policy reforms. This study justifies the need for significant changes in knowledge, attitude, and deeply ingrained cultural and religious practices that influence the period during menstruation of women and girls in Nepal.



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## CHAPTER I. INTRODUCTION

### **Background**

Menstruation is an event with ambiguous significance, one that defines them as women, yet at the same time requires repression or masking in public settings (Hahn & Apple, 1989, pp. 307).

Every day, more than 800 million women and girls menstruate around the world (George, 2013; Hennegan et al., 2019). Menarche in many cultures is regarded as a major milestone for young women, marking the start of the journey to womanhood (Dhingra & Kour, 2009; Mukherjee et al., 2020). However, in many parts of the world, particularly in low and middle-income countries (LMIC) across Asia and Africa, menstruation is met with silence, myths and misconceptions, social taboos, stigma, and menstruation discriminations causing barriers to the overall well-being (mental, social, and physical health), for majority of women and girls in LMICs (Amatya et al., 2018; Gold-Watts et al., 2020; Hennegan et al., 2019; Hennegan & Montgomery, 2016; Holland et al., 2020; Johnston-Robledo & Chrisler, 2013; Pietersen et al., 2018; Seymour et al., 2008). During their menstruation cycles, women and girls are considered dirty, polluted, impure, and untouchables (Thapa & Aro, 2019). They face a variety of restrictions in food and clothing, school attendances, daily activities, social and religious events, family gatherings, menstrual hygiene management (MHM), basic human necessities, and many more (Crawford et al., 2014; House et al., 2013).

## **Problem Statement**

Though menstruation stigma is a pervasive problem across LMICs, Nepal, a small country in South Asia, which has approximately 237,250 women and girls menstruating every day holds extreme menstrual beliefs, practices/ restrictions, and discriminations as a result of socio- cultural menstruation taboos and stigma (Hennegan et al, 2019; Mukherjee et al., 2020). More than 89 percent of these Nepalese women and girls face some type of restrictions and isolations during menstruation (Kadariya & Aro, 2015; Karki et al., 2017). Women and girls are not permitted to have physical contact with their spouses and/or male relatives, not permitted to enter kitchens, temples, schools/work, religious and important ceremonies, and many more. Many are excluded from daily activities, basic foods and clothing, and medical care during their periods (Amatya et al., 2018; Robinson, 2015). An extreme century-old Hindu ritual called ‘Chhapuadi’ is still practiced in Nepal where menstruating women and girls are isolated in poorly ventilated menstrual huts throughout their menstruating cycle (Mukherjee et al., 2020). These menstrual huts have been condemned as unsafe and unhygienic, lacking basic human necessities, and exposed to wildlife, danger, and deaths (Amatya et al., 2018; Robinson, 2015). Roughly 60% of women and girls still follow this Chhapuadi tradition and/ or similar restrictive and isolation practices throughout Nepal (Amatya et al., 2018; Robinson, 2015).

In a society that objectifies women's bodies and physiological processes, women and girls tend to internalize negative societal narratives about menstruation and engage in self-stigma or internalized stigma (Roberts et al., 2002). This internalized stigma threatens

the mental, social, and physical health of the stigmatized majority of Nepali women and girls (Crawford et al., 2014; Holland et al., 2020; Johnston-Robledo & Chrisler, 2020).

### **Purpose of the Study**

Despite the numerous challenges and barriers that menstruation taboos and stigma pose to the health and well-being of Nepali women and girls, this problem has received little attention in Nepal and has been extremely under researched (Amatya et al., 2018; Crawford et al., 2014; Mukherjee et al., 2020; Robinson, 2015; Thapa et al., 2019; Thapa & Aro, 2021). The few existing studies have largely focused only on the practice of Chhaupadi among adolescent females from rural Nepal and have been quantitative in nature (Amatya et al., 2018; Cardoso et al., 2019; Hennegan et al., 2019; Mukherjee et al., 2020; Ong & Chettri, 2019; Robinson, 2015; Thapa & Aro, 2021; UNRHCO, 2011). This study fills a critical gap in our understanding of menstruation stigma and the contextual factors, practices that impact overall well-being of women and girls. Knowledge in this area is critical to supporting women's overall wellbeing (Amatya et al., 2018; Garg & Anand, 2015; Gold-Watts et al., 2020; Johnston-Robledo & Chrisler, 2013; Pietersen et al., 2018). This study will also take a bottom-up approach, focusing solely on the women themselves, rather than the top-down approach used in previous studies, which diverted attention away from the women.



## **Research Questions**

The overall objective of this study is to explore the lived experiences of menstruation stigma of Nepali women. The study will seek to answer the following research questions:

1. What are the lived experiences of Nepali women who practice menstruation restrictions?
2. What are the socio-cultural factors that influence menstruation stigma and menstruation restrictions?
3. What impact do menstrual restrictions have on mental, social, and physical health?
4. What are the key recommendations to end the stigma and discriminations?

## CHAPTER II. OVERVIEW OF THE LITERATURE

### **MENSTRUATION**

Menstruation is a natural biological process that most women experience throughout their lives (Atreya & Nepal, 2020; Critchley et al., 2020). It is the monthly excretion of blood from the uterine wall in females, usually at 28-day intervals, lasting between two to eight days (Simpson et al., 2005). In general, the age of menarche (the first menstrual flow) ranges from the age of 9-16 years old, and menopause (the end of the menstrual cycles or 12 months without a menstrual period) usually occurs between the ages of 45 and 55 (Pietersen et al., 2018; Thakuri et al., 2021). Women and girls all around the world experience menstruation differently (Stubbs & Costos, 2004). In various cultures, menstruation is seen as a transition to adulthood and a significant milestone for young girls (Gillooly, 2004; Padmanabhanunni et al., 2017). However, in many cultures, menstruation is entwined with long-standing beliefs, myths, superstitions, rituals, and rules that are passed down from generation to generation (Cheng et al., 2007; Chrisler, 2011; Cronjé & Kritzinger, 1991; Simpson, 2005; Wong et al., 2013). They face a variety of restrictions in food and clothing, school attendances, daily activities, social and religious events, family gatherings, menstrual hygiene management, basic human necessities, and many more (Crawford et al., 2014; House et al., 2013) due to menstruation stigma.

#### **Menstruation stigma**

Since menstruation is a source of stigma, it is important to understand what stigma is and does in a culture (Johnston-Robledo & Chrisler, 2013). The term stigma refers to any stain or mark that differentiates some individuals from others and indicates that such

individuals have a flaw in their body or character that spoils their appearance or identity (Goffman, 1963). Menstruation distinguishes girls and women from the typical and privileged male body (Johnston-Robledo & Chrisler, 2013) and in many LMICs, menstruation is stigmatized, which leads to unhealthy processes for people who experience menstruation (Johnston-Robledo & Chrisler, 2013).

Menstruation stigma, unlike other forms of stigma, impacts significant populations of women and girls worldwide, particularly in LMICs, for many years throughout their lives, demanding public health attention (Johnson-Robledo and Chrisler, 2013; Holland et al, 2020). Several studies from Asia and Africa have reported challenges confronting women and girls, such as limited access to comprehensive menstrual education, lack of resources for menstrual hygiene management (MHM), lack of water, sanitation, and hygiene (WASH) facilities, and various menstruation discriminations influenced by harmful socio-cultural beliefs and taboos around menstruation (Das et al., 2015; David et al., 2018). Girls miss up to 20% of their class time due to inadequate menstrual hygiene knowledge, resources, and infrastructures at schools in many LMICs (Sommer et al., 2016 and each year, UNICEF estimates that ten percent of African girls misses school due to menstruation. In India, up to one in every five females drops out of school after getting their periods (Rop et al., 2016).

Furthermore, poor MHM may increase a woman's susceptibility to reproductive tract infections (RTI), reproductive diseases, and even cervical cancer (Chakraborty et al., 2019; Das et al., 2015). The 2003 hygiene-cancer link study found that reusing cloths was associated with a 2.5 times greater risk of serious cervical problems compared to clean clothes or menstrual pads (Mansfield & Bracken, 2003). Women and girls in these

communities' face various barriers during their menstruation due to socio-cultural beliefs and taboos around menstruation. All of which can have significant and long-term health and socioeconomic ramifications for many women and girls across Asia and Africa (Chakraborty et al., 2019; (Sommer et al., 2016; UNICEF, 2015). In India, menstruating women and girls are frequently viewed as dirty, impure, and unclean, and are required to remain in isolation during menstruation causing sentiments of shame and fear. These traditions are still practiced to differing degrees in various regions of the country (Garg & Anand et al., 2015). In Indonesia, menstruating women and girls are also considered impure and are not permitted to be touched by their husbands or other family members, making menstruation a shameful experience among women and girls in Indonesia (Davis et al., 2018). In Pakistan, 93% of menstruating women and girls would not want to talk to a male family member regarding anything about menstruation (Hennegan, 2019). These stigma and taboos surrounding mensuration are still a widespread issue among various societies and cultures in LMICs (Crawford et al., 2014; Hennegan, 2019).

### **Menstruation in Nepal**

Nepal, a small country in South Asia, holds extreme menstrual beliefs, practices, and restrictions as a result of taboos and stigma. The menstrual taboos and beliefs are frequently perpetuated by cultural and religious agents, as well as a patriarchal society that objectifies women's bodies and their natural biological processes (Chrisler, 2011; Fredrickson & Roberts, 1997; Roberts & Waters, 2004). Patriarchal societies, such as Nepal, objectify menstruating women's bodies and portray them as impure, polluted, dirty, untouchable, and harmful, fostering fear and detachment towards women and their bodies (Amatya et al., 2018; Chrisler, 2011; Hennegan et al., 2019; Mukherjee et al., 2020;

Robinson, 2015; Thapa & Aro, 2021; UNRHCO, 2011). Consequently, this objectification appears to serve a basic purpose, namely menstruation stigma and the imposition of restrictions and control on Nepali women's bodies and behavior (Chrisler, 2011; Crawford et al., 2009; Lahiri-Dutt, 2015; Merskin, 1999).

### **Menstruation stigma in Nepal**

Menstruation is seen as a taboo that women and girls must keep hidden to avoid shame and embarrassment (Merskin, 1999; Stubbs & Costos, 2004; Wong et al., 2013). More than 89 percent of Nepalese women face some type of restriction and isolation during menstruation (Kadariya & Aro, 2015; Karki et al., 2017). The word menstruation itself is regarded as shame and sin. Women and girls are not permitted to have physical contact with their spouses or male relatives, not permitted to enter kitchens, temples, schools, religious and important ceremonies. Many are excluded from daily activities, basic foods and clothing, and medical care during their periods (Amatya et al., 2018; Robinson, 2015). In some rural villages of Nepal, an extreme century-old Hindu ritual called Chhapuadi is still practiced where menstruating women and girls are isolated in poorly ventilated menstrual huts throughout their menstruating cycle (Mukherjee et al., 2020). These menstrual huts have been condemned as unsafe and unhygienic, lacking basic human necessities, and exposed to wildlife, danger, and death. Roughly 60% of women and girls follow this Chhaupadi and/or similar practices/restrictions throughout Nepal (Amatya et al., 2018; Robinson, 2015). Women and girls who face menstruation stigma and taboos and objectification of their bodies and physiological processes are susceptible to negative social narratives about menstruation and engage in self-stigma or internalized stigma (Roberts et al., 2002).

## **Internalized Stigma**

Internalized stigma is a series of discriminatory thoughts and actions directed at oneself as a result of various personal, societal, cultural, gender, and religious attributes (Baldwin, 2020; Kaundal & Thakur, 2014). Internalized stigma occurs when a stigmatized person believes stereotypes about themselves and acts in ways that the stigma expects them to act (Fredrickson & Roberts, 1997; Pietersen et al., 2018; Wong & Khoo, 2011). This internalized stigma threatens the overall wellbeing of the stigmatized (Crawford et al., 2014; Holland et al., 2020; Johnston-Robledo & Chrisler, 2020).

## **OVERALL WELLBEING**

The stigma associated with menstruation creates an imbalance in a person's 'health triangle' also known as the 'wellness triangle' (Fig.1). Its key components incorporate the mental, social, and physical health of an individual (Kun, 2013) and a measure of the various aspects of health and the efficiency of our body. The maintenance and promotion of health is accomplished through various combinations of mental, social, and physical health, all of which must be balanced to create total health or the overall wellbeing (Nutter, 2003). Subsequently, internalized stigma can worsen, undermine, or impede on these three components for menstruating women and girls who are stigmatized (Asrat et al., 2018).

**Figure 1.** *The Health Triangle*



Source: Kun, 2013

First, internalized stigma has been associated with reduced self-esteem, self-efficacy, stress, poor recovery, engagement in care etc. compromising mental health (Asrat et al., 2018; Corrigan, 2004; Stangl et al., 2019). Secondly, internalized stigma is negatively linked with isolation, full social acceptance, individuals' opportunities, social inequalities, social relationships, and empowerment issues of the stigmatized risking social health (Corrigan, 2004; Goffman, 2009; Stangl et al., 2019). Thirdly, internalized stigma has influence on individual's health- seeking behavior, medication adherence, rehabilitation process, resource availability etc. compromising women and girls' physical health (Asrat et al., 2018; Drapalski et al., 2013; Girma et al., 2014; Livingston & Boyd, 2010). Internalized stigmatization of women and girls during menstruation makes it difficult for them to achieve all the three components of the wellness triangle and reach total health (Asrat et al., 2018; Kun, 2013; Nutter, 2003). It threatens the mental, social, and physical health of the stigmatized Nepali women and girls (Crawford et al., 2014; Holland et al., 2020; Johnston-Robledo & Chrisler, 2020).

### **Overall wellbeing of Nepali Women and girls**

Nepali girls and women have significant risk to their health and overall wellbeing due to the cultural taboos and the internalized stigmatization during menstruation (Johnston-Robledo & Chrisler, 2013; Hennegan & Montgomery, 2016; Pietersen et al., 2018; Wong & Khoo, 2011) prohibiting them from achieving the wellness triangle (Amatya et al., 2018; Kun, 2013). Nepali women and girls encountering such stigma and taboos may experience: a) mental health impacts such as anxiety, depression, stress, lack of self-esteem, psychological abuse, and emotional state; b) social health impacts such as abandonment, loss of confidence, distancing from the community, missing schools, losing job opportunities, education, social ostracization, and lifestyle decline; and c) physical health issues such as adverse reproductive health risks, late medical diagnoses, menstrual disorders, infections, malnutrition, gender-based violence, risk of sexual harassments, assaults, rape, and animal attacks during 'Chhapaudi' or the seclusion period (Amatya et al., 2018; Cardoso et al., 2019; Chikwiri & Lemmer, 2014; Cherenack & Sikkema, 2021; Critchley et al., 2020; Garg & Anand et al., 2015; Geertz, 2016; Gold-Watts et al., 2020; Hennegan et al., 2019; Kun, 2013; Paria & Das, 2014; Robinson, 2015; UNRHCO, 2011).

Nepal's society is bounded by family relationships, obligations, and spiritual beliefs in a world ruled by gods and fate. Elaborate rituals and traditions dictate daily life. Religion, traditions, patriarchal culture, and government policies all contribute to menstruation taboos and stigma in Nepal (Bhartiya, 2013; Jack & Ali, 2010). They pose substantial risks to Nepalese women and girls' overall well-being and gender inequality (Critchley et al., 2020; Gold-Watts et al., 2020; Hennegan et al., 2019; Sommer et al., 2016). Major public health attention should be focused on improper menstruation practices of women and girls in



Nepal. Therefore, as a public health concern, it is critical to examine the underlying factors, causes, and consequences of menstruation stigma for Nepali women.

## **UNDERLYING FACTORS**

### **Religion and Culture**

Hinduism is the dominant religion of Nepal. Menstruating girls and women, particularly in Hindu communities are taught to suffer in silence and follow the various restrictions imposed on them including poor and inadequate menstrual hygiene resources (Amatya et al., 2018). Nepal is the second largest country to follow Hinduism after India (Garg & Anand et al., 2015) and is practiced by more than 80% of the population (Vyas & Spears, 2018). Thus, the religious traditions, culture, and beliefs on menstruation from Hinduism are deeply ingrained in many societies across Nepal (Garg & Anand et al., 2015; Robinson, 2015). Women and girls believe themselves to be impure, embarrassed by their natural bodily function, and fear being blamed for bringing bad fortune if they do not strictly follow the menstrual restrictions imposed by the society (Robinson, 2015). Traditional practices like these, and beliefs on menstruation, impede Nepali women and girls from achieving overall total health as described in the wellness triangle and from participating in many facets of social, cultural, and an independent life (Garg & Anand et al., 2015).

Additionally, these extreme and unhealthy customs are most prevalent in regions where Hinduism is practiced, and these deeply ingrained cultural, social, and religious beliefs that menstruation is spiritually polluting persist in Nepal. Further, in Hinduism, menstruating women are labelled as ‘impure’ and ‘dirty’ and bodily excretions are believed to be polluting, as are the bodies when producing them (Hodal, 2016). A yearly festival in

Hinduism known as 'Rishi Panchami' is observed for one day in August by all menstruating women and girls in Nepal, who purify themselves with water, prayer, and fasting for the "sins" they committed while menstruating (Hodal, 2016). Further, some Hindu castes in Nepal celebrate menarche with the custom of 'gupha basne,' which translates to 'staying in a cave,' in which a girl must spend up to 12 days in a dark room alone during menarche (Crawford et al., 2014; Mukherjee et al., 2020).

Additionally, the Chhaupadi tradition or menstrual exile more commonly practiced in rural western Nepal causes barriers for women and girls to seek any medical attention. Death from poisonous snakes, scorpion bites, and wild animal attacks have been reported during Chhaupadi as well (Amatya et al., 2018; Robinson, 2015; United Nations Resident and Humanitarian Coordinator's Office (UNRHCO), 2011). Although Chhaupadi was banned by the Nepal Supreme Court in 2005, the practice continues due to strong religion and cultural influences (Robinson, 2015; UNRHCO, 2011). This demonstrates the crucial need for the Nepalese government to take more initiatives, actions, and policies to address the harsh menstruation custom (Robinson, 2015; UNRHCO, 2011).

### **SOCIO-ECOLOGICAL MODEL**

The discipline of health promotion is sometimes critiqued for focusing on health behavior change while disregarding contextual factors that influence health (Golden & Earp, 2012; Sallis et al., 2008; Stokols, 1992). The Socio-ecological model (SEM) identifies individuals as embedded within a broader and more expansive social system (Bronfenbrenner, 1977) and it characterizes the interactive qualities of individuals and environments that underpin health outcomes (Sallis et al., 2008; Stokols, 1992). SEM assumes that there are several levels of influence, and these levels are interconnected and

mutually reinforcing (Stokols, 1992; Stokols et al., 1996). It has long been promoted for use in guiding public health practice and is now widely used in the field (Sallis et al., 2008; Winett, 1995). The World Health Organization and Healthy People 2010 see health as due to a complex interaction of environmental and individual factors, and the CDC encourages many of their grantees to use the SEM approach for program developments (Blas & Kurup, 2010; U.S. Department of Health and Human Services, 2000). SEM also posits the possibility of identifying suitable intervention strategies at each level of influence (McLeroy et al., 2003). Furthermore, SEM has been successfully utilized to investigate and conceptualize health and gender equality issues in South Asia, such as peer violence, maternal health care, and intimate partner violence (Ler et al., 2020; Shahabuddin et al., 2017; Wijeratne et al., 2014). Thus, to improve menstruation health experiences and women's health and wellbeing, we must first understand how menstruation stigma persists from different levels of SEM (Golden & Earp, 2012; McLeroy et al., 1988; McLeroy et al., 2003). Hence, we apply the SEM to examine the individual, interpersonal, societal, and policy levels that influence menstruation stigma in Nepal.

### **Individual Level Factors**

In the SEM, the individual level is also known as the intrapersonal level, is associated with the individual's personal characteristics and experiences (McLeroy et al., 1988). Individual level factors include knowledge, attitude, beliefs, biology, socioeconomic status (SES), and personal history of the individual (Casola et al., 2021; CDC, 2022; McLeroy et al., 1988). Individual level factors contributing to menstruation stigma in Nepal include women's religion, caste, education level, socioeconomic status, self-silencing and internalized stigma, lack of knowledge and awareness of menstruation,

and misinformation regarding menstruation (Casola et al., 2021; Crawford et al., 2014; Deblonde et al., 2010; Ma et al., 2017; McCammon et al., 2020; Robinson, 2015; Thapa & Aro, 2019). Misinformation frequently leads to menstruation ignorance and internalized stigma (Kumar & Srivastava, 2011; McCammon et al., 2020).

Some examples regarding menstruation misinformation in Nepal include: menstruation brings misfortunes and accidents, one could be attacked by a leopard, death of buffaloes and cows, brings illness in the family, death of the woman due to bloody vomiting, avoid boys during menstruation because they might become pregnant, menstruating women and girl's touch could contaminate or cause harm, touching food would cause the food to spoil, and menstruation symbolizes impurity and dirt (Amatya et al., 2018; Crawford et al., 2014; McCammon et al., 2020; Mukherjee et al., 2020; Robinson, 2015; Thapa & Aro, 2019). A survey done of 107 adolescent girls not following Chhapuadi in a rural village of western Nepal on Chhaupadi practice reported that the internalized belief among the girls not following Chhaupadi was they would bring misfortune to the family was the driving force of the practice (Amatya et al., 2018). Correct information, knowledge and understanding, and early education in schools for both girls and boys on menstruation and sexual health, will likely have a substantial individual level influence on menstrual stigma in Nepal (Hennegan & Montgomery, 2016; Hennegan et al., 2019).

### **Interpersonal Level Factors**

The interpersonal level of the SEM comprises the individual's social influence from family, friends, peers, and norms within social networks. It is largely influenced by immediate social relations (Byrd & McKinney et al., 2012; McLeroy et al., 1988).

Interpersonal factors significant to menstruation stigma include the influence from parents, grandparents, siblings, husband, in-laws, friends, peers, classmates, teachers, health care providers, and numerous social entities to which women are connected to, and their beliefs, attitudes, and knowledge about menstruation (Amatya et al., 2018; Crawford et al., 2014; Hennegan et al., 2019; Mukherjee et al., 2020; Robinson, 2015; Thapa et al., 2019; Thapa & Aro, 2021). According to a study on the prevalence of menstrual restrictions experienced by married women in three districts of Nepal: Nawalparasi, Kapilvastu, and Chitwan, nearly three out of every four women (72.3 %) reported experiencing many menstrual restrictions, or two or more types of menstrual restrictions. And women's participation in family and social life during menstruation was widely restricted by both husbands and husbands' family members (Cardoso et al., 2019). Furthermore, the majority of women who menstruate learn about menstruation through their mothers and peers, who may themselves be victims of internalized menstrual stigma and shame. This maintains a pattern of menstrual health information sharing that is either limited or misleading (Farage et al., 2011). These traditional influences from the interpersonal relationships are heavily influenced by the culturally based and religiously justified norms (Crawford et al., 2014; Hennegan et al., 2019; Ong & Chettri, 2019).

Nepali women experience stigma associated with menstruation, a lack of opportunities to discuss menstruation, and constraints in mobility and other activities during menstruation (Amatya et al., 2018; Thapa et al., 2019; Thapa & Aro, 2021). Family members enforcement of behavioral expectations such as religious or culturally prescribed menstruation restrictions significantly influenced the magnitude to which these were adhered to and thus women's and girls' menstrual experience (Guterman et al., 2007;

Hennegan et al., 2019). Expectations of purifying, female aptness, and secrecy around menstruation were imposed by adults in the close social circle through signals and gestures (Garg & Anand et al., 2015). Nepali women expressed concern about being judged by their immediate social group if they did not comply with the menstruation practices (Amatya et al., 2018; Budhathoki et al., 2018). The women also stated that family custom was the primary reason for adhering to extreme traditions such as Chhaupadi, untouchability, and prohibitions because they believed that if the practice was not followed, bad luck would follow the family. Menstruation is not culturally accepted as a natural biological function in Nepal with a lack of familial and immediate circle societal support (Amatya et al., 2018; Budhathoki et al., 2018; Crawford et al., 2014; Guterman et al., 2007; Hennegan et al., 2019; Mukherjee et al., 2020; Robinson, 2015; Thapa et al., 2019; Thapa & Aro, 2021). Lastly, Interpersonal level factors can have significant influences from various upper levels of SEM such as the Community/Institutional Level (Golden and Wendel, 2020).

### **Community or Institutional Level Factors**

Different SEMs interchangeably employ the terms community and institutional level, as well as organizational level, which are used separately or collectively (McLeroy et al., 1988). This study will incorporate institutional and organizational level factors under community level factors. A community refers to the culmination of the various organizations in an area. Community level influences include education, infrastructures, resources, hospitals, social service organizations, workplaces, schools, neighborhoods, religious entities, and any institutions or organizations that can make huge impacts and changes on the individual, interpersonal, and policy level factors (CDC, 2022; Ma et al., 2017; McLeroy et al., 1988). Community level factors associated with menstruation stigma

include lack of infrastructure and resources from schools, workplaces, and public settings for women and girls to practice menstrual hygiene management (MHM), lack of curriculums on menstruation and reproductive health from schools, lack of trainings, education, and awareness on menstruation stigma for teachers, health care providers, religious leaders, and traditional healers from respective organizations, and the myths, misconceptions, and patriarchal mindset from religious institutions (Amatya et al., 2018; Budhathoki et al., 2018; Crawford et al., 2014; Guterman et al., 2007; Hennegan et al., 2019; Mukherjee et al., 2020; Robinson, 2015; Salihu et al., 2015; Thapa et al., 2019; Thapa & Aro, 2021). This community level menstruation stigma an individual experiences is determined by the community or culture in which a person is living and not by the individual him or herself (Quinn & Chaudoir, 2009). These organizations and institutions have the ability to enact regulations and policies that can reduce menstruation stigma in Nepal (Thapa et al., 2019; Thapa & Aro, 2021).

### **Policy Level Factors**

Policies and laws that are enacted at the local, national, and global levels make up the broadest level of the SEM (McLeroy et al., 1988). These policies have the potential to have a substantial impact on many people and major influences on both encouraging and prohibiting actions and practices that help avoid or manage individual behaviors in various levels (Golden, 2019; McLeroy et al., 1988). Some factors at the policy level include cultural norms, health policies, economic policies, and educational policies (CDC, 2022; Poux, 2017). Some policy level factors in relation to menstruation stigma include national and local laws banning extreme and harmful menstruation practices, education policies on menstruation education and sexual health, policies regarding menstruation hygiene

management (MHM) in various institutions, and monitoring of the implementation and adherence to the strict laws prohibiting extreme menstruation practices nationally (Amatya et al., 2018; Crawford et al., 2014; Gold-Watts et al., 2020; Mukherjee et al., 2020; Robinson, 2015; Thapa et al., 2019; Thapa & Aro, 2021).

## **CONSEQUENCES OF UNDERLYING FACTORS**

Various factors stemming from individual to the policy level of menstruation stigma and taboos have critical consequences on the mental, social, and physical health on Nepali women (Crawford et al., 2014; McCammon et al., 2020).

### **Mental Health**

Our psychological well-being is referred to as our mental health (Malik et al., 2021). Mental health problems are one of the most significant contributors to the global burden of disease and disability (World Health Organization (WHO), 2001). Globally, mental illness affects more females (11.9%) than males (9.3%) (Saloni et al., 2021). In South Asia, mental health disorders such as depression remain a higher burden in females. Nepal ranked the second highest (4.0%) nation after Bangladesh (4.4%) in 2016 to report higher depressive disorders among females than males (Ogbo et al., 2018). Research have demonstrated that socially created inequalities in men and women's roles and responsibilities, status, privilege, and power interact with the biological differences between the sexes which can lead to various mental health problems experienced by women and girls such as in Nepal (Affi, 2007; WHO, 2002).

Psychological studies studying stigma have focused on aspects such as internalization, which is the acknowledgment of the stigmatized identity as a source of shame (Quinn & Chaudoir, 2009). This cultural construction of menstruation as disgusting,



humiliating, and polluted can lead to women and girls' negative attitudes about their physical bodies (Crawford et al., 2014; Quinn & Chaudoir, 2009). Many women who are stigmatized due to menstruation stigma and the ritual constraints imposed such as in Nepal have reported internalized emotions of low self-esteem, untouchability, and inferiority (Borenstein, 2020; Johnson-Robledo and Chrisler, 2013; Quinn & Chaudoir, 2009).

Further, the internalization by women due to self-silencing is predictive of negative mental health symptoms for women (Page et al., 1996). There is a much stronger association with both depression and anxiety conditions for women as opposed to men (Harper et al., 2006). Relative to men, Nepali women report greater mental health problems (Bennett, 1985; Kohrt & Worthman, 2009; Tausig et al., 2004; Thapa & Hauff, 2005). The shame associated with menstruation discourages women from addressing the topic openly. As a result, menstruators' views are constantly repressed in favor of societal acceptance and others' comfort and expectations. Conditioned self-silencing begins at a young age, when many young people are taught that menstruation is the opposite of cleanliness and attractiveness, and they seek ways to conceal their cycle as a result (Borenstein, 2020; Casola et al., 2021). Menstruating girls and women, specifically in Hindu communities such as Nepal, are taught to suffer in silence during menstruation (Crawford et al., 2014). The spiral of silence resulting from these practices can lead to deep-rooted feelings of fear and embarrassment regarding one's menstrual experiences (Casola et al., 2021; Metusela et al., 2017). Thus, due to the internalization and interrelated nature of self-silencing, women are more vulnerable to interpersonal stresses and negative emotion repressions putting them at a higher risk for depression (Frost et al., 2015; Morrison & Sheahan, 2009).

Additionally, the lack of consistent, widespread education on menstruation or preparation for menarche results in girls experiencing fear of exclusion or abandonment, insecurity, guilt, anxiety, humility, negative emotional state, and poor mentality among women and girls (Amatya et al., 2018; Crawford et al., 2014; Quinn & Chaudoir, 2009). A study of 70 young women aged 15 to 24 in the slums of Lucknow, India found that the majority of participants had a negative emotional response to their first menstruation, describing menarche as an unpleasant shock due to a lack of awareness, menstrual taboos, and stigma (McCammon et al., 2020). Further, due to menstruation stigma, women and girls' mental health suffer from lack of access to and resources for menstruation hygiene management (MHM) (Mason et al., 2017). A study on menstruation stigma and poverty found that 68.1 % of women who experienced menstruation stigma and low socioeconomic status reported symptoms of moderate to severe depression. They had higher rates of depression than individuals who did not encounter the menstruation stigma (Cardoso et al., 2021).

Moreover, these psychological abuses and impacts are distressing and are a primary source of school dropouts and absenteeism among teenagers and female adolescents, leading to additional declines in women's literacy level and economic development for the country (Fabrega, 1990; Jack, 1999; WHO, 2002).

