ABSTRACT

Title of Dissertation: "I THINK I WAS MISINFORMED": UNDERSTANDING GHANAIAN MOTHERS' PERSPECTIVES ON, AND EXPERIENCES WITH, MATERNAL HEALTH MISINFORMATION

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Many women in sub-Saharan Africa have died because of unmet maternal health information needs (Mulauzi & Daka, 2018). Existing research has established that access to, and use of, accurate maternal health information can optimize maternal health (Mwangakala, 2016). To the contrary, the reliance on, and use of, inaccurate information can result in susceptibility to maternal health complications (Arzoaquoi et al., 2015). Despite the negative impact of maternal health misinformation on mothers' maternal health behaviors, it has not received substantial scholarly attention, including in the areas of health communication and public relations. Given the scarcity of studies in these areas, this dissertation utilized the situational theory of problem solving (STOPS) and the culture-centered approach (CCA) to investigate how Ghanaian mothers understand, relate to, and experience maternal health misinformation.

Specifically, the study posed four research questions based on the independent variables of the STOPS. These questions examined (1) How the mothers identified maternal health misinformation, (2) The extent of their involvement with misinformation, (3) The challenges they encountered when attempting to correct misinformation, and (4) How their prior experiences with, and knowledge of, pregnancy, birth and postpartum enabled them to unpack misinformation.

The women who participated in this study were mothers who had either experienced pregnancy, birth, and postpartum in Ghana with children five years or younger or were pregnant. Twenty of these mothers were purposively sampled and participated in semi-structured interviews via WhatsApp voice calls and chat.

The findings demonstrate the applicability of STOPS to health communication and to a different sociocultural environment. The study revealed that the participants' high problem and involvement recognition coupled with low constraint recognition shaped their information acquisition, selection, and transmission. The study also showed that referent criterion significantly shaped problem recognition. Additionally, the study demonstrated how the constructs of the CCA, namely culture, structure, and agency, intersected with the independent variables of the STOPS to inform the mothers' communicative action. Specifically, it showed how the participants' culture shaped their problem and constraint recognition, how the mothers' agency shaped their involvement recognition and enhanced problem-solving, and how structure shaped problem recognition and referent criterion. The study concludes that maternal health interventions targeted at curbing misinformation must be culture centered. Also, the STOPS should be used in segmenting maternal health publics. This approach will help leverage the agency of active mothers for social correction of misinformation.

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Dedication

To Yintomya and Yinsoma, who have profoundly transformed my life.

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Chapter 1 – Introduction

Pregnancy, delivery, and postpartum phases in women's lives are crucial, as they, along with their babies, are considered vulnerable and deserving of adequate care and attention (Das & Sakar, 2014). Given this reality, mothers experience a heightened need for health information, and information seeking becomes the first significant step pregnant women take to obtain maternal health knowledge (Loudon et al., 2015; Shieh et al., 2010). Therefore, societies and institutions strive to create systems to make maternal health information accessible to mothers to reduce complications, negative maternal health behaviors, maternal mortality, and morbidity (Kassim, 2020). Thus, most mothers are able to satisfy their maternal health information needs using sources such as healthcare providers, the internet, mainstream media, interpersonal sources, books, and traditional birth attendants, among others (Guerra-Reyes et al., 2016; Osubor et al., 2006; Shieh et al., 2009).

Several studies have established that mothers' access to adequate and accurate maternal health information can help them achieve a healthy outcome for their pregnancy, delivery, and postpartum (Das & Sakar, 2014; Ukachi & Anasi, 2019). Therefore, the importance of accessing accurate maternal health information cannot be overstated. However, in women's quest to access maternal health information through the aforementioned sources, they get information that is not always accurate, and acting upon this information could lead to negative consequences like maternal death or morbidity.

Unfortunately, more often than not, many mothers die or experience maternal health complications due to unmet maternal health information needs (Mulauzi & Daka, 2018). Sadly, maternal mortality remains a significant health challenge that developing countries like Ghana

continue to battle (Osubor et al., 2006; Tuyisenge et al., 2019). A 2023 report by the World Health Organization (WHO) stated that "in 2020, about 70% of all maternal deaths were in sub-Saharan Africa" (2023, para. 6). This is extremely alarming as "every mother, no matter who they are or where they are, [should have] a fair chance at a safe delivery and a healthy future with their family" (WHO, 2023, para. 5). The WHO notes some factors that threaten progress made in reducing maternal mortality are "underfunding of primary health care systems, a lack of trained health care workers, and weak supply chains for medical products" (WHO, 2023, para. 9). For most sub-Saharan countries, like Ghana, plagued with maternal mortality and morbidity, the ultimate goal is to reduce these undesirable pregnancy outcomes. Thus, recent scholarship on maternal mortality and morbidity in developing nations has mainly focused on optimizing maternal health experiences by providing access to quality maternal healthcare (Lee et al., 2012). While these efforts are significant, a crucial determiner of women's use of maternal healthcare services, which is access to credible maternal health information, has been largely overlooked. Meanwhile, evidence suggests that access to credible maternal health information directly impacts mothers' use of maternal health services, ultimately leading to improved maternal health experiences and positive maternal health outcomes (Mwangakala, 2016).

Ukachi & Anachi (2019) corroborate that "even though access to quality healthcare is a known factor associated with the achievement of good health, adequate access to maternal and child health information could be another key factor that would facilitate good maternal and child health" (p. 525). Thus, a significant additional solution to reducing maternal death and morbidity is furnishing mothers with adequate maternal health information and knowledge to make them aware of and utilize the available services (Mulauzi & Daka, 2018; Mpembeni et al., 2019). Sadly, the lack of information about the right maternal health practices, including access

to healthcare facilities, healthcare providers, and all the necessary services women need for a successful pregnancy, results in adverse maternal health outcomes, like maternal health complications.

Indeed, several studies have focused on understanding the information-seeking practices of mothers in various settings using varied methods (Dasuki & Zamani, 2019; Johnson, 2015; Kassim, 2020; Owusu-Addo et al., 2016; Zhu et al., 2019). However, these studies have heavily concentrated on how these mothers seek maternal health information, the sources they use, and the challenges they encounter. Notably absent from these studies is an analysis of the women's perspectives on the credibility and trustworthiness of the information they retrieve from these sources, as well as how they are able to verify the accuracy of the information. The few studies highlighting the credibility of maternal health information tend to only scratch the surface. While these studies have discussed topics such as information overload and the accuracy of maternal health information, they do not specifically examine the processes mothers go through to verify information accuracy (e.g., Taheri et al., 2021). Additionally, the culture and agency of the mothers in sourcing maternal health information and the structures that support or limit access to accurate maternal health information or lack thereof are not interrogated in these studies. Further, few have focused explicitly on misinformation (Bryant & Levi, 2012; Diamond-Smith et al., 2012). Among these few, there are still limitations. These studies and their limitations are discussed in the literature review section.

Since we are in the era of fake news and misinformation spreads rapidly (Wang et al., 2019), it has become crucial to examine the penetration of misinformation into maternal health spheres. Wang et al. (2019) observe that although misinformation affects all areas of life, it presents significant problems in health, in particular, because misinformation can lead to a delay

in seeking care or preventing effective care. However, studies on health misinformation have been heavily quantitative and concentrated in areas like epidemics, pandemics, and vaccines, among other "notable" public health conditions. While health misinformation presents negative consequences for individuals, little is known about its impact on maternal health. Moreover, scholarly efforts to understand health misinformation, in general, have been top-down, ignoring the voices and lived experiences of those on the margins. Additionally, these studies have not explored the intersection between individuals' indigenous knowledge and scientific knowledge in relation to health misinformation.

Considering the outlined limitations of existing literature, the purpose of this qualitative study is to understand how Ghanaian mothers make meaning of maternal health misinformation within their culture. Specifically, the study examined (1) how Ghanaian mothers identify the problem of maternal health misinformation, (2) their involvement with the phenomenon, (3) the constraints in correcting misinformation, (4) how they draw upon prior experiences and knowledge to make meaning of the problematic situation of maternal health misinformation. This phenomenon is examined using qualitative research methods, as these methods allowed me to create a discursive space where the participants' lived experiences were prioritized. Carefully examining the information mothers consume during pregnancy, childbirth, and postpartum is necessary for designing culture-centered campaigns that target identifying and correcting maternal health misinformation, ultimately fostering positive maternal health behaviors. Thus, guided by the situational theory of problem solving (STOPS), I pose the following research questions:

1. How do Ghanaian mothers identify maternal health misinformation?
2. How involved are Ghanaian mothers with maternal health misinformation?

3. What challenges do Ghanaian mothers face when correcting maternal health misinformation?
4. How do Ghanaian mothers draw upon their prior knowledge about and experiences with pregnancy, birth, and postpartum to unpack the problematic situation of maternal health misinformation?

Summary of Methods

In this dissertation, I used qualitative methods to collect and analyze data. Specifically, I conducted semi-structured interviews to examine how Ghanaian mothers make meaning of maternal health misinformation within their culture. The participants were recruited using purposive sampling. Finally, I used thematic analysis to analyze the data collected from the interviews to answer the research questions.

Operational Definitions

This study is anchored by two core areas: maternal health and misinformation. I provide a detailed review of these concepts in the literature review. However, I render operational definitions of these terms here to establish a clear understanding of how I used these terms in this study.

Maternal Health

The WHO (n.d.) defines maternal health as the health of women during pregnancy, childbirth, and the postnatal period. The WHO acknowledges that each phase should be a positive experience that ensures that women and their babies reach their full potential for health and well-being (WHO, n.d.). Over the years, maternal health has been of utmost importance to

countries as all hands are on deck to reduce maternal mortality, a marker of national health and well-being (Crear-Perry et al., 2021). This approach is justified because maternal death is a commonly used maternal health outcome. Maternal health prevents death, complications, or disabilities (Mulauzi & Daka, 2018).

Although the WHO's definition has shaped global health for a very long time, it has been critiqued as having a narrow or restrictive outlook on women's maternal health. One notable critique comes from Knaul et al. (2016), who argue that maternal health should go beyond the pregnancy, birth, and immediate postpartum phases to encompass a woman's overall health and well-being. While their perspective holds value, this study adopts the WHO's definition of maternal health because the study's scope is limited to examining maternal health misinformation during these specific phases of maternal health. Therefore, whenever *maternal health* is mentioned in this dissertation, I mean *the health of women during pregnancy, childbirth, and the postnatal period.* In this study, I focus on all three periods of maternal health - pregnancy, birth, and postpartum because most existing studies have concentrated on one or two of these phases, creating a lack of comprehensive understanding of maternal health.

Misinformation

Although misinformation is widespread, particularly during the Covid-19 pandemic, defining it is exceedingly challenging because the benchmarks scholars often use to detect misinformation are sometimes moving targets (Vraga & Bode, 2020; Wang et al., 2022). Misinformation is used primarily interchangeably with related terms such as rumors, misleading advertising, fake news, and conspiracy theories (Tan et al., 2015; Wang et al., 2022). Cacciatore (2021) describes misinformation as a catch-all term used to describe all other related terms.

Wang et al. (2022) assert that using these terms interchangeably indicates a lack of understanding of the differences among false, unsubstantiated, and inaccurate claims. That said, there are numerous definitions of misinformation by different authors. Although scholarly disagreements characterize misinformation, I share some definitions that reflect the focus of this study. For instance, Dai et al. (2021) explain misinformation as "any piece of information that is retracted or corrected for its untruthful representation of an event" (Dai et al., 2021, p. 1041). Similarly, Lewandowsky et al. (2012) define misinformation as any piece of information that is initially processed as valid but is subsequently retracted or corrected.

From these definitions, an understanding emerges that misinformation is inaccurate information that can be misleading, needs to be corrected with expert opinion, and retracted. In addition, misinformation can have dire consequences for individuals. Lewandowsky et al. (2012) observe that "if individuals are misinformed, they may likewise make decisions for themselves and their families that are not in their best interest and can have serious consequences" (p. 107). In this study, I adopt the definition of Southwell et al. (2018). The authors explain misinformation as "*false information that can mislead people even if unintentionally promoted or mistakenly endorsed as being true*" (p. 4).

Health Risks

Health risk in the context of this dissertation means "the chance or likelihood that something will harm or otherwise affect your health" (National Institutes of Health, 2016, para. 4). This dissertation includes health risks because the lack of adequate and accurate maternal health information places mothers at risk of experiencing maternal health complications (Mpembeni et al., 2019). Therefore, it is necessary to examine how mothers' understanding of

the implications of consuming maternal health misinformation informs their communicative behaviors in relation to maternity.

Implications of Study

This study has both practical and theoretical implications. Practically, it provides significant insights into the untapped field of maternal health misinformation in Africa, particularly Ghana. First, it gives an insight into how mothers encounter maternal health misinformation, their level of connection to the problem of maternal health misinformation, and the challenges they face in correcting misinformation. The study also reveals how mothers rely on their cultural knowledge and experiences to make meaning of maternal health misinformation. Therefore, the significant findings of this study will serve as a foundation for designing culture-centered maternal health interventions to curb health misinformation.

Theoretically, this study contributes to the public-centered literature in PR that seeks to move organizations' interests from the core of strategic communication to the publics' domain (Botan & Taylor, 2004). Thus, this study aims to create a discursive space for Ghanaian mothers to share their perspectives and lived experiences on maternal health misinformation. Undertaking a research project on maternal health guided by a PR theory disrupts the dominant organization-centered frame through which PR concepts are traditionally explored. Additionally, it challenges the view that PR theories are restrictive and cannot be applied to other communication concepts. This study provides evidence from a different sociocultural environment to further augment PR researchers' and practitioners' understanding of publics, especially those whose voices have been erased from the mainstream.

Finally, integrating a PR theory (STOPS) and a health communication theory (CCA) demonstrates the applicability of the theories to understanding concepts like maternal health misinformation and publics' agency within the African sociocultural context.