### **Social Health**

Social health or 'social wellbeing' is the ability of people to be free, interact, form meaningful relationships, and coexist peacefully in communities with opportunities for advancement and well-being. It is the absence of negative conditions and feelings or the presence of more positive feelings than negative feelings (CDC, 2018; Umberson &

Montez, 2010). Social isolation has negative influences on mental and physical health, and could even lead to death, for otherwise healthy individuals. Studies have reported that people with a low quantity or quality social ties are more likely to die younger than those who are more involved. Adults who are more socially connected live longer and are healthier than their more isolated counterparts (House et al., 1988). Social scientists suggest that there is a clear link between social deprivation and the health of the general population (Umberson & Montez, 2010). Recent studies provide evidence linking social deprivation with a host of conditions, including heart attacks, chronic diseases, mobility issues, high blood pressure, cancer, poor mental health, anxiety and depression, and a weakened immune system (Ertel et al., 2009; Everson-Rose & Lewis, 2005; Robles & Kiecolt, 2003; Uchino, 2006).

Menstruating women in Nepal go through social isolation every month throughout the cycle and are separated from their family, friends, and the community (Amatya et al., 2018; Crawford et al., 2014; Mukherjee et al., 2020; Robinson, 2015; Thapa et al., 2019; Thapa & Aro, 2021). These women go through internalized stigma or self-stigma during this social isolation period and regulate their behavior accordingly (Roberts et al., 2002; Kc, 2018). Thus, women suffer from abandonment issues, loss of confidence, lower self-esteem, difficulties with social relationships, further distancing from the community, missing time in school, losing job opportunities, education, social ostracization, and lifestyle decline (McCammon et al., 2020; Loya, 2007; Thapa et al., 2019; Thapa & Aro, 2021; Yanos et al., 2020). Furthermore, poor social health limits acceptable opportunities to discuss menstruation, and restricting women's information sources on menstruation creating an unescapable cycle (McCammon et al., 2020).

## **Physical Health**

Physical health is vital to one's overall well-being and is experienced in the absence of illness or injury (National Health Service (NHS), 2012). Menstruation stigma and harsh menstruation restrictions can impede women's physical health, resulting in malnutrition, reproductive health risks and infections, late medical diagnoses, and menstrual disorders (Crawford et al., 2014; Mukherjee et al., 2020). These restrictions may also deprive menstruating women's access to basic human needs, MHM, healthcare, and security (Agampodi & Agampodi, 2018; Amatya et al., 2018;). There is also an additional risk of nutritional anemia and malnutrition in women when they are denied access to healthy food and clean water due to harsh menstruation restrictions. According to (Ranabhat et al., 2015; Thapa et al., 2019; Thapa & Aro, 2021), some Nepali women have increased risk of urinary tract infections and other reproductive health illnesses due to poor MHM, limited access to water sources, and lack of menstruation hygiene products. These unhealthy conditions result in diarrhea, dehydration, and respiratory tract illnesses among Nepali women and girls (Agampodi & Agampodi, 2018; Robinson, 2015; Thapa et al., 2019).

Menstrual disorders such as dysmenorrhea, menorrhagia, endometriosis, fibroids, and polycystic ovarian syndrome necessitate prompt and adequate treatment (United Nations Population Fund (UNFPA), 2021). Menstruation stigma and taboos, as well as a lack of attention, care, and education on menstruation, can lead to women not seeking adequate medical treatment during menstruation, further delaying these critical medical diagnoses (Atreya & Nepal, 2020; Critchley et al., 2020). Accompanied by social stigma and taboos surrounding menstruation lead to Nepali women facing more significant risks to their physical health during menstruation (Atreya & Nepal, 2020; Chakraborty, 2019).

Additionally, practices such as Chhaupadi and various isolation practices in Nepal during menstruation risk women and girls' social health from sexual harassment, assault, rape, and animal attacks. Many women and girls are forced reside in unsanitary menstrual huts with no doors, windows, electricity, or toilets, and are sometimes located near to animal shelters (Atreya & Nepal, 2020; Robinson, 2015). Frank (2021) explained that women and girls living in these huts have little to no warm clothing or blankets during cold months, putting them at risk for hypothermia. Additionally, one study revealed that many Nepali women and girls are exposed to smoke inhalation and carbon monoxide poisoning after starting fires inside the hut to keep warm (Robinson, 2015). Similarly, other studies explained that during the warm seasons, Nepali women are vulnerable to wild animal assaults and snake bites while practicing Chhaupadi or other menstruation restrictions (Atreya & Nepal, 2020; Ranabhat et al., 2015; Robinson, 2015). Incidences of girls being sexually abused and raped during Chhaupadi have also been documented in rural Nepal (Robinson, 2015). Women and girls in Nepal during menstruation fearing sexual harassments, assaults, rapes, and animal attacks can significantly deteriorate their social health (CDC, 2018; Umberson & Montez, 2010).

## **INTERVENTIONS**

According to the SEM, the purpose of interventions should be to build and maintain a setting that promotes health, or else interventions will be short-lived and unsustainable (Trickett, 2009). Individual or intra-level interventions aim to change people's knowledge, beliefs, and skills. affecting the social relationships support, modify social norms, and the institutional environments (Schölmerich & Kawachi, 2016). Community-focused interventions are intended to enhance health outcomes and empower marginalized

populations. Collaboration with agencies, religious entities, communities, neighborhoods, and other intermediary structures result in community transformations and empower marginalized populations (McLeroy et al., 1988; McLeroy et al., 2003; Schölmerich & Kawachi, 2016). Policy level interventions are to establish public policies with implications for health behavior or supporting citizen advocacy (McLeroy et al., 1988; Schölmerich & Kawachi, 2016).

Furthermore, SEM suggests that understanding the correlations between levels can be used to increase the success of an intervention, and that certain combinations of levels would be the most promising to target. Thus, multilevel interventions could be more effective than single-component interventions in breaking the prevailing menstrual taboos and stigmas as well as enhancing the overall wellbeing among Nepali women (CDC, 2018; Schölmerich & Kawachi, 2016; Thapa & Aro, 2021).

### **Interventions in Nepal**

Over the last decade, Nepal has adopted a number of interventions to reduce menstruation taboos and stigma, as well as to improve MHM and the health outcomes during menstruation (Hennegan & Montgomery, 2016; Thapa & Aro, 2021). These interventions are known as menstrual management interventions, and their purpose is to ensure women and girls manage their periods effectively while also allowing them to actively engage in school, work, and other activities. Examples of some interventions include a) increasing awareness on menstruation and advocacy practices such as street plays, posters, educational materials, and radio campaigns on menstruation, b) developing national guidelines for MHM, c) building toilet facilities in schools, and d) school curriculums on menarche, healthy menstrual practices, MHM, and menstrual disorders

(Karki et al., 2017; Thapa & Aro, 2021; UNRHCO, 2011). Likewise, an elimination initiative for the traditional Chhaupadi custom has been launched, which primarily consists of community sensitization through awareness raising and menstrual-shed destruction in various rural villages (Alejos, 2015). In August 2017, a criminal code law prohibiting Chhaupadi was also established, declaring that family members who force a woman to practice Chhaupadi face a three-month jail sentence and/or a fine of approximately \$30 USD. The law also forbids discrimination against and harsh treatment of menstruating women, as well as their segregation as untouchables (Uma, 2019).

However, such interventions have only been effective for a limited time. There is an ambiguity and insufficient evidence on the efficacy of these applied interventions, necessitating the proposed study further (Alejos, 2015). According to one quantitative study published in 2019, such interventions have not been beneficial in enhancing menstruation knowledge and practices (Baumann et al., 2019). There is also limited evidence on positive menstrual health outcomes or how such interventions should be applied in different cultural contexts in Nepal (Hennegan & Montgomery, 2016; Schensul & Trickett, 2009). Further, the efficacy of interventions has only been reported on paper, and not in real-world practice, and that the vast majority of Nepali families and women continue to observe chhaupadi, menstruation restrictions, and untouchability (Alejos, 2015; Hennegan & Montgomery, 2016; UNRHCO, 2011).

Similarly, the few assessments that have been conducted to date have identified some factors for these short-lived interventions; (a) lack of involvement from key community stakeholders in the execution of such interventions, (b) stigma and disapproval directed at women who abandon menstruation traditions, (c) the influence of contextual

factors (for example, low income and illiteracy) on such interventions, (d) opposition from community leaders and traditional healers, and (e) poor enforcement of laws against practices such as Chhaupadi (Alejos, 2015; Dahal et al., 2017; Robinson, 2015; Standing & Parker, 2019; Thapa & Aro, 2021; White & Das, 2013). This study is further seeking input from women themselves on the interventions that may break the stigma and improve their wellbeing.

Furthermore, a study done in 2015 found that many women in the community are also active in the enforcement of menstruation restrictions and practices in Nepal (Robinson, 2015). However, interventions do not specifically target women as the perpetrators (Garcia-Moreno et al., 2012). There is a need to add strategies to involve, encourage, and motivate local women along with male community leaders who have some authority and can influence on the pervasive menstruation taboos and stigma (Garcia-Moreno et al., 2012; Thapa & Aro, 2021). Interventions should work with, rather than against, existing cultural practices and beliefs (Schensul & Trickett, 2009). Thus, in attempt to transform harmful traditions such as menstruation stigma, it is important to address integral components of the socio-cultural context such as menstruation-related myths, taboos, and the related factors (Thapa & Aro, 2021; White & Das, 2013).

### **ADDRESSING GAPS IN THE LITERATURE**

Despite the numerous challenges and barriers that menstruation taboos and stigma pose to the health and well-being of Nepali women and girls, this problem has received little attention in Nepal and has been extremely under researched Amatya et al., 2018; Crawford et al., 2014; Mukherjee et al., 2020; Robinson, 2015; Thapa et al., 2019; Thapa & Aro, 2021). The few existing studies have largely focused on the practice of Chhaupadi



among adolescent females from rural Nepal and have been quantitative in nature (Amatya et al., 2018; Cardoso et al., 2019; Hennegan et al., 2019; Mukherjee et al., 2020; Ong & Chettri, 2019; Robinson, 2015; Thapa & Aro, 2021; UNRHCO, 2011). However, menstruation taboos and stigma, affect not just adolescent girls but both girls and women across the country (Hennegan et al., 2019; Mukherjee et al., 2020). There is little known about the Nepali urban women's perceptions and experience on menstruation stigma and taboos, practices, determinants, and the impact it has on them (Amatya et al., 2018; Mukherjee et al., 2020).

The study fills gaps in the literature on menstruation stigma, contextual factors, practices, and the impact on overall well-being in Nepali urban women. This study took a bottom-up approach, focusing solely on the women themselves, rather than the top-down approach used in previous studies, which diverted attention away from the women. As a result, this study fills a critical gap in our understanding of the overarching menstruation stigma and the influence on Nepali women. The stigma is multifaceted and stems from many sources, making it more crucial to understand the risks women face. Knowledge in this area is critical to ensuring women and girls wellbeing and gender equality in Nepal (Amatya et al., 2018; Garg & Anand, 2015; Gold-Watts et al., 2020; Johnston-Robledo & Chrisler, 2013; Pietersen et al., 2018).

## **THEORETICAL FRAMEWORK**

The study followed the Silencing the Self Theory (STS), and the well-known model, the Socio-Ecological Model (SEM), in a synthesized explanatory framework to understand the lived experiences of Nepali women facing menstruation stigma and addressing the research questions.

## **Silencing the Self-Theory (STS)**

Rooted in a feminist perspective, the Silencing the Self Theory (STS) was first developed in the late 1980s while conducting qualitative research on the repercussions of depression in women (Jack., 1991). While studying the subjective experiences of women's depression, the study found the common theme among these women was their self-silencing behavior as a result of their need to conform to cultural standards (Jack, 1991; Loya, 2007). This process of internal restriction and restriction of self-expression is labeled as self-silencing and has been linked to depression, anxiety, low self-esteem, perfectionism, disordered eating, loss of self, and an overall risk to the well-being of women (Arroyo et al., 2020; Emran et al., 2020; Gilligan, 1993; Hammen, 2018; Jack, 1991; Kun, 2013; Loya, 2007; Woods, 1999). There are four main constructs of STS theory namely 1) externalized self-perception, 2) care as self-sacrifice, 3) silencing the self (STS) or self-silencing, and 4) divided self (Jack, 1991; Jack, 2011). This study utilized the third construct; silencing the self. Silencing the self is specific to women and is attributed to the inferior status of women in the context of patriarchy such as in Nepal (Gilligan, 1993). Higher degrees of self-silencing have been further linked to inequality and oppression among women (Maji & Dixit, 2019).

STS adopts a psychosocial lens and focuses on issues of gender inequality in different social structures and levels. According to STS, family, traditions, and community pressures support the ideal of the good woman, while long-standing social practices continue to limit women's liberties (Fikree & Pasha, 2006). This holds true for Nepali women and girls experiencing strict traditional menstruation customs with very limited freedom. STS entails understanding women's subjective experiences and relational factors

contributing to these experiences. It also focuses on interventions and the implications as it goes beyond the symptom reduction approach and highlights the significance of relational factors that may be generating and perpetuating the problem (Emran et al., 2020; Jack, 1991; Jack & Ali, 2010; Jack et al., 2010; Lanier & DeMarco, 2015).

Further, STS is controlled by norms, values, and images dictating what women are supposed to be and how they are to behave (DeMarco & Lanier, 2014; Jack, 1991). STS refers to suppressing one's voice, emotions, thoughts, behaviors, and rights to avoid disagreements and maintain relationships with everyone; especially for women who adhere to societal norms for feminine relationship roles (Jack, 1991; Jack, 2011). STS can be a marker of oppression as it is a person's voice that brings a greater equality for them (Jack, 2011). According to STS, women self-monitor and absorb negative self-evaluation battles between the I (self-voice) and the Over-Eye (the cultural, moralistic voice that accuses oneself of breaking the culturally prescribed rules) (Jack, 1991; Jack, 2011). This negative self-evaluation refers to the internalized stigmatization by Nepali women and girls and risking the wellness triangle health outcomes (Kun, 2013). The imperatives of the over-eye regarding women's virtue are reinforced by the social reality of women's inequality (Jack, 1991; Jack & Ali, 2010; Jack, 2011). It suggests that women feel like they only matter if the culture encourages them to believe that their voice matters. Culture has a vital role in Asia, and particularly in Nepal, in determining the importance put on health outcomes (Emran et al., 2020; Jack et al., 2010). Thus, STS becomes destructive with negative health effects when a person perceives no choice such as women of Nepal (Emran et al., 2020; Jack, 2011; Maji & Dixit, 2019). It leads to disconnection or isolation from self and others

and this disconnection activates pathways of mutual negative influence among mental, physical, and social health outcomes (Jack, 1991; Jack, 2011).

This STS approach works with this study as the basic postulates of the theory attains with the Asian and the Nepali cultural values, norms, and expectations. It is suited best to understand the subjective experiences of Nepali women as Nepali women are taught to suffer in silence and follow the various restrictions imposed on them during menstruation. According to Fikree & Pasha (2006) and Regmi et al. (2004), the traditional Nepali peoples' lives tend to be controlled by the society's gender roles, religion, culture, and society. Laws and social practices within this group emphasize a strong patriarchal system with women's subordination incorporated in the family structure, legal, education, and healthcare systems, workplaces, government policies, and many more (Fikree & Pasha, 2006; Jack et al., 2010). Moreover, Nepali women are expected to accept their gender disparity and inequality in society (Fikree & Pasha, 2006; Jack et al., 2010; Maji & Dixit, 2019; Regmi et al., 2004). Thus, this STS approach will enable us to understand Nepali women experiencing menstruation stigma and the relational factors in various social levels, and the impact on health and wellbeing (Emran et al., 2020; Jack, 1991; Jack & Ali, 2010; Jack et al., 2010; Maji & Dixit, 2019; Thapa et al., 2019).

Additionally, STS theory employs the social-cognitive approach to understand women's health and well-being. It does not assume that self-silencing is a fixed, permanent characteristic; rather, it sees self-silencing as subject to the influence of factors in changing social levels and settings (Arroyo et al., 2020; Jack & Ali, 2010; Jack, 2011). Hence, this study integrates STS theory with the Social ecological Model (SEM) four levels: individual, interpersonal, community, and policy. By synthesizing the components of these

two frameworks, it is possible to gain a deeper understanding of how each level of the SEM influences Nepali women during menstruation from their perspective (McLeroy et al., 1988).

### **Social-Ecological Model (SEM)**

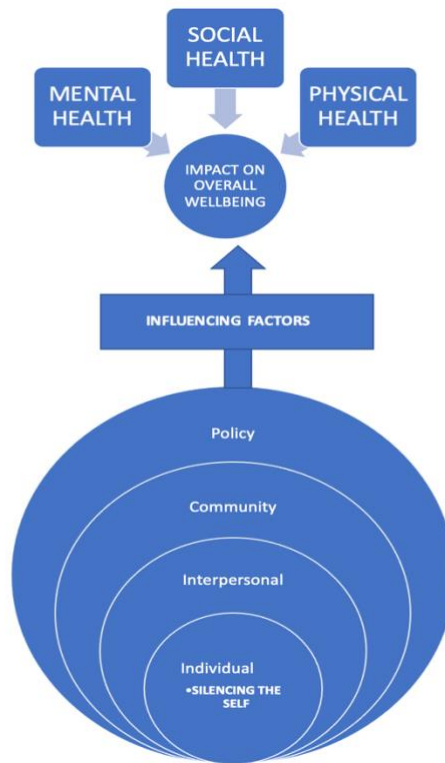
The SEM is broad in scope, and every level overlaps with each other. This demonstrates how the most effective public health policies include and address a diverse spectrum of perspectives and prospects (McLeroy et al., 1988). A public health organization may struggle to encourage healthy behaviors in a community if it does not address how various factors influence the population's behavior. SEM is useful in developing long-term solutions for vulnerable individuals and societies such as for women in Nepal. It emphasizes on factors from all levels: individual, interpersonal, community/institutional, and policy by considering the structural constraints that lead to a woman's suppressed position in society and expose her to more life occurrences (Kilanowski et al., 2017; McLeroy et al., 1988). Comprehending the multiple components that determine negative health outcomes will help researchers and practitioners to successfully address issues such as for menstruation stigma in Nepal (Golden & Earp, 2012).

STS theory combined with the SEM is applicable to this study. STS theory reframes existing paradigms that have limited the ability to listen to women's own perspectives on their health and wellbeing outcomes, whereas SEM provides a robust framework to explore issues at several levels connected to menstruation stigma and taboos in Nepal (Golden & Earp, 2012). This combined model enables us to better explain the impact of stigma and injustice on women's health outcomes. It also assists us in exploring strategies and

recommendations for tackling menstrual stigma in Nepal. As such, it is useful to have an explicit combined theoretical framework that can both guide research and intervention development on individual health outcomes (Stangl et al., 2019). Below is the conceptual framework for this study (Figure 2) that depicts the five concentric spheres of influencing factors (SEM), the STS theory, and the impact on Nepali women's overall wellbeing to understand the lived menstruation experiences.

### Conceptual Framework

**Figure 2.** Conceptual framework for understanding the lived menstruation experience of Nepali women.



## **Chapter II Summary**

In summary, the literature showed that menstruation taboos and stigmatization in Nepal is a public health concern. A normal biological process that is unique to women and girls, as well as the onset of womanhood, can be complicated and multidimensional. Individual, interpersonal, communal, and policy level factors all have an impact on Nepali women's overall well-being, encompassing their mental, social, and physical health. It is imperative to address these varied factors and their impact on the overall well-being for Nepali women to achieve equality. The proposed study focused on Nepali women's personal experiences with menstruation, with a particular emphasis on the factors that drive the restrictive menstruation practices and beliefs, the impact on their mental, social, and physical health, and varied menstruation discriminations that influences how they experience menstruation. Furthermore, this study was unique as it is utilizing a bottom-up strategy to seek intervention propositions using the SEM from Nepali women themselves, as opposed to the common top-down approach that prioritizes others' viewpoints above women. This study also added to the relatively limited extant literatures on Nepal's prevalent menstruation stigmas and taboos. A descriptive qualitative methodology will be used in this study to better understand the personal experiences of Nepali women who face menstrual stigma and prejudice.

### CHAPTER III. METHODOLOGY

This chapter discusses the research methodology to address the purpose and the research questions for this study. The chapter begins with the country's profile followed by a discussion of the cross-sectional research study design. Next, the following components of the research methodology are discussed: study participants, data collection, data management, data analysis, trustworthiness, positionality, and ethical considerations.

#### COUNTRY PROFILE

**Figure 3.** *Map of Nepal*



Source: World Map, 2020

Nepal, once known as the Kingdom of Nepal, is now known as the Federal Democratic Republic of Nepal. It is a landlocked Himalayan country in South Asia located between China to the north and India to the south (Sharp et al., 2009; UNICEF, 2019).



Nepal is home to the eight of the world's ten tallest mountains, including Mount Everest, the highest point on Earth and the birthplace of Lord Buddha (Adhikari & Lawoti, 2015). The citizens of Nepal are known as Nepali or Nepalese. The current population of Nepal is 30,023,760, with men constituting 49.6% of the population and women constituting 50.4% (Countrymeters, 2022; Worldometer, 2022). The median age in Nepal is 24.6 years (Worldometer, 2022).

Nepal is a multicultural and multiethnic nation with over 126 ethnic groups and castes with approximately 123 different dialects spoken. Nepali is the official language and is spoken by approximately 78 % of the population as a first or second language (UNICEF, 2019). The main religions followed in Nepal are Hinduism (81.3%), Buddhism (9.0%), Islam (4.4%), Kirat (3.0%), Christianity (1.4%), and other religions (0.9%) (National Population and Housing Census (National Population and Housing Census (NPHC), 2011). Nepal has the second-largest Hindu population after India, however by percentage of population, Nepal records the largest population of Hindus in the world (World Population Review, 2022). Nepal's constitution law prohibits anyone from converting someone to another religion, and in 2017, the country implemented a more rigorous anti-conversion law (Fischer, 2018).

### **Economical Context**

Nepal is one of the 48 Least Developed Countries (LDCs). Nearly 40% of people in Nepal have incomes of less than \$1 USD per day (UNICEF, 2019). In 2020, the proportion of the Nepalese population living in urban areas was approximately 20.58 %, with rural areas accounting for the remaining 79.42 % (Statista, 2020). Nepal's geography hinders the country's ability to reduce poverty. It is a small landlocked mountainous

country, making development and transportation of resources challenging. Additionally, unemployment, underemployment, and corruption in government all contribute considerably to Nepal's poverty rates (Borgen Project, 2019; Khadka, 1998). Nonetheless, the fifteenth plan - a five-year national plan - has set the objective of elevating Nepal to the level of a middle-income country (MIC) by 2030. However, for many Nepalese, life opportunities are largely controlled by the social stratification of the caste system, religion, and gender roles. These persistent norms and attitudes on the values of women and girls continue to have far-reaching implications for Nepal's development (UNICEF, 2019).

### **Gender Equality Indicators**

Gender roles, religion, and social caste system have a strong hold on the traditional Nepali society (Jack et al., 2010). Women's health and social standing are very poor relative to men. The adult literacy rate in Nepal (15 years and older) was 67.9 % in 2018, with male literacy at 78.6 % compared to female literacy at 59.7 percent, indicating a large gap between the sexes. (UNESCO, 2018). Nepali women have a disproportionate representation in low skill professions compared to men due to high levels of illiteracy and few years of schooling. Nepali women also earn 29.45 % less than their male counterparts on average regardless of the education level (Acharya, 2015). Women's lack of schooling and work opportunities leads to early marriage and childbearing in Nepal. Early marriage is relatively common, with more than one-third of Nepali women marrying before the age of 18 and 16% bearing children before the age of 18 (UNICEF, 2018). Nepal's low gender empowerment measure of 0.385 demonstrates women's marginalization in economic, political, healthcare, education, social, and professional domains relative to men (Jack et al., 2010).

The dominant Hinduism culture in Nepal reinforces a powerful patriarchal system in which women are oppressed in the family structure, workplace, health care system, legal system, and religion (Jack et al., 2010). Women are expected to accept their inequality in society. Men have the power and authority of providing financial resources and make the major decisions in a family. A girl is nurtured from an early age to embrace and carry out her task as the essential virtue of a Hindu woman (Bennett, 1983; Skinner & Holland, 1998). The ideal Nepali Hindu woman prioritizes her family over her personal desires. Traditions, family, and society contribute to the ideal of the good woman, while long-held social standards continue to limit women's liberty in Nepal. This ideal of a good Hindu woman is pursued with the hope of achieving security, a sense of belonging, and identity (Bennett, 1983; Skinner & Holland, 1998; Jack et al., 2010).

### **Study Setting**

The study took place in Kathmandu which is the nation's capital. It is the largest city with the population of 1.521 million in 2022 and the most populous city of Nepal. It is also known as the Kathmandu Valley (Thapa et al., 2008; Worldometer, 2022). According to the 2011 census, the official Nepali language was spoken by 61.26 % of the city's population (NPHC, 2011). 70 % of Kathmandu's overall population is between the ages of 15 and 59 (Central Bureau of Statistics (CBS), 2014). The native Newars are the most populous ethnic group, accounting for 30% of the total population in Kathmandu. The city's two major religions are Hinduism (81.3%) and Buddhism (9%) (World Population Review, 2022).

Hinduism and the social stratification of the caste was formed in Kathmandu. Kathmandu is well-known for its religious monuments and is known as the 'City of

Temples' due to its numerous old temples and pagodas. The city is one of the oldest inhabited cities, dating back more than 2000 years (Shrestha et al., 1986; Thapa et al., 2008). Kathmandu has long been the heart of Nepal's history, art, culture, politics, and economics. Religious and cultural celebrations play an important role in the life of Kathmandu residents (Sharma, 2003; Shrestha et al., 1986). Kathmandu is one of South Asia's fastest-growing metropolitan areas. It is also the first region in Nepal to face the tremendous challenges of fast and urban modernization (Sharma, 2003; Shrestha et al., 1986; Thapa et al., 2008). A large volume of the population (42%) living in the city are migrants from various regions of Nepal. Continued increase of economic opportunities, institutions, and urban amenities in Kathmandu, as well as the unequal distribution of resources for development and modernization in the rest of the country, have exacerbated the demands for migration to the capital (Thapa et al., 2008).

## **STUDY DESIGN**

### **Cross-Sectional Design**

This study was based on a cross-sectional design focusing on the interpretive descriptive accounts of a population under observation with a descriptive qualitative approach (Allen, 2017; Dörnyei Zoltán, 2007).

### **Descriptive qualitative approach**

The proposed study utilized a descriptive qualitative approach to explain and understand Nepali women's menstruation experience. The descriptive qualitative approach is built on the tenets of naturalistic inquiry (Lincoln & Guba, 1985). Naturalistic inquiry enables the researcher to understand the experiences and behaviors of individuals and

groups in their societal and cultural environments by observing, describing, analyzing, and interpreting their experiences (Guba, 1979). It enhances our understanding and provides us a descriptive explanation of the phenomenon (Willis et al., 2016). The overarching purpose of this approach is to describe an individual's experiences in their own words (Sadowski, 2000). Thus, this approach was most suitable as the aims of this study were to explore, uncover, and gain deep understanding (Creswell, 2013) from the perspectives of Nepali women of their menstruation experiences connected to stigma, taboos, discrimination, and customs.

Additionally, the researcher was the principal instrument for data collection and interpretation in a descriptive qualitative approach, which is ideal when exploring a sensitive and complex subject like menstruation stigma (Merriam, 2009). In this study using the descriptive qualitative methodology, it is critical that the research findings provide an accurate representation of Nepali women's menstrual experiences, and that the reflection is understood by the researcher. This is crucial in descriptive qualitative methodology (Sutton & Austin, 2015; Willis et al., 2016).

## **STUDY PARTICIPANTS**

### **Inclusion and exclusion criteria**

Participants were eligible to participate in this study if they were: 1) between the ages of 18-50; 2) Nepali; 3) speak English or Nepali; 4) live in Kathmandu; and 5) experienced some form of menstruation restrictions/ practices in the last ten years. This study only included participants over the age of 18 who could provide consent for the study. Nepali women from Kathmandu were chosen as menstruation stigma and discriminations

do not just affect rural women but women across the country from various background, caste, ethnicity, and regions of Nepal. There have been very few studies on women from Kathmandu's perspectives on menstruation stigma and their experience. Kathmandu is suited as it is the melting pot of Nepal, most populated and the most diverse group of Nepali ethnicities due to migration from all regions of Nepal. Adult women over 18 were selected as prior studies in Nepal have concentrated mostly on young adolescent Nepali girls and from rural regions. Yet, a review of the literature shows that menstruation stigma and discrimination can affect women and girls of all ages and regions in Nepal (Crawford et al., 2014; Mukherjee et al., 2020; Robinson, 2015). No exclusions were placed on the women's ethnicity, religion, caste, district of origin, income level, educational status, marital status, and whether they had been pregnant or had children.

### **Sampling and Recruitment**

**Sampling.** Participant recruitment was conducted using purposive sampling. Purposive sampling is used to find potential participants who can provide and contribute a deep understanding of the phenomenon under study (Merriam, 2009; Patton, 2002). It enables researchers to extract rich information from the data they collect and describe the significant impact their results have on the population. Further, purposive sampling implies that the more prior knowledge that researchers have about their specific communities of interest, the better the sample that they will select (Creswell, 2013; Etikan et al., 2016). Specifically, criterion sampling was utilized to select the individuals who are best suited to speak on their personal experience regarding menstruations stigma (Creswell, 2013).

**Recruitment.** The study recruited 22 women who met the criteria described in the inclusion/exclusion above. The 22 women were classified into two groups separated by

age: (18-34 years) as young adults, and (35-50 years) as early middle- aged. There is no uniform standard of age-group classification to explore the menstruation stigma in Nepal. Thus, this study followed the (WHO, 2015) international standard classification of age with adjustments to represent the life phases of the adult life span, avoid overlapping, and recruitment purposes: (18-34 years) as young adults, (35-49 years) as early middle-aged. For the purpose of this study, using age groups was utilized to see the birth cohort effects of menstruation stigma and related internalized stigma among age groups. The birth cohort effect is the effect that having been born in a certain time, region, period, or having experienced the same life experiences has on the development or perceptions of a particular group (Blanchard & Wachs, 1977; Keyes et al., 2014). The birth cohort effects findings from this study can be utilized to determine the stigma factors, practices, beliefs, discriminations among the age groups and possible interventions and programs tailored according to the age group.

The proposed study utilized recruitment flyers (Appendix A), distributed in-person, and on social media to reach Nepali women from Kathmandu. Telephone numbers of the co-investigator were provided on the flyers. Anyone who expressed an interest in the study was able to contact the co-investigator, who prescreened them to see if they met the inclusion criteria. Prescreening (Appendix B) was done in person or via telephone. Individuals who met the criteria were scheduled for an interview by the co-investigator. Recruited participants was briefed about the study, its voluntary nature, confidentiality, and the right to withdraw at any time without penalties to allow informed decision- making.

## **Sample Size**

Qualitative research is less concerned with the sample size and more focused on the richness and depth of information gathered (Creswell, 2013; Merriam, 2009). Descriptive qualitative approach can involve a wide spectrum of participants to describe their experiences, and sample sizes vary greatly (Creswell, 2013). To assure that sufficient information was obtained from participants, data collection continued until data saturation occurred, where additional interviews no longer yielded new insights or information (Fusch & Ness, 2015).

## **DATA COLLECTION**

In qualitative research, data collection entails posing questions, listening, observing, and analyzing to get understanding of the subject of interest (Whiting, 2008). For this study, data collection comprised in-depth, semi-structured interviews, which is a common and effective approach in qualitative studies (Creswell, 2013; Whiting, 2008).

### **Semi-structured**

The premise for adopting in-depth, semi-structured individual interviews as the primary data collection method is to meet the study's goal of gaining a full understanding of menstruation experience as perceived and lived by Nepali women. The semi-structured interview format allows participants to expand on their experiences and perspectives (Barriball et al., 1994; Salazar et al., 2015). It is best suited for exploratory research or when the topic under examination lacks information such as this study (Merriam, 2009).

### **Interview Guide**



The interview guide (Appendix C) was utilized by the researcher for this study. To ensure that the aims of the study were achieved, the interview guide was constructed utilizing the proposed study's research questions.

#### Research Questions

1. What are the lived experiences of Nepali women who practice menstruation restrictions?
2. What are the socio-cultural factors that influence menstruation stigma and menstruation restrictions?
3. What impact do menstrual restrictions have on mental, social, and physical health?
4. What are the key recommendations to end the stigma and discriminations?

The interview guide examined participants' knowledge, perceptions, and experiences with menstruation, focusing on stigma, taboos, restrictions, and practices, as well as influencing factors, their impact on their overall wellbeing, and recommendations for changes. In addition to the research questions on women's experiences, demographic information such as caste, religion, relationship status, level of education, employment, living history, and income was collected during the research interview to reflect the varied backgrounds of women's experiences in Kathmandu. This information was used to compare and offer sociodemographic, socio-cultural, and economic factors determining menstruation experiences in Kathmandu. The interview guide was evaluated, amended, and approved by the chair, committee members, and advisor from Nepal before the interviewing the participants.

## **Interview Preparation**

Qualitative interviews necessitate that the researcher be a good listener. Audio-recording was employed as it retains an accurate representation of participants' experiences, enables for repeated hearings, and mobile accessible data (Harvey-Jordan & Long, 2001). Participants had the privilege to select the day and time for the interview convenient for them. A location in Matidevi Rotary Club office was allocated and identified to conduct the interviews. This location was private, secure, and safe location. The researcher made sure that safety measures were in place before and after every interview. The researcher and members of the study team responded to any questions or concerns raised by the participants. The researcher obtained signatures for the informed consent in person. Paper copies of the consent were provided to participants upon request. The date and time of the interviews was documented in the field notes. A field notes document (Appendix D) was utilized to record observations and notes following each interview by the researcher.

## **DATA PREPARATION AND MANAGEMENT**

### **Transcription**

The process of producing a written record of spoken words is known as transcription. In qualitative research, individual or group interviews are transcribed and usually written verbatim. To reduce transcribing errors, researchers are recommended to transcribe their own interviews (Bailey, 2008; International Rescue Committee, 2018).

Transcribing the recordings will enable the researcher to identify and correct errors, mistranslations, and inaudible passages, as well as become acquainted with the data. However, transcription is a thorough, time-consuming task that can take anywhere from three to 10 hours to transcribe one hour of recording (International Rescue Committee, 2018; Nikander, 2008). This study utilized the help of a professional transcriber due to time constraints and the large volume of participants. The researcher also proofread all the 22 interview transcripts several times to ensure accuracy and misinterpretations.

### **Translation**

Interviews were conducted in Nepali and English. Translation is the process of converting an original (source) in one language into another (target). It is the precise transfer of information from the source to the target (Mandal, 2018). In qualitative research, translation should be handled professionally to reduce loss of meaning and increase the validity of study findings. A good translation ideally requires understanding of the study's terminology, familiarity with the socio-cultural background, fluent in both the source and target languages, and translation experience or training (Temple & Young, 2004). Translators are frequently necessary if the researcher is not a native speaker of the language spoken by research participants (International Rescue Committee, 2018). The researcher of this study was fluent in both the participants' native language and English, native of Kathmandu, and familiar with the study's terminologies. However, due to the volume of interviews, translation process was completed by both the researcher and a professional translation service from Nepal. To ensure accuracy and avoid any loss of meaning, all the 22 transcripts went through the process of back translation (verification of original documents against the translated versions).

## **DATA ANALYSIS**

In qualitative research, data analysis is understood as the practice of methodically finding and organizing interview transcripts, participant observations, or other non-textual materials acquired by the researcher in order to gain a better understanding of the phenomenon (Thorne, 2000). The study's findings describe menstruation experiences among Nepali women. As there are limited studies in this field, discussing menstruation experiences is critical to identifying the related factors and, ultimately, strategies to resolving it (Amatya et al., 2018; Mukherjee et al., 2020). The study utilized thematic analysis to describe the findings with the assistance of social- ecological model (SEM) (Bronfenbrenner, 2000; Henderson & Baffour, 2015). Although, the study is concentrated on individual level experiences, some themes are described in various levels (individual, interpersonal, community/institutional, policy) of the SEM based on their relevance to each Nepali woman's experience (Bronfenbrenner, 1994). SEM acknowledges that the individual knowledge and behavior emerges from social interactions across varying systems (Denzin & Lincoln, 2003).

### **Thematic analysis**

Thematic analysis is an effective method when the researcher wants to acquire information about people's ideas, opinions, knowledge, experiences, or values from a collection of qualitative data, such as interview transcripts (Braun & Clarke, 2006). It distinguishes itself by structuring texts and codes to represent structural conditions and socio-cultural contexts (Guest et al., 2012). Thematic analysis enables researchers to create visual patterns and conceptual relationships through methodically analyzing data at multiple levels (Fereday & Muir-Cochrane, 2008; Northcutt & McCoy, 2004). There are

several approaches to conducting thematic analysis, but the commonly utilized one involves a six-step process: familiarization, coding, generating themes, reviewing themes, defining, and naming themes, and writing up the results (Braun & Clarke, 2006; Guest et al., 2012). A computer-assisted qualitative analysis application, Dedoose was utilized for the thematic analysis of the study data.

**Step 1: Familiarization.** The very first step was for the researcher to familiarize themselves with the data they collected. The researcher gained full overview of all the data before evaluating. This included transcribing audio, reading over the materials, taking preliminary notes, and generally looking through the data to become acquainted with it (Braun & Clarke, 2006; Kiger & Varpio, 2020).

**Step 2: Coding.** Coding is the process of highlighting segments of the text, typically phrases or sentences and creating brief labels or codes to explain their meaning. The researcher used Dedoose to highlight various sentences that match to different codes. Each code explained the meaning or emotion expressed in that section of the text. It was critical for the researcher to look through each interview transcript and underline everything which stood out as pertinent or informative. In addition to identifying all the phrases and sentences that matched these codes, the researcher continued to add new codes as they read the material. After reading the text in its entirety, the researcher organized all of the data into groups defined by code. These codes provided the researcher with a concise overview of the key points and recurring patterns that appeared across the data (Braun & Clarke, 2006; Maguire & Delahunt, 2017).

**Step 3: Generating Themes.** This step needed the researcher to go over the codes they had created, uncover common patterns, and generate themes within them. Themes are

typically broader and more extensive than codes. The researcher grouped together several codes to form a single theme. In this stage, the researcher discarded codes that were too ambiguous, not significant enough, or those that did not appear frequently enough. Overall, the goal of this step was to produce prospective themes that provided the researcher with meaningful information about the data in accordance with the study's objectives (Braun & Clarke, 2006; Scharp & Sanders, 2019).

**Step 4: Reviewing Themes.** This step was to ensure that the themes are both relevant and an accurate representation of the data. The researcher returned to the data set and compare the themes against it. The researcher checked to see if they missed any significant materials, if the themes accurately represented the data, and if any improvements were required to make the themes perform better. If the researcher ran into any issues with the themes, she either divided them up, merged them, eliminated them, or developed new ones to make them more useful and accurate (Braun & Clarke, 2006; Clarke et al., 2015).

**Step 5: Defining and Naming Themes.** At this point, the researcher had a final list of themes and was able to name and define each of them. The process of defining themes requires defining precisely what each theme signifies and determining how it helps to our understanding of the phenomenon. The method of naming themes included coming up with a concise and easily accessible name for each theme (Braun & Clarke, 2006; Majumdar, 2022).

**Step 6: Writing Up.** This was the final step, and the researcher wrote up the data analysis at this stage. Writing a thematic analysis entailed an introduction that outlined the research questions, objectives, and aims of the study. The write up contained the

methodology section, results or findings, and the conclusion which provided a summary that addresses the overarching research questions (Braun & Clarke, 2006; Sundler et al., 2019).

## **ETHICAL CONSIDERATION AND HUMAN SUBJECTS PROTECTION PLAN**

### **IRB Application**

The study proposal and supporting materials were submitted for review and approved by the University of Louisville Institutional Review Board (IRB No. 22.0498) (Appendix G) and the Nepal Health Research Council (NHRC) Institutional Review Committees (IRC Reference No. 261) (Appendix H). The study strictly adhered to all ethical guidelines established by these two boards.

### **Informed Consent and Human Subjects Protection**

Prior to conducting this study, the researcher and any personnel participating with data collection and analysis obtained Collaborative Institutional Training Initiative (CITI) and Health Insurance Portability and Accountability Act of 1996 (HIPAA) training. Selected participants were provided a written informed consent form (Appendix E) in Nepali or English, depending on their preferences. The researcher provided all participants, both verbal and written information, on the purpose of the study as well as its voluntary nature, rights to withdraw anytime without any consequences, potential risks, and benefits, contact persons for any queries or concerns, audio- recording of interviews, confidentiality measures, participation policies, and data management. Data privacy consent form (Appendix F) was also provided to participants.

## **Data Security**

Considering that qualitative studies frequently involve detailed descriptions of study participants, breaches of confidentiality are of special concern to qualitative researchers (Kaiser, 2009) which investigators must collect, analyze, and report data without jeopardizing the respondents' identities (Baez, 2022). Measures were placed throughout this study process to maintain the confidentiality, privacy, and safety of all identifiable data collected. All interviews were held in safe and private venues agreed upon by the participant and the researcher. All documents comprising participants' names, contact information, and unique identifiers (UID) were held confidential to protect data privacy of the participants. All electronic documents were also saved on an encrypted portable USB drive to which only the researcher and individuals cleared by the ethical committees had access to. Any physical documents or hard copies of the study including consent forms were secured in separate and sealed envelopes in a locked cabinet that only the researcher will have access to. The researcher also ensured that all data are de-identified and substituted with generic descriptions and acronyms. No breaches in data security occurred during the study. All study results are stored in secure locations for minimum of 3 years, as specified by the UofL IRB, after which time paper records will be shredded and electronic data will be removed.

## **Risks and Benefits**

**Risks.** There were no major risks for participating this study. However, there may be a possible risk of loss of confidentiality. To reduce such risks, all identifying information were coded and stored in a password-protected computers that only the study team members had access to.



**Benefits.** While there may be no direct benefits to participants, the study's findings may be beneficial in helping others develop a better understanding of Nepali women's menstruation experiences, particularly those of urban Nepali women. The information gained in this study may be used to develop prospective programs and interventions, and new policies and laws supporting Nepali women to improve Nepali women's overall health and well-being.

## **TRUSTWORTHINESS**

Qualitative researchers are responsible for making sure that their research meet rigor or trustworthiness standards (Creswell, 2013; Rubin, 2000). Trustworthiness of a study refers to the degree of confidence in the data, analysis, and procedures used to ensure the quality of a study. Qualitative research defines four aspects of trustworthiness: credibility, transferability, dependability, and confirmability (Anney, 2014; Connelly, 2016).

### **Credibility**

Credibility occurs when the research findings represent the perspectives of the individuals being studied. In standard terminology, credibility is equivalent to internal validity and supports the trustworthiness of qualitative research findings and interpretations (Lincoln & Guba, 1985; Patton, 1999). This study used member checking and peer debriefing to ensure credibility.

**Member Checking.** Member checking process involves verifying the data collected, interpretations, and the findings of the study with the participants (Candela, 2019; Lincoln & Guba, 1985). It is important that participants in the research study be given the opportunity to respond and comment to their representations (Harvey, 2015;

Lincoln & Guba, 1985). To reduce misrepresentations, I sought clarifications from participants by probing and obtaining immediate feedbacks following each interview and summarizing significant points from the interview (Koelsch, 2013; Lincoln & Guba, 1985).

**Peer Debriefing.** Peer debriefing is one of the methods used in qualitative research to gain credibility. This technique aids you in finding errors, identifying biases, and improving the quality of your study (Creswell, 2013; Spall, 1998). This study engaged the dissertation chair, committees, and advisor to provide scholarly counsel and constructive evaluation to improve the study. They provided a close assessment and critique of the research process, methodology, data analysis, dissemination of results, and conclusions.

### **Transferability**

One of the four aspects required to ensure trustworthiness is transferability, which is the degree to which qualitative research findings and interpretations may be utilized in similar contexts and settings (Lincoln & Guba, 1985; Slevin & Sines, 1999). To ensure transferability in qualitative research, the researcher provides a detailed description of the study for reader/user with similar background and concepts on the subject to make conclusions on whether data transfer is feasible (Kirkman, 2008). Thus, the study provides a detailed description of the study's setting, participants, findings, and limitations to ensure transferability (Lincoln & Guba, 1985).

### **Dependability**

Dependability is defined as the consistency and stability of qualitative research findings, as well as the extent to which the research processes are documented, allowing someone not involved in the research to monitor, audit, and evaluate the research process. Effectively addressing dependability could strengthen qualitative research studies (Guest

& Namey, 2012; Lincoln & Guba, 1985). The audit trails approach is one of the methods used to establish dependability in qualitative studies (Merriam, 2009). This study employed the audit trail approach, which entailed comprehensive transparent descriptions of all the research steps taken from the start of a research project to the completion and reporting of findings. The audit trail documentation demonstrates the rigorous process of analysis, reduction, and synthesis of the raw data collected (Wolf, 2003).

### **Confirmability**

The final trustworthiness criterion that a qualitative researcher must achieve is confirmability. This criterion refers to the degree of assurance that the outcomes of the study are based on the participants' experiences and statements rather than probable researcher biases (Anney, 2014). Reflexivity is one of the techniques used in qualitative research to achieve confirmability. A qualitative researcher uses a reflexivity mindset and attitude when collecting, analyzing, and disseminating the findings of the study. The researcher must assess their own background and position to see how it affects the research process (Dodgson, 2019). To attain reflexivity, the researcher for this study engaged in continuous critical self-reflection and re-examined their position as the research advanced.

## **RESEARCHER POSITIONALITY**

The term positionality refers to an individual's view of the world and the position the researcher has chosen to adopt on the research and its social and political background (Holmes, 2020; Rowe, 2014). Positionality influences how research is conducted, as well as its outcomes and results (Rowe, 2014). Thus, as a qualitative researcher, I identified my positionality for this study in order to conduct more valuable, reliable, and ethical research.

I began by positioning myself in respect to the phenomenon being studied. Menstruation stigma and the discrimination practices are widely prevalent in Nepal which I have experienced first-hand growing up and to some extent still do. Growing up in Nepal, I witnessed my mother, grandmother, sister, aunts, and other menstruating members of the family face some level of menstruation restrictions and become victims of menstruation discrimination. In turn, the same women imposed or influenced the menstruation restrictions on me as I grew up. From an early age, I was taught and encouraged to believe the myths, misconceptions, and social taboos around menstruation in Nepal. I, as well as my professors, friends, classmates, and family members, have experienced menstruation in the context of Nepal's patriarchal society, gender roles, culture, and religion. This led to my interest in researching menstruation stigma experiences in Nepal.

In addition, I recognized my position in respect to the study context and process. Kathmandu was chosen for this study since it is my hometown and I have personal connections in the area. We do not know much about Nepali women's experiences with menstruation, related factors, and their impact on overall well-being in Kathmandu since it is an urban center with women from different parts of the country, and the likelihood that cultural dynamic may have changed the practices. I recognized or see myself with the participants. I am also familiar with Kathmandu's socio-cultural background and language. My personal background may help in creating trust and rapport with participants throughout the research process, including recruiting. Lastly, I will need to disclose my insider-outsider position. Given my roots, personal history, similar characteristics as participants, socio-cultural background, religion, language, and personal connections to the place, I am an insider. However, I am an outsider because of my association with a foreign

academic institution, role as an international researcher, and living outside Nepal for more than 12 years.

Overall, I acknowledge that my multiple positionalities may potentially influence the research. I will be constantly reflecting on my position on this research, participants, and the research process to ensure the trustworthiness and accurate representation for the study findings. This study makes significant contributions to strengthen our understanding of Nepali women's menstrual experiences, which will ultimately enhance practice and policy, and lead to the improvement of women's overall quality of life.

## CHAP IV. RESULTS

### **Introduction**

This study aimed to explore the lived experiences of menstruation stigma among Nepali women. It utilized a qualitative cross-sectional design with a descriptive qualitative approach to understand the menstruation stigma and the related practices and discriminations in Nepal. Results in this chapter addressed the following research questions:

1. What are the lived experiences of Nepali women who practice menstruation restrictions?
2. What are the socio-cultural factors that influence menstruation stigma and menstruation restrictions?
3. What impact do menstrual restrictions have on mental, social, and physical health?
4. What are the key recommendations to end the stigma and discriminations?

This chapter begins with the demographic profile of the study participants followed by the key findings (themes) from twenty-two (22) semi-structured interviews. The researcher used the thematic analysis approach to analyze data.

### **Demographic Profile of Study Participants**

A total of 22 Nepali women participated in this study. One-half (50%) of the participants were between the ages of 18 and 34, and the other 22 participants were between the ages of 35 and 50. All of the participants identified themselves as female (100%). Fifty nine percent (59%) of the study participants were married and 41% were single. The

majority (36%) of study participants said they had never attended school, while 9% said they had finished elementary school, 9% had finished middle school, 14% had finished high school, 14% had finished undergraduate studies at a college, and 18% had completed graduate school (Master's or higher). Participants mainly reported Hindu as their religion (86%), Hindu/Buddhist (5%), and Christian (9%). Among the participants, 55% were low income, 23% lower- middle, and 23% middle-high income. In terms of participants caste, 27% of participants identified as Brahmin, Chettri (upper level), 41% as Gurung, Magar, Newar (mid-level), 14% as Bhujel, Chepang (lower level), 9% as Damai (Dalit or untouchables), and 9% as Chaudhary, Desai (foreign caste). Table 1 & 2 details the demographic profile of all 22 participants.

**Table 1.** *Demographic Profile of Participants*

<b>Characteristics (N= 22)</b>	<b>Number</b>	<b>Percentage %</b>
<b>Age</b>		
18-34	11	50%
35-50	11	50%
<b>Marital Status</b>		
Married	13	59%
Single	9	41%
<b>Education Level</b>		
None	8	36%
Elementary	2	9%
Middle School	2	9%
High School	3	14%
College Graduate (Undergraduate)	3	14%
Graduate Degree or Advanced (Master's degree or advanced)	4	18%
<b>Religion</b>		
Hindu	19	86%
Hindu /Buddhist	1	5%
Christian	2	9%
<b>Income Level</b>		
Low	12	55%
Lower- middle	5	23%

<b>Characteristics (N= 22)</b>	<b>Number</b>	<b>Percentage %</b>
Middle-High	5	23%
<b>Caste</b>		
Upper level (Brahmin, Chettri)	6	27%
Mid-level (Gurung, Magar, Newar)	9	41%
Lower level (Bhujel, Chepang)	3	14%
Dalit - Untouchables (Damai)	2	9%
Indian/Nepali (Chaudhary, Desai)	2	9%
<b>Occupation</b>		
Maid/cleaners	5	23%
Housewife	5	23%
Teacher (middle-high school)	4	18%
Student	3	14%
Social worker	2	9%
Director – Social work organization	1	5%
4-year college Principal	1	5%
University Professor	1	5%
<b>Origin (5 Regions of Nepal)</b>		
Eastern	5	23%
Central (Kathmandu)	6	27%
Western	4	18%
Mid-Western	3	14%
Far Western	2	9%



**Table 2.** *Demographic breakdown of participants with Unique Identifiers (UI)*

UI	Age Group	Caste	Religion	Income	Education level	Marital status	Occupation
1	18-34	Newar (Mid-level)	Hindu	Low-mid	Masters	Married	Teacher-elementary/ middle school
2	35-50	Newar (Mid-level)	Hindu	Low-mid	Undergrad	Married	Teacher-elementary/ middle school
3	18-34	Newar (Mid-level)	Hindu	Low	Highschool	Single	Undergrad-student
4	35-50	Damai (Dalit-untouchables)	Hindu	Low	None	Married	Housewife
5	35-50	Brahmin (Upper caste)	Hindu	Mid-high	Undergrad	Married	Teacher
6	18-34	Brahmin (Upper caste)	Hindu	Low	None	Single	Maid/cleaner
7	35-50	Chettri (Upper caste)	Hindu	Mid-high	Masters	Single	Teacher
8	18-34	Chettri (Upper caste)	Hindu	Low	None	Married	Housewife
9	18-34	Bhujel (Lower caste)	Christian	Low	None	Married	Maid/cleaner
10	18-34	Magar (Mid-level)	Hindu	Low	None	Married	Housewife
11	35-50	Damai (Dalit -untouchables)	Hindu	Low	None	Married	Maid/cleaner

UI	Age Group	Caste	Religion	Income	Education level	Marital status	Occupation
12	35-50	Brahmin (Upper caste)	Hindu	Low-mid	Elementary	Married	Housewife
13	35-50	Chaudhary -mom (Indian) -foreign caste	Christian	Low	Elementary	Married	Maid/cleaner
14	18-34	Magar (Mid-level)	Hindu	low	none	Single	Maid/cleaner
15	18-34	Desai -mom (Indian) -foreign caste	Hindu	Mid-high	Masters	Single	Principal/College
16	18-34	Brahman (Upper caste)	Hindu	Low-mid	High school	Single	Undergrad Student-IT/school job
17	35-50	Chebang (Lower caste)	Hindu/Buddhist	Low	Middle school	Single	Social worker
18	35-50	Bhujel (Lower caste)	Hindu	Low	Middle school	Married	Social worker
19	18-34	Gurung (Mid-level)	Hindu	Low	None	Married	Housewife
20	35-50	Gurung (Mid-level)	Hindu	Mid-high	Undergrad	Married	Director of a Social work organization
21	18-34	Magar (Mid-level)	Hindu	Low-mid	Highschool	Single	Undergrad Student- nursing
22	35-50	Gurung (Mid-level)	Hindu	Mid-high	PhD	Single	Professor-University

## THE STUDY THEMES

The findings of this study are organized under the following five major thematic areas that emerged from the analysis, each containing several subthemes: 1) menstruation perceptions; 2) menstruation experience; 3) impacts on women's lives; 4) influencing factors; and 5) participants recommendations to end the stigma. Throughout this section the participants quotes are referenced by their unique identifiers (UI) (See Table 2 above).

### **Theme 1. Menstruation perceptions**

This section presents the findings on how participants perceive and their beliefs surrounding menstruation. Four subthemes emerged; menstrual blood is 'polluted'; the 'menstruation curse' ; menstruation is a burden; and menstruation is a natural process.

**1.1 Menstruation blood is 'polluted'.** Most of the participants perceived menstruation blood and menstruating women and girls as 'polluted', 'dirty', and 'impure'. Participants generally believed that in Hinduism, menstruation is viewed as a symbol of impurity. One participant said,

Menstrual blood is dirty and feels like it is polluted. This dirty and polluted blood makes the women and girls also impure. In Hinduism, menstruation blood represents impurity, and that women and girls should be cleansed (Participant 5, 35-50 age group).

While the majority of participants (35-50 age group) attested to menstruation blood being 'dirty' and makes them feel 'impure', a few of them said it was not their fault they felt that

way, since as girls and women they are that way and therefore they are stuck believing they are 'impure'.

Yes, we are impure every month and yes, I consider menstruation as a symbol of impurity. But I also like to believe that is not our fault. We were born and raised into this way of thinking (Participant 3, 18- 34 age group).

**1.2 The 'menstruation curse'.** Many participants called it the 'menstruation curse'. They explained that that menstruation could bring bad luck to their families and themselves if menstrual practices were not followed. Common examples of bad luck explained by the participants were: family members become ill, family losing fortune, death of family members, miscarriages, infertility, possessed by Gods, and destruction of farm plantations.

When I do not follow what my grandmother or mother tells me to do during menstruation, I have noticed that I bring bad luck. My mother told me not to touch our garden's plants or flowers and I think I touched accidentally one day. All the flowers died the next day. So, I believe in the 'menstruation curse (Participant 2).

I truly believe that I had my miscarriage due to not following the traditional practices. I also think that some women cannot get pregnant due to the menstruation curse (Participant 4, 35- 50 age group).

I have heard stories in my village and from my family that not following old traditions can cause our family to be poor and like bring death to our family (Participant 12).

Some participants also shared that touching the male members of the family during menstruation brings bad luck or makes the male members ill.

I was told once that my aunt touched her brother (my uncle) or sat next to him watching tv during her period, and he fell severely ill after couple of days. So, I feel like I could bring bad misfortune to everyone (Participant 11).

Couple of the participants also attested that not obeying the menstrual practices could cause the male elders or the household of the family (men) to be possessed by gods.

I had gone to the prayer room in our home on night while on my period. My mom told me that one of our Hindu Gods had possessed my dad for few seconds the next morning while praying. My mom said that God was letting him know that he was mad with me or something. I started believing after that on the ‘menstruation curse (Participant 10).

Many participants also said that they do not want to be the cause of something bad happening, hence sticking to age-old traditions.

Whether I believe it or not on the ‘menstruation curse’, I do not want to be the cause of bringing bad luck to my family or anyone. What if it is true. I will just do whatever family says (Participant 8).

While the majority of the participants believed in the ‘menstruation curse’, there were a couple of participants (18- 34 age group) who did not believe in the ‘menstruation curse’.

I do not think that ‘menstruation curse’ is real. I have only been told stories about it. I have not experienced it first-hand. I will still follow the traditions as I was taught from very age, and it feels weird not to do it (Participant 21).

**1.3 Menstruation is a burden.** Most of the participants considered being born as a female meant being subjected to all of the menstruation practices and that can be a burden.

It is hard for females everywhere in the world, I think. But specially for us who has to go through mensuration and follow all the strict customs. We go through very hard times. Sometimes I feel like being a female is a burden to me and the family (Participant 19, 18-34 age group).

Many also shared some of reasons for considering menstruation as a burden. Participants considered menstruation as a burden due to physical pain such as cramping of the back, abdomen, arms, and legs; fatigue; headache; nausea; vomiting; and severe sickness.

Along with practicing menstrual traditions, we have to also go through our own physical pain during periods. I have severe menstrual cramps in my abdomen, back and legs. I get massive headaches and feel like vomiting all the time. Menstruation is a burden for us (Participant 13).

I wish I did not have periods. It is such a hassle (Participant 14).

**1.4 Menstruation is a natural process.** While most of the participants viewed menstruation as ‘impure’, a burden, and a ‘curse’, few participants concurrently acknowledged that menstruation is a natural process given to females by God. The participants chose to keep the menstrual customs to avoid upsetting God and families.

I think to have period is a natural thing for us. God gave the ability to have period. We cannot change that. But I will still follow with the menstrual practices as to not upset the Gods and my family (Participant 15, 18- 34 age group).

Some participants also shared that menstruation is beautiful and symbolizes the beginning of adulthood and the females' ability to bear children. It is a normal biological process.

My mother told me that when I have my period then I am able to give birth. It is beautiful. It is natural to have period.” (Participant 22).

In summary, study theme one presented that the participants perceived menstruation as ‘polluted, ‘cursed’, a burden, and a natural process given by God (Figure 1). In addition,

participants expressed perceptions and beliefs that reinforce menstruation taboos which influences participants menstruation experience.

## **Theme 2. Menstrual Practices**

Menstrual practices were categorized into three major subthemes: before, during and after menarche (first period) practices.

**2.1 Before menarche practices.** All the participants from the Newar Caste (mid-level caste) discussed the practice of Gufa (in the cave) and also the rite of passage celebration for Newar community.

**a. Gufa (In the cave: the rite of passage celebration).** Participants explained that this traditional ritual is called the Gufa tradition (English; cave), also sometimes known as the ‘the sun marriage’. Gufa ritual is only followed by one group of people who are from the Newar caste, which falls under middle-level caste category. Participants discussed that the largest ethnic/caste group in Kathmandu are the native Newars and that the Gufa custom is most common there. Participants from the Newar caste explained that Gufa is a mandatory tradition that all Newari females (between nine to thirteen years old) must undergo before their first menstruation. This ritual symbolizes the marriage of the young girl to the Sun. It is also the transition of a girl child into an adolescent, a rite of passage celebration for Newari caste and an auspicious occasion. The Sun is believed to protect the girl child from evil spirits and omens after the end of this 12-day ritual.

I was eleven years old when I did gufa. I had no idea what it was, but I was excited.

I got to wear new clothes and lots of people came and ate food. A long day of just



praying and entertaining guests. I knew that we had to do these rituals and only newars did them (Participant 2).

Participants stated that this ritual lasts 12 days, with the girls living alone in a dark room with no sunlight, no windows, and closed doors. The girl is believed to be under the possession of evil spirits during these 12 days. The girl should at all times avoid the Sun and any male members of the family for all 12 days. The girl is allowed to have female relatives only from the 6<sup>th</sup> day onwards for a limited duration. They shared feeling scared, anxious, stressed, hungry, undernourished, cold, and very ill during those 12 days alone in a dark room. They also reported missing school, families, and friends over those 12 days.

At first you are excited but once you are taken into this scary small dark room and locked inside, I cried a lot. There were no windows or nothing. I could not see anyone or talk to anyone. I could not talk to my parents or siblings or anyone. I remember being hungry and cold all the time and just scared (Participant 1).

I like the Gufa tradition because it is my tradition, but it is very scary to live alone in that room for 12 days when you are only 9 years old or just a child. I wish somebody else stayed with me in that room. I got fever and pretty sick lots of days, but you could not get out (Participant 3).

I actually wanted to go to school. I rather be anywhere than that room (Participant 2).

All three Newar participants reported having participated in the Gufa ritual prior to their first menstruation. They stated that the Gufa custom is still practiced on a daily basis by their community. They acknowledged that this ceremony can be difficult, but it is an essential part of their tradition. Its purpose is to ensure that every girl child has a beautiful life away from the world's evils.

I have seen all my sisters, and friends, and cousins go through gufa tradition. We celebrate and eat so much on the 12<sup>th</sup> day. I get that we do this to get the bad things away from us for the rest of our lives (Participant 3).

**2.2 During menarche practices.** Majority of the participants recalled and shared the types of practices and restrictions they followed during menarche.