This first chapter has provided a background on the phenomenon of maternal health information and the importance of accurate maternal health information. The next chapter, the literature review, covers a review of the literature on maternal health, health misinformation, and the theories - STOPS and CCA. The chapter concludes by demonstrating a connection between the theories and concepts.

Chapter 2 - Literature Review

In the following sections, I examine existing literature on the core concepts of the study, maternal health information, misinformation, and health misinformation. I also review the extant literature on the framework and theory that guide the study, the culture-centered approach (CCA), and the situational theory of problem solving (STOPS).

The research context

Ghana is a West African country with approximately 34 million people (World Population Review, n.d.). Ghana has a clear north and south divide. The north is agriculturally dominant, characterized by low population density, relatively far from large cities, and has rural areas that mainly engage in farming (Diao et al., 2019). Conversely, the south is more urbanized, densely populated, and less dependent on agriculture (Diao et al., 2019).

The rural-urban divide is another significant divide that influences infrastructure and resource distribution in Ghana. Since the urban areas in Ghana are densely populated, mainly due to rural-urban migration, these areas have more resource allocations and infrastructure compared to the rural regions (Abekah-Nkrumah & Abor, 2016). Contrarily, rural areas tend to have poor services (Somanje et al., 2020).

In terms of healthcare, most hospitals are in urban areas, whereas health centers serve rural populations. Studies have shown that urban dwellers mostly live closer to health facilities than their rural counterparts (Abor et al., 2011). However, rural dwellers have other factors that inhibit their use of health facilities. These factors include "poor road infrastructure, longer average distance to health facilities in rural areas, and the skewed distribution of health facilities and health personnel in favor of urban centers" (Abekah-Nkrumah & Abor, 2016, p. 9), making it challenging for rural mothers to access maternal healthcare.

Although these stark differences exist regarding resources and infrastructure allocation, systems such as tradition, culture, and family ties are not easily distinguishable based on the rural-urban divide (Somanje et al., 2020). This is because Ghana is essentially a collectivist society. Hofstede (2011) asserts that in collectivist cultures, "people from birth onwards are integrated into strong, cohesive in-groups, often extended families (with uncles, aunts, and grandparents) that continue protecting them in exchange for unquestioning loyalty and oppose other ingroups" (p. 11). Like many African cultures, Ghana is collectivist and based on the extended family system (Abdullah et al., 2023; Donkor & Andrews, 2011).

Pregnancy, birth, and postpartum within the Ghanaian cultural context

This collectivist culture shapes maternal health in several ways. First, collectivist culture creates the opportunity for communal support during maternity. In many instances, new mothers are cared for by the older women in the family. This can include the new mother's mother, mother-in-law, aunties, and sisters with birth experience. This social support has proven advantageous for mothers as it helps improve maternal well-being (Aynalem et al., 2023).

In addition to the communal nature of maternity, Dako-Gyeke et al. (2013) espouse that the Ghanaian culture perceives pregnancy as a potentially dangerous period where pregnant women need to be protected spiritually. In some instances, pregnant women's use of health facilities during pregnancy and delivery is also determined by older female relatives or traditional birth attendants (Dako-Gyeke et al., 2013). This means health decisions are not made by the individual but by the family (Donkor & Andrews, 2011).

This communal form of maternity means that the time-tested methods are transferred during that period (Otoo et al., 2015). These cultural practices generally cover the mothers' nutrition, conduct, and general well-being. Examples include some cultures restricting pregnant

women's consumption of foods such as eggs, snails, ripe plantains, okro, among others. On maternal health, herbal or traditional medicine is used mainly to promote good health during pregnancy and prepare the woman's body for childbirth (Otoo et al., 2015). In other instances, there is a preference for traditional birth attendants. Notably, these cultural practices surrounding maternity exist alongside modern healthcare services (Otoo et al., 2015). Scholars have found that while some of these time-tested cultural practices are beneficial, some are sometimes unhelpful because they cause delays in maternal healthcare seeking, which can present maternal health complications (Adatara et al., 2019; Arzoaquoi et al., 2015; Aynalem et al., 2023).

The WHO shows that Ghana has a maternal mortality ratio (MMR) of 308 deaths per 100,000 births and indicates that 78.9 % of all births occurred in the presence of skilled health personnel in 2017-2018 (WHO, n.d.). About 75% of these deaths are caused by postpartum hemorrhage, infections, pre-eclampsia, birth complications, and unsafe termination of pregnancy (Sumankuuro et al., 2019). Interestingly, all these complications can be avoided with skilled attention (Sumankuuro et al., 2019). Therefore, to reduce maternal mortality and morbidity and remove access barriers, Ghana introduced free delivery care in 2005 and free antenatal care (ANC) in 2008. In 2008, the Community-based Health Planning Services (CHPS) was introduced to fulfill the Universal Health Coverage target and provide healthcare to persons in rural and remote locations (Ameyaw et al., 2021). However, despite the free maternal healthcare for women in Ghana and the CHPS program, maternal deaths are still unacceptably high (Dalaba et al., 2015).

Maternal Health Complications

The WHO's report on maternal mortality indicates that although maternal mortality rates dropped by about 34% in the past two decades, about 800 women still lose their lives every day

from preventable causes related to pregnancy and childbirth. This data indicates that a maternal death occurred almost every two minutes in 2020. Unfortunately, nearly 95% of these preventable deaths occurred in low and lower-middle-income countries in 2020. This statistic reveals the jarring inequalities in access to quality health services and portrays the gap between the rich and poor (WHO, 2023). Regrettably, women in low-income countries like Ghana have a higher lifetime risk of death from maternal health. This means that a woman's lifetime risk of maternal death is the probability that a 15-year-old woman will eventually die from a maternal cause. To put the WHO's assertion in perspective, it means that whereas the probability for women in higher-income countries is 1 in 5300, it is 1 in 49 for women in low-income countries (WHO, 2023).

In addition, the WHO states that maternal mortality is attributable to complications during and following pregnancy and childbirth. However, most of these complications develop during pregnancy, and most are preventable or treatable. According to the WHO (2023), these are the major complications that account for nearly 75% of all maternal deaths: (1) severe bleeding (mostly after birth), (2) infections (mostly after birth), (3) high blood pressure during pregnancy (pre-eclampsia and eclampsia), (4) complications from delivery and (5) unsafe abortion. In Ghana, Lee et al. (2011) report the 5 top leading causes of maternal mortality as hypertensive states of pregnancy, hemorrhage, genital tract sepsis, early pregnancy deaths, and infection.

In the WHO report cited earlier, maternal deaths can be prevented by women having access to high-quality care during pregnancy, during, and after childbirth, and all births are attended by skilled health professionals (WHO, 2023). However, poor women are less likely to receive adequate care. The factors that prevent women from receiving or seeking care during

pregnancy and childbirth include limitations in the healthcare system, social determinants (e.g., income, access to education, race, and ethnicity, etc.), harmful gender norms, and external factors that contribute to instability and health system fragility (WHO, 2023). To corroborate, Kamali et al. (2018) note that other factors include poverty, distance to health services, lack of information, inadequate services, and cultural practices. The WHO (2023) observes that improving maternal health requires that barriers that limit access to quality maternal health services must be identified and addressed at both health system and societal levels. One of these barriers is the lack of access to adequate maternal health information. Thus, I discuss maternal health information in the following sections.

Maternal Health Information

Maternal health information entails the information women require during pregnancy, childbirth, and postpartum and the knowledge communicated or received concerning particular circumstances of preventive, curative, or palliative health care (Mulauzi & Daka, 2018). Mothers' access to and use of reliable health information is crucial to making informed decisions about their health and ultimately having a positive pregnancy outcome (Kassim & Katunzi-Mollel, 2017). In essence, maternal health information is vital because it can provide women with the relevant knowledge to help them make informed decisions and identify existing health risks for them and their children (Kamali et al., 2018; Patra et al., 2014). This knowledge can also help them prevent future health problems (Mulauzi & Daka, 2018). Ukachi and Anasi (2019) confirm that women's access to quality maternal and child health information empowers them to protect themselves from many health risks associated with their reproductive life (p. 525). Thus, adverse maternal health outcomes can be linked to a lack of adequate and accurate maternal health information (Kamali et al., 2018). In the following sections, I briefly review the

maternal health information needs, sources, and challenges women face while sourcing information and finally narrow it down to maternal health misinformation.

Maternal Health Information Needs

Women have different health needs during pregnancy, birth, and postpartum (Mulauzi & Daka, 2018). As pregnancy is a transforming stage for women, many women experience a heightened need for maternal health information to manage their pregnancies and the transition to motherhood, especially if it is a first-time pregnancy. In their study on the health information needs of pregnant women in Iran, Kamali et al. (2018) found that women need information to understand the development and care of the fetus, physical and psychological complications after delivery, pregnancy nutrition, and special tests during pregnancy. Similarly, Mulauzi and Daka (2018) revealed through their literature review on maternal health information published literature between 2000 and 2017 that the information mothers need during pregnancy includes the importance of regular checkups, place of delivery, birth preparedness, pregnancy period, nutrition, miscarriage, pregnancy complications/danger signs, sexual and family relations, fetus development, expected child, TB, HIV and malaria in pregnancy, medicines in pregnancy, family planning, and exercise.

Javanmardi et al. (2022) examined the motivations of pregnant women to seek health information. They found that the primary reasons to seek maternal health information for the participants in this study include the desire (1) to protect the health of the mother and fetus, (2) to increase maternal health knowledge, (3) to prevent recurring problems or causing complications in pregnancy, (4) reduce worry about pregnancy problems and (5) receive encouragement from a spouse, relatives, and healthcare providers. To summarize, mothers tend to need information

during pregnancy on prenatal, delivery, and postpartum care and the social and psychological aspects of maternity. Pregnancy represents the only phase during maternity where mothers actively seek information on all three phases - pregnancy, birth, and postpartum.

Expectedly, women's information needs change as they approach delivery and postpartum. However, studies remain limited regarding information seeking of women during labor and birth. During birth, women need information regarding what to expect during early labor, like the signs and symptoms of the start of labor, contractions, and the differences between labor contractions and Braxton Hicks contractions (Myhre et al., 2021). Overall, this study shows that women's early access to a suitable amount of trustworthy information at the right time and social support from midwives and partners or other supporting persons are necessary to provide a positive labor experience for the women (Myhre et al., 2021).

The transition to parenthood is marked with a significant need for information and support as most women feel stressed, experience anxieties and fears about their changing roles, and are primarily concerned about the safety of their new baby and their ability to care for the baby (Slomian et al., 2017). For example, after delivery, most women were found to need information on breastfeeding, bottle feeding, sexual relationship, weight loss, episiotomy, hemorrhoids, emotional support, sleep and rest, and varicose veins (Mulauzi et al., 2018; Slomian et al., 2017). Similarly, Guerra-Reyes et al. (2016) found that mothers sought information on breastfeeding, tongue tie and lip tie, infant health issues, and other topics they were uncomfortable discussing with their healthcare providers, like sex and depression. Although women's information-seeking practices change in each phase, it is apparent that they searched for a broader range of topics during pregnancy than in the other two phases.

Maternal Health Information Sources

Gagné et al. (2018) argue that "individuals who seek multiple sources of health information have the best capacity to address health-related concerns and information needs" (p. 392). Increasingly, women are using multiple channels to source maternal health information as "access to maternal health information is easy and readily available anytime and anywhere" (Taheri et al., 2021, p. 2). Therefore, even women with limited access to maternal health due to social inequities can at least boast of getting information through some maternal health information sources.

Criss et al. (2015) studied the role of health information sources in Hispanic mothers' decision-making during their children's first 1000 days of life. They found that the participants used healthcare providers, interpersonal, self-following intuition, the internet, and television for maternal health. In this study, the participants reported that although their healthcare providers are their trusted source of maternal health information, they often relied on the internet as it was more convenient.

Similarly, Kamali et al. (2018) found that mothers used the internet, physicians, and family/friends/colleagues as sources of maternal health information. Most of the participants in this study preferred the internet or family/friends/colleagues as these were more convenient because they provided the needed information whenever they required it. However, healthcare providers were the primary and most important source of information (Kamali et al., 2018). Thus, out of all the sources, healthcare providers emerged as the most trusted source of maternal health information for mothers (Criss et al., 2015; Kamali et al., 2018). Most women interact with their healthcare providers during their appointments during pregnancy, childbirth, and the early postpartum stages.

Although combining multiple sources of maternal health information positions mothers to tackle health concerns, not all of these sources provide credible maternal health information. Unfortunately, inaccurate maternal health information is received from the same sources as general maternal health information; therefore, in the following sections, I delve into health misinformation, its sources, correction strategies, and how these relate to maternal health.

Health Misinformation

The Covid-19 pandemic that wreaked havoc worldwide highlighted the pervasiveness of health misinformation, with many researchers empirically exploring the topic in-depth during the Covid-19 years (Nan et al., 2022). Nan et al. (2021) observe that reliable health information is crucial to making informed decisions about one's health. Unfortunately, although the internet has become the go-to resource for seeking health information, it has been critiqued as a platform laden with inaccurate information; hence, users are easily exposed to inaccurate health information online (Chrousos & Mentis, 2020; Swire-Thompson & Lazer, 2020). Even with the pervasiveness of health misinformation, scholars have yet to reach a consensus on what constitutes health misinformation. This dissensus on the definition of health misinformation can be attributed to the multiplicity of health conditions (Suarez-Lledo & Alvarez-Galvez, 2021).

Swire-Thompson and Lazer (2020) define "health misinformation as information that is contrary to the epistemic consensus of the scientific community regarding a phenomenon" (p. 434). Similarly, Nan et al. (2021) define health misinformation as "a specific type of misinformation that contains one or more health-related claims inconsistent with scientific consensus" (p. 318). Chou et al. (2018) also took the scientific approach and defined health misinformation as "a health-related claim or fact that is currently false due to a lack of scientific

evidence" (p. 2417). Suarez-Lledo and Alvarez-Galvez (2021) define health misinformation as a health-related claim based on anecdotal evidence, false or misleading, owing to the lack of existing scientific knowledge. Wang et al. (2022) proposed an all-encompassing definition of health misinformation after reviewing current definitions. They define health misinformation as "a health-related claim or fact that is currently false due to its contradiction to expert consensus and/or best available evidence at the time, inaccurate due to its use of incomplete evidence, or unsubstantiated due to a lack of evidence" (p. 10). The significant idea that characterizes the definitions above is that for misinformation to be categorized as health misinformation, it must be inaccurate information on a health-related topic and lack scientific evidence or consensus. It is crucial to understand health misinformation because it poses risks to individuals as "it can delay or prevent effective care, in some cases threatening the lives of individuals" (Wang et al., 2019, p. 1).