**a. Chhaupadi (menstruation huts/ animal sheds; seclusion).** Participants discussed an extreme form of menstrual seclusion practice called Chhaupadi, an old Hindu tradition, which is only practiced in Nepal and mostly prevalent in the Western regions of Nepal. Majority of the participants (35-50 age group) described being labelled as the untouchables and forced to reside in menstruating huts or animal sheds away from their houses during their period. They discussed that girls experiencing menstruation for the first time are displaced from their homes and are required to live in the menstruating huts or livestock sheds, for at least 14 days, beginning on the first day of menarche.

I had to pack up some of my belongings and move to a cow shed far away from my home. I think I had to live there for 14 days or so and I was 10 years old I think. This was my first time learning about Chhaupadi. I was called untouchable by my family (Participant 4).

All participants who originated from Western regions of Nepal claimed that they had to go undergo the Chhaupadi custom during menarche. They also noted that the Chhaupadi custom days decreases from 14 to roughly up to 7 days after menarche.

I had to live in a small dark hut for like 14 days in my first period. After that, I had to only stay there for like 5-7 days (Participant 5).

Participants shared that these menstruating huts or animal sheds were small, narrow, and occasionally congested if multiple family members were on their period together. They lacked windows and ventilation, electricity, access to clean water and toilets, as well as warm blankets and mattresses. Most of these huts or sheds lacked door locks and security for women and girls. The women and girls mostly resided alone in these dark and unsafe huts/sheds. Participants who were required to reside in animal sheds described their living conditions as inhumane. They had to live with cows, buffaloes, and goats at times. There was a scarcity of food and had to wait for lengthy periods of time to get food from families. Menstruating women and girls were not permitted to touch or approach any male family or community members.

I lived with couple of girls from the community during our first period in the cow shed. It was scary but I had my friends so that was the only good part. It got so cold because it was wintertime and we had sleep on the floors close to the cows. It smelled so bad in there. We used to get hungry a lot but had to wait for food forever. We did not have any windows or no door locks to keep us safe. We had no toilets, so we had to go out in the farm in dark which was very scary. And we could not see our dad or brothers for at least 14 days or so (Participant 6).

Some participants reported frequent mosquito bites and bleeding while living in these huts during the summer.

It was so painful. I used to get mosquito bites every night and was bleeding most of the times in that animal shed (Participant 7).

Many participants also expressed being harassed by men or boys during Chhaupadi. They would make jokes, throw stones, and mock them from afar living in animal sheds.

I remember getting teased by boys while staying in those huts. Some of them even threw stones at us (Participant 8).

Participants asserted that women and their babies have to follow the Chhaupadi tradition after giving birth for about a month, jeopardizing the wellbeing of both mother and baby.

It is even harder for women who have just given birth. You have to live in the small huts or sheds with your newborn baby. It is not healthy for the baby nor the mother. I have seen many mothers and baby become sick and also death of some babies (Participant 9).

Participants believed the Chhaupadi tradition still exists in the west and has some influence in the central to eastern regions. Participants discussed that this custom is followed more by the upper castes (Brahmin, Chettri) and those who are influenced by the upper castes. They explained that the upper castes Nepalis are largely descended from sacred Hindu priests and hold strong Hindu beliefs. They reside or originated largely from the western regions of Nepal, thus have a higher prevalence of Chhaupadi in the West.

Chhaupadi is followed more by the upper castes and also by people who wants to belong to upper castes. Chhaupadi is more prevalent in the west is because Nepalis upper castes mostly originated from the west. The upper castes have strong ties as Hindu priests and have strong beliefs regarding Chhaupadi (Participant 9, identified as lower caste).

I feel like Chhaupadi has also influence in the central regions like Kathmandu and eastern regions of Nepal because lot of people who are from upper castes have migrated to various regions of Nepal (Participant 10, identified as mid-level caste).

**b. Separation practice.** Almost half of the study participants reported following the separation practice during menarche. The participants were ordered to leave their houses and live with extended family members for approximately eight to ten days. It has a similar concept to Chhaupadi, but with moderate to low level restrictions comparatively, and without the menstruation huts and animal sheds. Participants described feeling confused, frightened, and uncomfortable while living outside their homes for the period during menarche. Participants were told that not following the ritual may bring bad luck to their families.

I started bleeding, and my mom told me that now you have to go and live with your aunt for 10 days. She packed my bags and took me to my aunt. I had no idea what was going on. I was told that this is called a period and you are impure for 10 days. You cannot live in your home as it will bring bad luck to the home and family (Participant 18).

Participants discussed additional restrictions that they had to participate in during their stays with extended families. These rites had to be followed in order to maintain everything pure, according to traditional Hindu beliefs. Participants discussed that they were told to not enter the prayer room and contaminate the room. One participant said,

When I arrived at my aunt's home, I was told to not go to the prayer room during my stay and contaminate the entire room and the stuffs inside there (Participant 17).

Participants also discussed how they had to reside in a separate small room alone, were not permitted to enter the kitchen and cook for themselves, had to use designated utensils, and were not allowed to use any drinking or water sources without permission of elders.

I was told not to go to the kitchen, and not cook anything by myself and stay in a separate room for 10 days. I was not allowed to go eat anything even when I was hungry. I was also told not to contaminate any water in the house so ask permission. I had to have my own utensils for 10 days and no one could touch it as it would contaminate the entire food. (Participant 2).

Participants mentioned that they were told to not celebrate any major festivals and holidays during this practice. One participant said,

I was told to not attend any family functions, holidays, festivals or parties for these 10 days. I used to feel so lonely and hurt not being able to attend important functions. It was embarrassing to not attend while others are attending (Participant 14)

Participants discussed being told to avoid contact with male members of the family and not contaminate the male members.

I was told to not talk to my cousin who was male for 10 days which was hurtful and thought I did something bad. I was told that if I touch my cousin or get too close, I may contaminate him and make him impure (Participant 22).

Few participants (18-34 age group) also recounted being carried through the back door in the dark to live with extended family members, their entire body and head covered in blankets. Their whole body and face were covered to avoid contact with the male members of the family. Participants described this experience as being kidnapped and horrifying.

I remember being carried through the back door at midnight or something with blankets covering my whole body and face. I thought I was getting kidnapped and was so scared. My family told me later that they were taking me to my aunt's home because I started my period, and I cannot stay in my own home for some days. They said that covering my face and body made sure that I did not make any contact with male members of the family (Participant 6, identified as upper caste).

Respondents acknowledged that some of the separation practice customs are seen less in Kathmandu than in villages. In the last 15-20 years they have witnessed fewer girls being transferred to live with other family members and being taken in the dark with their faces and bodies covered. They indicated that the practice does exist and is not entirely eliminated.



I have noticed that girls are being sent off to other people's houses less or being taken away like hostage in Kathmandu than in villages. It is not to say that it does not occur, it does all over Nepal. It surely does but maybe behind doors who knows. It has not been completely gone (Participant 14)

**2.3 After Menarche practices.** Majority of participants (18-34 age group) discussed the practice 'modern day Chhaupadi' frequently during the interviews.

**a. Modern day Chhaupadi.** The majority of interviewees agreed that menstrual restrictive practices continue to exist in every family household in Kathmandu and throughout Nepal. Although the harsh practice of Chhaupadi is not as common in Kathmandu as it is in villages or the far-west regions, the term 'modern day Chhaupadi' came up frequently in conversations. Women and girls are still kept separated in their own houses, unable to visit temples, prayer rooms, kitchens, farms, gardens, cook meals, touch water sources, not able to participate family gatherings/holidays/religious events, eat separately from family members, sleep on floors, and undertake body purification. Participants termed these rituals as 'modern-day Chhaupadi', implying that women and girls may not live in animal sheds or menstrual huts but adhere to at least two or more of various menstruation restrictions. Several of the participants also noted that the religious belief of increased contamination from menstruating women living in homes rather than huts or animal sheds has led to increased restrictions above.

Even though some of us may not have to live in animal sheds or huts like we did 10 years ago in villages, we still go through restrictions in our own homes. We do not have to live in huts or sheds to follow the restrictions. There are still rules that we can do and cannot do. Me and my sister cannot go the temple or worship, not enter kitchen, family gatherings, cook, purification and all. It is basically called modern day Chhaupadi. It still has its core values of Chhaupadi and followed in big cities like Kathmandu too, which may look less harmful for not living in huts, but the main concept of discrimination is there (Participant 16, identified as upper caste, undergrad student ).

Two participants also recounted being confined to a small rug-sized space to sit, sleep, stand, eat, and study during menstruation in recent days.

My mother-in-law told me to sit and do everything there on that small rug. I was not allowed to walk everywhere in the house contaminating things. When family gathered to eat, I was told to sit on that rug and not move until everybody left. It was humiliating (Participant 1).

Some married respondents commented that they are told to not sleep with their husbands and to sleep on the floor during menstruation by their mother in laws. It is thought to bring bad luck to their husbands if not observed.

I had seen my mother do it too and my mother-in-law also told me to not sleep with your husband during period. It will bring bad luck to my husband. I also at times sleep on the floor during period (Participant 2).

Several women (35-50 age group) emphasized the inconsistency in the beliefs of women polluting farms and plantations with their menstruating blood, yet still being obliged to conduct heavy manual labor such as hauling farming materials during menstruation. Women are expected to transport crops, garden supplies, and conduct physical labor on the farm while on their period. These contradictions in ideas were regarded by participants as dominating women and girls over men.

We had to work in the farms like carrying heavy crops and plants and materials like bricks to the farm back and forth. It was so heavy and our back used to hurt. While we were told that our menstruating blood would kill the plants and flowers but we it was ok to do the manual labor for the farm. It does not make sense. I think it is to favor men, so they do not have to do it (Participant 17).

**b. Cleansing/ purifying practice.** Almost all participants (both age groups) discussed that they had to cleanse themselves on the last day of menstruation by showering in cold water and sprinkling 'soon pani' (gold water) all over their bodies. The 'soon pani' or 'gold water' method involves sprinkling fresh water dipped in gold on the individual after completing her menstruation. According to Hindu tradition, this procedure purifies the girl until her next menstruation occurs.

After the process or first period days were over, I was purified by my grand- mother by ‘soon pani’. She sprayed me all over with that and was told I am pure now until the next period. I also had to take cold shower early in the morning to purify myself (Participant 20).

Additionally, participants discussed the impacts of following the traditional menstruation practices on their overall well-being.

### **Theme 3. Influencing socio-cultural factors**

The themes emerged were individual, interpersonal, community, and policy level factors.

#### **3.1. Individual Level**

**a. Education.** Many participants discussed that there is lack of education and information on school curriculums on the biological process of menstruation, sexual health, menstruation hygiene management and debunking the myths and beliefs surrounding menstruation resulting in the social taboos and stigma.

It is still common to have schools in Nepal not teaching menstruation process, sexual health, menstruation hygiene management and so on. They do not teach on how these myths and taboos are false which I think results more in taboos and stigma (Participant 19).

Participants also discussed that receiving the right education and information on menstruation and the biological process at a young age may have the ability to perceive and challenge the menstrual societal taboos and stigma.

I think that students who get the right education or knowledge on menstruation at a very early age in schools or from family has the confidence to fight back on social taboos and stigma (Participant 21).

**b. Caste.** Nearly all participants discussed that caste is one of the big factors on the restrictions that are put in place and the beliefs surrounding menstruation.

Nepal is big on caste, and everything is run by caste. Menstruation restrictions depends on which caste you are from and what beliefs your caste believes in regarding menses (Participant 16).

Majority of participants (both age groups) discussed that the upper castes (Brahmin, Chettri) are the major enforcer on the most menstruation restriction practices to their women and girls than any other castes.

In my experience, the upper castes women and girls follow the most restriction practices and are very strict on them (Participant 18).

I still go through various menstruation restrictions which are mandatory and expected from me (Participants 6).

Participants also mentioned that the upper castes menstruation restrictions and beliefs are very influential and expands to other level castes as the desire to fit in the society and move up the caste.

I grew up listening to the upper castes' beliefs and teachings in the Hindu temples regarding menstruation and the sins. Everyone wants to follow what the upper castes are doing to fit in with them and be part of the upper caste. We all followed their ways and menstruation practices because it felt right (Participant 9).

Participants from the Newar caste discussed that the Gufa practice is only followed by the Newar caste and is a sacred and ancient tradition. They discussed that this practice should continue to be mandatory to preserve their caste traditions regardless of the impact on wellbeing on women.

Gufa practice is only followed by Newar castes, very sacred and an old tradition. I think that it should continue on to preserve our culture and should be mandatory. I know there are risks to women, but it is our caste tradition (Participant 2).

**c. Geographic origin.** Many participants shared that the geographic origin also influences the level of menstruation restrictions, and the different traditional beliefs, myths, taboos, and discriminations.

Participants shared that individuals who originated from western regions of Nepal started Chhaupadi and various extreme restrictions of menstruation in Nepal. They believe that this was due to majority of upper castes originating from the Western regions of Nepal which is also predominantly Hindus. Participants who originated from the central to eastern regions of Nepal followed mostly followed moderate to low level menstrual restrictions. However, participants acknowledged that geographic origin alone does not influence the menstrual restrictions and discriminations.

I have noticed that if you are from the western regions of Nepal, you follow more of the Chhaupadi tradition or extreme restrictions than the central to eastern regions of Nepal. But it also depends on your caste and religion at the same time (Participant 18).

Depending on where you are originally from Nepal also determines greatly how your menstruation restrictions goes and what you were taught (Participant 20).

**d. Socioeconomic status.** Participants reported that one's socioeconomic status (SES) influenced menstruation hygiene management (MHM) resources and access to medical care during menstruation. Participants shared that lower SES individuals had poorer access

to medical care and MHM resources and products during menstruation compared to higher SES. Some participants also shared that they did not have toilets in their home to clean themselves and change pads/clothes privately and in a hygienic manner. Participants from lower SES had to utilize public restrooms which are hard to find throughout Nepal.

Menstruation stigma is pervasive throughout Nepal but if you are poor too, it is worse. You really are at the bottom of the pool to get medical care, simple pain killer medicines, visits to nurses and doctors. I am from a low-income family, and it is worst for us to get even cloth to use during our periods. We do not even have toilets in our homes. We have to go to farms or dirty public toilets to change and clean ourselves during menstruation (Participant 11).

**e. Age group.** Participants discussed how age also influences one's attitudes and beliefs towards menstruation and the surrounding stigma. They suggested that the new generation age groups of 18-34 and especially under 18 age groups are more likely to learn and change their attitudes and behaviors towards menstruation stigma and restrictions.

Old people are never going to change. But we have chances from the younger groups specially under 18 group. I have noticed that younger girls are trying to bring change and not follow all the traditions (Participant 21).



**f. Religion.** Religion, according to participants, is also a major factor in influencing beliefs, menstruation traditions, and restrictions. Participants discussed how predominantly Hinduism has strong beliefs, old traditions, and myths and taboos regarding menstruation.

Hinduism teachings has the biggest influence on the menstruation restrictions and what people believe. Hindu goes way back in time and the old beliefs and traditions depicted and taught regarding menstruation influences our traditions still today (Participant 5).

### **3.2. Interpersonal Level (Family)**

**a. Elder females.** Majority of the participants said that elder females (grandmothers, middle-aged mothers (-in laws) were the most influential in sustaining old menstruation practices and beliefs. They stated that elder females have stronger beliefs in the Hindu menstruation practices and believe that ‘god will punish’ if traditions are not followed.

We are very close to our mothers and grandmothers. We grow up with them more and are close to them more than anyone. Whatever they teach us feels like the most important thing to do and do not question it. My grandmom and mom have very strong beliefs on menstruation and that god will bring bad luck or punish if we do not follow (Participant 3).

Elder females, particularly mother in laws have been known to impose harsh menstruation traditions on their daughters in law shared by participants. They believe it is due to mother in laws' desire for their son to be pure and not contaminated by their daughters in law during their period.

My mom was strict with me to follow the menstruation restrictions but when I got married and started living with my in laws, I found that my mother-in-law was way stricter and harsher. My mother-in-law imposed more and more restrictions to not impure her son ” (Participant 4).

Participants also discussed how elder females have internalized practices in their belief system. They stated the lack of education is the primary cause of ignorance on menstruation process and the internalization of strong beliefs by the elder females. Participants discussed that due to the absence of education, the elder females' beliefs are passed down from generation to generation without anyone raising concerns.

No one has educated older generations on menstruation and female bodies. There is ignorance regarding menstruation process and what it is. Older females keep teaching the old beliefs and traditions generation to generation and no one questions it. Women have internalized the practices in their belief system now. It is hard to break the vicious cycle (Participant 10).

Many participants discussed that their grandmothers, mothers, and mothers in law want to keep extreme practices such as Chhaupadi and Gufa traditions alive. Some grandmothers described to the participants that the current ‘modern day Chhaupadi’ and restrictions today are less extreme compared to their own practicing experiences. The elder females believe the traditions must go on even though painful and harsh.

My grandmother stated that we have it very easy compared to them. They suffered the most. She said that even though it is painful and harsh, we have to maintain the tradition as God will punish us. My grandmother and mother would like the younger generation to keep practicing even the harsh practices such as Chhapudi. My grandmother also said that if they had to do it then the younger girls have to as well (Participant 19).

Several participants in this study (35-50 age group) claimed that they would like their daughters to follow the menstruation restrictions.

I know that it is bad and, but I would like my daughter to follow menstruation restrictions. Maybe not harsh as Chhauapdi but at least some of the ‘modern day Chhaupadi’ restrictions (Participant 18).

**b. Elder sisters.** Several participants discussed that they received their first menstruation knowledge and how to manage it from their older female siblings or, in some cases, female cousins. Some participants shared that having elder sisters helped them get through their

first period, learn how to use cloths and pads, and stay together in huts/sheds. The presence of elder sisters aided in the sharing of mensuration experiences and the emotions regarding menstruation practices.

I had lots of elder sisters. I was lucky to have many sisters to guide me through my first period and stay in the menstruating hut back in the village. It was easy to vent and talk about menstruation and practices to my sisters than to mom or grandmoms (Participant 1).

### **3.3. Community Level**

**a. Religious leaders.** The religious leaders were identified by the majority of interviewees as the most influential people in preserving menstruation practices and strong menstruation taboos and beliefs. Participants shared that religious leaders are the most respected, highly reputed, perceived as pure, and are mostly from the upper castes and males. Majority of the people in a community follow the teachings and seek guidance from religious leaders.

My priest in our Hindu temple is almost like God to us. He is pure, respected and we do not question him. He says that females not following and believing in the Hindu menstruation traditions will have bad luck come to them. My mom and entire family take his guidance and suggestions (Participant 6).

Additionally, participants discussed how religious leaders are often at the top of the hierarchical system and exert significant power and influence over society members, particularly elder females. Participants shared that elder females are the most religious and the temple- going members in a Hindu community.

Religious leaders or priests are on the top of the chain in the society. They are deemed pure, and they have lot of power over what to do and what not to do. My grandmothers think that they know better than anyone. They have been studying this forever and they know what they are doing and predict stuffs. Older people and especially older women go to temples a lot (Participant 5).

Many participants feel that religious leaders' statements have a greater influence on the older generation than on the younger generation.

But I feel like now a days younger generation are more critical and not believe everything what the priests are saying if it seems a bit off or harmful to you. Younger generation try to question and teach their moms and all. But it is harder for the older generation (Participant 8).

**b. Female community health workers.** Several participants talked about female community health workers in the communities. Participants discussed about how female community health workers who are beneficial to them when they live in rural villages or low-income communities. The female community health workers are educated on

menstruation cycle and the biology behind it, as well as the harsh traditional practices. They raise awareness, inform, educate, and assist women and girls with medical issues when there are shortages of doctors and nurses.

One female community health worker worked in our health post in the village. She used to help us teach about periods and how to manage them. She used to help us if we needed help medically while on periods or when not on periods. She used to tell us that menstruation is normal and natural (Participant 11).

Several participants discussed how female community health workers also attempted to teach young girls and women to abandon Chhaupadi and other harmful menstruation practices. Unfortunately, there are few female community health care workers throughout Nepal, and many are driven out of villages and cities by people who do not believe in their teachings.

Our community health worker was a female, so it was easier for us to talk to her. But she used to teach us that we should not follow Chhaupadi or other restrictions if it was harmful or making you sad. But I sometimes seen community health workers getting chased off by elder females or religious leaders because they did not believe in their ideas and knowledge (Participant 12).

**c. Teachers.** Participants stated that there are fewer female teachers in schools and learning about sexual and adolescent health from male teachers is intimidating and embarrassing.

Furthermore, due to embarrassment, stigma, and a lack of curriculum in schools, teachers, both male and female, prefer to skip menstrual health education. Participants felt that teachers' beliefs and biases toward menstruation traditions and restrictions influenced teaching about menstruation and they primarily teach what is socially desirable.

We always had older men teaching us biology and sex education classes if there were any health education classes. It was so awkward to learn from male teachers. Plus, teachers never taught in detail I feel like. They only taught what the community wanted to hear. Teachers were also embarrassed and their own beliefs to not teach about menstruation and debunk the taboos and stigmas (Participant 19).

**d. Community leaders.** Many interviewees discussed that elected local officials, mostly men of high caste, have the power and influence to change the old menstruation practices, and mitigate the taboos and extreme beliefs slowly. Participants stated that local officials, who are mostly men from higher castes, can influence religious leaders from the same caste hierarchy. However, some participants also shared that officials usually have politics in mind and support the majority beliefs in the community and oppose positive changes for women.

Local mayors in my community have the power and has the means to support and spread knowledge on menstruation and end harsh practices. But I feel like they only think about winning votes so they might not care about women's needs (Participant 21).

### 3.4. Policy Level

**a. Lack of policies.** Participants discussed the lack of mandatory local and national policies protecting women from menstruation discriminations resulted in the overall wellbeing harm to women in Nepal.

There are so few laws or strict policies that help women against menstruation discriminations or restrictions in Nepal. When there are no strict laws in place then people do not stop with the practices and affect women always on their health (Participant 10).

They also mentioned the lack of mandatory education policies to incorporate menstruation health topics in all school curriculums added to the menstruation discriminations against women.

It is hard to see all schools including menstruation health education and the discriminations in all school curriculums. I do not think there are any education polices in Nepal telling schools to include mandatory menstruation education. I think that not teaching in schools is the cause of menstruation illiteracy and more discriminations (Participant 4).

Few participants discussed that there is one law in place that bans only the Chhaupadi practice and not for any other practices. However, they pointed out these laws are usually



only for the paper and does not exist in reality nor practice. The ban on Chhaupadi is not monitored and implemented properly. The majority of participants were not aware of the existing ban on Chhaupadi. One participant said,

I know that there is a law that bans Chhaupadi, but I do not know anything about it and how it works. It is not known to most people, and I do not think it is monitored regularly at all or was written properly. I just think that these laws are just for show and is not enforced to practice (Participant 18).

**b. Poor access to MHM.** Majority of the participants expressed that the government needs to have more initiatives and funding for menstruation hygiene management products throughout Nepal. Participants discussed that the lack of funding, availability, and the cost of menstruation hygiene products effected women's health overall.

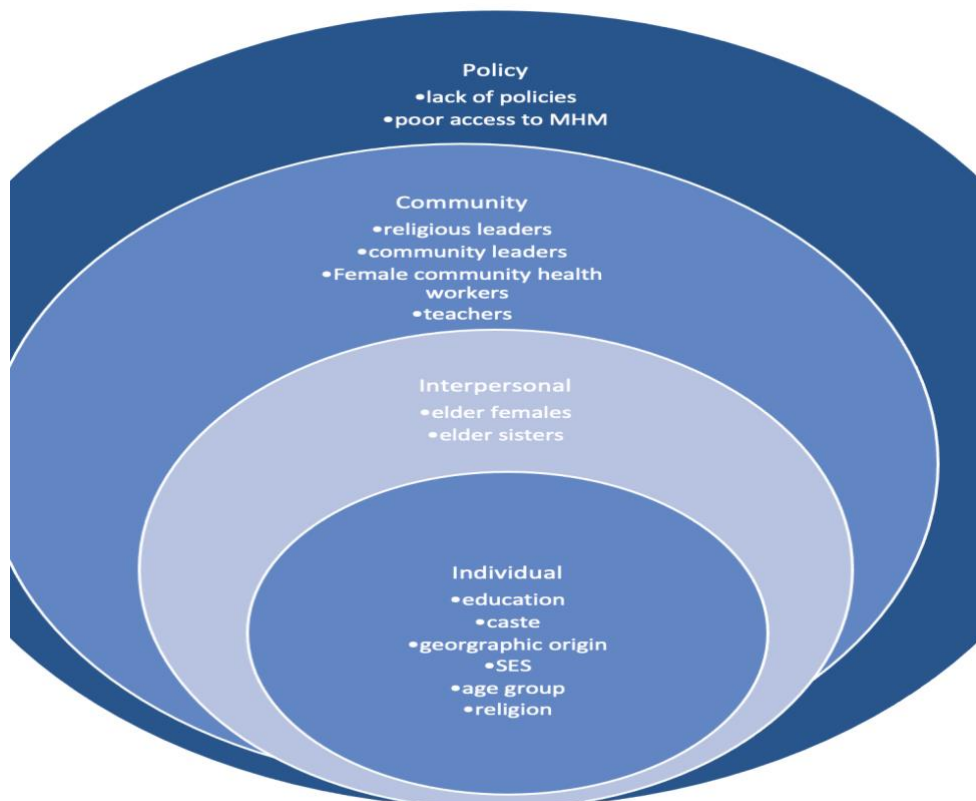
The government needs to have more money for us women to manage our menstruation. We need more menstruation hygiene products to be available everywhere and a lot cheaper so we can afford more (Participant 4).

Some participants also discussed that the lack of toilets for women and girls in schools, work, and public places and clean running water to manage their menstruation hygiene regularly hampered their overall health.

There is also the problem of no toilets designated for women in many places still and hard to find water and like soap and all to change our pads or cloths or clean (Participant 16).

Figure 4 provides the summary of influencing factors at various socioecological levels.

**Figure 4.** *Summary of Influencing factors (Socioecological Levels)*



#### **Theme 4. Impacts on women's overall well-being**

Three major subthemes emerged in the discussion of the impact of menstruation on women's lives. They were related to their mental, social, and physical health.

**4.1. Impact on Mental Health.** Our psychological well-being is referred to as our mental health (Malik et al., 2021).

**a. Internalized stigma.** Majority of the participants (35-50 age group) discussed the internalization of being 'impure'. They asserted that the labels and perceptions such as 'impure', 'polluted', and 'dirty' has been ingrained in them from an early age. This internalization has led most of the participants to believing and affirming that they are 'impure' resulting in self- stigma or internalized stigma.

I have been told I was dirty and impure since I was 8 years old. I was told that when you start bleeding from vagina, you will be impure to everyone in the family and community. You were born this way and you have no choice. I now truly believe that I am impure because I feel like lot of bad things has happened during my period. I should distance myself from my family during menstruation. I hate myself at times for bringing bad luck (Participant 17).

#### **Internalizing symptoms**

Participants discussed internalizing symptoms of distress, anxiety, depression, fear, and self-hate.

**Distress & Anxiety.** Many participants (35-50 age group) attested to the feeling of constant distress and anxiety during menstruation. They expressed their distress at the prospect of bringing bad luck, sicknesses, miscarriages, infertility, loss of wealth, and death to their families during menstruation. Participants shared that such beliefs and taboos observed during the period of menstruation cause them continuous distress and anxiety during their periods.

I get so worried and have major anxiety during my period. I have so much pain during my period and on top of that I have to think about how I could ruin my family. I could cause infertility in future, illness in family, lots of bad luck, even death or we could lose money or jobs. I do not want to be the one causing all this (Participant 5).

**Depression.** Several participants also expressed feeling sadness, emptiness, and frustration when faced with several menstruation restrictions each month. They acknowledged feeling depressed due to the nature of menstruation discriminations and the labeling of ‘impure’, and ‘untouchables’ by families and their own community. Participants shared that the restrictions placed today reflect Chhaupadi, or what is now mostly known as ‘modern day Chhaupadi, that equally discriminates and demeans women during menstruation.

I did gufa practice on my first period. Now, I still practice all the isolation practices or modern day Chhaupadi like restrictions as well. I have done it all. I just feel so

depressed, sad, lonely, and angry with the world. Why only women have to go through all this in 2022? We have not progressed much (Participant 12).

**Fear.** Several participants indicated tremendous fear and a lack of safety during Chhaupadi and Gufa practices. They were fearful as they were obliged to live alone in small and dark enclosed huts/animal sheds and locked rooms for 12- 14 days with limited food, ventilation, drinking water, blankets, electricity, clothes, and sunlight. Some participants reported that they are emotionally traumatized, which had tarnished the meaning of menstruation and being a woman for them.

I used to be so scared living in that animal shed alone at times. I would never like to do that again. I used to feel unsafe as well due to unlocked and open huts at nights. It has damaged menses for me and what it means to be a woman (Participant 11).

**Self-hate.** Majority of the participants shared the emotion of self- hate while going through menstruation restrictions and practices.

I cannot stop thinking that I am not impure. I feel like this self-stigma is very hard to get rid of now. I was raised in this. I hate myself (Participant 2).

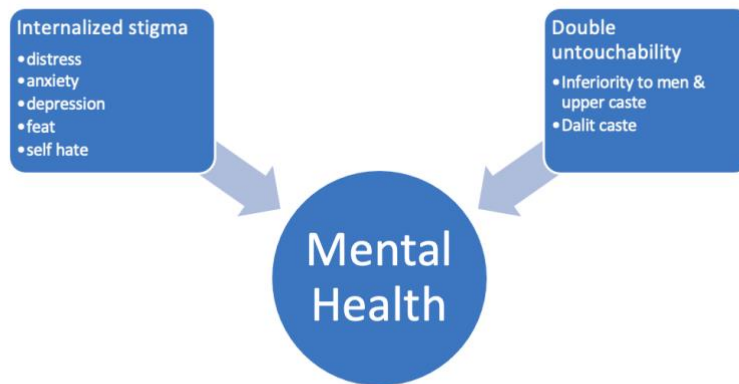
**b. Double Untouchability.** Participants from the Dalit (untouchables) caste reported feeling the term ‘double untouchability’ during menstruation. They addressed how the

Dalit communities in Nepal are labeled untouchable and endure discrimination on a regular basis from the upper castes. During menstruation, women and girls from the Dalit caste are treated as untouchable at home and in their communities too, creating the sense of 'double untouchability'. Dalit women participants expressed a sense of inferiority to men and upper castes due to the 'double untouchability' emotion.

We are from the bottom of the pool in terms of caste in Nepal. We are the untouchables. No one can marry us, touch us, come inside our homes or go to upper caste homes, eat our food, drink our house water and all. We already feel the worst and then during menstruation we are like double untouchables. Our community discriminates against us too. I feel lower to men and upper caste during menstruation and other times too (Participant 4).

Figure 5. illustrates the mental health impacts on women of menstruation taboos and restrictions.