Sources of Health Misinformation

Health misinformation is disseminated through various sources (Tan et al., 2015). Nan et al. (2021) identify the media, industry, government and politicians, and healthcare providers as sources of misinformation. First, the media has been recognized as a common source of health misinformation. Nan et al. (2021) note that journalistic media disseminates misinformation through oversimplification, misrepresentation, and overdramatization, which happens when reporters attempt to repackage science for a mass audience and to adhere to the journalistic principles of balance (p. 319). The traditional media spreads health misinformation as news, widely circulated or amplified by Internet news and users (Nan et al., 2021). Individuals encounter misinformation on the internet through searches, content generation, and engagement

with mobile apps (Swire-Thompson & Lazer, 2020). Also, misinformation can be disseminated online through works of fiction in movies, etc. (Lewandowsky et al., 2012).

Secondly, health misinformation can be circulated by healthcare providers. Some providers spread health misinformation by not having adequate or updated information on the topic or adhering to prevalent false beliefs in their specialty. Also, with the internet affording everyone the chance to disseminate information, these practitioners can share misinformation online. Thirdly, informal groups or community networks are another source of misinformation. An example is mom groups (Bautista et al., 2021). These groups tend to circulate rumors and misinformation through trust and knowledge networks created among ethnic or racial subgroups due to social constraints (Heller, 2015 in Nan et al., 2021).

The prevalence and diversity of health misinformation cannot be overstated, particularly in this era where the Internet and social media facilitate the fast spread and impact of misinformation (Bautista et al., 2021; Bode & Vraga, 2018; Wu et al., 2022). The Covid-19 pandemic has proven that social media indeed facilitates the spread of misinformation as most of the misinformation around the pandemic came from social media platforms such as Twitter (now X), Facebook, and YouTube (Bautista et al., 2021; Suarez-Lledo & Alvarez-Galvez, 2021). With the rate at which health misinformation spreads on social media, WHO considers it a public health threat, especially during the pandemic. The WHO (2021) reported that nearly 6000 people worldwide were hospitalized during the first three months of the Covid-19 pandemic due to Covid-19 misinformation. Some of the notable misinformation surrounding Covid-19 were efforts to discredit the threat of Covid-19 and conspiracy theories that vaccines could alter human DNA (WHO, 2021). The misinformation around the pandemic caused low vaccine acceptance among the population. Given this example, misinformation negatively impacts

individuals' health behaviors. Therefore, finding a solution to this infodemic[1] and info-deficiency, particularly for women in the Global South, is significant to saving lives and increasing individuals' adoption of public health measures like mask-wearing and hand hygiene (Khamis & Campbell, 2020; WHO, 2021).

Suarez-Lledo & Alvarez-Galvez (2021) observe that although social platforms encourage the spread of relevant health knowledge, they equally present social and health risks. Unsurprisingly, they note that false and misleading health information spreads faster than scientific knowledge (Suarez-Lledo & Alvarez-Galvez, 2021). While access to adequate information is crucial to a mother's motherhood journey, there is a notable limitation in the literature on health communication and misinformation as studies on maternal health misinformation remain limited. In the next section, I review maternal health information.

Maternal Health Misinformation

One of the dangerous implications of misinformation on maternal health is the fact that it can easily undermine the significant efforts by health systems to reduce the current maternal mortality rates to meet the sustainable development goal (SDG) target 3.1, which aims to reduce the global maternal mortality ratio to less than 70 per 100,000 live births by 2030 (WHO, n.d). Despite the dangerous nature of misinformation and its classification as a public health concern, few studies have sought to understand its impact on maternal health. However, studies abound on misinformation in areas such as disease prevention and epidemics (e.g., Nyhan & Reifler, 2015) and pandemics (e.g., Zhou et al., 20212). Currently, there is no concrete work on maternal health

[1] The WHO explains infodemic as an overabundance of information — some accurate, some not — that spreads alongside a disease outbreak.

misinformation, especially in Ghana. However, few studies have attempted to understand the importance of accurate maternal health information. For example, Bryant and Levi (2012) assessed the accuracy of the medical information provided by crisis pregnancy centers (CPC) in North Carolina using a "secret shopper" survey of thirty-two CPCs. The researchers found that most of the CPCs presented inaccurate information regarding abortion and its risks to potentially pregnant mothers through in-person interactions, phone calls, and website information. Giving inaccurate information to women needing abortion services violates beneficence, autonomy, and justice – the ethical principles governing medicine. The authors conclude that unregulated and ideologically driven CPCs should not be allowed to mislead women with inaccurate information.

Additionally, Diamond-Smith et al. (2012) found that women's fear of the side effects of family planning is fueled by misinformation. The authors used qualitative interviews with women from three countries (India, Nepal, and Nigeria) to assess what they feared about family planning, how they acquired this knowledge, and how it impacted their decision-making. Fear of side effects based on rumors was prevalent among the participants. Some information was based on misinformation, and others were based on real possible side effects. The authors conclude that family planning use will increase if the participants do not fear the side effects.

Similarly, Kakaire et al. (2014) found that myths and misinformation negatively impacted women's utilization of long-acting reversible contraceptive (LARC) methods in Uganda. The myths and misinformation were centered on unfounded fears of infertility, delayed return to fertility, and the development of cancer following the use of LARC. From the literature, contraception is one of the areas of maternal health that scholars have identified as laden with misinformation.

Finally, maternal health misinformation has been explored in relation to Covid-19 (Ameyaw et al., 2021; Aranda et al., 2022). The pandemic heightened researchers' efforts to understand how misinformation on the pandemic impacts maternal health access and use. Unfortunately, these studies were limited in that they presented brief insights into how pandemic misinformation affected maternal healthcare and did not comprehensively examine how maternal health misinformation threatens and derails efforts to improve maternal health access and service utilization to prevent maternal mortality and morbidity.

Correction of Misinformation

Misinformation impacts many areas of society, from politics to health, and scholars agree that misinformation is a canker that must be tackled head-on. However, its correction is difficult and expensive as multiple factors, such as the audience's characteristics, the original misinformation, and the medium of correction, inform the success of corrective interventions (Southwell et al., 2015).

Dai et al. (2021) define misinformation correction as a "process of updating existing knowledge about an event" (p. 1041). Thus, during information correction, "individuals encode new information about a subject that often conflicts with what they already know about it (Dai et al., 2021, p. 1041). Although new media outlets are infamous for spreading misinformation, they are a place where misinformation can be corrected. Whereas there is a ton of unproven health information shared on social media, there is also an equal amount of scientific literature, medical professionals, government representatives, and pseudoscientific research (Bode & Vraga, 2018). Users of a platform can also correct information. Bautista et al. (2021) affirm that any person who uses social media can become a digital first responder. This form of correction is known as social correction. Social correction is correction by a peer, and algorithmic correction is

correction by a platform (Bode & Vraga, 2018). There is also expert correction**,** including corrections from government agencies like the Centers for Disease Control and Prevention (CDC), non-government organizations, or a news article." (Bautista et al., 2021; Bode & Vraga, 2018). Best practices for correcting misinformation include simple, brief, and strong retractions, emphasizing facts, and providing an alternative account (Lewandowsky et al., 2012).

Some earlier studies have sought to understand the strategies used to correct misinformation. For instance, using quantitative methods, Bode and Vraga (2018) examined how everyday users and platform-generated algorithms can reduce health misperceptions on social media. The results of the study indicate that comments are as effective as related stories produced by the platform aimed at correcting health misinformation for breaking health issues for which public beliefs likely remain malleable. Based on the findings, the authors suggest that a clear messaging strategy for public health authorities could be to encourage users to refute false or misleading health information clearly, simply, and with evidence and provide appropriate sources to accompany their refutation. In the authors' view, this approach is pragmatic compared to encouraging refuting information in algorithms that produce stories related to health information. Taking the complications around using algorithms to correct misinformation into consideration, Bode and Vraga (2018) highlighted some benefits of social correction. They note that social correction might help reach diverse populations who may otherwise ignore messages through official channels. The authors conclude that "correction can work when done quickly and clearly and provides supporting evidence either through a related stories algorithm or a link offered by a social contact" (p. 1138).

There is a consensus among misinformation scholars that using verified information to correct misinformation is a straightforward solution to the problem (Dai et al., 2021; Walter &

Murphy, 2018). However, there is still much to be understood about this correction strategy. For instance, “what conditions facilitate information recipients’ cognitive reliance on the correct information and relinquish the information that is proved inaccurate?” (Dai et al., 2021). Thus, Dai et al. (2021) took a different approach to examine misinformation correction. Using a two-wave online experiment, their study tested how the effectiveness of misinformation correction is influenced by (1) message order – whether the correction is presented before or after misinformation and (2) message content – whether the correction is accompanied by a message that enhances the coherence between misinformation and correction message. The results of the study indicated that a correction of the misinformation was most effective when it was delivered after the misinformation and with a debiasing message.

Additionally, healthcare providers can serve as role models in correcting misinformation as they possess extensive clinical knowledge they can share (Bautista et al., 2021b). Also, there is overwhelming evidence that mothers deem their healthcare providers a source of credible and reliable maternal health (Khamis & Agboada, 2023; Taheri et al., 2021; Owusu-Addo et al., 2016). While these studies provide relevant insight into misinformation correction, they are limited as they do not investigate the factors influencing individuals' misinformation correction. I discuss the two theories, CCA and STOPS, in the following sections.

Culture-Centered Approach

With the complexity that currently characterizes health communication, it has become increasingly important to critically consider culture in planning health interventions. The culture-centered approach (CCA) developed by Mohan Dutta is a theoretical framework that places culture at the core of health communication practices (Dutta, 2007). The framework advocates for the attempt to change social structures surrounding health through dialogue with members of

a particular culture to create spaces for marginalized cultural voices (Dutta, 2007). Therefore, the central idea of the CCA is listening to the voices erased from the mainstream and who are particularly silent or voiceless in decision-making processes (Dutta et al., 2013).

The CCA challenges the dominant approach to health promotion that seeks to inform change from an individual level by focusing on the target population's knowledge, attitudes, and behaviors. Ultimately, this dominant approach ignores the sociocultural and economic contexts within which health experiences are situated (Dutta, 2007). Dutta (2007) argues that the CCA is concerned with how the health promotion efforts that align with the dominant approach to health intervention seek to create, reiterate, and sustain conditions of the subaltern. The approach ultimately "seeks to interrupt the dominant paradigm of health promotion by introducing subaltern voices into the discursive space" (Dutta, 2007, p. 306). By moving the subaltern voices into discursive spaces, the CCA is able to present alternative constructions of health.

Therefore, the CCA proposes a dialogic engagement with subaltern communities to understand how health meanings, health risks, and health issues are constructed and how solutions can stem from these dialogic engagements with the subaltern community members (Dutta, 2007). Through a dialogic engagement, the CCA activates a discursive space where subaltern voices are now heard instead of obliterated. In this regard, this dissertation seeks to shift the concentration of health misinformation research from the core, where experts determine what misinformation covers, to the periphery, where subaltern voices can also participate in discussions on misinformation. The CCA focuses on the interaction between three main concepts: culture, structure, and agency. These are discussed in the next section.

Culture, Structure, and Agency

In the CCA, culture is " a complex and dynamic web of meanings that is continuously in flux, as it interacts with the structural processes that surround the culture" (Dutta, 2007, p. 310-311). Thus, culture is expressed through the meanings that the cultural participants co-construct, and "these meanings are located within the local context of the culture" (p. 311). Although culture is static, culture within the CCA also carries a fluid element that constantly shifts as the culture responds to statewide, national, and global changes in politics, economics, and communication flow (Dutta, 2007, 2018). Therefore, culture shifts as individuals regularly participate in meaning-making (Dutta, 2014). Thus, how people experience health, and by extension, health information, is embedded within their cultural contexts. In the CCA, objective and universal claims are underscored by individuals' cultural knowledge claims (Dutta, 2014). In this study, the explication of culture within the CCA enabled me to analyze how the mothers' culture influences how they make meaning of maternal health misinformation.

According to Dutta (2007), "structure refers to the organization of social systems, the patterns of distribution of resources, and the patterns of control of these resources that are inherent in the production and reinforcement of social inequities" (p. 319). Structures include the communicative processes, rules, roles, and rituals that comprise participation and representation (Dutta, 2014). Also, structures are visible within the state, civil society organizations, and for-profit organizations. These institutions shape the life experiences of those in the margins (Dutta, 2007). Structures also encompass "elements such as medical services, transportation, food, and shelter, which are deeply connected to the material resources available locally to individuals and communities" (Basnyat & Dutta, 2012, p. 275). Expectedly, culture and structures are intricately intertwined as they mutually influence each other. The CCA allows researchers to interrogate

how structure impacts cultural members' health choices. The CCA also reveals how structures constrain, limit, and define what is available to cultural members and what is not (Dutta, 2007). In this study, structures helped me understand how institutions, rules, roles, rituals, and communicative processes limit mothers' access to credible maternal health information. It enabled me to analyze how health structures, such as the Ministry of Health (MoH) and Ghana Health Service (GHS), prevent them from identifying and correcting misinformation if applicable.

Agency focuses on the capacity of cultural members to enact their choices and to participate actively in negotiating the structures that constrain their access to resources (Dutta, 2014). Enacting agency can manifest in collective forms of solidarity or be seen through individuals' acts of meaning-making to negotiate structures of oppression and marginalization (Dutta, 2014). In this study, the concept of agency enabled me to interrogate how the mothers negotiated the structures that restrain their access to credible maternal health information and restrict their ability to correct misinformation.