**Figure 5.** *Impact on mental health*



**4.2. Impact on Social Health.** Social health or ‘social wellbeing’ is the ability of people to be free, interact, form meaningful relationships, and coexist peacefully in communities with opportunities for advancement and well-being (CDC, 2018; Umberson & Montez, 2010).

**a. Abandonment issues.** Several participants shared the sentiment of abandonment from loved ones during menstruation. They developed a fear of losing loved ones as a result of customs like Chhaupadi, Gufa, and prolonged absence from their families and communities during their menses.

I was taken into the menstruating hut for 14 days or longer alone, a bit far away from our home and did not get to see my family a whole lot. I was only 9 years old. I felt anxiety and scared from losing my family forever (Participant 4).

**b. Social ostracization.** Participants discussed being ostracized by elders in the family and religious community members because they go through menstruation every month. They described being ignored and excluded from family discussions, activities, and gatherings during menstruation.

During my period, the elders in my family and some religious people in my local communities tend to ignore and exclude me from everything like family events, activities, discussions and many more. They give us kind of like silent treatment and make us feel like we are outcast (Participant 7).

**c. Missing education.** Majority of the participants discussed feeling embarrassed and ashamed in front of their male peers during school days when on their periods. Women perceived embarrassment and shame as a result of a lack of awareness, unpreparedness, and resources about menstruation prior to menarche. They also stated missing numerous days and quitting school following their first periods.

I can never forget my first period during math class. I started bleeding which I had no idea why. I was bleeding heavily, and the blood was dripping all over the floor.



I was so embarrassed and wanted to run away and never come back. I do not like math from that day and I missed two months of school after that (Participant 3).

A few participants also stated that male classmates bullied and shamed them during menstruation at school. They shared that the boys were also taught about menstruating girls and women as 'impure' and 'dirty'. The bullying and shaming also resulted in girls missing or quitting school altogether.

I had the worst time during my 8<sup>th</sup> grade. Some of my boy classmates used to make fun of me for having my period. They would know because my face would be so red, walked funny, and felt sick during my periods. My male teachers also never helped us. I hated those boys for making fun of me. They would also know because sometimes I would stain the chairs, it was so embarrassing (Participant 21).

**d. Poor self-esteem & confidence.** Many participants conversed about how the internalized stigma around menstruation, as well as the restrictions imposed, forced them to have poor self-esteem and a low confidence. The participants discussed that the numerous restrictions shaming and labeling them as inferior to men and a burden to families and communities caused them to have feel weak and incapable. This resulted in self-doubt, and they missed out on opportunities in school, colleges, career, and intimate relationships.

I always had and still have low confidence in me and low self-esteem. I do not think I am pretty or smart. I was always told I am impure and polluted and dirty, and I do not bring good things for people and me. Menstruation restrictions made me feel really bad about myself. That is why I did not apply for college (Participant 17).

Participants also stated that their low self-esteem resulted in loneliness and their participation decreased social activities.

I felt lonely and wanted to do nothing with anyone during periods and even after as an adult. I was so used to chhaupadi that I wanted to do that instead of going out (Participant 18).

Figure 6. illustrates the social health impacts on women of menstruation taboos and restrictions.

**Figure 6.** *Impact on social health*



**4.3. Impact on Physical Health.** Physical health is vital to one’s overall well-being and is experienced in the absence of illness or injury (National Health Service (NHS), 2012).

**a. Malnutrition.** Many participants shared a lack of proper and fresh meals while adhering to various traditional menstruation practices. Participants reported not having enough to eat, not having a well-balanced diet, and being forbidden to access the kitchen and cook meals for themselves. Some participants also discussed having to starve for extended periods while living in menstruating huts/animal sheds, and locked rooms.

Me and my sister had to starve for like 9-10 hours at times because no one would give us food. I had to wait for my mom to come home from work and then give us

food. Dad and other members would not give us food as it would impure them. Sometimes we did not have fresh foods, not enough to make us full, and did not have proper meals. We are still not allowed to enter the kitchen and cook and prepare meals for ourselves (Participant 14).

During Gufa, my mom would slide food to us through doors and it was not enough food. Or we would only get little food or only fruits that did not fill us up (Participant 18)

Participants also shared that they were not permitted to consume dairy products, vegetables, and meat products when menstruating. One of the reasons given to them for not being allowed to consume dairy products was the belief that menstruation women could make cows and buffaloes sick if they consumed milk or dairy products.

My grandmom told me that we were not allowed to have dairy products because it would make our animals such as cows and buffaloes sick by consuming their milk or something (Participant 21).

**b. Hypothermia.** Several respondents stated lack of mattresses, warm blankets, lack of winter clothes, and having to sleep on bare floors or grasses in huts/ animal sheds/ secluded rooms during winter. They also reported not having electricity and heaters in Chhaupadi huts/ sheds which further resulted in colder nights. Participants reported experiencing

hypothermia during menstruation practices causing at times slurred speech, exhaustion, and drowsiness.

I remember always feeling cold while staying in huts or animal sheds. We had to sleep on floors or just on grasses with no mattresses or blankets. It used to get so cold during winter and I used to shiver and had slurred speech (Participant 16).

We had no electricity and no heaters during winter while staying in Gufa. It got so cold that I passed out with getting so tired and drowsy (Participant 12).

**c. Insect/ snake bites.** A few participants reported frequent mosquito and spider bites at night when staying in the menstruating huts/animal sheds. Two participants also observed seeing snakes roaming around their huts causing panic and fear among women and girls. One respondent recounted a friend who was bitten by a snake and had to be hospitalized for several days.

Every night I got bitten by mosquitoes and spiders in that animal shed. I used to bleed all over my legs every month due to mosquito bites (Participant 4).

I remember my friend got bitten by a snake when she stayed in the hut. Luckily, she got to a hospital in time, and she lived. But it is so scary (Participant 5).

**d. Suffocation.** Participants discussed feeling trapped or suffocated while living in enclosed dark rooms with no ventilation. It was difficult to have fresh air in those closed dark rooms.

While in gufa, there were no windows, and the door was always locked. I felt like suffocated and running out of air for those 14 days (Participant 6).

Several participants also experienced suffocation due to excessive smoke while attempting to light fires in the huts/animal sheds during the winter months. The winter months were especially difficult for menstruating women and girls.

I remember it used to get so cold during winter while living in the huts. We tried to light fire to keep us warm and we would suffocate at times because of poor ventilation (Participant 8).

**e. Sexual assaults.** Several participants (18-34 age group) discussed the contradiction of women being untouchable during menstruation but yet being sexually abused by men during menstruation.

I feel like the beliefs we were taught does not match sometimes. We were taught to believe we are untouchable during menstruation, but we also get sexually harassed, assaulted and raped during these times (Participant 9).

Participants related their stories of being sexually assaulted and mocked by male members of their community. They recounted being sexually harassed by male members of their society, such as inappropriate touching or kissing, while staying in menstruation huts. There are no locks on the doors and no one guarding the huts. Men and boys would also mock or tease them calling them impure while living in the huts. Participants expressed feeling unsafe and vulnerable during Chhaupadi or practices having to be alone.

Many participants have heard of several women and girls being raped while residing in the huts/ animal sheds. Participants said that women and girls may not report the rape or sexual abuses due to embarrassment and no one believing them. All participants reported safety as their major concern when women and girls are alone secluded in rooms/huts/ sheds while menstruating.

I remember many times living in the huts that a man would come inside the hut and touch me inappropriately or kiss me and run away. I could not do anything and no one in our family would believe in me. Or it would be embarrassing for my family in front of the society. I felt helpless and unsafe during chhaupadi. I have heard of rapes of women and girls living in the huts (Participant 12).

We used to be teased and mocked when living in the huts/animal sheds by men and boys. They used to call us impure, dirty, and contaminated (Participant 11).

### **Medical complications**

**f. Infections.** Participants discussed how poor MHM, such as lack of running water, inability to dry clothes in a hygienic manner, inability to change clothes or pads for 2-3 days, and inability to wash and shower, has led to many urinary tract infections and other disorders. Three individuals disclosed that they experienced abnormal discharges, itching in the vaginal area, rashes, and atypical smell with pain in the vagina.

Sometimes we did not get to wash ourselves or change clothes or pads for 2-3 days which would create such bad smell and uncomfortable. I had urinary tract infections rashes, and severe itching down there almost every month (Participant 16).

Majority of the participants shared that the menstruation restrictions deprived them of resources to manage menstruation. During practices such as Chhaupadi, Gufa, separation, and even ‘modern day Chhaupadi’ women lacked basic needs such as pads, tampons, access to clean running water, toilets, soaps, change of clothes, and medications. They also reported not having toilets for women and girls in schools and colleges.

We did not get any products to manage our menstruation. We still lack basic needs to manage our periods. I still do not wear pads. I wear cloths instead of pads. We have limited access to water, toilets, and cleaning supplies during periods. Some schools do not have enough toilets for girls (Participant 4).



Many of the participants reported still using clothes instead of pads and tampons during menstruation. They have to reuse the cloths by washing secretly and drying them in places where men cannot see them, such as in dark rooms.

I had to hide and wash the cloth that I wore during my periods. I was told not to let anyone see it specially men. We had to wash really quick and dry in a dark small room where no one would see it (Participant 14).

Participants also discussed not being able to dry menstruation cloths in the sun and use proper cleaning agents caused infections in vagina due to unsanitary cloths.

We never got the chance to dry outside in the sun and use proper soaps and detergents to wash the cloths. We had to do it so secretly and fast that we did not get to wash and dry properly. I used to get infections in our vagina due to the cloths being dirty (Participant 21).

**g. Illnesses.** Several participants also reported diarrhea, dehydration, and respiratory tract illnesses such as pneumonia and fever due to poor MHM and unhealthy conditions while following traditional practices.

Me and my sister had diarrhea, pneumonia, fever, dehydration and just sick during chhaupadi and still in today's isolation practices at times (Participant 17).

**h. Missed Diagnosis.** Majority of the participants shared that due to the stigma associated with menstruation, they did not want to discuss their menstrual problems with anyone. Doctors are reluctant to touch their patients due to stigma and the label that women are impure. As a result, women and girls did not seek health care and preferred to keep health problems a secret and suffer alone. One woman reported that her doctors took several years to diagnose endometriosis which hampered her fertility. The doctor was reluctant to touch and examine her as she is labelled as ‘impure’ during her period. She was mentally and physically abused by her husband and mother-in-law due to the infertility.

I finally had the courage to go to a doctor, but he never examined me properly. It took him very long to let me know I had endometriosis. The doctor was hesitant to touch me or examine me properly as I was impure during menstruation. I was unlucky to visit the doctor during my period (Participant 18).

Many of the participants expressed how they felt about having access to medical care and the lack of courage to request for medical care during menstruation. Participants reported deprived of medical care while being isolated from the community during menstruation. Few participants shared that they were told to ignore having severe cramps and abdominal pain during their periods.

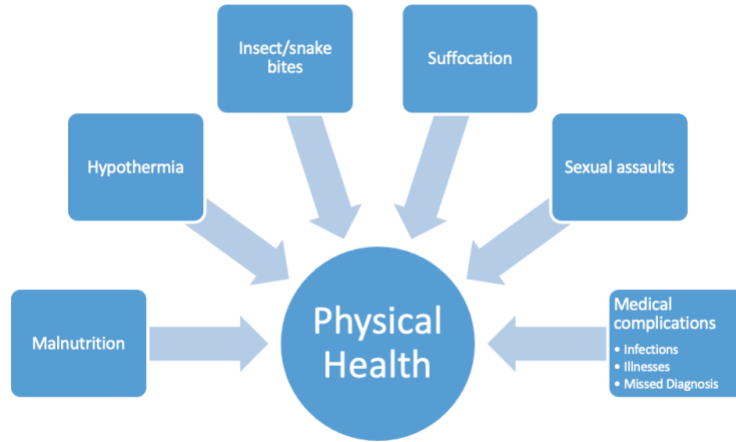
I have severe pain and cramps in my abdomen during my periods. I used to cry a lot. Every time I told I am suffering or having extreme pain, my family told me that it will go away and just ignore it (Participant 22).

Several participants also discussed that they have never visited a doctor in their lifetime. Participants were afraid and hesitant to see a doctor as their families did not believe they could have any health problems during their periods. Some also shared that there were shortage of doctors, nurses, and hospitals in villages. Participants who were not from villages reported that medical care was expensive in cities and also difficult to find female doctors.

I have never been to a doctor. My mom and grandmom say that we do not need to go to a doctor. It is expensive and to go the doctor. Also, my families do not believe that I could have health problems during my periods. They blame everything on the period (Participant 20, 35-50 years).

Figure 7. illustrates the physical health impacts on women of menstruation taboos and restrictions.

**Figure 7.** *Impact on physical health*



Additionally, participants discussed the influencing social cultural factors of traditional menstruation practices and restrictions.

### **Theme 5. Participants recommendations to end the stigma**

Participants provided a number of recommendations in an effort to lessen and eradicate menstrual stigma and discriminations to change the Nepali women's lived menstruation experience improving overall wellbeing. Four subthemes emerged from the interviews: various education programs & strategies, awareness campaigns, increasing mental health professionals and female health providers, and policy change proposal on caste system.

#### **Education programs & strategies**

**a. Education on women empowerment:** participants recommended educating Nepali women on their basic human rights, right to have access to resources, and autonomy. Participants discussed this education program may help women to talk more about menstruation and be vocal on their needs and speak against harsh restrictions. One participant said,

We should teach women on their rights, freedom, and the rights to access to resources as a female. I think these programs may help Nepali women be more vocal about menstruation too and demand their needs and say not to harmful restrictions (Participant 10).

**b. Education on menstruation hygiene management (MHM):** participants recommended educating women and girls on how to manage menstruation with hygienic menstrual products and the health risks resulting from poor MHM. Participants also mentioned educating young girls before menarche so that they are prepared, aware, and equipped with MHM products during their first period.

Many women do not know what products to use during menstruation and what hygiene to follow during their periods. We need to learn these things before the period mostly, so we know what is going on and what to use on our first period. We need to know more about hygiene and the management so that we do not get infections and diseases (Participant 2).

**c. School curriculums on normalizing menstruation:** participants discussed incorporating menstruation education on all school curriculums, normalizing menstruation. They discussed teaching the menstruation biology, process, and debunking the myths and social taboos surrounding menstruation.

I think we teach in every school on what menstruation is and start normalizing it. It should be in schools and also colleges if possible. The curriculums should teach every detail on menstruation and teach that menstruation is normal, not bad, and the women are not impure or dirty (Participant 1).

**d. Educating lead religious leaders:** participants discussed educating high-ranking lead religious leaders on the overall negative impact on Nepali women's overall wellbeing due to harsh restrictions and discriminations. This program will also teach the leaders to alter the harsh religious teachings on menstruation and link in a positive way: menstruation is not a sin but a marking the start of the journey to womanhood and fertility. Participants mentioned that educating lead religious leaders will have an effect to influence most of their disciples under them.

The main people are the high-ranking religious leaders or priests. It is going to be hard to change them. Maybe we can educate them on changing some religious teachings in a positive way. Menstruation is not a bad thing or sin but like it is a journey to adulthood and a sign of fertility. I feel like the supreme religious leaders can have influence over all the other religious leaders under them and all disciples.

We should also educate them on many negative things that may happen to women following harsh restrictions (Participant 9).

**e. Educating men on menstruation:** participants recommended educating men on menstruation, the biological process and the social taboos and stigmatizations on Nepali women. Participants discussed that teaching men and boys on menstruation in the patriarchal society is vital to helping women experienced menstruation without restrictions and discriminations.

We need to educate men and boys on menstruation process and everything on menstruation like taboos and stigma that harms women and girls. We live in a patriarchal society, so it is very important to teach the men as well and not just women. I think it will help the whole society if both men also are educated on menstruation (Participant 14).

**f. Simple Language:** participants discussed using simple language while teaching and educating the elder females and illiterate individuals on menstruation. Participants recommended that the use of visual materials such as posters, pictures, videos, and movies will be better than large amounts of text to help these women.

There are so many women and girls in Nepal that never went to school and still do not. I do not see anyone making education materials for people who cannot read or

write. We can have pictures, movies, songs and stuffs for those people (Participant 20).

**g. Incentivizing menstrual education:** participants recommended providing remuneration to local schoolteachers, religious leaders, and local elected officials for providing menstrual educational workshops and classes for students and the community. The incentives offer motivation and encouragement for these stakeholders to continue teaching on menstruation and the negative impacts of menstrual stigma on their own disciplines.

I believe that incentives from the government will be so helpful to encourage and motivate the schoolteachers, religious leaders, and local leaders to continue for providing menstrual educational workshops and classes for students and the community (Participant 19).

### **Awareness programs**

**Door to Door awareness program:** participants recommended door to door raising awareness on menstruation process, debunking myths and taboos surrounding menstruation, and on the risks and consequences of harmful practices such as Chhaupadi, gufa, and other separation practices. Participants discussed the door-to-door campaign might reach more women and girls who have no access to schools, television, radios, transportation, domestic violence, and other financial resources.



Social workers should do door to door education because not every woman and girls can go outdoors all the time. Many women and girls never go to school, work, do not have tvs, radio, no transport, and many have domestic violence not letting them go outside (Participant 22).

Women and girls need to know the risks of chhaupadi, gufa, and many other restrictions in Nepal. We do not know the risks because one tells us. More awareness and education on the actual risks on what happens to our overall health is important by going to every house in the community (Participant 21).

### **Provide mental health professionals**

Participants suggested providing more, available, and affordable mental health professionals in every community for women and girls who needs counselling during their period and practicing restrictions. Mental health professionals should focus on the menstruation practices negative impacts, how to overcome those negative experiences, and addressing people's mindset towards menstruation.

We need to have more mental health professionals in every area or community for women and girls who needs them. Lot of women might be going through lot of pain mentally and lots of emotions and they may not talk to their close ones. They can talk to mental health professionals to guide them. The professionals should also help them with shifting people's attitudes on the negative menstruation beliefs (Participant 13).

### **Increasing female health providers**

Participants recommended increasing female health providers such as social workers, female doctors, nurses, and volunteers in all communities. They discussed that women feel more comfortable sharing their health problems and working with female providers than male providers.

We need more females for everything. We need female social workers, community health care workers, female doctors and nurses. I want to go to a female doctor or nurse to show my vaginal problems than to a man. I feel like men do not understand and might judge us (Participant 15).

### **Policy reform on the caste system**

Participants recommended proposing the removal of the division of castes topics in school and religious books and also removing the term ‘untouchable’ castes from them. They mentioned that this proposal may help create equal access to education, healthcare, and basic human rights to Nepali women and improve their menstruation lived experience and their overall wellbeing.

Our school and religious books have caste divisions, and it shows who are on the top and who are on the bottom. We need to remove the word ‘untouchable’ as well from these books. This social caste system discriminates lower caste from access to resources, basic rights, education, health care, and all. Not having access to education for women and girls leads to no education on menstruation as well and I

think it is like a bad vicious cycle of women discrimination. I think that this policy change might improve all castes women's health and menstruation experience (Participant 4).

## CHAPTER V. DISCUSSION

### **Overview of the chapter**

The overall objective of this study was to explore the lived experiences of menstruation stigma of Nepali women. This chapter discusses the key findings of this study in the light of the existing literature. The chapter concludes with a discussion of the study limitations as well as the implications for practice, policy, and future research.

### **Discussion of Research Findings**

#### **Nepali women lived menstruation experience**

The bloody stigma still remains, period. Participants in this study described their lived menstruation experiences and how it has impacted them and the factors causing them. Nepali women experience stigmatization of menstruation. It begins early with all women reporting they had received little or no education or preparation for menarche, and they had experienced fear, anxiety and shame as a result. This finding is consistent with (Crawford et al., 2014) research on managing menstruation stigma in Nepal. Majority of women in this study considered menstruation to be a burden, to themselves and their families, a finding in an earlier research study by Hennegan et al., (2019). Majority of the women still hold the views that their menstrual blood is ‘polluted’, ‘a curse’, and ‘a burden,’ which underlines the existing menstruation taboos and stigma. These findings aligned with studies that illustrated menstruation stigma and taboos still exist today throughout Nepal (Crawford et al., 2014; Mukherjee et al., 2020; Robinson, 2015).

The stigmatization continues through adulthood with most women describing being obligated to follow religiously based traditional practices during their menstrual periods.

All the practices followed the general rule of isolation which agrees with the previous literatures (Amatya et al., 2018; Crawford et al., 2014; Mukherjee et al., 2020; Robinson, 2015; Thapa et al., 2019). Some of the harsh restrictions described by the participants were: being kept separated in their own houses, unable to visit temples, prayer rooms, kitchens, farms, gardens, cook meals, touch water sources, not able to participate family gatherings/holidays/religious events, eat separately from family members, sleep on floors, and undertake body purification which were consistent with previous literatures (Amatya et al., 2018; Hennegan et al., 2019; Mukherjee et al., 2020; Thapa et al., 2019). One restriction practice was unique from this study was that women were also being confined to a small rug-sized space to sit, sleep, stand, eat, and study during menstruation. Additionally, a new term emerged from this study ‘modern day Chhapaudi’. It is a reduced version of Chhaupadi as termed by the participants and followed after menarche till menopause. They reported that, while the extreme Chhaupadi tradition may not be as common and reported in cities as it is in villages, menstrual restrictions practice similar to Chhaupadi still exist today and termed the ‘modern day Chhapaudi’.

The majority of the younger participants (18-34 age group) described these restrictions and practices as uncomfortable, difficult, embarrassing, and problematic while majority of the older participants (35-50 age group) described these practices as preserving and respecting the culture which was not found in previous literatures. Nepali women also explained that they conformed to these practices due to being silenced, social acceptance, respect for their elders and the desire to continue cultural traditions which is consistent with (Mukherjee et al., 2020) study on perception and practices of menstruation restrictions in Nepal. This is consistent with the silencing the self theory from previous literatures

Fikree & Pasha, 2006; Jack et al., 2010; Maji & Dixit, 2019; Regmi et al., 2004). Participants in this study discussed feeling self-stigmatized causing self-silencing which is impelling negative mental health, social health, and physical health impacts. Women explained they conformed to the practices due to being silenced, social acceptance, respect for their elders and the desire to continue & conform to cultural traditions as described in the silencing the self-theory. Silencing the self at the individual level leads to negative interactions, oppression, feeling inferior status at other levels in the socio-ecological model and women described feeling inferior compared with men, oppression and gender inequality due to menstruation discriminations and self-silencing.

This study highlighted that menstruation stigma and the associated restrictions, and the discriminations have a negative impact on women and girls' mental, social, and physical health. This is consistent with (Nutter, 2003), which described that stigma associated with menstruation creates an imbalance in a person's 'health triangle' or the overall wellbeing which incorporates mental, social and physical health. Women from this study discussed feeling self-stigmatized and this internalization causing self-silencing which is a predictive of negative mental health symptoms for women agreeing with the study's self-silencing theory (Jack, 1991; Page et al., 1996). Women described experiencing double untouchability, distress & anxiety, depression, and fear while practicing these restrictions due to this self-stigmatization which is consistent with (Borenstein, 2020; Johnson-Robledo and Chrisler, 2013; Quinn & Chaudoir, 2009) studies.

Additionally, participants shared the sentiment of abandonment and social ostracization from loved ones during menstruation resulting a negative impact on their social health. They shared the feeling of abandonment, social ostracization, missing

education, and poor self-esteem and confidence due to menstruation restrictions and stigmatization aligning (Thapa et al., 2019; Thapa & Aro, 2021; Yanos et al., 2020) past studies. Women described losing trust and finding it difficult to maintain social relationships with members of their community and while distancing from their social circle and families while practicing traditional customs which was a new finding that emerged from this study. Further, participants shared some of the physical impacts on them such as malnutrition, hypothermia, insect/snake bites, suffocation, sexual assaults, poor menstruation hygiene management, dehydration, and poor medical care resulting in illnesses due to harsh menstruation restrictions. These findings agree with (Crawford et al., 2014; Mukherjee et al., 2020) findings on physical health impacts on Nepali women during menstruation. All women reported safety as their major concern when women and girls were alone secluded in rooms/huts/sheds while menstruating which is consistent with past literatures (CDC, 2018; Robinson, 2015; Umberson & Montez, 2010). However, participants discussed this as a contradiction of the traditional menstruation beliefs of being untouchable during menstruation but yet being sexually abused by men during menstruation which is not mentioned in previous literatures finding (Robinson, 2015).

Similarly, women discussed the important factors that are influencing their lived experiences of menstruation at various levels of socioecological model. Women shared that one's education, caste, geographic origin, socioeconomic status, age, and religion were major factors influencing menstruation restrictions and beliefs at the individual level which is supported by previous studies (Amatya et al., 2018; Crawford et al., 2014). At the intra-level, women shared that the elder females were the most influencing factors on enforcing menstruation restrictions and the beliefs surrounding menstruation while elder

sisters were influential in helping younger sisters to prepare for menstruation and inform regarding menstruation before menarche. These both findings were new outcomes developed from this study. At the community level, religion, female community healthcare workers, teachers, and community leaders were described as major factors contributing to menstruation restrictions and information surrounding menstruation for the participants. These findings align with the previous literatures by (Amatya et al., 2018; Garg & Anand et al., 2015) on menstruation related myths and practices in Nepal and India. At the policy level, women shared that lack of policies and poor access to menstruation hygiene management as major factors contributing to their menstruation lived experience. These findings are consistent with previous literature by (Thapa & Aro, 2021) on multilevel interventions for menstrual taboos. There is further lack of monitoring and funding issues at the local and national level in Nepal to end the harsh menstruation practices against women which emerged as a new finding from this study. Lastly, the caste system and the age of women were identified as the most influencing factors in determining and influencing menstruation restrictions, discriminations, and stigmatization.

## **Recommendations**

Various education programs and strategies, awareness campaigns, increasing mental health professionals and female health providers, and policy reform on caste system were highlighted in the study to improve the lived experiences of menstruation for Nepali women. Education programs and strategies included: education on women empowerment, education on menstruation hygiene management, school curriculums on normalizing menstruation, educating lead religious leaders, educating men on menstruation, using simple language to educate elder females and illiterate individuals, and incentivizing



menstrual education. Door to door awareness program was the most popular recommendation by all women to raise awareness on menstruation process, debunking myths and taboos surrounding menstruation, and on the risks and consequences of harmful practices such as Chhaupadi, gufa, and other separation practices. Providing more and affordable mental health professionals, increasing more female health providers in all communities, and policy reform proposal on the division of caste system were also included among the participants to improve Nepali women's overall wellbeing and menstruation lived experiences.

### **Limitations**

First, this study was qualitative in nature; thus, the objective was not to generate findings that are representative of and generalizable to all the women living in Nepal, but rather to learn and explore the lived experiences of menstruation stigma with its underlying factors and its impact on overall wellbeing. Second, while every effort was made to include participants from all socio demographic backgrounds, this proved challenging and a potential limitation due to time constraints, the sensitivity of the topic, issues of trust, and willingness to participate.

### **Study Implications**

#### **Implications for practice**

The findings from the study highlight stigmatization of menstruation among Nepali women. While some of the younger generation group of women agreed that menstruation stigmatization and discrimination should be eliminated, the larger percentage of women in

this study preferred to maintain adherence to some form of menstrual restriction and enforce restrictions on their daughters. The study's findings showed that the majority of women and men had received little to no education on menstrual preparation, the menstrual cycle, its causes before menarche, and debunking the myths and taboos regarding menstruation. Menstrual education on the process and debunking myths is imperative in Nepal to cease or reduce negative perceptions and attitudes of menstruation, menstruation hygiene products, feelings of shame and inferiority, low self-esteem, sexual assaults, and the risk of infections and illnesses, overall wellbeing. Menstrual education helps women and girls make informed decisions for their body. Majority of participants suggested incorporating menstruation normalization topics in school curriculums as early as primary level. Participants recommended primary level as educating children early can have long lasting effects (Koff & Rierdan, 1995; Rembeck & Gunnarsson, 2004).

Normalizing menstruation topics in school curriculums should include menstruation biology; debunking myths and cultural taboos, traditional practices and the impact on women and girl's overall wellbeing, and the influencing factors of menstruation practices (Rembeck & Gunnarsson, 2004). Further, girls should have the practical knowledge to use sustainable period products (e.g., reusable pads, period underwear, pads, tampons and menstrual cups) before menarche. Additionally, there is a crucial need to engage boys to learn about menstruation at schools. The findings from the study highlighted boys and men bullying, mocking, teasing, and harassing women and girls during menstruation in schools, colleges, work, and while practicing menstruation restrictions. Thus, to move beyond patriarchal culture and change the menstrual discourse,

there is a need to educate boys early in schools as well on menstruation process and the related discriminations.

Lastly, there is a need for education for teachers as well on how to be comfortable talking about menstruation process, the related discriminations, and talking with the parents if needed. It is crucial for teachers to feel comfortable teaching about menstruation, engage students onto discussions, and have the skills to navigate this sensitive topic with students and parents (Ekstrand et al., 2011).

### **Implications for Policy**

This study underlines opportunities to develop and enforce policies surrounding menstruation education, access to resources, and human rights. This study demonstrates the need for a national level mandated policy of education for all. Girls' enrollment in schools remains lower than the boys due to caste system, socioeconomic status, and gender throughout Nepal (Acharya, 2021). The majority (64%) of study participants in this study reported had never attended school. A national level mandated policy requiring all children regardless of gender and caste must be enrolled in school is much required. All Nepali girls enrolled in schools' results in girls having the opportunity to learn basic human rights, menstruation education, sex health classes, opportunities to engage in female health needs, and their autonomy. Further, education for all girls results in more female providers, female teachers, female community health workers, and more female leaders as the study highlighted a shortage of female representatives nationally (Murtaza, 2012; Rembeck & Gunnarsson, 2004).

Additionally, policy makers need to pass the bill on incorporating menstruation education debunking myths, taboos, and stigmatization of women and girls in all primary

and secondary schools as the study highlighted. There needs to be more budget allocated for women and girls' education, awareness campaigns on menstruation, normalizing menstruation, and for menstruation hygiene products. Additionally, mental conditions have been experienced by women due to menstruation restrictions and discriminations from this study. Policies allocating adequate resources for mental health should be prioritized, with more services provided by professional counsellors, and trained providers.

However, this study highlighted some of the current policies, such as criminalizing Chhaupadi is not effective due to low awareness, poor implementation, monitoring, poor evaluation of action plans, and failure to engage the locals. Thus, policies should have proper implementation, monitoring, and proper regular evaluation of actions plans and engage with the locals. All policies targeted towards education, awareness campaigns, mental health services, and traditional practices should include local and key stakeholders (parents, grandparents, priests, teachers, local officials, community members), proper implementation, clear instructions, effective monitoring, and concrete action plans.

### **Implication for Future research**

There have been very few studies in Nepal on the lived experiences of menstruation from the perspectives of women and girls. Most menstruation related studies have focused on the Far-Western regions of Nepal and only on the practices of Chhaupadi. This study contributed to the literature on women from Kathmandu, Nepal's capital city in the central region. Conducting similar studies with different population adds to the literature and is beneficial to women and girls, public health practitioners, and policy makers. Therefore, research needs to be carried out exploring the lived experiences and perspectives on menstruation of women and girls living in the Eastern regions of Nepal .

Additionally, this study focused on Nepali women aged 18 to 50 and excluded girls under the age of 18. Conducting a similar study with the children under 18 years, may be beneficial and contribute to the literature on the upcoming younger generation's attitudes, beliefs and experiences on menstruation. Furthermore, this study highlighted the significance of men as influential in a patriarchal society. There is a lack of studies conducted on the perspectives of males regarding the topic of menstruation in Nepal, thus exploring Nepali men's attitudes and beliefs regarding menstruation would be advantageous. Lastly, this study did not have the feasibility to include all the 125 caste and ethnic groups of Nepal. Research with different caste groups could be beneficial to local stakeholders, policymakers, and public health practitioners in Nepal.

### **Conclusion**

This study highlighted the lived menstruation experiences of Nepali women, the influencing factors, the impact on their overall wellbeing and the recommendations by the participants to improve their lived menstruation experiences. This study has shown that socio cultural factors at various levels of socioecological model shape the lived menstruation experiences of Nepali women. The younger generation of women are beginning to disagree and want to bring changes to the extreme menstrual restriction practices in Nepal. However, the older generation of women are unlikely to abandon their beliefs and old traditional and religious menstruation practices and continue to enforce them on younger generations. Various menstruation restrictions and practices continue to exist, as do social and caste menstruation discriminations, deep-rooted cultural and religious myths and taboos, gender inequalities, and the Nepali culture of silence on

menstruation, all of which have an impact on the overall wellbeing of women and girls during menstruation. The existence of menstruation restrictions with the influence at various levels of socio-ecological model shapes the lived menstruation experience for Nepali women. This study justifies the need for significant changes in knowledge, attitude, and deeply ingrained cultural and religious practices that influence the period during menstruation of women and girls in Nepal. Participants recommended targeted education programs and strategies, awareness programs, increasing mental health professionals, female health providers, and policy reforms.

## REFERENCES

- Acharya, D. R. (2021). Status of girls' participation in higher education in Nepal. *International Journal of Multidisciplinary Perspectives in Higher Education*, 6(2), 68-85.
- Acharya, S. (2015). Prospects and Realities in Nepal.
- Adhikari, P., & Lawoti, M. (2015). Nepal. In *An Introduction to South Asian Politics* (pp. 112-128). Routledge.
- Afifi, M. (2007). Gender differences in mental health. *Singapore medical journal*, 48(5), 385.
- Agampodi, T. C., & Agampodi, S. B. (2018). Normalising menstruation, empowering girls: the situation in Sri Lanka. *The Lancet Child & Adolescent Health*, 2(8), e16.
- Alejos, S. C. (2015). Abolition of Chhaupadi in the far and mid-western region of Nepal. Kathmandu: Restless Development Nepal. Retrieved May, 9, 2019.
- Allen, M. (2017). *The sage encyclopedia of communication research methods* (Vols. 1-4). Thousand Oaks, CA: SAGE Publications, Inc doi: 10.4135/9781483381411\
- Amatya, P., Ghimire, S., Callahan, K. E., Baral, B. K., & Poudel, K. C. (2018). Practice and lived experience of menstrual exiles (Chhaupadi) among adolescent girls in far-western Nepal. *PloS one*, 13(12), e0208260.  
<https://doi.org/10.1371/journal.pone.0208260>
- AncaVitu, E. L., Vitcu, L., & Marcu, A. (2007). Multi-stage maximum variation sampling in health promotion programs' evaluation. *J Prev Med*, 15, 5-18.

- Anney, V. N. (2014). Ensuring the quality of the findings of qualitative research: Looking at trustworthiness criteria.
- Anney, V. N. (2014). Ensuring the quality of the findings of qualitative research: Looking at trustworthiness criteria.
- Arroyo, A., Woszidlo, A., & Janovec, A. (2020). Voice as a mediator of mothers' and daughters' feminist attitudes and psychological outcomes: an application of silencing the self theory and social cognitive theory of gender development and differentiation. *Communication Monographs*, 87(4), 506–526.  
<https://doi.org/10.1080/03637751.2020.1758949>
- As-Sanie, S., Black, R., Giudice, L. C., Valbrun, T. G., Gupta, J., Jones, B., ... & Nebel, R. A. (2019). Assessing research gaps and unmet needs in endometriosis. *American journal of obstetrics and gynecology*, 221(2), 86-94.
- Asrat, B., Ayenalem, A. E., & Yimer, T. (2018). Internalized Stigma among Patients with Mental Illness Attending Psychiatric Follow-Up at Dilla University Referral Hospital, Southern Ethiopia. *Psychiatry journal*, 2018, 1987581.  
<https://doi.org/10.1155/2018/1987581>
- Atreya, A., & Nepal, S. (2020). Untouchables: women and girls in Nepal. *Obstetrics and Gynecology*, 136(1), 3–5. <https://doi.org/10.1097/AOG.0000000000003928>
- Baez, B. (2002). Confidentiality in qualitative research: Reflections on secrets, power and agency. *Qualitative Research*, 2, 35-58.
- Bailey, J. (2008). First steps in qualitative data analysis: transcribing. *Family practice*, 25(2), 127-131.



- Baldwin, K. (2020). Attitudes about Menstruation: A Qualitative Study of Implicit and Explicit Attitudes (Doctoral dissertation, University of West Florida).
- Barriball, K. L., & While, A. (1994). Collecting data using a semi-structured interview: a discussion paper. *Journal of Advanced Nursing-Institutional Subscription*, 19(2), 328-335.
- Baumann, S. E., Lhaki, P., & Burke, J. G. (2019). Assessing the role of caste/ethnicity in predicting menstrual knowledge, attitudes, and practices in Nepal. *Global public health*, 14(9), 1288-1301.
- Bennett, L. (1983). *Dangerous wives and sacred sisters: Social and symbolic roles of women in Nepal*. New York: Columbia University Press.
- Bennett, L. (1985). *Dangerous wives and sacred sisters: Social and symbolic roles of high-caste women in Nepal*. *Religious Studies*, 21(2).
- Bennett, L. (2008). Caste, ethnic, and regional identity in Nepal: further analysis of the 2006 Nepal Demographic and Health Survey. Population Division, Ministry of Health and Population, Government of Nepal
- Benshaul-Tolonen, A., Zulaika, G., Sommer, M., & Phillips-Howard, P. A. (2020). Measuring menstruation-related absenteeism among adolescents in low-income countries. *The Palgrave handbook of critical menstruation studies*, 705-723.
- Bhartiya, A. (2013). Menstruation, religion, and society. *International Journal of Social Science and Humanity*, 3(6), 523.
- Bista, D. B. (1991). *Fatalism and development: Nepal's struggle for modernization*. Orient Blackswan.

- Blanchard, R. D., Bunker, J. B., & Wachs, M. (1977). Distinguishing aging, period and cohort effects in longitudinal studies of elderly populations. *Socio-Economic Planning Sciences*, 11(3), 137–146. [https://doi.org/10.1016/0038-0121\(77\)90032-5](https://doi.org/10.1016/0038-0121(77)90032-5)
- Blas, E., & Kurup, A. S. (Eds.). (2010). *Equity, social determinants and public health programmes*. Geneva, Switzerland: World Health Organization.
- Borenstein, J. (2020). *Stigma, Prejudice and Discrimination Against People with Mental Illness*. American Psychiatric Association.
- Borgen Project. (2019). 10 facts about poverty in Nepal. <https://borgenproject.org/ten-facts-about-poverty-in-nepal/>
- Boyd, J. E., Adler, E. P., Otilingam, P. O., Peters, T. (2013). Internalized stigma of mental illness (ISMI) scale: A multinational review. *Comprehensive Psychiatry*. <http://dx.doi.org/10.1016/j.comppsy.2013.06.005>.
- Braun V., & Clarke V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. doi:10.1191/1478088706qp063oa
- Braun, V., & Clarke, V. (2012). *Thematic analysis*.
- Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, 32, 513-531.
- Bronfenbrenner, U. (1994). Ecological models of human development. In *International encyclopedia of education* (pp. 37-42). Oxford, UK: Elsevier.
- Bronfenbrenner, U. (2000). Developmental science in the 21st century: Emerging questions, theoretical models, research designs and empirical findings. *Social Development*, 9(1), 115-125.

- Budhathoki, S. S., Bhattachan, M., Castro-Sánchez, E., Sagtani, R. A., Rayamajhi, R. B., Rai, P., & Sharma, G. (2018). Menstrual hygiene management among women and adolescent girls in the aftermath of the earthquake in Nepal. *BMC women's health*, 18(1), 1-8.
- Byrd, D. R., & McKinney, K. J. (2012). Individual, interpersonal, and institutional level factors associated with the mental health of college students. *Journal of American College Health*, 60(3), 185-193.
- Cameron, M. M. (1998). *On the edge of the auspicious: Gender and caste in Nepal*. University of Illinois Press.
- Candela, A. G. (2019). Exploring the function of member checking. *The Qualitative Report*, 24(3), 619-628.
- Cardoso, L. F., Clark, C. J., Rivers, K., Ferguson, G., Shrestha, B., & Gupta, J. (2019). Menstrual restriction prevalence and association with intimate partner violence among Nepali women. *BMJ Sexual & Reproductive Health*, 45(1), 38-43.
- Cardoso, L. F., Scolese, A. M., Hamidaddin, A., & Gupta, J. (2021). Period poverty and mental health implications among college-aged women in the United States. *BMC women's health*, 21(1), 1-7
- Casola, A. R., Kunes, B., Jefferson, K., & Riley, A. H. (2021). Menstrual health stigma in the United States: communication complexities and implications for theory and practice. *Journal of Midwifery & Women's Health*, 66(6), 725–728.  
<https://doi.org/10.1111/jmwh.13216>
- Center, N. F. C. (2015). *Assessment study on chhaupadi in Nepal: Towards a harm reduction strategy*. Kathmandu, Nepal.

- Centers for Disease Control and Prevention. (2018). Health related quality of life (HRQOL). Well-being concepts. Retrieved from <https://www.cdc.gov/hrqol/wellbeing.htm>
- Centers for Disease Control and Prevention. (2022). The Social-Ecological Model: A Framework for Prevention. Retrieved from <https://www.cdc.gov/violenceprevention/about/social-ecologicalmodel.html>
- Central Bureau of Statistics. (2014). Population Monograph of Nepal. Government of Nepal. <https://mohp.gov.np/downloads/Population%20Monograph%20V01.pdf>
- Chakraborty, S. (2019). Menstrual Health in Peril due to Taboos and Stigmas about Menstruation: A Comparative Study in this Context between Two Indian Villages. *International Journal of Innovative Science and Research Technology*. <https://ijisrt.com/wp-content/uploads/2019/07/IJISRT19JL02.pdf>
- Cheng, C. Y., Yang, K., & Liou, S. R. (2007). Taiwanese adolescents' gender differences in knowledge and attitudes towards menstruation. *Nursing and Health Sciences*, 9, 127– 134. doi:10.1111/j.1442-2018.2007.00312.x
- Chikwiri, E., & Lemmer, E. M. (2014). Gender-based violence in primary schools in the Harare and Marondera Districts of Zimbabwe. *Journal of Sociology and Social Anthropology*, 5(1), 95-107.
- Chrisler, J. C. (2011). Leaks, lumps, and lines: Stigma and women's bodies. *Psychology of Women Quarterly*, 35, 202–214. doi:10.1177/0361684310397698
- Clarke, V., Braun, V., & Hayfield, N. (2015). Thematic analysis. *Qualitative psychology: A practical guide to research methods*, 222, 248.

- Connelly, L. M. (2016). Trustworthiness in qualitative research. *Medsurg Nursing*, 25(6), 435.
- Country meters. (2022). Nepal population (2022) live — Countrymeters. Retrieved from <https://countrymeters.info/en/Nepal>
- Crawford, M., Lee, I. C., Portnoy, G., Gurung, A., Khati, D., Jha, P., & Regmi, A. C. (2009). Objectified body consciousness in a developing country: A comparison of mothers and daughters in the US and Nepal. *Sex Roles*, 60(3), 174-185.
- Crawford, M., Menger, L. M., & Kaufman, M. R. (2014). 'This is a natural process': managing menstrual stigma in Nepal. *Culture, Health and Sexuality*, 16(4), 426–439. <https://doi.org/10.1080/13691058.2014.887147>
- Creswell, J. W. (2013). *Qualitative inquiry and research design : choosing among five approaches* (3rd ed.). Los Angeles: SAGE Publications.
- Critchley, H. O., Babayev, E., Bulun, S. E., Clark, S., Garcia-Grau, I., Gregersen, P. K., ... & Griffith, L. G. (2020). Menstruation: science and society. *American Journal of Obstetrics and Gynecology*, 223(5), 624-664.
- Critchley, H. O., Babayev, E., Bulun, S. E., Clark, S., Garcia-Grau, I., Gregersen, P. K., ... & Griffith, L. G. (2020). Menstruation: science and society. *American journal of obstetrics and gynecology*.
- Cronjé, H. S., & Kritzing, I. E. (1991). Menstruation: Symptoms, management and attitudes in university students. *International Journal of Gynecology & Obstetrics*, 35, 147– 150. doi:10.1016/0020-7292(91)90818-P
- Dahal, B., Acharya, S., Munakarmi, R., Sunar, T., & Parajuli, B. (2017). Chhaupadi and education of girls: A study on effects of Chhaupadi practices on education of

adolescent girls in Karnali, Nepal. Kathmandu: Action Works Nepal & BEE Group.

Dahal, K. (2008). Nepalese woman dies after banishment to shed during menstruation. *BMJ: British Medical Journal (Online)*, 337.

Das, P., Baker, K. K., Dutta, A., Swain, T., Sahoo, S., Das, B. S., Panda, B., Nayak, A., Bara, M., Bilung, B., Mishra, P. R., Panigrahi, P., Cairncross, S., Torondel, B., & Wilson, B. A. (2015). Menstrual hygiene practices, wash access and the risk of urogenital infection in women from odisha, india. *Plos One*, 10(6).  
<https://doi.org/10.1371/journal.pone.0130777>

Davis, J., Macintyre, A., Odagiri, M., Suriastini, W., Cordova, A., Huggett, C., ... & Kennedy, E. (2018). Menstrual hygiene management and school absenteeism among adolescent students in Indonesia: evidence from a cross-sectional school-based survey. *Tropical Medicine & International Health*, 23(12), 1350-1363.

Deblonde, J., De Koker, P., Hamers, F. F., Fontaine, J., Luchters, S., & Temmerman, M. (2010). Barriers to HIV testing in Europe: a systematic review. *European journal of public health*, 20(4), 422-432.

DeMarco, R. F., & Lanier, L. R. (2014). The concept of “silencing the self” in low-income, aging, HIV-infected African American women: a 10-year community-based participatory program of research with results. *Journal of the Association of Nurses in AIDS Care*, 25(2), 112-122.

Denzin, N. K., & Lincoln, L. S. (2003). *Collecting and interpreting qualitative materials* (2nd ed.). Thousand Oaks, CA: Sage

Denzin, N. K., & Lincoln, Y. S. (2011). *The Sage handbook of qualitative research* (4th

Dhingra, R., Kumar, A., & Kour, M. (2009). Knowledge and practices related to menstruation among tribal (Gujjar) adolescent girls. *Studies on Ethno-Medicine*, 3(1), 43-48.

Dodgson, J. E. (2019). Reflexivity in qualitative research. *Journal of Human Lactation*, 35(2), 220-222.

Dörnyei Zoltán. (2007). *Research methods in applied linguistics : quantitative, qualitative, and mixed methodologies* (Ser. Oxford applied linguistics). Oxford University Press.

Drapalski, A. L., Lucksted, A., Perrin, P. B., Aakre, J. M., Brown, C. H., DeForge, B. R., & Boyd, J. E. (2013). A model of internalized stigma and its effects on people with mental illness. *Psychiatric Services*, 64(3), 264-269.

ed.). Thousand Oaks: Sage.

Ekstrand, M. et al. (2011) 'Sex education in Swedish schools as described by young women', *The European Journal of Contraception & Reproductive Health Care*, 16(3), pp. 210–224. doi:10.3109/13625187.2011.561937.

Elledge, M. F., Muralidharan, A., Parker, A., Ravndal, K. T., Siddiqui, M., Toolaram, A. P., & Woodward, K. P. (2018). Menstrual hygiene management and waste disposal in low and middle income countries—a review of the literature. *International journal of environmental research and public health*, 15(11), 2562.

Emran, A., Iqbal, N., & Dar, I. A. (2020). 'silencing the self' and women's mental health problems: a narrative review. *Asian Journal of Psychiatry*, 53, 102197–102197. <https://doi.org/10.1016/j.ajp.2020.102197>

- Ertel, K. A., Glymour, M. M., & Berkman, L. F. (2009). Social networks and health: A life course perspective integrating observational and experimental evidence. *Journal of Social and Personal Relationships*, 26(1), 73-92.
- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American journal of theoretical and applied statistics*, 5(1), 1-4.
- Everson-Rose, S. A., & Lewis, T. T. (2005). Psychosocial factors and cardiovascular diseases. *Annu. Rev. Public Health*, 26, 469-500.
- Fabrega Jr, H. (1990). Psychiatric stigma in the classical and medieval period: a review of the literature. *Comprehensive Psychiatry*, 31(4), 289-306.
- Farage, M. A., Miller, K. W., & Davis, A. (2011). Cultural aspects of menstruation and menstrual hygiene in adolescents. *Expert Review of Obstetrics & Gynecology*, 6(2), 127-139.
- Fereday, J., & Muir-Cochrane, E. (2008). Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International Journal of Qualitative Methods*, 5(1), 80-92.
- Fikree, F. F., & Pasha, O. (2004). Role of gender in health disparity: the South Asian context. *Bmj*, 328(7443), 823-826.
- Fischer, M. G. (2018). Anti-Conversion Laws and the International Response. *Penn St. JL & Int'l Aff.*, 6, 1.
- Fredrickson, B. L., & Roberts, T. A. (1997). Objectification theory. *Psychology of Women Quarterly*, 21, 173–206. doi:10.1111/j.1471-6402.1997.tb00108.x



- Frost, A., Hoyt, L. T., Chung, A. L., & Adam, E. K. (2015). Daily life with depressive symptoms: Gender differences in adolescents' everyday emotional experiences. *Journal of Adolescence*, 43, 132–141.  
doi:10.1016/j.adolescence.2015.06.001
- Fusch, P. I., & Ness, L. R. (2015). Are we there yet? Data saturation in qualitative research. *The qualitative report*, 20(9), 1408.
- Garcia-Moreno, C., Guedes, A., & Knerr, W. (2012). Understanding and addressing violence against women: female genital mutilation. World Health Organization-Department of Reproductive Health, Pan American Health Organization.
- Garg, S., & Anand, T. (2015). Menstruation related myths in India: strategies for combating it. *Journal of family medicine and primary care*, 4(2), 184–186.  
<https://doi.org/10.4103/2249-4863.154627>
- Geertz, A. (2016). An opportunity to address menstrual health and gender equity. FSG.
- Geifman, N., & Rubin, E. (2011). Towards an age-phenome knowledge-base. *BMC bioinformatics*, 12(1), 1-9.
- George, R. (2013). Celebrating womanhood: how better menstrual hygiene management is the path to better health, dignity, and business. Water Supply and Sanitation Collaborative Council.
- Gilligan, C. (1993). Letter to readers. *a different voice: Psychological theory and women's development*.
- Gillooly, J. B. (2004). Making menarche positive and powerful for both mother and daughter. *Women & Therapy*, 27(3–4), 23–35. doi:10.1300/J015v27n03\_03

- Girma, E., Möller-Leimkühler, A. M., Dehning, S., Mueller, N., Tesfaye, M., & Froeschl, G. (2014). Self-stigma among caregivers of people with mental illness: toward caregivers' empowerment. *Journal of multidisciplinary healthcare*, 7, 37.
- Goffman, E. (1963). *Stigma Notes on the Management of Spoiled Identity* Simon and Schuster. New York, 3.
- Goffman, E. (2009). *Stigma: Notes on the management of spoiled*. New York, NY: Simon and Schuster.
- Gold-Watts, A., Hovdenak, M., Daniel, M., Gandhimathi, S., Sudha, R., & Bastien, S. (2020). A qualitative study of adolescent girls' experiences of menarche and menstruation in rural Tamil Nadu, India. *International journal of qualitative studies on health and well-being*, 15(1), 1845924.  
<https://doi.org/10.1080/17482631.2020.1845924>
- Golden TL and Wendel ML (2020) Public Health's Next Step in Advancing Equity: Re-evaluating Epistemological Assumptions to Move Social Determinants From Theory to Practice. *Front. Public Health* 8:131. doi: 10.3389/fpubh.2020.00131
- Golden, S. D., & Earp, J. A. (2012). Social ecological approaches to individuals and their contexts: twenty years of health education & behavior health promotion interventions. *Health education & behavior : the official publication of the Society for Public Health Education*, 39(3), 364–372.  
<https://doi.org/10.1177/1090198111418634>
- Greg, G., Arwen, B., & Laura, J. (2006). How many interviews are enough? : an experiment with data saturation and variability. *Field Methods*, 18(1), 59–82.  
<https://doi.org/10.1177/1525822X05279903>

- Guba, E. G. (1979). Naturalistic inquiry. *Improving Human Performance Quarterly*, 8(4), 268-76.
- Guest, G., MacQueen, K. M., & Namey, E. E. (2012). *Applied thematic analysis*. Thousand Oaks, CA: Sage.
- Guest, G., MacQueen, K. M., & Namey, E. E. (2012). Validity and reliability (credibility and dependability) in qualitative research and data analysis. *Applied thematic analysis*, 79, 106.
- Guest, G., Namey, E., & Chen, M. (2020). A simple method to assess and report thematic saturation in qualitative research. *Plos One*, 15(5), 0232076.  
<https://doi.org/10.1371/journal.pone.0232076>
- Gurung, H. (2002). Trident and Thunderbolt, Cultural Dynamics in Nepalese Politics. In *Ethnicity, Caste and a Pluralist Society*, ed. B. Krishna Battachan. Kathmandu, Nepal: Social Science Baha Himal Association.
- Guterman, M., Mehta, P., & Gibbs, M. (2007). Menstrual taboos among major religions. *The Internet Journal of World Health and Societal Politics*, 5(2), 1–7. Retrieved from <https://print.ispub.com/api/0/ispub-article/8213>
- Hahn, R., & Apple, R. D. (1989). *The Woman in the Body: A Cultural Analysis of Reproduction*.
- Hammen, C. (2018). Risk factors for depression: an autobiographical review. *Annual review of clinical psychology*, 14, 1-28.
- Harper, M. S., Dickson, J. W., & Welsh, D. P. (2006). Self-silencing and rejection sensitivity in adolescent romantic relationships. *Journal of Youth and Adolescence*, 35(3), 435–443. doi:10.1007/s10964-006-9048-3

- Harvey-Jordan, S., & Long, S. (2001). The process and the pitfalls of semi-structured interviews. *Community Practitioner*, 74(6), 219.
- Harvey, L. (2015). Beyond member-checking: A dialogic approach to the research interview. *International Journal of Research & Method in Education*, 38(1), 23-38.
- Henderson, D. X., & Baffour, T. D. (2015). Applying a socio-ecological framework to thematic analysis using a statewide assessment of disproportionate minority contact in the United States. *The Qualitative Report*, 20(12), 1960.
- Hennegan, J., & Montgomery, P. (2016). Do Menstrual Hygiene Management Interventions Improve Education and Psychosocial Outcomes for Women and Girls in Low and Middle Income Countries? A Systematic Review. *PloS one*, 11(2), e0146985. <https://doi.org/10.1371/journal.pone.0146985>
- Hennegan, J., Shannon, A. K., Rubli, J., Schwab, K. J., & Melendez-Torres, G. J. (2019). Women's and girls' experiences of menstruation in low- and middle-income countries: a systematic review and qualitative metasynthesis. *Plos Medicine*, 16(5), 1002803. <https://doi.org/10.1371/journal.pmed.1002803>
- Hodal, K. (2016). Nepal's Bleeding Shame: Menstruating Women Banished to Cattle Sheds'. *The Guardian*, 1.
- Holland, K. J., Silver, K. E., Cipriano, A. E., & Brock, R. L. (2020). Internalized body stigma as a barrier to accessing preventative healthcare for young women. *Body Image*, 35, 217–224. <https://doi.org/10.1016/j.bodyim.2020.09.005>

- Holmes, A. G. D. (2020). Researcher Positionality--A Consideration of Its Influence and Place in Qualitative Research--A New Researcher Guide. *Shanlax International Journal of Education*, 8(4), 1-10.
- House, J. S., Landis, K. R., & Umberson, D. (1988). Social relationships and health. *Science*, 241(4865), 540-545.
- House, S., Mahon, T., & Cavill, S. (2013). Menstrual hygiene matters: a resource for improving menstrual hygiene around the world. *Reproductive Health Matters*, 21(41), 257-259.
- International Rescue Committee. (2018). Qualitative data transcription and translation. New York, USA: IRC.
- Jack, D. C. (1991). *Silencing the self: Women and depression*. Harvard University Press.
- Jack, D. C. (1999). *Silencing the self: Inner dialogues and outer realities*.
- Jack, D. C. (2011). Reflections on the silencing the self scale and its origins. *Psychology of Women Quarterly*, 35(3), 523-529.
- Jack, D. C., & Ali, A. (2010). Introduction: Culture, self-silencing, and depression: A contextual-relational perspective. In *Silencing the Self Across Cultures: Depression and Gender in the Social World: Depression and gender in the social world*. Oxford University Press.
- Jack, D. C., Pokharel, B., & Subba, U. (2010). I don't express my feelings to anyone': How self-silencing relates to gender and depression in Nepal. *Silencing the self across cultures: Depression and gender in the social world*, 147-75.

- Jha, A. K., Ojha, S. P., Dahal, S., Sharma, P., Pant, S. B., Labh, S., ... & Dhimal, M. (2019). Prevalence of mental disorders in Nepal: findings from the pilot study. *Journal of Nepal Health Research Council*, 17(2), 141-147.
- Johnston-Robledo, I., & Chrisler, J. C. (2013). The menstrual mark: Menstruation as social stigma. *Sex roles*, 68, 9–18. doi:10.1007/s11199-011-0052-z
- Johnston-Robledo, I., Chrisler, J. C. (2020). The Menstrual Mark: Menstruation as Social Stigma. *The Palgrave Handbook of Critical Menstruation Studies* [Internet]. Singapore: Palgrave Macmillan. Chapter 17.  
<https://www.ncbi.nlm.nih.gov/books/NBK565611/> doi: 10.1007/978-981-15-0614-7\_17
- Joshi, S. (2022). Chhaupadi practice in Nepal: A literature review. *World Medical & Health Policy*, 14(1), 121-137.
- Juneja, A., Sehgal, A., Mitra, A. B., & Pandey, A. (2003). A survey on risk factors associated with cervical cancer. *Indian Journal of Cancer*, 40(1), 15-22.
- Kadariya, S., & Aro, A. R. (2015). Chhaupadi practice in Nepal—analysis of ethical aspects. *Medicolegal and Bioethics*, 5, 53.
- Kaiser, K. (2009). Protecting respondent confidentiality in qualitative research. *Qualitative health research*, 19(11), 1632-1641.
- Karki, K. B., Poudel, P. C., Rothchild, J., Pope, N., Bobin, N. C., Gurung, Y., & Sherpa, L. (2017). Scoping review and preliminary mapping menstrual health and hygiene management in Nepal. Lalitpur, Nepal: Population Services International Nepal.

- Karki, K. B., Poudel, P. C., Rothchild, J., Pope, N., Bobin, N. C., Gurung, Y., & Sherpa, L. (2017). Scoping review and preliminary mapping menstrual health and hygiene management in Nepal. Lalitpur, Nepal: Population Services International Nepal.
- Kaundal, M., & Thakur, B. (2014). A dialogue on menstrual taboo. *Indian Journal of Community Health*, 26(2), 192-195.
- Kaur, R., Kaur, K., & Kaur, R. (2018). Menstrual hygiene, management, and waste disposal: practices and challenges faced by girls/women of developing countries. *Journal of environmental and public health*, 2018.
- Kc, S. (2018). [‘Impacts on social well-being of women due to the CHHAUPADI tradition (Being untouchable during menstruation) among the women of far western Nepal’][The case study of the'CHHAUPADI'tradition (a form of culture based gender discrimination) in Achham district, Far Western Region, Nepal] (Master's thesis, OsloMet-Oslo Metropolitan University).
- Keyes, K. M., Nicholson, R., Kinley, J., Raposo, S., Stein, M. B., Goldner, E. M., & Sareen, J. (2014). Age, period, and cohort effects in psychological distress in the united states and canada. *American Journal of Epidemiology*, 179(10), 1216–27. <https://doi.org/10.1093/aje/kwu029>
- Khadka, N. (1998). Challenges to developing the economy of Nepal. *Contemporary South Asia*, 7(2), 147-165.
- Kiger, M. E., & Varpio, L. (2020). Thematic analysis of qualitative data: AMEE Guide No. 131. *Medical teacher*, 42(8), 846-854.
- Kilanowski, J. F. (2017). Breadth of the socio-ecological model. *Journal of Agromedicine*, 22(4), 295-297.

- Kirk, J., & Sommer, M. (2006). Menstruation and body awareness: linking girls' health with girls' education. *Royal Tropical Institute (KIT), Special on Gender and Health*, 1(3), 1-22.
- Kirkman, C. (2008). Establishing truthfulness, consistency and transferability. *Nurse researcher*, 15(4).
- Koelsch, L. E. (2013). Reconceptualizing the member check interview. *International journal of qualitative methods*, 12(1), 168-179.
- Koff, E., & Rierdan, J. (1995). Early adolescent girls' understanding of menstruation. *Women & health*, 22(4), 1–21. [https://doi.org/10.1300/J013v22n04\\_01](https://doi.org/10.1300/J013v22n04_01)
- Kohrt, B. A., & Worthman, C. M. (2009). Gender and anxiety in Nepal: the role of social support, stressful life events, and structural violence. *CNS neuroscience & therapeutics*, 15(3), 237–248. <https://doi.org/10.1111/j.1755-5949.2009.00096.x>
- Kok, G., Gottlieb, N. H., Commers, M., & Smerecnik, C. (2008). The ecological approach in health promotion programs: A decade later. *American Journal of Health Promotion*, 22, 437- 442. doi:10.4278/ajhp.22.6.437
- Kumar, A., & Srivastava, K. (2011). Cultural and social practices regarding menstruation among adolescent girls. *Social work in public health*, 26(6), 594-604.
- Kun, Agota. (2013). Health, stress, well-being, and positive affectivity. <https://www.researchgate.net/publication/263505081>
- Lahiri-Dutt, K. (2015). Medicalising menstruation: A feminist critique of the political economy of menstrual hygiene management in South Asia. *Gender, Place & Culture*, 22, 1158–1176. doi:10.1080/0966369X.2014.939156



- Lanier, L., & DeMarco, R. (2015). A synthesis of the theory of silencing the self and the social ecological model: Understanding gender, race, and depression in African American women living with HIV infection. *AIDS patient care and STDs*, 29(3), 142-149.
- Ler, P., Sivakami, M., & Monárrez-Espino, J. (2020). Prevalence and factors associated with intimate partner violence among young women aged 15 to 24 years in India: A social-ecological approach. *Journal of interpersonal violence*, 35(19-20), 4083-4116.
- Levitt, R. B., & Barnack-Tavlaris, J. L. (2020). Addressing menstruation in the workplace: The menstrual leave debate. *The Palgrave Handbook of Critical Menstruation Studies*, 561-575.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.
- Lopez, K., & Willis, D. G. (2004). Descriptive versus interpretive phenomenology: Their contributions to nursing knowledge. *Qualitative Health Research*, 14, 726-735.
- Livingston, J. D., & Boyd, J. E. (2010). Correlates and consequences of internalized stigma for people living with mental illness: A systematic review and meta-analysis. *Social science & medicine*, 71(12), 2150-2161.
- Loya, B. N. (2007). *Women's silencing-the-self: A structural model*.
- Ma, P. H., Chan, Z. C., & Loke, A. Y. (2017). The socio-ecological model approach to understanding barriers and facilitators to the accessing of health services by sex workers: a systematic review. *AIDS and Behavior*, 21(8), 2412-2438.