The CCA in Health Communication

The CCA is anchored on the idea that cultural voices need to be centered in articulating health problems and solutions (Dutta, 2007). Therefore, culture becomes the theoretical lens through which the dominant paradigm is critiqued. By engaging in meaning-making with cultural participants, alternative theories of health are generated. Ultimately, these alternative theories provide health communicators the avenues to challenge and disrupt the top-down approach, the dominant paradigm and status quo in health communication.

In this dissertation, the CCA was used as an entry point or an approach to understanding the cultural underpinnings of Ghanaian mothers' experiences and perspectives on maternal

health to ultimately foster the planning of maternal health interventions that disrupt the dominant approaches to maternal health interventions or interventions that seek to serve the interests of others (structures such as institutions) above the mothers. By taking the culture-centered approach, which centralizes the mothers' experiences, this dissertation reveals alternative constructions of maternal health misinformation within the local cultural contexts of these mothers, a missing piece in the health misinformation literature.

Scholars have used the CCA to explore different topics within different contexts in health communication. Within the maternal health context, Basnyat and Dutta (2012) used the CCA to interrogate how local cultural and structural contexts enable Nepalese women to (re)construct motherhood. It further examined how these alternative constructions of motherhood allow the participants to enact agency in their reproductive health choices. Using open-ended and semi-structured interviews with 50 Nepalese women at a health clinic in Nepal, the authors found that the participants enacted agency through the constant construction and reconstruction of their reproductive health, which is informed by their lived experiences, knowledge, and expectations within their microculture and structures. Constructions of reproductive health challenge the dominant Eurocentric discourse and assumption that Third World women lack agency and are monolithic. It finally highlights the significance of including the voices of third-world women in reproductive health discourses, as the complexities around reproductive health can only be revealed when these women's lived experiences are privileged and their voices amplified.

In another study, Yehya and Dutta (2010) explored the intersections of religion and health in the context of aging among elderly Druze women and their caregiver daughters using in-depth interviews and information conversations. The authors found that the women constructed health within the context of their faith, expressed issues concerning mistrust of

modern medicine, shared their polymorphic health experiences, and viewed health as a structure. The authors' creation of a discursive space enabled the voices of the elderly Druze women and their caregivers to be brought to the core. By articulating their lived experiences and health narratives, the participants challenge the dominant health narrative and provide alternative health interpretations based on their local contexts. The authors conclude that health communication scholars should pay attention to the "fragmented and continually negotiated nature of health meanings, disrupting the universal appeal of the biomedical model" (Yehya & Dutta, 2010, p. 855).

The studies highlighted here enabled me to understand how the participants' culture, the local contexts within which they experience health, and structures shape the meanings they make of maternal health misinformation in Ghana. Essentially, these studies helped make sense of the intersections between the local knowledge of the mothers versus the scientific knowledge espoused by biomedical experts.

Linking the CCA to this Study

This study used the CCA as a framework that enabled me to understand how culture influences Ghanaian mothers' meaning-making process of maternal health misinformation. Mainstream discourses on maternal health in Ghana have been predominantly informed or dominated by Western understandings of health. For instance, these interventions are mainly geared towards safe delivery and access to care facilities, primarily using quantitative methods while ignoring the impact of the culture, agency, and structures that might inform a mother's maternal health information-seeking processes. Moreover, current approaches to curtailing maternal mortality and morbidity position women in the global south as passive recipients of interventions who lack agency (Basnyat & Dutta, 2012). However, by using the CCA in this

study, I hope that Ghanaian mothers' voices are no longer obliterated from discursive spaces, nor are they viewed as passive recipients of interventions, but their intricate experiences are brought to the fore. Therefore, the CCA challenges the erasure of these women's experiences and ultimately foregrounds their experiences in defining and addressing health misinformation on maternal health.

Situational Theory of Problem Solving

The situational theory of problem solving was used to understand mothers' communicative behaviors in identifying and correcting maternal health misinformation. Kim and Grunig (2011) introduced the situational theory of problem solving (STOPS) as an extended and generalized version of the situational theory of publics (STP). The authors observe a shortcoming of the STP in that it presented a narrow conceptualization of active communication behaviors among publics by using only information acquisition, i.e., information seeking or attending (Kim & Grunig, 2011). However, publics do not only seek information but engage in information sharing and selection. Thus, the utility of the STP was limited. Hence, STOPS was proposed to fill these gaps identified in the earlier theory of publics. In the STOPS, active publics engage in information sharing as it facilitates problem-solving.

The STOPS is underpinned by the understanding that most human behavior, including maternal health behavior, is motivated by problem solving (Kim & Grunig, 2011). Therefore, the general dependent variable of the theory is communicative action in problem solving (CAPS). CAPS refers to "a problem solver's heightened communicative activeness in information taking, selecting, and giving as one engages in problem solving" (Kim & Grunig, 2011, p. 124). This dependent variable integrates the six communication variables in the three domains of communicative action. These three domains of communicative action are information

acquisition, selection, and transmission. The six variables within these three domains are information seeking (active) and information attending (passive) – within the information acquiring domain, information forefending (active) and information permitting (passive) in the information selecting domain, and information forwarding (active) and information sharing (passive) in the information transmitting domain. The CAPS is depicted in the table below:

Table 1

Description of the general dependent variable - CAPS

Communication action	The variables	Action	Definition (Kim & Grunig, 2011)
Information acquisition	Information seeking	Active	The planned search of the environment for messages about a specified topic.
	Information attending	Passive	The unplanned discovery of a message followed by continued processing of it.
Information selection	Information forefending	Active	The extent to which a communicator fends off certain information in advance by judging its value and relevance for a given problem-solving task.
	Information permitting	Passive	The extent to which a communicator accepts any information related to a problem-solving task.
Information transmission	Information forwarding	Active	This is a planned, self-propelled information giving to others.
	Information sharing	Passive	The sharing of information reactively only when someone requests one's opinion, idea, or expertise about the problem.

Kim and Grunig (2011) indicate that this concept "describes a problem solver's heightened communicative activeness in information taking, selecting, and giving as one engages

in problem solving" (p. 124). However, problem solvers' communicative processes are divided into passive and active components. When a problem solver is passive in the face of information, it is termed information attending.

The theory espouses that people are more likely to seek information when motivated to solve a problem (Kim & Grunig, 2011). The proponents of the theory further explain that individuals select particular kinds of information as they engage in problem-solving. However, people encounter issues like information overload or information inconsistency when they engage in prolonged information taking. During this communicative process, people develop a subjective rule of relevance to determine which information to keep and which to discard.

The Independent Variables

Kim and Grunig (2011) term the theory's independent variables perceptual, cognitive, and motivational antecedents. These are problem recognition, constraint recognition, level of involvement, and referent criterion.

Under problem recognition, a problem does not exist until publics acknowledge or recognize it. Kim and Grunig (2011) define problem recognition as "one's perception that something is missing and that there is no immediately applicable solution to it" (p. 128). Here, "a person who perceives a problem but feels incapable of finding an immediate solution to it or lacks a mechanism to narrow the perceived psychological discrepancy enters a problematic situation" (Grunig, 1968 in Kim & Grunig, 2011, p. 128). As a result, the person is likely to stop their current routine to determine a solution to the problem. Problem recognition is both a cognitive and perceptual variable. In this study, problem recognition enabled me to make sense of how the participants recognize maternal health misinformation as a problem and the steps they take in finding solutions to the problem of maternal health misinformation.

Involvement recognition is considered a perceptual variable in the STOPS. This is the extent to which a person connects themselves with a problematic situation (Grunig, 1997). Therefore, the extent and nature of an individual's communicative action are affected by their perceived connection to the problem. For example, an individual's perceived low connection is likely to result in a passive communicative behavior – thus, they engage in information attending. Conversely, when there is a perceived close connection to the problem, there is an active communicative behavior – therefore, they engage in information seeking. Kim and Grunig (2011) acknowledge the difference between an individual's actual and perceived connection and conclude that involvement recognition is a perceived connection between the self and the problem situation. Involvement recognition helped me to understand how the participants feel connected to the issue of maternal health misinformation.

Constraint recognition occurs when an individual perceives that there are obstacles in a situation that limit their ability to do anything about the situation. Kim and Grunig (2011) acknowledge that constraint recognition discourages people from engaging in communicative behaviors such as information seeking and attending. Constraint recognition helped me make sense of the barriers that limit the participants' ability to correct the maternal health misinformation they encounter.

Finally, referent criterion is "any knowledge or subjective judgmental system that influences the way in which one approaches problem solving" (p. 131). To the proponents, referent criterion can cover decisional guidelines or decision rules that are considered relevant to the current problematic situation. Referent criterion can be classified into two: (1) recyclable solutions from an individual's internal storage and (2) judging rules that stem from self-fulfilling referents such as goals, desires, or preferences within the problematic situation (Kim & Grunig,

2021). Therefore, prior problematic situations give problem solvers a referent criterion. This translates into the problem solver's communicative behaviors. If the problem solver has a recyclable referent criterion, they may search less for information related to the current problem. Sometimes, a problem might be less difficult when individuals have solutions from prior problem-solving experience (Kim & Grunig, 2021). Referent criterion enabled me to understand how the participants draw on their previous experiences with maternal health misinformation to navigate present cases of misinformation.

Although the STP used perceptual variables to explain communication behavior, STOPS does not. Instead, Kim and Grunig proposed situational motivation in problem solving as a motivational concept that mediates the effect of problem recognition, constraint recognition, and involvement recognition on the dependent variables, i.e., CAPS. Situational motivation in problem solving "represents the extent to which a person stops to think about, is curious about, or wants more understanding of a problem" (Kim & Grunig, 2011, p. 132). In this regard, motivation is no longer measured as problem recognition as was in the STP; instead, it is an effect of problem recognition.

Using STOPS in Health Communication

While the literature on STOPS is substantial in PR research, it is limited in health communication research. However, few scholars have sought to explore health communication concepts with STOPS. For instance, Shen et al. (2019) used the STOPS and quantitative methods to analyze publics' Cancer information seeking using the Health Information National Trends Survey (HINTS). The authors found that the study demonstrated the utility of the STOPS in a health information context, finding support for problem recognition, involvement recognition, and referent criterion being shown in people's information seeking of cancer-related information

and accessing health information online. By applying the theory to HINTS, the authors expanded the theory by adding a new information behavior – information accessing. Information accessing is described as being different from information seeking, as information accessing involves the active process of reviewing and retrieving acquired and stored information. Shen et al. (2019) espouse that health communicators should focus on increasing publics problem recognition and involvement recognition and offer relevant knowledge frames to enhance publics' referent criterion in designing health campaigns. Although the authors found the role of trust in information seeking and accessing to be more complicated, trust is significant as it could result in people's increased search for cancer information from any source. To the authors, adding trust to the original framework indicates the possibility of extending the theory as trust reveals the interaction among message, source, channel, and receiver characteristics, unlike the independent variables, which are all issue related.

Similarly, Kim et al. (2011) demonstrated the utility of the STOPS in the health communication context by using the STOPS to (1) explain and predict who is most likely to communicate about specific health issues, (2) segment publics to examine their communicative behavioral characteristics, and (3) explain donation behavioral intentions and to test the problem chain recognition effect. Through the findings, the authors broadened information behaviors by including communicative action in problem solving, noting that information seeking is just one of the many information behaviors publics engage in. In addition, the findings indicate that individuals' information seeking is correlated with information selection and information transmission. These studies provide a significant foundational explanation of publics' communicative behaviors in health contexts.

Misinformation, Public Relations and STOPS

With PR having its roots in propaganda, a concept closely related to misinformation and disinformation, it is interesting that scholars have not paid much attention to the role PR practice and theory play in misinformation in general. A search in some of the leading PR journals indicates that although PR plays a significant role in misinformation, research on misinformation is now gaining ground, with most studies focusing on crisis misinformation (Barnoy, 2022; Bernadas, 2021; Jin et al., 2020; Nekmat & Kong, 2019).

This focus on crisis misinformation indicates that PR has focused more on organizational rather than societal or health interests, even though PR and health communication are intricately related (Dimitrov et al., 2022). Holtzhausen (2000) corroborates that PR is a "discipline that has far-reaching effects on society, PR needs to be understood and examined in a broader social, cultural, and political context rather than in a narrowly defined organizational function" (p. 95). Similarly, Bernadas (2021) asserts that little effort has been seen from scholars concerning the role of PR in advancing public health. As health misinformation is identified as a public health concern (Nan et al., 2021), I argue that it is crucial to understand the role of PR in public health issues like health misinformation.

One of the important areas where PR's role is pronounced in health misinformation is segmentation. Health campaigns aim to tailor specific messages to specific publics (Kim et al., 2011). However, health communicators must understand publics' communicative behavior to tailor specific health messages. Therefore, understanding publics' communicative behavior will help segment them accordingly. Hence, STOPS as a PR theory presents relevant constructs to understand how Ghanaian mothers as publics of health systems or organizations make meaning of maternal health misinformation based on their cultural knowledge and experiences. In this

study, I used the STOPS to examine Ghanaian mothers' recognition of the problem of maternal health misinformation, how involved they are with the problem, the constraints they have when correcting misinformation, and how they draw upon their prior experiences to unpack the problematic situation.

Chapter 3 - Method

I adopted the qualitative approach to answer and analyze the research questions outlined earlier. Guided by the CCA and STOPS theoretical models, I used semi-structured interviews to gain a comprehensive understanding of Ghanaian mothers' perspectives on and experiences with maternal health misinformation. As a qualitative researcher who identifies with the interpretive paradigm and is guided by the precepts of CCA, my primary assumption is that meaning is socially constructed and that my aim as a researcher is to co-create knowledge and meaning with my participants by privileging their experiences (Dutta et al., 2013; Tracy, 2020). Therefore, the methodology and data collection methods I selected were guided by this standpoint. In this part of the dissertation, I detail the methods that underpin the study by first situating my methods in the interpretive paradigm.