- Maguire, M., & Delahunt, B. (2017). Doing a thematic analysis: A practical, step-by-step guide for learning and teaching scholars. *All Ireland Journal of Higher Education*, 9(3).
- Maji, S., & Dixit, S. (2019). Self-silencing and women's health: A review. *International Journal of Social Psychiatry*, 65(1), 3-13.
- Majumdar, A. (2022). Thematic analysis in qualitative research. In *Research Anthology on Innovative Research Methodologies and Utilization Across Multiple Disciplines* (pp. 604-622). IGI Global.
- Malik, V. S., Kumar, K., & Behmani, R. K. (2021). A LITERATURE REVIEW ON MENSTRUATION AND MENTAL HEALTH.
- Mandal, P. C. (2018). Translation in qualitative studies: Evaluation criteria and equivalence. *The Qualitative Report*, 23(10), 2529-2537.
- Mansfield, P. K., & Bracken, S. (2003). The tremin program: sixty-eight years of research on menstruation and women's health. *Womens Studies Quarterly*, 31, 25–41.
- Mason, L., Sivakami, M., Thakur, H., Kakade, N., Beauman, A., Alexander, K. T., ... & Phillips-Howard, P. A. (2017). 'We do not know': a qualitative study exploring boys perceptions of menstruation in India. *Reproductive health*, 14(1), 1-9.
- McCammon, E., Bansal, S., Hebert, L. E., Yan, S., Menendez, A., & Gilliam, M. (2020). Exploring young women's menstruation-related challenges in Uttar Pradesh, India, using the socio-ecological framework. *Sexual and reproductive health matters*, 28(1), 1749342. <https://doi.org/10.1080/26410397.2020.1749342>

- McLeroy, K. R., Norton, B. L., Kegler, M. C., Burdine, J. N., & Sumaya, C. V. (2003). Community-based interventions. *American Journal of Public Health*, 93, 529-533.
- McLeroy, K. R., Steckler, A., & Bibeau, D. (1988). The social ecology of health promotion interventions. *Health Education Quarterly*, 15(4), 351-377.
- Merriam, S. B. (2009). *Qualitative research : a guide to design and implementation*. San Francisco: Jossey-Bass.
- Merskin, D. (1999). Adolescence, advertising, and the ideology of menstruation. *Sex Roles*, 40(11-12), 941–957. doi:10.1023/A:1018881206965
- Metusela, C., Ussher, J., Perz, J., Hawkey, A., Morrow, M., Narchal, R., ... & Monteiro, M. (2017). “In my culture, we don’t know anything about that”: sexual and reproductive health of migrant and refugee women. *International journal of behavioral medicine*, 24(6), 836-845.
- Ministry of Health (MoH). (2016). *Nepal Demographic and Health Survey*. <https://www.dhsprogram.com/pubs/pdf/fr336/fr336.pdf>.
- Morrison, T. G., & Sheahan, E. E. (2009). Gender-related discourses as mediators in the association between internalization of the thin-body ideal and indicants of body dissatisfaction and disordered eating. *Psychology of Women Quarterly*, 33(4), 374–383. doi:10.1111/j.1471-6402.2009.01515.x
- Mukherjee, A., Lama, M., Khakurel, U., Jha, A. N., Ajose, F., Acharya, S., Tymes-Wilbekin, K., Sommer, M., Jolly, P. E., Lhaki, P., & Shrestha, S. (2020). Perception and practices of menstruation restrictions among urban adolescent girls and women in Nepal: a cross-sectional survey. *Reproductive health*, 17(1), 81. <https://doi.org/10.1186/s12978-020-00935-6>

- Murtaza, K. F. (2012). Women empowerment through higher education in Gilgit-Baltistan. *International Journal of Academic Research in Business and Social Sciences*, 2(9), 343.
- National Health Service. (2012). Bolton NHS Foundation Trust. Physical Health. Retrieved from <https://www.boltonft.nhs.uk/services/the-parallel-young-peoples-health/information/physical-health/>
- National Population and Housing Census. (2011). National Report. Central Bureau of Statistics. Government of Nepal. <https://web.archive.org/web/20130418041642/http://cbs.gov.np/wp-content/uploads/2012/11/National%20Report.pdf>
- Nikander, P. (2008). Working with transcripts and translated data. *Qualitative research in psychology*, 5(3), 225-231.
- Northcutt, N., & McCoy, D. (Eds.). (2004). *Interactive qualitative analysis: A systems method for qualitative research*. Thousand Oaks, CA: Sage.
- Nutter, S. (2003). *The health triangle*. Anchor Points, Inc.
- Ogbo, F. A., Mathsyaraja, S., Koti, R. K., Perz, J., & Page, A. (2018). The burden of depressive disorders in South Asia, 1990–2016: findings from the global burden of disease study. *BMC psychiatry*, 18(1), 1-11.
- Ong, T., Mellor, D., & Chettri, S. (2019). Multiplicity of stigma: the experiences, fears and knowledge of young trafficked women in Nepal. *Sexual and reproductive health matters*, 27(3), 32-48.

- Padmanabhanunni, A., Jaffer, L., & Steenkamp, J. (2017). Menstruation experiences of South African women belonging to the ama-Xhosa ethnic group. *Culture, Health & Sexuality*, 1–11. doi:10.1080/13691058.2017.1371335
- Patton, M. Q. (1999). Enhancing the quality and credibility of qualitative analysis. *Health services research*, 34(5 Pt 2), 1189.
- Patton, M. Q. (2002). *Qualitative Research & Evaluation Methods: Integrating Theory and Practice* (3 ed.). Thousand Oaks, California: Sage Publications.
- Patton, M. Q. (2008). *Utilization-focused evaluation* (4th ed.). Sage Publications.
- Pietersen, B.I. (2018). Exploring the factors influencing the beliefs about and attitudes toward menstruation of a group of South African female University students.
- Poux, S. (2017). Social-ecological model offers new approach to public health. The Borgen Project.
- Quinn, D. M., & Chaudoir, S. R. (2009). Living with a concealable stigmatized identity: the impact of anticipated stigma, centrality, salience, and cultural stigma on psychological distress and health. *Journal of personality and social psychology*, 97(4), 634.
- Quinn, L. A., Thompson, S. J., & Ott, M. K. (2005). Application of the social ecological model in folic acid public health initiatives. *Journal of Obstetric, Gynecological, & Neonatal Nursing*, 34, 672-681. doi:10.1177/0884217505281877
- Rager, K. B. (2005). Compassion stress and the qualitative researcher. *Qualitative Health Research*, 15(3), 423-430.
- Rai, N., & Thapa, B. (2015). A study on purposive sampling method in research. Kathmandu: Kathmandu School of Law, 1-12.

- Ranabhat, C., Kim, C. B., Choi, E. H., Aryal, A., Park, M. B., & Doh, Y. A. (2015). Chhaupadi culture and reproductive health of women in Nepal. *Asia Pacific Journal of Public Health*, 27(7), 785-795.
- Ranabhat, C., Kim, C. B., Choi, E. H., Aryal, A., Park, M. B., & Doh, Y. A. (2015). Chhaupadi culture and reproductive health of women in Nepal. *Asia Pacific Journal of Public Health*, 27(7), 785-795.
- Regmi, S. K., Pokharel, A., Ojha, S. P., Pradhan, S. N., & Chapagain, G. (2004). Nepal mental health country profile. *International review of Psychiatry*, 16(1-2), 142-149.
- Rembeck, G., & Gunnarsson, R. (2004). IMPROVING PRE-AND POSTMENARCHEAL 12-YEAR-OLD GIRLS' ATTITUDES TOWARD MENSTRUATION. *Health care for women international*, 25(7), 680-698.
- Richard, L., Gauvin, L., & Raine, K. (2011). Ecological models revisited: Their uses and evolution in health promotion over two decades. *Annual Review of Public Health*, 32, 307-326. doi:10.1146/annurev-publhealth-031210-101141
- Richard, L., Potvin, L., Kishchuk, N., Prlic, H., & Green, L. W. (1996). Assessment of the integration of the ecological approach in health promotion programs. *American Journal of Health Promotion*, 10, 318-328.
- Roberts, T. A. (2004). Female trouble: The Menstrual Self-Evaluation Scale and women's self-objectification. *Psychology of Women Quarterly*, 28(1), 22-26. doi:10.1111/j.1471-6402.2004.00119.x
- Roberts, T. A., & Waters, P. L. (2004). Self-objectification and that "not so fresh feeling". *Women & Therapy*, 27(3-4), 5-21. doi:10.1300/J015v27n03\_02

- Roberts, T.-A., Goldenberg, J. L., Power, C., & Pyszczynski, T. (2002). “Feminine Protection”: The effects of menstruation on attitudes toward women. *Psychology of Women Quarterly*, 26, 131–139. doi:10.1111/1471-6402.00051
- Robinson H. (2015). Chaupadi: The affliction of menses in Nepal. *International journal of women's dermatology*, 1(4), 193–194.  
<https://doi.org/10.1016/j.ijwd.2015.10.002>
- Robles, T. F., & Kiecolt-Glaser, J. K. (2003). The physiology of marriage: Pathways to health. *Physiology & behavior*, 79(3), 409-416.
- Rop, R., Tinsley, E., & Rabie, T. S. (2016). Globally, Periods Are Causing Girls to Be Absent from School. *The World Bank*, 27.
- Rothchild, J., Piya, P.S. (2020). Rituals, Taboos, and Seclusion: Life Stories of Women Navigating Culture and Pushing for Change in Nepal. In: Bobel, C., Winkler, I.T., Fahs, B., Hasson, K.A., Kissling, E.A., Roberts, TA. (eds) *The Palgrave Handbook of Critical Menstruation Studies*. Palgrave Macmillan, Singapore.  
[https://doi.org/10.1007/978-981-15-0614-7\\_66](https://doi.org/10.1007/978-981-15-0614-7_66)
- Rowe, W. E. (2014). Positionality. *The SAGE encyclopedia of action research*, 628.
- Rubin, A. (2000). Standards for rigor in qualitative inquiry. *Research on Social Work Practice*, 10(2), 173-178.
- Salazar, L. F., Crosby, R. A., & DiClemente, R. J. (2015). *Research methods in health promotion* (Second edition. ed.). San Francisco, CA: Jossey-Bass, a Wiley brand.
- Salihu, H. M., Wilson, R. E., King, L. M., Marty, P. J., & Whiteman, V. E. (2015). *Socio-ecological Model as a Framework for Overcoming Barriers and Challenges*

- in Randomized Control Trials in Minority and Underserved Communities.  
International journal of MCH and AIDS, 3(1), 85–95.
- Sallis, J. F., Owen, N., & Fisher, E. B. (2008). Ecological models of health behavior. In K. Glanz, B. K. Rimer, & K. Viswanath (Eds.), Health behavior and health education: Theory, research, and practice (pp. 465-486). San Francisco, CA: Jossey-Bass.
- Saloni Dattani, Hannah Ritchie and Max Roser (2021) - "Mental Health". Published online at OurWorldInData.org. Retrieved from:  
'<https://ourworldindata.org/mental-health>' [Online Resource]
- Sandelowski, M (2000). Focus on Research Methods: Whatever Happened to Qualitative Description?. Research in nursing & health. 23. 334-40. 10.1002/1098-240X(200008)23:43.0.CO;2-G.
- Savin-Baden, M., & Howell-Major, C. (2013). Qualitative research: The essential guide to theory and practice. Qualitative Research: The Essential Guide to Theory and Practice. Routledge.
- Scharp, K. M., & Sanders, M. L. (2019). What is a theme? Teaching thematic analysis in qualitative communication research methods. Communication Teacher, 33(2), 117-121.
- Schensul, J. J., & Trickett, E. (2009). Introduction to multi-level community based culturally situated interventions. American Journal of Community Psychology, 43(3), 232-240.



- Schölmerich, V. L., & Kawachi, I. (2016). Translating the socio-ecological perspective into multilevel interventions: Gaps between theory and practice. *Health Education & Behavior*, 43(1), 17-20.
- Seymour, K. (2008). Bangladesh: Tackling menstrual hygiene taboos. UNICEF Sanitation and Hygiene, Case, 10.
- Shabaya\*, J., & Konadu-Agyemang, K. (2004). Unequal access, unequal participation: some spatial and socio-economic dimensions of the gender gap in education in Africa with special reference to Ghana, Zimbabwe, and Kenya. *Compare: A Journal of Comparative and International Education*, 34(4), 395-424.
- Shahabuddin, A., Nöstlinger, C., Delvaux, T., Sarker, M., Delamou, A., Bardají, A., ... & De Brouwere, V. (2017). Exploring maternal health care-seeking behavior of married adolescent girls in Bangladesh: a social-ecological approach. *PloS one*, 12(1), e0169109.
- Sharma, P. (2003). Urbanization and development. *Population monograph of Nepal*, 1, 375-412.
- Sharp, R., Elson, D., Costa, M., & Dev, S. V. (2009). Federal Democratic Republic of Nepal.
- Shrestha, C. B. (Ed.). (1986). The historic cities of Asia, Kathmandu. Centre for Nepal & Asian Studies, Tribhuvan University.
- Simpson, A. (2005). Cultural interpretation of menstruation in relation to adolescent girls in Nigeria. *IFE Psychologia: An International Journal*, 13(2), 219–228.  
doi:10.4314/ifep.v13i2.23689

- Singh, N., Rajput, S., & Jaiswar, S. P. (2022). Correlation of menstrual hygiene management with cervical intraepithelial neoplasia and cervical cancer. *Journal of Cancer Research and Therapeutics*. [https://doi.org/10.4103/jcrt.jcrt\\_1021\\_21](https://doi.org/10.4103/jcrt.jcrt_1021_21)
- Skinner, D., Valsiner, J., & Holland, D. (2001, September). Discerning the dialogical self: A theoretical and methodological examination of a Nepali adolescent's narrative. In *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research* (Vol. 2, No. 3).
- Slevin, E., & Sines, D. (1999). Enhancing the truthfulness, consistency and transferability of a qualitative study: utilising a manifold of approaches. *Nurse Researcher* (through 2013), 7(2), 79.
- Sommer, M., Chandraratna, S., Cavill, S., Mahon, T., & Phillips-Howard, P. (2016). Managing menstruation in the workplace: an overlooked issue in low-and middle-income countries. *International Journal for Equity in Health*, 15(1), 1-5.
- Sommer, M., Hirsch, J. S., Nathanson, C., & Parker, R. G. (2015). Comfortably, Safely, and Without Shame: Defining Menstrual Hygiene Management as a Public Health Issue. *American journal of public health*, 105(7), 1302–1311. <https://doi.org/10.2105/AJPH.2014.302525>
- Spall, S. (1998). Peer debriefing in qualitative research: Emerging operational models. *Qualitative inquiry*, 4(2), 280-292.
- Standing, K. E., & Parker, S. L. (2019). Nepal's menstrual huts: what can be done about this practice of confining women to cow sheds?. *The Conversation*.
- Stangl, A. L., Earnshaw, V. A., Logie, C. H., van Brakel, W., C Simbayi, L., Barré, I., & Dovidio, J. F. (2019). The Health Stigma and Discrimination Framework: a

- global, crosscutting framework to inform research, intervention development, and policy on health-related stigmas. *BMC medicine*, 17(1), 1-13.
- Statista. (2020). Share of rural population in Nepal from 2011 to 2020  
<https://www.statista.com/statistics/761008/nepal-share-of-rural-population/>
- Stokols, D. (1992). Establishing and maintaining healthy environments: Toward a social ecology of health promotion. *American Psychologist*, 47(1), 6-22.
- Stokols, D. (1996). Translating social ecological theory into guidelines for community health promotion. *American Journal of Health Promotion*, 10, 282-298.
- Strauss, B., Appelt, H., Daub, U., & de Vries, I. (1990). Generational differences in perception of menstruation and attitude to menstruation. *Psychotherapie, Psychosomatik, medizinische Psychologie*, 40(2), 48–56.
- Stubbs, M. L., & Costos, D. (2004). Negative attitudes toward menstruation: Implications for disconnection within girls and between women. *Women & Therapy*, 27(3–4), 37–54. doi:10.1300/J015v27n03\_04
- Sumpter, C., & Torondel, B. (2013). A systematic review of the health and social effects of menstrual hygiene management. *PloS one*, 8(4), e62004.
- Sundler, A. J., Lindberg, E., Nilsson, C., & Palmér, L. (2019). Qualitative thematic analysis based on descriptive phenomenology. *Nursing open*, 6(3), 733-739.
- Suri, H. (2011). Purposeful sampling in qualitative research synthesis. *Qualitative research journal*.
- Sutton, J., & Austin, Z. (2015). Qualitative Research: Data Collection, Analysis, and Management. *The Canadian journal of hospital pharmacy*, 68(3), 226–231.  
<https://doi.org/10.4212/cjhp.v68i3.1456>

- Tamang, L. (2015). Sexual and Reproductive Health Service Knowledge and Use among Youth in the Kathmandu Valley, Nepal: Influence of Gender–Power Relations.
- Tausig, M., Subedi, S., Subedi, J., Broughton, C. L., & Williams-Blangero, S. (2004). The psychological disease burden in Nepal and its relationship to physical health problems. *Social Behavior and Personality: an international journal*, 32(5), 419-427.
- Temple, B., & Young, A. (2004). Qualitative research and translation dilemmas. *Qualitative research*, 4(2), 161-178.
- Thakuri, D. S., Thapa, R. K., Singh, S., Khanal, G. N., & Khatri, R. B. (2021). A harmful religio-cultural practice (Chhaupadi) during menstruation among adolescent girls in Nepal: Prevalence and policies for eradication. *PloS one*, 16(9), e0256968. <https://doi.org/10.1371/journal.pone.0256968>
- Thakuri, D. S., Thapa, R. K., Singh, S., Khanal, G. N., & Khatri, R. B. (2021). A harmful religio-cultural practice (Chhaupadi) during menstruation among adolescent girls in Nepal: Prevalence and policies for eradication. *PloS one*, 16(9), e0256968.
- Thapa, R. B., Murayama, Y., & Ale, S. (2008). Kathmandu. *Cities*, 25(1), 45-57.
- Thapa, S. B., & Hauff, E. (2005). Psychological distress among displaced persons during an armed conflict in Nepal. *Social psychiatry and psychiatric epidemiology*, 40(8), 672-679.
- Thapa, S., & Aro, A. R. (2021). ‘Menstruation means impurity’: multilevel interventions are needed to break the menstrual taboo in Nepal. *BMC Women's Health*, 21(1), 1-5.

- Thapa, S., Bhattarai, S., & Aro, A. R. (2019). 'Menstrual blood is bad and should be cleaned': A qualitative case study on traditional menstrual practices and contextual factors in the rural communities of far-western Nepal. *SAGE open medicine*, 7, 2050312119850400. <https://doi.org/10.1177/2050312119850400>
- The World Bank (2011). Gender equality and development. <https://openknowledge.worldbank.org/handle/10986/4391>
- Thorne, S. (2000). Data analysis in qualitative research. *Evidence-based nursing*, 3(3), 68-70.
- Trickett, E. J. (2009). Multilevel community-based culturally situated interventions and community impact: An ecological perspective. *American journal of community psychology*, 43(3), 257-266.
- U.S. Department of Health and Human Services. (2000). *Healthy People 2010: Vol. 1. Understanding and improving health and objectives for improving health*. Washington, DC: Government Printing Office
- Uchino, B. N. (2006). Social support and health: a review of physiological processes potentially underlying links to disease outcomes. *Journal of behavioral medicine*, 29(4), 377-387.
- Uma, S. (2019). South Asian feminist engagements with law: some explorations in the context of violence against women. *Jindal Global Law Review*, 10(2), 197-221.
- Umberson, D., & Montez, J. K. (2010). Social relationships and health: a flashpoint for health policy. *Journal of health and social behavior*, 51 Suppl(Suppl), S54–S66. <https://doi.org/10.1177/0022146510383501>
- UNESCO. (2018). Nepal Education and Literacy. <http://uis.unesco.org/en/country/np>

- UNICEF. (2015). Menstrual hygiene management in Indonesia: understanding practices, determinants and impacts among adolescents' schoolgirls. Melbourne: Burnet Institute.
- UNICEF. (2018). Country Programme Action Plan 2018-2022. Government of Nepal and United Nations Children's Fund.  
<https://www.unicef.org/nepal/media/191/file/CPAP%202018-2022.pdf>
- UNICEF. (2019). General Country Profile. Retrieved from  
<https://www.unicef.org/rosa/media/10576/file/Nepal.pdf>
- United Nations Population Fund. (2021). Menstruation and human rights. Retrieved from  
<https://www.unfpa.org/menstruationfaq>
- United Nations Resident and Humanitarian Coordinator's Office. (2011). Field Bulletin: Chaupadi in the far-west. United Nations Resident and Humanitarian Coordinator's Office; Kathmandu, Nepal.  
Retrieved [http://www.ohchr.org/Documents/Issues/Water/ContributionsStigma/ot\\_hers/field\\_bulletin\\_-\\_issue1\\_april\\_2011\\_-\\_chaupadi\\_in\\_far-west.pdf](http://www.ohchr.org/Documents/Issues/Water/ContributionsStigma/ot_hers/field_bulletin_-_issue1_april_2011_-_chaupadi_in_far-west.pdf).
- United Nations. (1982). Provisional guidelines on standard international age classifications. Retrieved  
[https://unstats.un.org/unsd/publication/SeriesM/SeriesM\\_74e.pdf](https://unstats.un.org/unsd/publication/SeriesM/SeriesM_74e.pdf)
- United Nations. (2019). Break taboo around menstruation, act to end 'disempowering' discrimination, say UN experts. Retrieved from  
<https://news.un.org/en/story/2019/03/1034131>
- Vashisht, A., Pathak, R., Agarwalla, R., Patavegar, B. N., & Panda, M. (2018). School absenteeism during menstruation amongst adolescent girls in Delhi, India. *Journal*

- of family & community medicine, 25(3), 163–168.
- [https://doi.org/10.4103/jfcm.JFCM\\_161\\_17](https://doi.org/10.4103/jfcm.JFCM_161_17)
- Vyas, S., & Spears, D. (2018). Sanitation and religion in South Asia: what accounts for differences across countries? *The journal of development studies*, 54(11), 2119-2135.
- White, P., Sharma, S., & Das, S. K. (2013). Culture clash: menstruation taboos and ODF in Nepal. FCG International.
- Whiting, L. S. (2008). Semi-structured interviews: guidance for novice researchers. *Nursing Standard* (through 2013), 22(23), 35.
- Wijeratne, M. P., Seneviratne, R., Gunawardena, N., Lynch, C., Sandøy, I. F., & Ostbye, T. (2014). Correlates of peer violence among 13-to 15-year-olds in Gampaha District schools in Sri Lanka: findings from a comparison between violent and non-violent adolescents. *SAGE Open*, 4(3), 2158244014550616.
- Willis, D. G., Sullivan-Bolyai, S., Knafl, K., & Cohen, M. Z. (2016). Distinguishing features and similarities between descriptive phenomenological and qualitative description research. *Western journal of nursing research*, 38(9), 1185-1204.
- Wilson, L. C., Rademacher, K. H., Rosenbaum, J., Callahan, R. L., Nanda, G., Fry, S., & Mackenzie, A. C. (2021). Seeking synergies: understanding the evidence that links menstrual health and sexual and reproductive health and rights. *Sexual and Reproductive Health Matters*, 29(1), 1882791.
- Winett, R. A. (1995). A framework for health promotion and disease prevention programs. *American Psychologist*, 50, 341-350.

- Wolf, Z. R. (2003). Exploring the audit trail for qualitative investigations. *Nurse educator*, 28(4), 175-178.
- Wong, L. P., & Khoo, E. M. (2011). Menstrual-related attitudes and symptoms among multi-racial Asian adolescent females. *International Journal of Behavioral Medicine*, 18(3), 246–253. <https://doi.org/10.1007/s12529-010-9091-z>
- Wong, W. C., Li, M. K., Chan, W. Y. V., Choi, Y. Y., Fong, C. H. S., Lam, K. W. K., ... Yeung, T. Y. (2013). A cross-sectional study of the beliefs and attitudes towards menstruation of Chinese undergraduate males and females in Hong Kong. *Journal of Clinical Nursing*, 22(23–24), 3320–3327. doi:10.1111/jocn.12462
- Woods, S. J. (1999). Normative beliefs regarding the maintenance of intimate relationships among abused and nonabused women. *Journal of Interpersonal Violence*, 14(5), 479-491.
- World Health Organization. (2001). *The World Health Report 2001: Mental health: new understanding, new hope*.
- World Health Organization. (2002). *Gender and mental health*.
- World Health Organization. (2015). *World Health Statistics*. Retrieved <https://www.who.int/docs/default-source/gho-documents/world-health-statistic-reports/world-health-statistics-2015.pdf>
- World Map. (2020). *Where is Kathmandu*. World Map, a Map of the World with Country Names Labeled. Retrieved from <https://www.mapsofworld.com/where->
- World Population Review. (2022). *Hindu countries 2022*. Pew Research. <https://worldpopulationreview.com/country-rankings/hindu-countries>



World Population Review. (2022). Kathmandu Population 2022.

<https://worldpopulationreview.com/world-cities/kathmandu-population>

Worldometer. (2022). Nepal population (2022). Worldometer - real time world

statistics. <https://www.worldometers.info/world-population/nepal-population/>

Yanos, P. T., DeLuca, J. S., Roe, D., & Lysaker, P. H. (2020). The impact of illness

identity on recovery from severe mental illness: a review of the

evidence. *Psychiatry research*, 288, 112950.

Young, I. M. (2005). *On female body experience: "Throwing like a girl" and other*

*essays*. Oxford University Press.

## Appendix A. Recruitment Flyer

UofL Institutional Review Boards  
IRB NUMBER: 22.0498  
IRB APPROVAL DATE: 07/11/2022

### Recruitment Flyer



We are looking for participants to take part in a study on menstruation experience and the related restrictions and practices in Nepal

#### To participate you must:

- Be between the ages of 18-50 years old
- Be Nepali
- Speak English or Nepali
- Live in Kathmandu
- Have experienced menstruation restrictions/practices in the last ten years
- Be willing to give 1-1.5 hours for an interview

#### Additional Information:

- No fees or charges associated
- Interviews will be confidential and private
- Able to drop out/withdraw from the study anytime
- You choose the date/time/location/ for the interview
- All female researchers
- US University Affiliated academic research/Nepal Health Research Council/Institutional Review Board approved

If you are interested, please contact Imisha Gurung at Tel: +977-9818086263 or +977-9840362650 (call/text, Viber, WhatsApp)

## Appendix B. Prescreening Questions

Anyone who expresses an interest will contact the co-investigator, who will prescreen them to see if they meet the inclusion criteria. Prescreening can be done in-person or via telephone.

1. What is your age?
  - ☐ 18-34 years
  - ☐ 35-50 years
2. Were you born in Nepal?
  - ☐ Yes
  - ☐ No
3. Are you Nepali?
  - ☐ Yes
  - ☐ No
4. Do you live in Kathmandu?
  - ☐ Yes
  - ☐ No
5. Do you speak Nepali or English fluently?
  - ☐ Yes
  - ☐ No
6. Have you experienced any menstruation restrictions/discriminations in the last ten years?
  - ☐ Yes
  - ☐ No

Individuals who meet the criteria

Individuals who answer all yes to questions two through six and fall within the specified age category on question one meets the criteria. They will be scheduled for an interview by the co-investigator for the study. The scheduled interviews will only take place once the participant has reviewed and signed the informed consent form.

Individuals who do not meet the criteria

The co-investigator will thank the individuals who do not meet the prescreening criteria for their interest and willingness to participate. She will explain why they have not been selected this time and thank them for their valuable time. All personal information of the individuals collected during the prescreening process will be destroyed by deletion.

## Appendix C. Interview Guide

Introduce yourself, purpose of the study, set expectations (ground rules), and obtain informed consent for the study and audio recording, some warmup talks (icebreakers).

Date:  
Start Time:  
End Time:  
Location:  
Participant UID:

### Socio-Demographics Profile

Let us start with some basic information about you? You can refuse to answer any of the questions anytime.

1. Gender

- a. Female
- b. Non-Binary
- c. Other \_\_\_\_\_
- d. Prefer not to say

2. Age: \_\_\_\_\_

3. Religion \_\_\_\_\_

4. Caste \_\_\_\_\_

5. Ward Number \_\_\_\_\_

6. What is your highest education level?

- a. Did not attend school
- b. Secondary Education Examination (SEE)
- c. Bachelors

- d. Masters
- e. Phd/Doctorate
- f. Not listed (Please list here) \_\_\_\_\_

7. Marital Status

- a. Single
- b. Divorced
- c. Widowed
- d. Married
- e. Separated
- f. Other \_\_\_\_\_

8. Occupation

- a. Student
- b. Unemployed
- c. Employed/ List your job here \_\_\_\_\_
- d. Prefer not to say

9. Which of these describes your household income per month? (Nepali Currency- Rupees)

- a. Less than 2,500 Rs
- b. 2,500- 10,000 Rs
- c. 10,001- 20,000 Rs
- d. 20,001- 40,000 Rs
- e. More than 40,000 Rs
- f. Do not know
- g. Prefer not to say
- h. Other \_\_\_\_\_

10. Which city/village did you live most of your childhood?  
\_\_\_\_\_

11. Which city/village have you lived most of your adulthood?  
\_\_\_\_\_

Questions

1. What do you believe causes women to have periods (bleed from vagina)? What are the traditions that women have during this time?

Probes: How do you know about menstruation and the traditions that surround it?