Interpretive Paradigm

Interpretivism posits that reality is not singular; instead, there are multiple realities that are unique, simultaneous, and local (Lindlof & Taylor, 2019). Hesse-Biber (2017) observes that interpretivism "focuses on subjective experience, small-scale interactions, and understanding (seeking meaning)" (p. 48). In addition, researchers guided by this paradigm place a premium on participants' experiences and perspectives as significant sources of knowledge. Thus, "the only way to understand social reality is from the perspective of those enmeshed within it" (Hesse-Biber, 2017, p. 50). Finally, in interpretivism, the researcher's effect on the research is acknowledged or made explicit by being self-reflexive (Creswell & Baez, 2021; Tracy, 2020). Thus, as a researcher working within this paradigm, I recognize that I can only fully understand maternal health misinformation from my participants' experiences. Therefore, throughout the

data collection process, I gave primacy to the participants' experiences while acknowledging the effect I might have on the research process by being self-reflexive.

Qualitative Methodology

Qualitative research is an approach that studies a phenomenon within its natural environment, where the researcher does not manipulate the setting (Lincoln & Guba, 1985). This means that the research happens in an uncontrived, non-artificial environment where the researcher has little control over how things pan out. Tracy (2013) also explains qualitative research as an umbrella term encompassing the collection, analysis, and interpretation of qualitative data derived from interviews, documents, and observation to ultimately describe meanings, relationships, and patterns.

Additionally, researchers who identify with the qualitative method focus on emic perspectives (Tracy, 2013). This means that qualitative research reports participants' voices as it allows them to share their experiences, perceptions, and motivations. Furthermore, qualitative research draws on different methods to create a complex layer to the central phenomenon. As such, qualitative research becomes a process through which a researcher identifies a research problem (broad) and formulates questions (specific) that, if answered, bring a solution to or help address the problem (Creswell & Baez, 2021).

The qualitative research method was suitable for this study because I was interested in examining Ghanaian mothers' experiences and perspectives on the central phenomenon of maternal health misinformation. Also, I interviewed a small sample of mothers – 20, offering an in-depth understanding of maternal health misinformation.

Qualitative research provides many benefits to researchers. First, employing the qualitative method allowed me to work with smaller samples, as my focus was primarily on

depth instead of breadth. My goal was to unravel the complexities of the phenomenon of maternal health misinformation per the participants' experiences and not necessarily focus on numerical values. Also, using the qualitative method allowed me to bring the voices on the periphery to the core. In most instances, the marginalized in society, for example, women, are not able to discuss or share their realities freely. However, by interviewing these participants and ultimately presenting their views through thick description in Chapter 4, the readers of this work can see and *experience* the realities of these mothers and also hear their voices. Another significant benefit qualitative research offers its users is the interdependence between the researcher and the participants (Lindlof & Taylor, 2019). This relationship is characterized by co-creating knowledge and meaning through mutual respect, interaction, and reciprocity. Therefore, throughout the interview, I used questions that elicited the participants' experiences, accorded them respect, and ensured that I did not impose my maternal health knowledge on them.

Although qualitative research is considered naturalistic and humanizing, it is not without drawbacks. One of the significant downsides discussed by scholars is its time-consuming nature. I experienced this at different stages of the process, but it was more pronounced while recruiting participants for the study and scheduling interviews. Getting a time that worked well for myself and the participant was sometimes challenging. Since Ghana is four or five hours ahead of Eastern time, depending on the season, there were several days that I had to conduct interviews in the wee hours of the morning. Another time-consuming aspect was cleaning the transcript. Although I had used an AI service (as discussed in the data collection), I still had to go through the audio and transcript as though I was transcribing afresh. The AI could not adequately capture the accents of the participants and me. Also, there were times when the participants made

references in a local language that the transcription tool could not process. This was a daunting task, as the reason for using the AI tool was to cut the transcription time in half. Although this was time-consuming, it was beneficial as it enabled me to immerse myself in the data. In other words, it was a double-edged sword.

Another downside is that qualitative research cannot be generalized. As mentioned earlier, qualitative researchers do not focus on breadth but on depth. Therefore, a statistical generalization is not the goal. And since qualitative researchers work with the understanding that there is no universal reality but multiple realities, it will be meaningless for them to generalize statistically across populations. However, the meaningful contribution is that qualitative researchers are able to engage in analytic generalizations where qualitative researchers, by giving detailed accounts and ensuring that there is coherence among their research goal, methods, theories, and literature, are able to position their studies such that others can replicate or transfer into other settings.

Research Sample

Sampling refers to the “selection of units (i.e., people, organizations, locations, events) for inclusion in a research project” (Phillips, 2014, p. 541). Qualitative researchers mostly use purposeful or purposive sampling to select the participants and sites that can provide or give the necessary information on the central phenomenon (Lindlof & Taylor, 2017, 2019). Tracy (2020) corroborates that qualitative researchers are primarily interested in selecting a sample that aligns with the goals of the research project. In her view, purposeful sampling is when researchers "choose data that fits the parameters of the project's research questions, goals, and purposes" (p. 83). I used the purposive sampling technique because it allowed me to interact with mothers with first-hand knowledge of maternal health misinformation. Therefore, the sample covered

Ghanaian mothers who are either expecting or have children five years or younger who have experienced maternal health misinformation.

Daymon and Holloway (2011) assert that sampling should cover three main areas: where to sample, what to sample, and whom or what to sample. Additionally, the pervasiveness, multifaceted nature and effects of health misinformation require that researchers probe misinformation through a multidimensional lens, like recruiting different participants. Therefore, for this study, I recruited Ghanaian mothers who are either primiparous (first-time mothers) or multiparous (mothers who have birthed multiple times) women to participate. This sampling strategy enabled me to capture diverse opinions, as the lived experiences shared by these mothers varied based on the number of times they have experienced pregnancy and birth.

Specifically, I recruited the participants based on the following criteria. First, the mothers should have been pregnant or given birth within the past five years. Six participants were primiparous mothers, 11 were multiparous mothers, and three were pregnant with their first at the time of the interviews. Second, the mothers should have been pregnant or given birth in Ghana and currently residing in Ghana. All the mothers had experienced maternal health in Ghana. Third, the mothers must be 18 years or older. Individuals 18 years and above are considered adults per the IRB requirements and the laws of Ghana. Therefore, these individuals can express their own views or opinions without parental oversight or approval. All the participants were more than 18 years of age, with the youngest being 27 years old and the oldest being 45 years old at the time of the interviews. Finally, the participants must have basic English proficiency. English proficiency was a requirement because although there are over 79 languages in Ghana, I am only fluent in one of those languages. Thus, interpreters would be necessary if participants were allowed to speak their preferred language. Given that pregnancy, childbirth,

and postpartum phases are sensitive stages in a woman's life, I avoided using interpreters during the interviews to maintain the confidentiality and privacy of these women's experiences. All the participants were educated and could express themselves in basic English.

Table 2

Participant Demographics (N = 20)

Pseudonym	Age	Number of children	Ethnic group	Education	Age of the last child	Date of interview	Recording	Duration of interview (rounded to the nearest minute)
Lisa	37	3	Ewe	Masters	Four years	9/13/23	Yes	55
Gladys	28	1	Akuapim	First degree	Three months	9/14/23	No	39
Joanna	35	2	Akan	First degree	Few Weeks	9/19/23	No	65
Sandra	34	3	Akan	Diploma[2]	21 months	9/22/23	Yes	39
Akua	39	3	Ga	First degree	Three weeks	9/22/23	Yes	33
Edith	37	1	Akan	First degree	22 months & pregnant	9/23/23	Yes	34
Sylvia	41	4	Akan	First degree	14 months	9/23/23	Yes	50
Ama	28	0	Ga	Diploma	Four months pregnant	9/23/23	Yes	33
Theodora	40	1	Ga	Diploma	21 months	9/24/23	Yes	25
Augusta	36	3	Guan	First degree	Six months	9/24/23	Yes	41
Lena	32	1	Ewe	HND[3]	One month	9/25/23	Yes	47

[2] Equivalent to an associate degree in the United States
[3] Higher National Diploma - Equivalent to an associate degree in the United States

Brenda	45	3	Kwahu	First degree	Five years	9/25/23	Yes	30
Regina	30	1	Ga	First degree	Seven months	9/26/23	Yes	27
Magaret	27	1	Ewe	First degree	Two years	9/26/23	Yes	21
Elfreda	40	2	Ewe	First degree	One year, ten months	9/28/23	Yes	22
Sena	35	3	Akuapim	First degree	One year, one month	9/29/23	Yes	53
Enyo	44	3	Fante	First degree	One year	10/6/23	Yes	50
Owusua	28	0	Ewe	First degree	Currently pregnant	10/6/23	Yes	51
Naa	30	2	Ashanti	First degree	One year, three months	10/7/23	Yes	42
Rosa	29	0	Nzema	High School	Currently pregnant	10/12/23	No	WhatsApp Chat

Data Collection Method

Hesse-Biber (2017) observes that the data collection method is determined by your research question. The research questions I ask in this study are open-ended and can only be answered by drawing upon the participant's own expression of their experiences (Creswell & Baez, 2021).

Interviews

Interpretive researchers ask open-ended questions to enable them to understand the meanings participants assign to the phenomenon (Lapan et al., 2012). Tracy (2013) notes that qualitative interviews provide opportunities for mutual discovery, understanding, reflection, and

explanation via an organic, adaptive path, and often energizing path. Interviews elucidate subjectively lived experiences and viewpoints from the participants' perspectives (p. 132). In this study, I employed the semi-structured interviews. I used semi-structured interviews because they enabled me to share a reciprocal relationship with my participants, where we all held subject positions. It also allowed participants to speak for themselves – be their own advocates. This interview style also offered flexibility that enabled me to ask follow-up questions based on participants' responses, which drifted into other interesting realms of maternal health (Roulston & Choi, 2018).

Further, I selected interviews as a data collection method in a study shaped by the culture-centered approach has helped me to bring the voices of the women from the periphery to the core as their voices must be included in writing the future of maternal health because their voices are often silenced, ignored, or reported only by second hand (Langer et al., 2013).

The interview questions were reviewed and approved by the IRB and were open-ended. Seeking IRB approval ensured that the questions were ethically sound. Also, the open-ended nature of the questions enabled the participants to speak for themselves and stimulated in-depth discussions as opposed to closed-ended questions. After each interview, I recorded my understanding and impressions of the interview in relation to the research questions and theory (Tracy, 2020).

The interview guide was designed with main questions and probing questions. These interview questions were crafted based on the independent variables of STOPS and also the CCA. I started the interview with general questions about the mothers' maternal health information needs, how these needs are satisfied, and their preferred source of maternal health information. This set of questions was included to ease the mothers into the interview. After this

set of questions, the mothers were asked specific questions about how they identify the problem of maternal health misinformation, how involved they are with the issue of maternal health misinformation, the challenges they face when correcting maternal health misinformation, and how their prior experiences and knowledge of maternal health help them unpack maternal health misinformation in Ghana. Additionally, the mothers were asked to describe how their culture plays a role in how they make meaning of maternal health misinformation. I asked demographic questions at the end of the interview. This set of questions covered the age, ethnicity, and the highest level of education. The average time spent on the interviews was 40 minutes, with the longest lasting 65 minutes and the shortest lasting 21 minutes.

All the mothers were interviewed virtually through WhatsApp audio calls and a WhatsApp chat. I used WhatsApp to interview the participants because WhatsApp is widely used in Ghana and is more affordable (internet data-wise) than other applications like Microsoft Teams, Zoom, etc. It is also easier to interact with as most people are familiar with its interface compared to other applications. Lindlof and Taylor (2019) observe that virtual interviews are used, especially if participants live in a distant location and are geographically dispersed. Within the context of this dissertation, the participants live in different regions of Ghana, which is over 5000 miles away from Maryland, where I live. Although face-to-face interviews are ideal, Lindlof and Taylor (2019) note that mediated interviews can be as good for most research objectives. Most importantly, the virtual interviews were synchronous, making it possible to ask follow-up questions and probe participants' responses in real-time.

Furthermore, using virtual interviews allowed me to save the interview to the storage site of my choice, hence capturing and preserving the spoken discourse. Some of the interviews were audio-recorded with the permission of the participants. Seventeen participants agreed to be audio

recorded; two declined the recording, while one requested to be interviewed via WhatsApp chat. I used *Otter.ai*, an artificial intelligence voice-to-text transcription software, to record the interviews. *Otter.ai* transcribed concurrently as the interview was ongoing. I listened to the audio and cleaned the transcript, as the transcription tool did not accurately capture all the interview details. I downloaded the audio files from *Otter.ai* and uploaded them to a secured UMD box drive. I then deleted the audio files from *Otter.ai*.

Although virtual interviews have many benefits for the researcher and participants, there are also some downsides. A downside of mediated data collection is that the participants must have technological expertise, a prerequisite for a successful interview. For this study, all the participants had a smartphone, the WhatsApp mobile application, and the level of digital expertise that enabled them to engage in the WhatsApp voice calls with no hindrances. Another downside is that the participants must have strong internet connectivity for the interviews to be successful. While this was the case for most participants, some of the interviews had glitches as the internet connectivity was not always favorable. Thus, two interviews had to be rescheduled.

Sample Size

Qualitative researchers work with smaller samples, focusing on how each individual or a small group of people experience a phenomenon (Creswell & Baez, 2021; Hesse-Biber, 2017). However, no hard-and-fast or a priori rules exist for determining an optimal sample size (Lindlof & Taylor, 2019).

I initially proposed interviewing 30 Ghanaian mothers, as I believed this was a practical number to give me an in-depth understanding of the phenomenon. However, I ultimately interviewed 20 mothers. This decision was made as I had reached saturation, a point where the interviews yielded no new information after the first 16 interviews. I conducted four more

interviews to confirm saturation (Miles et al., 2014; Tracy, 2017). Since I conducted all the interviews and took notes during and after the interviews, I began seeing similar patterns in the data about how the mothers generally made sense of maternal health misinformation. For instance, when asked about inaccurate information they get during pregnancy, the mothers who were interviewed later repeated similar information the mothers interviewed earlier discussed. Most of this information was on food restrictions, which were the same. When no new information came up after interviewing the 20th participant, I wrapped up the data collection as the most common way to judge whether the number of participants is enough for your qualitative study is through data saturation. I deem the homogeneity of the sample as one of the main reasons I reached saturation in this study, as all the women have been pregnant before and come from or live in the southern part of Ghana (Hennink & Kaiser, 2022).

Data Analysis

The transcripts from the interview yielded a total of 236 single-spaced Word document. This number included the notes I took from the two participants who declined to be recorded and the participant interviewed via text. As a qualitative researcher working in the interpretive paradigm, I immersed myself in the data by dedicating a reasonable amount of time to reading and rereading the transcripts, listening to audio recordings, and thinking about them (Tracy, 2013). Thematic analysis allowed me to do that. Thus, I used Braun and Clarke's (2006) approach to thematic analysis to analyze the data. Thematic analysis is a method for identifying, analyzing, and reporting patterns or themes within data (Braun & Clarke, 2006). Thematic analysis thus allowed me to engage in an iterative search across the data set to find repeated patterns of meaning (Braun & Clarke, 2006).

The analysis process started when I noticed and searched for patterns of meaning and issues of potential interest in the data (Braun & Clarke, 2006). This process began during the data collection phase, where I noted some patterns in the data after each interview. Notwithstanding this initial identification of patterns, the first phase of thematic analysis, according to Braun and Clarke (2006), involves becoming familiarized with the data. This point was where I actively engaged in reading, rereading, and searching for meanings and patterns. During this phase, I took notes for the coding that followed. Phase two involves the generation of the initial codes. Here, I identified initial codes from the raw data, enabling me to organize the data into meaningful groups. Braun and Clarke (2006) state that coding can be done manually or through a software program. I used the software Delve to code. Phase three entails the search for themes in the codes that I generated. To do this, I sorted the codes identified in phase two into potential themes while considering the relationship between the codes, the themes, and the different levels of themes (Braun & Clarke, 2006). I then reviewed the themes in the fourth phase. This was where I reviewed and refined the candidate themes to identify the ones that could stand alone, needed to be refined, or collapsed into each other. During phase five, I defined and named the final themes. Here, I identified the essence of each theme and determined what aspect of the data each theme captures. This was also the point where I identified the "story each theme tells…and how it fits into the broader overall story" (Braun & Clarke, 2006, p. 22). By using Delve, I was able to easily pool together the participants' quotes as evidence that supports these themes. Phase 6, the final step, involves the production of the report. This was where I used the themes to tell a story, as seen in Chapter Four. I believe the findings presented in the next chapter provide a concise, coherent, logical, and non-repetitive report while providing enough evidence of the themes within the data (Braun & Clarke, 2006).

Ensuring the Quality of Qualitative Research

Since qualitative research started receiving backlash for not being rigorous enough, scholars have attempted to identify the markers of quality in qualitative research. Some of these scholars have sought other more naturalistic terms to replace those used in quantitative research. Yvonna S. Lincoln and Egon G. Guba are the earlier scholars who sought to defend the quality of qualitative research in 1985. They assert that qualitative scholars should replace internal validity with credibility, external validity with transferability, reliability with dependability, and objectivity with confirmability. Miles et al. (2014) corroborate these same alternatives in their book. While these earlier efforts have been instrumental in how we currently approach quality in qualitative research, I subscribe to Tracy's (2010) big tent criteria of ensuring quality in qualitative research instead. These are a worthy topic, rigor, sincerity, credibility, resonance, significant contribution, ethics, and meaningful coherence. For this dissertation, I used worthy topic, rigor, credibility, sincerity, and ethics.

First, Tracy (2010) espouses that researchers must ensure they have a worthy topic. A worthy topic is significant, engaging, and thought-provoking. One that should add new knowledge to the existing body of knowledge. This dissertation's topic is worthy of exploration, as the literature on misinformation does not include much on maternal health issues. Additionally, it is a worthy topic because studies on misinformation, particularly from Ghana, are sparse; thus, I envisage this study will provide relevant empirical insight to beef up the literature in this area.

I used several strategies to enhance the quality and rigor of this study. First, I ensured that I selected the right theories and data collection methods. The justification for these choices is explained above. I also interviewed a diverse sample, with mothers from different parts of Ghana and ethnic groups who were either primiparous or multiparous. I meticulously reviewed these

transcripts to ensure their accuracy before the commencement of the analysis. Additionally, the interview procedures and protocol were reviewed by the IRB to ensure that they were appropriate, as previously mentioned. Finally, I ensured that the data analysis process was detailed and transparent.

Additionally, good qualitative research should show credibility through triangulation, thick description, multivocality, and member reflections. In their iteration of assessing the quality of qualitative studies, Creswell and Baez (2021) assert that triangulation is a researcher's way or method of ensuring that their findings are plausible. Triangulation involves approaching the research from at least two different points and is mostly three ways – triangulation of theories, data collection methods, and participants/sites (Creswell & Baez, 2021; Flick, 2004). Triangulation manifested in this study through (1) the use of different theories, the CCA and STOPs, and (2) the recruitment of both primiparous and multiparous women from different ethnic groups and different parts of Ghana. In this dissertation, member reflections took the form of member checks. Thus, I conducted member checks during the interviews to ensure that the participants' thoughts were captured accurately. During the interviews, I frequently summarized participants' responses and asked them to confirm my comprehension of their responses. Most times, the participants validated my summary and, at other times, corrected me and even added more information. Triangulating the theories, providing thick description, and conducting member checks enhanced the study's credibility.

Sincerity, another criterion for assessing the quality of qualitative study, dictates that the researcher is self-reflexive and transparent about the methods and challenges (Tracy, 2010). A good qualitative researcher who works in the interpretive paradigm is a self-reflexive instrument, with the researcher open to talking about how their biases, subjectivities, and background

collectively impact the interpretation of the data (Tracy, 2020). The defining characteristic of qualitative research that tackles the interdependence between qualitative researchers and the things they study stipulates that qualitative researchers' socialization seeps into their research. Given this socialization, qualitative researchers constantly interact, collect, and interpret data through their worldviews - acting as the instrument through which data is collected and interpreted (Lindlof & Taylor, 2019). Lindlof & Taylor (2019) argue that interpretivism requires qualitative researchers to "interpret both [their] own lived experience and the expressed experience of others" (p. 12). Also, Brown (2019) observes that everyone carries bias, and identifying and reflecting on this bias is significant in reducing or mitigating bias. Based on this understanding, I discuss how my multiple identities inform my study in terms of data collection and analysis.

My research interests have been defined by development and health communication since 2015. However, after becoming pregnant in 2019, the year I applied to graduate school applications to pursue my doctorate, I found that my research interests had significantly changed and been shaped by my experiences as a first-time mother. Thus, the birth of my child marked the birth of a fascinating academic journey, one that has led to this dissertation and the other studies I have conducted on mothers' maternal and child health information-seeking behaviors.

During my pregnancy, I used varied sources of maternal health information to source health information and understand the changes happening in my body. I used the internet, my healthcare providers, my mom and mom-in-law, and friends with the experience. As a mother, I have consistently used the internet to seek health information on my child's nutrition, medicine, sleep, and first aid. Basically, I am an avid health information seeker. But while I seek information on the internet, I am intrigued by the amount of information one search query churns

out, and if you are not fortunate enough, a mere search on a headache can come back with a cancer diagnosis from Dr. Google, making it very difficult to trust what I source on the internet.

Therefore, my experiences as a mother have shaped how I view and interpret the phenomenon of pregnancy, birth, postpartum, and motherhood. In my research, these beliefs and opinions I have formed through my own experiences seep through the studies I conduct. However, I am quick to acknowledge that my pregnancy, birth, and postpartum experiences were from a privileged standpoint and might not reflect the reality of most of the participants who gracefully agreed to participate in my studies. Therefore, I endeavored to capture participants' experiences accurately in my studies using thick description and member checking.

Secondly, I was born and raised in Ghana. This is a part of my identity that can never be erased. Although I take pride in this identity and my ability to understand the culture of the people to an extent, Ghana is a heterogeneous community and not bound by a single culture. Thus, I remained open-minded as my participants shared their experiences on a phenomenon with me. I asked multiple questions during data collection to ensure I understood the interviewees' perspectives instead of making assumptions because I am also Ghanaian. I also informed the participants that I would reach out to them if I did not understand something they expressed in their interview. I have done this multiple times in my previous studies.

Another way of ensuring quality is by being ethical. Ethics encapsulates the researcher's goal to do good in all circumstances during the research process. According to Tracy (2013), ethics can be grouped into four categories: procedural, relational, situational, and exiting ethics. First, procedural ethics cover ethical actions prescribed by an organization or institutional review board (IRB) as universal or necessary (Tracy, 2013). In line with this explanation, I submitted an IRB application for the study to ensure that the rights of the participants are duly protected

through informed consent, ensure privacy and confidentiality, and avoid deception (Creswell & Baez, 2021; Hesse-Biber, 2017; Tracy, 2013). Generally, the informed consent covered the procedures in place to deal with any adverse outcomes resulting from participating in the study (Hesse-Biber, 2017). Therefore, I ensured the informed consent was detailed and clear enough on the participants' role in my study, the potential risks and benefits, and how I intend to use their responses. It assured participants that their agreement to participate in the study was entirely voluntary and that they could opt out before, during, or after participation (Hesse-Biber, 2017; Lindlof & Taylor, 2019). I also allowed the participants to ask questions based on the consent form before the start of the interviews. Most of them had no questions, but the few that had questions were concerned about whether the study would ultimately inform change in the maternal health space in Ghana.

Second, relational ethics involves the researcher understanding that she is co-constructing knowledge with the participants, thus being respectful and sensitive. Here, I was conscious of how my own biases, as I have enumerated above, might influence the interview process. Being cognizant of this influence, I was more attentive to the complexities of co-creating meaning with people with whom I share similar identities (Hesse-Biber, 2017). Thus, I was respectful and sensitive throughout the process.

Third, situational ethics relates to ethical issues that arise in specific contexts (Tracy, 2013). Here, researchers must critically reflect on questions of right or wrong that come up during the data collection process. This required that I “constantly consider which questions to ask, which secrets to keep, and which truths are worth telling” (Ellis, 2007, p. 26). However, I did not encounter any issues where I needed to fall on situational ethics during the data collection

process. The last is exiting ethics. This guided the ethical presentation of the findings, ensuring that the mothers were represented accurately.

Chapter 4 – Research Findings

This chapter presents the findings of this study, which emanated from 20 semi-structured interviews with primiparous and multiparous Ghanaian mothers who have experienced pregnancy, childbirth, and postpartum in Ghana. While I mostly present the participants' own words as quotes in this chapter, I sometimes edit some of the sentences by inserting punctuations and translating some local language or jargon, or phrases used during the interview to improve readability. The findings presented here reveal the complex intersections between the concept of maternal health information and misinformation, the situational theory of problem solving, and the culture-centered approach, as will be fully explained.

RQ1: How do Ghanaian mothers identify maternal health misinformation?

This question was asked to understand the mothers' recognition of the problem of maternal health misinformation. The mothers shared that they are able to identify maternal health misinformation through maternal health literacy skills, lived experiences, and skepticism of the information. These themes, illustrated through the participants' quotes, are discussed below.

Identification through maternal health literacy skills

The participants indicated that they are able to identify maternal health misinformation by using maternal health literacy skills such as information verification from healthcare providers, comparison of information from different sources, and further research. First, the participants mentioned that they verified the information they received from sources like the internet and family and friends with their maternal healthcare providers, like their midwives and doctors. Almost all the participants in this study acknowledged that credible maternal health information comes from their healthcare providers because these providers have received extensive medical training. This finding resonates with earlier studies, which found that mothers trusted

information from their healthcare providers more than any other source (Kamali et al., 2018; Khamis & Agboada, 2023; Taheri et al., 2021). Therefore, their healthcare providers become a reliable source for verifying information. When asked how she is able to identify misinformation, Augusta, a 36-year-old mother of three, shared an experience with preeclampsia when she was advised not to take her medicine as she would never be able to get off it. She narrated,

> Someone said if I take the blood pressure medicine today, it means forever and ever I am going to take the drug. I was quite scared, so I didn't want to take it, and my blood pressure kept rising. So, I had to talk to my healthcare provider, who assured me nothing would happen. That was when I started taking it.

Similarly, Sylvia, a 41-year-old mother of four, shared her experience of being past her due date when she was pregnant with her last child. She shared that her midwife asked her to come for an induction at the hospital, but her mother and mother-in-law advised against it. They asked her to use an enema with hot water as they believed this would help induce labor. She followed their recommendation, but labor did not start. It was only when she consulted her midwife, who she said presented "clear evidence*"* that her placenta was aging and thus denying the baby the necessary nutrients, that she agreed to be induced.

Although Augusta and Sylvia confirmed the accuracy of the information with their healthcare providers, they both initially believed the inaccurate information and allowed it to inform their health behavior. This example confirms that most people tend to encode all new information as true and only later determine its accuracy (Southwell et al., 2018).

Similarly, Sena, a 35-year-old mother of three, recounted how her mother gave her false information during labor and she had to verify this information from the midwife attending to

her. She shared, “My mom asked me not to drink water during labor because it delays labor, but I was thirsty, so I asked the midwife, and she said I could drink water.” Sena acknowledged that she was shocked that she could not drink water, but luckily for her, she was able to identify misinformation right there at the hospital.