- Mom/Dad
- Grandparents
- Male/ Female Family members
- Siblings
- School
- Religious leaders
- Government
- Others?

2. Please share with me about your first or your earliest memory of your experience of having your period.

Probes:

- Year \_\_\_\_\_
- What kind of menstruation restrictions did you have to go through?
- How were you treated?
- How were the restrictions enforced?
  - Mom/Dad
  - Grandparents
  - Male/ Female Family members
  - Siblings
  - School
  - Religious leaders
  - Government
  - Others?

3. How did the menstruation restrictions affect you?

- a. Mental health

Probes:

- Did you feel sad, unhappy all the time, shame, scared, impure, stress? Others?

- b. Social health

Probes:

- No friends, no support, lonely, untouchable, inferior? Others?

- c. Physical health

Probes:

- Sick, physically hurt, infections, sexual assault? Others?

4. Tell me about any guidance or help you received in managing your first menstruation or the earliest memory having your periods

Probes:

- How prepared were you?
- Who helped you?

5. Can you tell me about your experience the most recent time that you had your period?

Probes:

- Year\_\_\_\_\_
- What kind of menstruation restrictions did you have to go through?
- How were you treated?
- How were the menstruation restrictions enforced?
  - Mom/Dad
  - Grandparents
  - Siblings
  - Husband/Partner
  - Male/ Female Family members
  - School
  - Religious leaders
  - Government
  - Others?

6. How did the menstruation restrictions affect you?

- a. Mental health

Probes:

- Did you feel sad, unhappy all the time, shame, scared, impure, stress? Others?

- b. Social health

Probes:

- No friends, no support, lonely, untouchable, inferior? Others?

- c. Physical health



Probes:

- Sick, physically hurt, infections, sexual assault? Others?

7. What additional cultural/religious menstruation restrictions do women in your community face during their menstrual periods?

Probe:

- Cultural traditions
- Religious traditions

8. If any women do not follow the menstruation restrictions, how are they seen and treated? What would happen to them?

Probes:

- Family?
- Community?

9. How can we improve the health of women in Nepal during their menstrual periods?

- a. Mental health

Probes:

- sad, unhappy all the time, shame, scared, impure, stress? Others?

- b. Social health

Probes:

- No friends, no support, lonely, untouchable, inferior? Others?

- c. Physical health

Probes:

- Sick, physically hurt, infections, sexual assault? Others?

10. What kind of policies and programs are needed to reduce these menstruation restrictions/discriminations?

Probes:

- What actions would you like to see taken?
- What are the likely effects of these actions?

11. Is there anything that you would like to discuss that I did not cover?

Do you have any questions for me? Thank you for your participation. I appreciate you sharing your personal experiences. This information will be kept confidential and secure. Again, Thank you for your valuable time.

Debrief: How was this interview experience for you?

## Appendix D. Field notes Worksheet

Participant UID:

Interviewer Name:

Date:

Location of Interview:

Time of Interview:

Observational notes:

(e.g., description of the location where the interview takes place, people present during the interview, observations about the participants: are they nervous? shy? calm? do the participants easily understand the questions?)

--

Methodological notes:

(e.g., comments about the interview guide, changes in the order of questions, difficulties with certain questions or themes, length of the interview, interruptions, overall research process)

--

Personal notes:

(e.g., how the researcher felt doing the interview: uncomfortable, lost concentration, tired, happy)

--

## Appendix E. Informed Consent

## MENSTRUATION STIGMA: A QUALITATIVE EXPLORATORY STUDY ON LIVED EXPERIENCES AMONG NEPALI WOMEN

### Introduction and Background Information

You are being invited to participate in a research study that aims to understand and explore menstruation experience and the related restrictions and practices among Nepali women. This study is being conducted under the direction of Dr. Muriel Harris and Ms. Imisha Gurung at the University of Louisville School of Public Health and Information Sciences in Health Promotion and Behavioral Sciences Department.

### Purpose

The purpose of this study is to explore the lived experiences of menstruation restrictions and the overall impact on the wellbeing among Nepali women. There is not a lot of information about this topic so your interview will help to improve our knowledge on this topic. Your participation may benefit other women who have similar experience such as yours in Nepal. This study is being conducted in partial fulfillment of a degree.

### Procedures

We are asking you to participate in a 60 to 90-minute audio recorded interview with Imisha Gurung, the study co-investigator. The interview will take place in-person in a secure and private location. You will be questioned about your experiences with menstruation restrictions and related experiences. The interview will be audio recorded, so the information you share can be reviewed later. You will not be identified by name on the audio recording or any other documents. Interviews are available in English or Nepali depending on your preference.

### Potential Risks

There are no more than minimal risks associated with participating in this research study. By participating in this research study, you may experience discomfort, and/or distress as a result of emotions that surface during your interview or during your participation. To mitigate these risks, the co-investigator will apply sensitive research practices, skills, and permission to continue the interview.

### Benefits

The information collected may not benefit you directly. The information learned in this study may be helpful to others who are experiencing menstruation restrictions and related discriminations. The information may also help to improve programs and policies for other Nepali women.

## Compensation

We will provide you with an incentive valued at NPR 500.00 Rupees upon completion of the interview, for your valuable time, inconvenience, or expenses while you are in this study, and as a way to thank you for your contribution.

## Alternatives

Instead of taking part in this study, you could choose to not participate in the study.

## Confidentiality

All the information you give during the research will be held in confidence and your name will not be in any report or publication of the research. Reports and publications of this research will be shared both inside and outside of Nepal. Individuals from the University of Louisville's Department of Health Promotion and Behavioral Sciences, the UofL Institutional Review Board (IRB), the UofL Human Subjects Protection Program Office (HSPPPO), compliance/legal personnel of UofL, Nepal Health Research Council (NHRC)-Institutional Review Committee (IRC), and other regulatory agencies may inspect these records. In all other respects, however, the data will be held in confidence to the extent permitted by law. Should the data be published, your identity will not be disclosed.

## Security

The data collected in this study, including all recorded data and transcripts, will be stored for period of 5 years, and destroyed. All the information you give will be stored safely on an encrypted password secured drive, and only the research team be able to see, hear, or read this information.

## Voluntary Participation

By participating in the interview, you are agreeing to participate in this study. Taking part in this study is completely voluntary. You may choose not to take part at all. If you decide not to participate in this study, this will not affect your access to health or other services in any way. If you decide to be in this study, you may change your mind and stop taking part at any time. You will be told about any new information learned during the study that could affect your decision to continue in the study.

## Research Participant's Rights

For independent advice on your rights as a research participant please contact the Human Subjects Protection Program Office at the University of Louisville at (502) 852-5188 or Nepal Health Research Council (NHRC)- Institutional Review Committee (IRC) at Tel: +97714254220, email: nhrc@nhrc.gov.np. You may discuss any questions about your rights as a research participant, in private, with a member of either of the Institutional Review Boards (IRB) listed. The IRB is an independent committee made up of people from

the University community, staff of the institutions, and people from the community not connected with these institutions. The IRB of University of Louisville and Nepal Health Research Council (NHRC)- Institutional Review Committee (IRC) have approved the participation of human subjects in this research study.

#### Questions, Concerns and Complaints

If you have any questions about the research study, please contact Dr. Muriel Harris at Tel: +15026440474, email address [mjharr08@louisville.edu](mailto:mjharr08@louisville.edu) or Ms. Imisha Gurung at Tel: +977-9818086263, e-mail: [imisha.gurung@louisville.edu](mailto:imisha.gurung@louisville.edu). If you have any concerns or complaints about the research or research staff and you do not wish to give your name, you may call the toll-free number at 1-877-852-1167. This is a 24-hour hot line answered by people who do not work at the University of Louisville.

#### Acknowledgment and Signatures

This document tells you what will happen during the study if you choose to take part. Your signature and date indicate that this study has been explained to you, that your questions have been answered, and that you agree to take part in the study. You are not giving up any legal rights to which you are entitled by signing this informed consent document though you are providing your HIPAA authorization as outlined in this informed consent document. You will be given a copy of this consent form to keep for your records upon request.

I attest that I am 18 years or older. I have read the above and give my full consent to participate in this study.

---

Printed Name of Participant  
Date Signed

---

Signature of Participant

---

Printed Name of Person Explaining Consent (PEC)  
investigator) Date Signed

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Signature of PEC (if not an

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Printed Name of Investigator (PI, Sub-I, or Co-I)  
Date Signed

---

Signature (PI, Sub-I, or Co-I)

## Appendix F. Data Privacy Consent Form

UofL Institutional Review Boards  
IRB NUMBER: 22.0498  
IRB APPROVAL DATE: 07/11/2022

### Data Privacy Consent

The University of Louisville may be treated as a Data Controller for individuals who are currently located in or are a citizen of Nepal. Applicable privacy laws often require notification and/or consent regarding the collection and use of your personal information.

UofL provides you with the following information:

- (1) The information you provide and questions you answer (including any personal data you provide) are needed in order for the study team and others associated with the study at UofL to conduct the study and evaluate the information provided in order to complete the study and associated results of the study. The purpose of this study is to explore the lived experiences of menstruation stigma and related restrictions among Nepali women. As a part of the processing of the information collected, UofL may provide the information to third parties in the regular course of business who are providing services for UofL for the study. Such third parties may be considered data processors and would be under an obligation to protect that information from disclosure. For additional details see UofL's Privacy Statement at <https://louisville.edu/privacy-statement>.
- (2) A refusal to supply this information could make it impossible for you to participate in this study as well as any obligations required by law.
- (3) Your information provided including any personal data may be stored and/or used from now until 5 years after your role as a participant in the study at UofL has ended.
- (4) You can withdraw your consent, if granted below, at any time, but this will not affect the processing of your information including any personal data based on your consent before withdrawal (and such withdrawal could impact our ability to continue processing your data as a study participant).
- (5) You have legal rights and remedies regarding any breach of your personal information.

Having read the above notice, I give my consent for the use of my personal data (including any sensitive data) for the purposes outlined above.

Signature \_\_\_\_\_ Printed Name \_\_\_\_\_ Date \_\_\_\_\_

Should you have questions about what information we collect and how we process it, please contact us via email at: [privacy@louisville.edu](mailto:privacy@louisville.edu) or [hsppofc@louisville.edu](mailto:hsppofc@louisville.edu).

## Appendix G. University of Louisville Institutional Review Board Outcome Letter

Human Subjects Protection Program Office  
300 E. Market Street, Suite 380  
University of Louisville  
Louisville, KY 40202



<b>DATE:</b>	July 11, 2022
<b>TO:</b>	Muriel J Harris, PhD, MPH
<b>FROM:</b>	The University of Louisville Institutional Review Board
<b>IRB NUMBER:</b>	22.0498
<b>STUDY TITLE:</b>	<b>MENSTRUATION STIGMA: A QUALITATIVE EXPLORATORY STUDY ON LIVED EXPERIENCES AMONG NEPALI WOMEN</b>
<b>REFERENCE #:</b>	748042
<b>CONTACT FOR QUESTIONS:</b>	Sherry Block 852-2163 sbloc04@louisville.edu

This study was reviewed and approved with changes on 07/03/2022 by the Chair/Vice Chair of the Institutional Review Board and approved through Expedited Review Procedure, according to 45 CFR 46.110(b), since this study falls under Category 7: Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

The changes were reviewed and approved by HSPPO staff on 07/11/2022.

This study now has final IRB approval from 07/11/2022 through 07/10/2025.

The following items have been approved:

Submission Components			
Title	Version #	Version Date	Outcome
INTERVIEW GUIDE	Version 1.2	06/27/2022	Approved
DATA PRIVACY CONSENT FORM_CLEAN	Version 2.0	07/08/2022	Approved
FLYER	Version 1.0	06/20/2022	Approved
PROTOCOL	Version 1.0	06/20/2022	Approved
PRESCREENING QUESTIONS	Version 1.0	06/16/2022	Approved
INFORMED CONSENT_CLEAN	Version 2.0	07/08/2022	Approved

IRB policy requires that investigators use the IRB "stamped" approved version of informed consents, assents, and other materials given to research participants. For instructions on locating the IRB stamped documents in iRIS visit: <https://louisville.edu/research/humansubjects/iRISSubmissionManual.pdf>

Your study does not require continuing review per federal regulations. Your study has been set with a three-year expiration date following UofL local policy. If your study is still ongoing at that time, you will



receive automated reminders to submit a continuing review form prior to the expiration date. If you complete your study prior to the expiration date, please submit a study closure amendment.

All other IRB requirements are still applicable. You are still required to submit amendments, personnel changes, deviations, etc... to the IRB for review. Please submit a closure amendment to close out your study with the IRB if it ends prior to the three year expiration date.

Human Subjects & HIPAA Research training are required for all study personnel. It is the responsibility of the investigator to ensure that all study personnel maintain current Human Subjects & HIPAA Research training while the study is ongoing.

#### **Site Approval**

Permission from the institution or organization where this research will be conducted **must** be obtained before the research can begin. For example, site approval is required for research conducted in UofL Hospital/UofL Health, Norton Healthcare, and Jefferson County Public Schools, etc...

#### **Privacy & Encryption Statement**

The University of Louisville's Privacy and Encryption Policy requires identifiable medical and health records; credit card, bank account and other personal financial information; social security numbers; proprietary research data; and dates of birth (when combined with name, address and/or phone numbers) to be encrypted. For additional information: <http://louisville.edu/security/policies>.

#### **Implementation of Changes to Previously Approved Research**

Prior to the implementation of any changes in the approved research, the investigator must submit modifications to the IRB and await approval before implementing the changes, unless the change is being made to ensure the safety and welfare of the subjects enrolled in the research. If such occurs, a Protocol Deviation/Violation should be submitted within five days of the occurrence indicating what safety measures were taken, along with an amendment to revise the protocol.

#### **Unanticipated Problems Involving Risks to Subjects or Others (UPIRTSOs)**

A UPIRTSO is any incident, experience, or outcome, which has been associated with an unexpected event(s), related or possibly related to participation in the research, and suggests that the research places subjects or others at a greater risk of harm than was previously known or suspected. The investigator is responsible for reporting UPIRTSOs to the IRB within 5 working days. Use the UPIRTSO form located within the iRIS system. Event reporting requirements can be found at: <http://louisville.edu/research/humansubjects/lifecycle/event-reporting>.

#### **Payments to Subjects**

In compliance with University policies and Internal Revenue Service code, payments to research subjects from University of Louisville funds, must be reported to the University Controller's Office. For additional information, please call 852-8237 or email [controll@louisville.edu](mailto:controll@louisville.edu). For additional information: <http://louisville.edu/research/humansubjects/policies/PayingHumanSubjectsPolicy201412.pdf>

The committee will be advised of this action at a regularly scheduled meeting.

We value your feedback; let us know how we are doing: <https://www.surveymonkey.com/r/CCLHXP>

Sincerely,

A handwritten signature in cursive script, appearing to read "Paula Radmacher".

Paula Radmacher, Ph.D., Vice Chair,  
Biomedical Institutional Review Board  
PR/slb

## Appendix H. Nepal Health Research Council (NHRC) Approval



Ref. No.: 261

8 August 2022

**Ms. Imisha Gurung**

Principal Investigator

University of Louisville School of Public Health and Information Sciences

United States

**Ref: Approval of thesis proposal**

**Dear Ms. Gurung,**

This is to certify that the following protocol and related documents have been reviewed and granted approval through the expedite review process by the Expedited Review Sub-Committee meeting for its implementation.

Protocol Registration No/ Submitted Date	331/2022 PhD 14 July 2022	Sponsor Protocol No	NA
Principal Investigator/s	Ms. Imisha Gurung	Sponsor Institution	NA
Title	Menstruation Stigma: A qualitative exploratory study on lived experiences among Nepali women in Kathmandu		
Protocol Version No	NA	Version Date	NA
Other Documents	1. Data collection tools 2. Informed consent form 3. University approval letter 4. Work plan	Risk Category	Minimal risk
Co-Investigator/s	1. Assoc. Prof. Muriel Harris 2. Dr. Bigya Shah		
Study Site	Kathmandu		
Type of Review	<input checked="" type="checkbox"/>	Expedited	Timeline of Study 3 August 2022 to March 2023  Duration of Approval 3 August 2022 to 3 August 2023  Frequency of continuing review NA
	<input type="checkbox"/>	Full Board	
	Meeting Date: 1 August 2022		

*Dr.*

Tel: +977 1 4254220, Fax: +977 1 4262469, Ramshah Path, PO Box: 7626, Kathmandu, Nepal  
Website: <http://www.nhrc.gov.np>, E-mail: [nhrc@nhrc.gov.np](mailto:nhrc@nhrc.gov.np)




Government of Nepal  
**Nepal Health Research Council (NHRC)**  
Estd. 1991

Ref. No.: 261

		This approval will be valid one year	
Total budget of research	\$ 2700.00		
Ethical review processing fee	\$ 100.00		
<b><u>Investigator Responsibilities</u></b>			
<ul style="list-style-type: none"><li>Any amendments shall be approved from the ERB before implementing them</li><li>Submit progress report every 6 months</li><li>Submit final report after completion of protocol procedures at the study site</li><li>Report protocol deviation / violation within 7 days</li><li>Comply with all relevant international and NHRC guidelines</li><li>Abide by the principles of Good Clinical Practice and ethical conduct of the research</li></ul>			

If you have any questions, please contact the Ethical Review M & E Section at NHRC.

Thanking you,

  
\_\_\_\_\_  
Dr. Pradip Gyanwali  
Member Secretary

Tel: +977 1 4254220, Fax: +977 1 4262469, Ramshah Path, PO Box: 7626, Kathmandu, Nepal  
Website: <http://www.nhrc.gov.np>, E-mail: [nhrc@nhrc.gov.np](mailto:nhrc@nhrc.gov.np)

## CURRICULUM VITAE

Imisha Gurung, MPH, RT (R) (ARRT)  
Teaching/ Graduate Research Assistant  
Faculty Favorite Nominee 2021-2022  
Dr. M. Celeste Nichols Award recipient  
Department of Health Promotion and Behavioral Sciences Scholar  
University of Louisville School of Public Health and Informational Sciences

School of Public Health & Information Sciences  
485 E. Gray St., Room 022, Louisville, KY 40202

[imugurung@gmail.com](mailto:imugurung@gmail.com) (personal)  
(510)-932-4438 -cell

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### EDUCATION

<b>M.P.H.</b> , Masters in Public Health Marshall University College of Health Professions Global and Community Health Track	<b>2016</b> <i>Huntington, WV</i>
<b>B.A.</b> , Bachelor in Regents of Arts Concord University	<b>2014</b> <i>Athens, WV</i>
<b>A.S.</b> , Associate of Science in Radiologic Technology Mountain State University	<b>2012</b> <i>Beckley, WV</i>

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### PROFESSIONAL EXPERIENCE

<b>Teaching/ Graduate Research Assistant</b> Muriel Harris, Ph.D., - Assistant Professor Advanced Program Evaluation Teaching assistant Department of Health Promotion and Behavioral Sciences University of Louisville School of Public Health and Informational Sciences	<b>2018-Present</b>
<b>Lead Radiologic Technologist</b> Express Mobile Diagnostic Services Louisville, Kentucky, 40218 Covid-19 pandemic health care worker (7 days on call- 18 hour shifts)	<b>2018-Present</b>
<b>Patient Coordinator</b> 550 Clinic, Ryan White Foundation UofL Ambulatory Care Building STD Prevention Clinic	<b>2018-2019</b> <i>Louisville, KY</i>
<b>Lead Registered Radiologic Technologist</b> Southern West Virginia Health System, Lincoln Primary Care	<b>2012-2018</b> <i>Hamlin, WV</i>
<b>AmeriCorps, CDSMP &amp; DSMP Coordinator</b> Cabell-Huntington Health Department	<b>2014-2016</b> <i>Huntington, WV</i>
<ul style="list-style-type: none"><li>▪ Representative for Health and Wellness &amp; Clinical and Disaster Services – Cabell County</li><li>▪ Sexually transmitted Disease awareness</li><li>▪ Tuberculosis prevention</li></ul>	

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CV – Imisha Gurung, MPH, RT (R)

- Representative for Health and Wellness & Clinical and Disaster Services – Cabell County
- Sexually transmitted Disease awareness
- Tuberculosis prevention
- Community Health Assessments and improvement planning
- Chronic disease self-management course instructor
- Diabetes self-management course instructor
- Changing the future of WV program coordinator
- Eating healthy initiative for obesity in WV coordinator
- Occupational health risks awareness and weight loss program coordinator

#### **Graduate Assistant**

**2014-2016**

Marshall University, Office of Disability Services  
Huntington, WV

- Assisted and mentored students enrolled in the disability services.
- Assisted with note taking, test proctoring, accommodations, and tutoring, laboratory and library assistants, including coordination with the faculty, early registration and equipment assistance.

#### **Environmental Program Student Assistant**

**2008-2010**

USDA Rural Development

*Beckley, WV*

Mountain State University Environmental Science Dept.

- Review of environmental impact reports affiliated with Mountain State University and USDA Beckley, WV.
- Environmental assessment of public and private projects prior to project review.
- County General Plan, Community Plans with the school, environmental documents and specialized plans such area specific plans, air and water quality plans, and environmental compliance.

#### **Direct Care Staff/ Provider**

**2008-2016**

Res Care – Nursing Home; Assisted Living

*Barboursville, WV*

#### **CERTIFICATIONS**

**Registered Radiologic Technologist, ARRT, RT (R)**

**2012-**

American Registered Radiologic Technologist

*WV, KY, I*

**Basic Life Support, CPR certified**

**2012-**

American Heart Association

*Huntington, WV*

**Health Inspector Sanitarian Training Course**

**2015-17**

Cabell Huntington Health Department / Sanitary Dept.

*Huntington, WV*

**Community Health Education Resource Person, CHERP Level 1**

**2015-**

West Virginia School of Osteopathic Medicine

*Lewisburg, WV*

**Chronic Disease Self-management, CDSMP certified**

**2014-**

Stanford University & Cabell Huntington Health Dept.

*Huntington, WV*

Workshop Leader

**Diabetes Self-management, DSMP certified**

**2014-**

Stanford University & Cabell Huntington Health Dept.

*Huntington, WV*

Workshop Leader

#### **AWARDS AND HONORS**

**Faculty Favourite Nominee 2022-2023**

**2022-2023**

University of Louisville, Program Evaluation Teaching assistant

*UofL*

**Certificate of Appreciation from the White House & AmeriCorps**

**2014-17**

CV – Imisha Gurung, MPH, RT (R)

AmeriCorps National and Community Service, 2 years	Huntington, WV
<ul style="list-style-type: none"> <li>▪ Chronic disease self-management course instructor</li> <li>▪ Diabetes self-management course instructor</li> <li>▪ Changing the future of WV program coordinator</li> <li>▪ Eating healthy initiative for obesity in WV coordinator</li> <li>▪ Occupational health risks awareness and weight loss program coordinator</li> </ul>	
<b>Highest Fundraiser Appreciation:</b> Nepal's Devastating Earthquake, 2015	2015
Nepalese Association Beckley & Papa John's	Beckley,
WV	

<b>Employee of the Year Award</b>	2013-16
Direct Care Provider, Res Care – Nursing Home; Assisted Living	Barboursville, WV
<ul style="list-style-type: none"> <li>▪ Awarded the "Employee of the Year: 2013, 2014, 2015, 2016- Res Care (Residential Services)" for outstanding direct care services and provider for clients to reach their highest level of independence and with daily living.</li> </ul>	

<b>Miss Little Lady Beauty Pageant Nepal, 1999</b>	1999
2 <sup>ND</sup> runner up	
Kathmandu Jaycees Beauty Pageant education award	

#### SCHOLARSHIPS

Dr. M. Celeste Nichols Award winner	2023
Multicultural Association of Graduate Student Scholarship (M.A.G.S )	2022
University of Louisville School of Public Health and Informational Sciences Tuition Scholarship Department of Health Promotion and Behavioral Sciences Teaching/ Graduate Research Assistantship (TRA/ GRA)	2018-
Segal AmeriCorps Education Award	2014-16
Maiti Nepal (End Trafficking girls) Government Foundation Education Award	2006-07
Mountain State University Tuition Scholarship	2008-12
Kathmandu Jaycees Beauty Pageant Education Award	1999

#### PROFESSIONAL AFFILIATIONS

<b>Associations</b>	
Member of the American Society of Radiologic Technologists	2008-
Member of the Mahila Aaama Samuha Foundation (Mothers- Female Rights of Nepal)	2007-
Member of the Maiti Nepal Foundation (Say No to Child Trafficking)	2005-

#### FUNDED RESEARCH ACTIVITIES, GRANTS, AND CONTRACTS

##### Research

Co-Investigator	
<ul style="list-style-type: none"> <li>• Professional Healthcare Chaplaincy Certification: Exploring Efficacy &amp; Strategizing Future Directions Center for Health Organization Transformation, \$50,000, 2019-20</li> </ul>	



Graduate Research Assistant

- Kentucky Health Insurance Literacy Training ( K- HILT) Modules, 2019-
- Professional Healthcare Chaplaincy Certification: Exploring Efficacy & Strategizing Future Directions  
Center for Health Organization Transformation, \$50,000, 2019-20

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#### CONFERENCE PAPERS AND ORAL PRESENTATIONS

Oral Presentation: Exploring models for prevention of Cervical Cancer in sub-Sahara Africa. The Afro-European Medical and Research Network (AEMRN) Conference -United Nations (Palais des Nations) Geneva, Switzerland, Dec 12 & 13, 2019. **Gurung, I.** (2019)

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#### POSTER PUBLICATIONS

White, K., Combs, R., Johnson, R., **Gurung, I.** (2019) *Professional Chaplaincy Certification: Exploring Efficacy and Strategizing Future Directions*. Center for Health Organization Transformation Fall Meeting, Seattle, WA

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#### PUBLICATIONS

##### Articles in Progress

White, K., Combs, R., Johnson, R., **Gurung, I.** (2019) *Professional Chaplaincy Certification: Exploring Efficacy and Strategizing Future Directions Report*.

**Gurung, I.** (2019) .Exploring models for prevention of Cervical Cancer in sub-Sahara Africa.

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#### LECTURES, GUEST LECTURES, AND OTHER PRESENTATIONS

Guest Lecture, Healthy eating in workplace  
Cabell County West Virginia Fire Department 2016

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#### MEDIA APPEARANCES

##### Television

"Harm Reduction Program- Needle Exchange ", WSAZ News, June, 2016  
Cabell-Huntington Harm Reduction Program, Needle Exchange  
Huntington, WV

"Say No to Child Trafficking," SAGARMATHA TV, Jan, 2005  
Maiti Nepal Foundation, Prevention & Protection

Miss Little Lady Beauty Pageant Nepal, 1999 1999  
Nepal Television  
2<sup>ND</sup> runner up  
Kathmandu Jaycees Beauty Pageant education award

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#### TEACHINGS

**Chronic Disease Self-management**, CDSMP classes/ workshop 2014-16  
Stanford University & Cabell Huntington Health Dept. Huntington, WV

**Diabetes Self-management**, DSMP classes / workshop 2014-16  
Stanford University & Cabell Huntington Health Dept. Huntington, WV

**Instructor**, Employee wellness, employee stress 2016

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CV – Imisha Gurung, MPH, RT (R)



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## PRACTICUMS

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### **Change the Future WV, Healthy Future- Cabell County**

**2014-16**

Marshall University & Cabell Huntington Health Dept.

*Huntington, WV*

Vision: Increase Health Education/ Health communication in Cabell County

Healthy people living and working in a healthy community

Plan, recruit and facilitate CDSMP, DSMP and DPP classes to at risk populations in Cabell County

*Preceptor: Elizabeth A. Adkins, Dr. Richard Crespo, Dr. William Pewen*

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## CONFERENCES, EVENTS, PRESENTATIONS

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The Afro-European Medical and Research Network (AEMRN) Conference – United Nations (Palais des Nations) Geneva, Switzerland. Oral Presentation on Exploring models for prevention of Cervical Cancer in sub-Saharan Africa. Author: Gurung, I. (2019). Dec 12 & 13, 2019.

Live webcast Seminars: The American Registry of Radiologic Technologists (ARRT) – Nov 8, 2019.

Global Maternal Health Symposium – United Nations Association of the United States of America – Kentucky Division – Oct 29, 2019.

Grand rounds: Medicare for all – University of Louisville School of Medicine. Dr. Pedigo, Economist- University of Massachusetts. Oct 24<sup>th</sup>, 2019.

Kentucky Association of Community Health Workers Conference. Embassy suites by Hilton Lexington/UK Coldstream, Ryan Combs Ph.D. Sep 19, 2019.

Cervical Cancer and HPV vaccine. University of Louisville - School of Public Health and Information Sciences- Clinical and translational research building, Andrew Lajoie, Ph.D. Fall 2019.

EpiHour. Presenter: Anne Wallis, PhD., March 21, 2019

Metro Council Meeting. Metro Hall: Voting on the budget issues-policy in development and action. March 21, 2019.

Lucina Health- Preterm Birth and Maternal Mortality Event, Muhammad Ali Center, Feb 15, 2019.

Heart of the Matter – Feb 2, 2019

ASRT Radiology Educational Symposium and Annual Governance and House of Delegates Meeting (ARRT) – Las Vegas – June 21- 24, 2018.

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## SERVICE TO THE COMMUNITY

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### **Volunteer Roles**

#### **Louisville Nepalese and Bhutanese Refugee (STD prevention education)**

**2018- Present**

Freedom adult day care

4511 Bardstown road,

Louisville, KY, 40218

*Louisville, KY*

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CV – Imisha Gurung, MPH, RT (R)

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<b>Harm Reduction Program Assistant</b> Cabell-Huntington Harm Reduction Program, Needle Exchange	<b>2016</b> <i>Huntington, WV</i>
<b>911 Safety Home Fire Campaign</b> American Red Cross	<b>2015</b> <i>Charleston, WV</i>
<b>Healthy Plate: Diet &amp; Nutrition Educator for Kids</b> Cabell-Huntington Health Department	<b>2014-2016</b> <i>Huntington, WV</i>
<b>Say No to Child Trafficking Advocate</b> Maiti Nepal Foundation, Prevention & Protection Anuradha Koirala, Founder & CEO (CNN Hero, 2010)	<b>2005-</b> <i>Kathmandu, Nepal</i>
<ul style="list-style-type: none"> <li>▪ Setting up prevention homes in areas identified as high risk</li> <li>▪ Helping and tutoring girls who have dropped out of schools</li> </ul>	
<b>Female Rights Advocate</b> Mothers in Rural Areas of Nepal, Mahila Aaama Samuha Foundation	<b>2007-</b> <i>Kathmandu, Nepal</i>
<ul style="list-style-type: none"> <li>▪ General community welfare, health education and support,</li> <li>▪ fight for women's rights -rural villages of Nepal</li> </ul>	

#### **OTHERS**

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Technical Expertise:	Microsoft, SPSS, C++, Java, Cobalt, Athena, PACS -Radiology Dedoose
Languages:	English, Gurung, Hindi, Malay, Nepalese; Fluent