Second, the mothers are able to identify misinformation by comparing the information they received from their maternal healthcare providers with what they received from other sources. The participants indicated receiving maternal health information from their healthcare providers, mainly through antenatal classes. These classes helped to provide consistent and up-to-date information for the mothers, which enabled them to distinguish accurate maternal health information from inaccurate information. Since most of them deem information from their healthcare providers accurate, it becomes a benchmark. Hence, once the new information does not align with what their maternal healthcare providers tell them, they begin to question the accuracy of the information. This finding is similar to an earlier study where pregnant teenagers found that information from interpersonal relationships contradicted what they received from their healthcare providers (Owusu-Addo et al., 2016). When asked how she is able to identify inaccurate maternal health information, Enyo, a 44-year-old mother of three, observed that she gets accurate maternal health information during antenatal classes. Hence, the information she receives during these classes becomes the benchmark. She stated,

> When we go to antenatal, they educate us. So, based on that education, I assess what I read or hear elsewhere. So, if this information is in line with what they have been teaching us in the [antenatal class], then it is accurate. If it does not align, then it is not accurate.

This finding echoes Marsh and Yang's (2018) assertion that one of the ways to identify truth is by assessing the credibility of the source. Therefore, since the mothers deem healthcare providers credible, any information received from them is considered the truth, and any information that does not align, they deem inaccurate.

Finally, the mothers identify misinformation when they conduct personal research on the pieces of maternal health information they decide to keep and use. Since maternal health information flows from sources such as healthcare providers, interpersonal networks, and the internet, these mothers are often presented with a lot of information and are inclined to filter it before acting upon it. Most of the mothers indicated that this filtering process is mainly based on their beliefs, prior experiences, the source of the information, and the significance of the information to them. It is through this research process that they identify the inaccurate pieces of information from the accurate ones.

This research is conducted mainly by reading more on the information they receive, particularly through the internet. While some earlier studies have reported that the internet is considered an invalid source of maternal health information (Taheri et al., 2021), the findings of this study indicate that some of the mothers used the internet to verify the accuracy of the information they receive from other sources, especially from their interpersonal networks.

Some mothers even take their research a step further by comparing different sources on the internet before acting upon the information received. This finding resonates with findings from an earlier study, which found that the mothers used comparison as a strategy to evaluate the information received (Taheri et al., 2021). For instance, Lisa, a 37-year-old mother of three, established a personal verification system where she compared information from multiple sites on the internet and followed majority consensus. She said, "I read not less than five articles on

the same topic. When you read no less than five [articles], and you get about 80% pointing at the same thing, then it is accurate." Gladys, a 28-year-old mother of one, indicated that she knew she was misinformed when presented with advice not corroborated by her own research. She shared,

> Random people, family members, and friends gave me advice, especially regarding food. They tell you not to eat eggs, snails, plantains. They also asked me not to eat kenkey and beans because the baby would be big. They also tell you not to eat in public, step out in the evening, or bathe in the open. Then, with medications, too, they asked me to ignore what I got from the hospital and go herbal. But I ignored them.

When asked why she ignored the advice, she explained,

> Because I confirmed with the healthcare providers and did my own research, for instance, with the eggs, I found out that eggs give protein and other nutrients that are essential for me and the baby. I also confirmed with the midwives, and they said I would need those foods because of the nutrients I would get from them. So, I had to ignore the wrong advice I received.

Similarly, Margaret, a 27-year-old mother of one, shared how her friend told her not to eat eggs during pregnancy because when she gives birth, the child would have an eye defect. She Googled and found that eggs were good for pregnant women. She then asked for confirmation from her midwife, who told her she could eat eggs. This finding is consistent with previous studies that indicate that mothers are restricted from eating snails, eggs, etc. (Ekwochi et al., 2016; Siaw et al., 2023). Therefore, these mothers believe that the consensus of multiple information sources on a particular piece of information attests to its accuracy. Additionally, using multiple sources of information or convergent information-seeking, enabled by the mothers' high literacy, equipped them with the capacity to address health-related concerns and

satisfy their information needs (Gagné et al., 2018; Shieh & Broome, 2010). Thus, Lisa, Gladys, and Margaret leveraged their literacy skills to identify misinformation through their personal research.

Identification through lived experiences

Some of the mothers expressed that they are able to identify inaccurate maternal health information through their lived experiences. For instance, some realized that the maternal health advice they had been given was inaccurate when they did not experience the expected complications after disregarding it. This was more pronounced in the maternal health information the mothers received from family and friends, especially older women. This theme of misinformation identification through lived experiences was more pronounced when it came to the topic of food restrictions.

For instance, Enyo narrated her experience about how her mother told her not to eat snails during pregnancy, or else the baby would drool a lot when born. She followed this advice during her first and second pregnancies, but it was difficult because snails were her favorite delicacy. She, however, ate snails during her third pregnancy, and nothing happened to the child. She said, “Then for the last one, once in a while, I ate it [snail], but even though I have eaten it, nothing happened…so somehow, what my mother told me was not the truth”. Through this experience, the participant learned that pregnant women’s consumption of snails has no physiological effects on the baby.

Ama, a 28-year-old expectant mother, also shared a similar experience when she was told that eating plantains during pregnancy causes miscarriage. She went ahead and ate plantains during pregnancy, but nothing happened. She mentioned that “because I didn’t have any complications after eating the plantains, I think I was misinformed.”

The mothers who had this experience were able to conclude that they were being misinformed because consuming some of these restricted food items presented no immediate or short-term consequences. This finding aligns with findings from Otoo et al. (2015) that a mother's level of education plays a role in whether she believes in and adheres to food restrictions during pregnancy. Specifically, they found that highly educated mothers defied some of these taboos and experienced no consequences. The boldness shown by these mothers in defying some of these restrictions stems from the fact that they are highly educated and are able to research to confirm the information. Both Enyo and Ama have post-secondary education. As a result, they aligned more with biomedical explanations of pregnancy restrictions than those seeded in their culture.

It is also important to note that not all the mothers received food restrictions from their interpersonal networks, some mothers shared that their healthcare providers advised them not to consume certain foods. Joanna, a 35-year-old mother of two, shared that her midwife told her not to take Lipton (black tea) because it would make her anemic. This showed that food restrictions can come from their healthcare providers. However, the findings showed that the mothers were more comfortable with their healthcare providers' justification for certain food restrictions than the ones they received from their interpersonal networks.

It is interesting to note that although some mothers realized that they had been misinformed through their personal experiences, as shared above, they sometimes harbored feelings of fear or cognitive dissonance. For example, Gladys explained,

> I feel afraid. Because even though you've been informed, asked the questions, done the research, and stuff, the inner you will be asking questions, such as: Is it real? Would it

happen? Would the next pregnancy be affected? Will the evil spirits harm you? Is my next generation going to be safe? Won't they be affected by a decision I made today? These emotions, most of the time, influenced the maternal health behaviors of these mothers.

In addition to identifying misinformation through their lived experiences, the mothers were also able to identify misinformation based on others' lived experiences. This manifested through their discussions with other mothers and women. For example, Akua, a 39-year-old mother of three, narrated how a lady used hot water to alleviate her cesarean pains, meanwhile, she was given an absorbable suture, and the wound reopened and had to be rushed to the hospital to be sutured again. Through their interaction, she understood that an older woman had given her that advice, but it was apparently wrong. By sharing her experience, Akua understood that the other mother was wrongly advised.

Identification through skepticism of information

Most of the mothers who identified maternal health misinformation as a problem indicated that their skepticism fueled their ability to identify the misinformation. The abundance of maternal health information during the pregnancy, birth, and postpartum period makes some of the mothers cautious as they fear the possibility of receiving or consuming inaccurate maternal health information. As a result, the mothers who have the knowledge and resources to verify the information often do so before acting upon it.

Therefore, the mothers' skepticism about the information they receive about maternal health encourages them to determine when it is necessary to verify the accuracy of the information. For example, **S**andra, a 34-year-old mother of three, shared how her doubt about the information she received made her conduct her own research to verify this information. She

shared that she was once told that babies can get jaundice if the mother consumes excessive oil often during her pregnancy. She narrated,

> Some people even tell you if you are pregnant and you often take oil, your baby can even get jaundice. That jaundice has nothing to do with taking oil. I had to Google it and found out it wasn't anything related to oil. But they said it is caused by bilirubin, and it hasn't gotten anything to do with what I take, like my oil and that, so I just ignore it.

In addition, some of the mothers were skeptical of new information if it conflicted with their intuition. That gut feeling that something was wrong enabled the mothers to search for what was missing. In some instances, they discarded the information immediately. At other times, they searched for more information to make meaning of the information they had received.

For example, Regina, a 30-year-old mother of one, mentioned, "And also, with my research, sometimes I know when the thing is actually wrong. When I ask people and my intuition just tells me, no, I know it is wrong". This finding is consistent with the study by Criss et al. (2015), which found that some mothers relied on their intuition to determine the information they needed to use in caring for their children.

Other participants expressed skepticism about advice that did not seem logical or lacked evidence. For instance, Brenda, a 45-year-old mother of three, shared, "When you are pregnant in my culture, you need to shower before 6 pm. But those things do not make sense to me. If I shower before 6 pm and I'm feeling hot, don't I have the right to shower again?" Brenda's skepticism of the information she received was her only way of navigating misinformation. Although she expressed disbelief and went against most of these cultural practices around pregnancy, her actions were not based on having an alternative, verified information showing that these practices were wrong. Instead, she shared that her actions were driven by the fear that

some of these cultural practices might actually be true and have negative consequences if she did not follow them.

In summary, the mothers who participated in this study leveraged their research, their lived experiences, antenatal classes, and discussions with other mothers and learning about their experiences to identify maternal healthcare misinformation.

RQ2: How involved are Ghanaian mothers with maternal health misinformation?

Most of the mothers interviewed revealed that they had encountered maternal health misinformation and formed a consensus that maternal health misinformation poses a serious problem to Ghanaian mothers' health as it can lead to maternal morbidity and mortality. Despite this acknowledgment, all of them did not feel closely connected with the problem of misinformation. Some of the mothers were significantly more involved than others. Two themes, high involvement and low involvement, are discussed below.

High involvement recognition

The mothers who were highly involved with the problem of maternal health misinformation understood the risks it posed to their health. Several of them shared personal experiences of times when they were given inaccurate information that could have resulted in harmful consequences if followed. They also expressed significant concerns about maternal health misinformation and shared how they take precautions when sourcing maternal health information. Some of these precautionary measures include questioning the maternal health advice received, conducting their own research, and consulting medical professionals. Therefore, they recognize that they can consume misinformation if they are not cautious.

Additionally, these highly involved mothers highlighted the flaws that characterize Ghana's maternal healthcare system, especially the mistreatment they sometimes receive from

healthcare practitioners, which influences how they navigate maternal health misinformation. Lisa, a mother who is an enthusiastic information seeker and appears to have vast experience and knowledge of the healthcare system shared,

> So, the medical staff, okay? If you pick 10 Ghanaian nurses or doctors. About seven of them will get angry when you ask them questions. That is what I get. Not only from the local hospitals. I've even been to the University of Ghana Hospital, and it's the same thing. Sometimes, I even go to the extent of fighting them. If they consult with you, they just start writing when you tell them what is wrong with you. Then, they ask you to go and do lab tests. And take this medication. But as soon as you ask, "Doc, please, what are we treating, or what are we suspecting?" Then, the facial expression changes. I don't know why.

Lisa lamented this limitation of the healthcare system made it extremely difficult for mothers to verify the accuracy of information. This forces them to resort to other information sources. Also, this group of mothers feels strongly that more needs to be done so that mothers can get accurate information regarding maternal health. These mothers also actively correct misinformation for other mothers, showcasing their deep awareness of misinformation and its consequences. Additionally, their activeness in correcting misinformation for other mothers means they retained information they can use in problem solving. Akua shared her experience of correcting misinformation for a mother with whom she shared the same ward using the knowledge she gained from antenatal classes. She narrated,

> When I was at the hospital, one patient close to me delivered before I did, and the mother came around. So, you know, she had some tear and I think they sutured her. So, when the mom was like, this thing when you get home, you sit on hot water to heal your wounds.

> Meanwhile, we have been told that now the thread used to suture is like rubber, so it will melt on its own, and there is no need for you to sit on hot water. So, I told the mom that this is what we learned. And still, the mom insisted that her daughter had to sit on the hot water. She said she's an old lady. It has never been done in their time. It's not like that. So, I told her, "Your time is different from our time and because of technology, things have advanced". So, I told my friend not to listen to her mother because if she did, she would go and then she'd be rushed back to the hospital because the wound had opened again.

Based on this experience, Akua observed that efforts need to be put in place for more mothers to attend antenatal classes to hear some of these inaccurate pieces of information corrected. Her desire to see the problem of misinformation solved beyond the individual level led her to share that "pregnancy schools should move from the hospitals to the neighborhoods." This point highlights the importance of community outreach and engagement in spreading accurate maternal health information and countering misinformation.

To summarize, this group of interviewed mothers is very aware of and concerned about the maternal health misinformation problem, primarily based on their personal experiences and the actions they take to find accurate information. Their desire to see every Ghanaian mother having access to accurate maternal health information attests to their deep understanding of the impact of the problem of misinformation.

Low involvement recognition

Conversely, some of the interviewed mothers were not as actively involved with the issue of maternal health misinformation as those previously discussed. Although they acknowledged misinformation as a problem, these mothers did not express a profound connection to it. This

group tends to select information that suits them without justifying the rejection of other pieces of information.

Typically, most of them do not go through any extra verification processes. These mothers' limited engagement mainly stems from (1) their satisfaction with the information they receive, (2) their perceived lack of agency, (3) less knowledge about the processes they should engage in to identify misinformation, which in some cases indicates lower health literacy skills, and (4) being new to pregnancy, birth and postpartum (i.e., first-time moms).

Some of the mothers in this category indicated they were satisfied with the information they received and believed they were not at risk of consuming misinformation. For instance, Sandra, a 34-year-old mother of three, made the following remark when referencing the restriction that a pregnant woman should not eat outside because she can be bewitched:

> It [misinformation] is really a problem. Because it might even make people do certain things. They even go to that extreme. Sometimes you can even go to town, you are really hungry. Just take something, but because of the information you have, you can't eat till you get back home. I don't know. It's really very difficult. But for me, I don't have that issue. But I think it's a problem. It's a problem that needs to be tackled.

Some mothers, like Sandra, are confident that they are unlikely to fall victim to misinformation or experience its consequences because they are educated and well-informed. Elfreda, a 40-year-old mother of 2, mentioned, "We those who, pardon me, are a bit learned, we are okay with it [navigating misinformation]."

This group of mothers was quick to give examples of other mothers' negative experiences with maternal health misinformation. They, especially, lamented that the less privileged and less educated women were more likely to suffer the consequences of maternal

health misinformation. They added that through the Ministry of Health (MoH), the government must put measures in place to ensure that these less privileged women also receive relevant and accurate maternal health information from credible sources like their healthcare providers. They believe that this effort will go a long way to reduce the adverse outcomes the consumption of maternal health misinformation brings.

For instance, Lena, a 32-year-old mother of one, remarked,

> [Misinformation] is a problem because, let me say, pregnant women who are naive, you know, in the Ghanaian context, when you are outspoken, you're considered disrespectful. But then, when you are the calm type and then anything someone says, you say okay to it, then you are considered to be respectful. When you have someone who is naive, this person will say okay to everything and then it may mislead this person into doing something that might not help them, especially taking herbal medicine and other stuff. It might affect her and the baby because the mother is naive. But because grandmother says so, she'd simply follow.

Lena's explanation of how other mothers' lack understanding of the possibility of being misinformed through some of these interpersonal communication networks illustrates that she has detached herself from the problem. Therefore, the relevance of the problem to her, in her opinion, is lower compared to mothers who have less agency.

In conclusion, some of these interviewed mothers showed low involvement with the problem of misinformation due to low health literacy skills, lack of agency, high level of education, and/or general satisfaction with the maternal health information they received.

RQ3: What challenges do Ghanaian mothers face when correcting maternal health misinformation?

As the mothers begin to encode new information on maternal health that conflicts with what they already know (Dai et al., 2021), they become better positioned to recognize misinformation. This knowledge increases their ability to correct inaccurate claims. However, this correction is not a straightforward process. Southwell et al. (2018) explain that once misinformation has enjoyed wide exposure, it becomes very difficult to counter. In this dissertation, constraint recognition occurred when the participants realized their limitations in correcting the maternal health misinformation received. The data reveals that the challenges the mothers encounter while attempting to correct misinformation include cultural influences and the perceived lack of capacity.

Cultural influences

Cultural influences manifested in the participants' interactions with their interpersonal contacts. Most of the mothers indicated that their mothers, mothers-in-law, and older female relatives shared misinformation by sharing outdated maternal health beliefs and practices, and these pieces of information mostly contradict what they are told at the hospital.

Although the mothers are aware that they are being misinformed, they are unable to counter or go against such misinformation because most of these elderly women do not entirely believe in medical knowledge. Instead, they believe that their practices are right and should be enforced, regardless of proof that some of these practices do not work. The older generation's strict adherence to these cultural practices might stem from the fear of being punished by their ancestors, as seen in a study by Arzoaquoi et al. (2015). As a result, the elderly women see themselves as guardians tasked with preserving their culture. However, the younger women who participated in this study do not entirely align with these beliefs, leading to a clash of

intergenerational ideas and preferences. This clash and the interlocutors' age differences make it extremely difficult for the mothers to openly defy or challenge these prevailing cultural practices, particularly when the pregnancy, birth, and postpartum periods are spent with these elderly women.

Additionally, this finding typifies the power these elderly women wield, which is consistent with findings from Yarney's (2019) study that power relations in the home make some mothers of pregnant women provide medicine and decide on the food their expectant daughters can take based on their experience. Naa, a 30-year-old mother of two, shared the pressure she experienced when she was past her due date. She narrated,

> My grandmother came from the village and said I should use *bibiduro* [herbal medicine], and the baby would pop out within minutes, but as a nurse, I know more. Hmm, our mothers can sometimes be quack doctors. Also, my midwife told us during antenatal classes not to take any herbal medicine to aid in delivery. So, when I was past my due date, my grandmother was like, so you see, you ladies of today, you do not believe in herbal medicine. I didn't mind her. Then, there was a tenant in our house who also kept telling me to take the herbal medicine. I became so worried. I even had to go to my pastor to pray for me.

The use of traditional medicine to support childbirth or enhance the maternal well-being of the mother is not uncommon in Ghana. Indeed, several studies have confirmed that Ghanaian mothers use traditional medicine during pregnancy and postpartum (Buor et al., 2023; Otoo et al., 2015). In most Ghanaian communities, there are known traditional medicines for different maternal health issues. These medicines are mainly made by herbalists with extensive knowledge and experience. These medicines can either be ingested, inhaled, or used as ointment

(Adamolekun et al., 2023). While many Ghanaians believe in the effectiveness of these traditional medicines because of these herbalists' experience, many others, like Naa, choose not to use these herbs because they align more with modern medicine. Based on her profession as a registered nurse and what she learned at antenatal about the negative impacts of traditional medicine, she believed her grandmother misinformed her. However, Naa could not just debunk the misinformation because of her grandmother's experience and age. Naa's dilemma highlights the complex dynamics that characterize traditional medicine use in maternal healthcare in Ghana. It also shows that traditional beliefs are safeguarded by older women and are challenging to overcome, even when the mothers do not entirely believe in their efficacy.

Some of the mothers shared being pressured to oblige to some of this misinformation because they are under the care of these older women, particularly during the postpartum period. As mothers living in a collectivist society, they shared that these periods, especially the postpartum period, are spent under the care of extended family members. Family members either come to the new mother's home or the new mother moves to live with her elderly relatives for a period. During these times, the new mothers are obliged to follow certain practices even if they disagree with them. However, because these practices are shared by elderly relatives, they have no option but to follow these established practices. For instance, Edith observed how acquiescence plays out in her relationship with her mother during the postpartum. She shared,

> Sometimes, when you receive information, you just sit down and say, ah, is it true? For example, when a child is hiccupping, they will ask you to put a thread on the head. Then, the hiccups will stop. Does this thread have any effect on the head or something? But that's their belief, so your mom will insist that you put the thread on the head, and you do so, knowing very well that you're just putting it to please her since she will talk

> [complain]. So, society itself has an influence on us. Sometimes, if you try to sway from them, they'll tell you that you are too known[4] and this is what they have been practicing for generations.

Regina mentioned, "You know, these types of cultural perceptions and practices conflict with what we are told in the hospital." This quote suggests the mothers know that some of the information the elderly women share with them may contain misinformation. However, some of these cultural beliefs and norms that negatively impact maternal health behaviors are deeply rooted and challenging to counter, even if a woman recognizes it may not be entirely accurate. These cultural norms persist and are difficult to counter primarily because they serve as identity markers. Arzoaquoi et al. (2015) acknowledge that some of these cultural practices, particularly those relating to food restrictions, help cultural groups maintain their identity. As a result, people practicing these norms experience a sense of belonging, making it difficult to change.

Lack of capacity

The second challenge the mothers indicate facing while trying to correct maternal health misinformation is the lack of capacity. Some mothers, especially first-time mothers, explained that they did not have the knowledge or confidence to push back on false information and advocate for their health when they realized the information was inaccurate. Thus, although they are skeptical of the inaccuracy of the information, some expressed that they lack the necessary resources, like direct access to healthcare providers, to verify the information's accuracy, making it difficult for them to correct the misinformation.

Theodora shared, "If you don't go to the hospital, you'll not have the right information." Other mothers lamented how access to trustworthy maternal health information is difficult for

[4]*Too known* is a derogatory term used for someone who knows it all or overly confident in their intelligence.

the average Ghanaian woman. Thus, the mothers are forced to accept any information handed to them because that is all there is. For instance, Sylvia mentioned,

> Other people might not be able to verify the information they receive because they do not have other options to check it out, and if you don't have any other option and someone is giving you such advice, you might not even be able to cross-check to find out if it is accurate or not, you just go with it. So, the situation of each individual also counts.

Some other mothers do not deem themselves qualified to engage in social correction or peer correction (Bode & Vraga, 2018). When asked whether she corrects misinformation for others if she knows that they are being misinformed, Elfreda acknowledged that "you are not in a position to just debunk it outright in their face, because as much as you are colleagues, they might still feel that what they know is the best." She, therefore, directed other mothers whom she believed had inaccurate maternal health information to their midwives to seek clarification on the topic.

To summarize, cultural influences and the perceived lack of capacity made it challenging for participants to correct maternal health misinformation for other mothers in Ghana.

RQ4: How do Ghanaian mothers draw on their prior knowledge and experiences about pregnancy, birth, and postpartum in Ghana to unpack the problematic situation of maternal health misinformation?

Prior knowledge or experience with pregnancy, birth, and postpartum in the same sociocultural environment was valuable to the mothers as it positioned them as better problem solvers with the right tools to tackle and resolve problems. Even though some of the mothers acknowledged that no two pregnancies are the same, the sociocultural environment and situations surrounding pregnancy, birth, and postpartum, particularly in Ghana, typically remain the same. Information flows from the same sources, and maternal health processes stay the same. It is evident from the data analysis that prior knowledge and experiences of pregnancy, birth, and

postpartum help Ghanaian mothers to (1) identify misinformation, (2) engage in active health information-seeking behaviors, and (3) educate other mothers.

Prior knowledge and experiences help identify misinformation

Most of the mothers, especially those who have had multiple pregnancies and births, are able to identify maternal health misinformation based on their experience. Prior pregnancy, birth, and postpartum experience means that the mothers have received maternal health information from all the sources previously mentioned, have attended antenatal classes where they received maternal health education, and had the healthcare practitioners correct some of these pieces of inaccurate maternal health information to them before.

Therefore, their prior knowledge and experiences enabled them to develop a schema for assessing new information. They draw upon the information gathered during their previous pregnancies and births to determine if new maternal health information seems reasonable or aligns with what they know first-hand. Gladys specifically mentioned,

> They [healthcare providers] debunk the misinformation and call some people (both midwives and experienced mothers) to share their experiences. Some will tell you that my mother and grandmother told me to do something, but I realized those were misinformation, so I am doing the right thing at the moment.

Therefore, the knowledge she gained from antenatal classes helped her understand the pieces of information to act upon and those not to consider at all. Thus, when asked about the likelihood of her experiencing the impact of consuming maternal health misinformation, Gladys shared, “It is less likely – I keep asking questions and researching and reading, and since I have a child now, I am also experienced in certain things. I know that if I eat eggs or beans, I will get nutrients instead of sickness.” Therefore, she feels better equipped for her subsequent pregnancies.

In addition, prior experience helps the mothers identify which sources to trust more, like medical professionals, and which ones to be more cautious of, like cultural beliefs or advice from family or friends. Based on this knowledge, the mothers are more skeptical of information provided by non-medical sources and use different strategies to verify this information rather than taking it unquestioningly. For example, Naa, a 30-year-old mother of two, shared,

> When I found out that I was pregnant with a second child, I was like, since I've been through the first one, I can handle the second one myself without any interference – from others, such as the grandmother, the mother, the mother-in-law, and even my husband himself. So, I did everything on my own.

Prior knowledge and experiences shape mothers' health information-seeking behaviors

The findings indicate that mothers with prior experiences with misinformation tend to be more proactive in seeking information. They ask more questions and are most often found expressing their skepticism about the information received. Therefore, they conduct their own research, like reading or searching online and asking specific questions during antenatal classes, rather than just relying on what others tell them. This approach enabled them to know when to seek a second opinion or alternative perspectives if something seemed off. In instances where they encounter contradictory information, they heavily rely on advice from their healthcare providers rather than from interpersonal relationships. For example, Elfreda mentioned,

> Sometimes, when you meet at class [antenatal class], you might have fellow colleagues who are pregnant who might want to share something they did that helped them, and they insist you do the same. Sometimes, they say, "Oh, I fell sick when I woke up, and then I drank whatever. And then, oh, if you're also feeling sick, you can go ahead and do so." But for me, I believe we don't have the same body system. Our body mechanisms are

different. So, what might work for you might not work for me, so I don't just take anything. Even though we all share whatever we know, you still have to be very careful before you do something differently based on another person's experience or advice.

Through this experience and knowledge that interpersonal networks can unintentionally share misinformation, Elfreda is always cautious when presented with information from these sources. She further narrated that she would rather ask her nurse to clarify some of the pieces of information she got.

Prior experiences and knowledge enable the mothers to educate other mothers on misinformation

Finally, prior experience with pregnancy, birth, and postpartum also helped some of the mothers correct inaccurate pieces of maternal health information for other mothers. They shared knowledge with other pregnant women and new mothers to help combat misinformation while encouraging them to ask their healthcare providers questions and constantly verify information. Although most of them acknowledged that they did not often share voluntarily, they talked about instances where they were ready to share when consulted. Edith had this to say,

> So, I had a friend who was pregnant. She consulted me on how to go about it. She shared that she was advised not to go to antenatal clinics because she needed to wait for three months before she did, so I told her it was a lie. Immediately as soon as you find out that you're pregnant, you need to go to these antenatal clinics to run different types of tests on you. Then, they give you the right medication and advice on how to go about your pregnancy. Every pregnancy differs, and we are all different people. What I might go through is different from what you might go through. She took my advice, and then she started going to the clinic.

The findings also showed that the interviewed mothers did not only correct misinformation for pregnant women and new mothers but also for their own mothers or elderly relatives who held outdated or false beliefs about pregnancy, birth, and postpartum. These mothers use their knowledge to correct misinformation for their mothers through dialogue and co-construction of knowledge. For instance, Edith shared that her mother advised her to eat palm nut soup with fufu daily after delivery because this meal enhances breast milk production. However, she did not like fufu. Therefore, she had to use dialogue to avoid being pressured into eating something she did not enjoy. She stated,

> I had to sit her [mother] down to explain certain things to her. That is, what she did in her time was different. These things have changed, and we have grown from a certain stage to a certain stage. You need to eat good food, not just palm nut soup and fufu, every day.

Overall, prior knowledge and experiences with pregnancy, birth, and postpartum prepare Ghanaian mothers to identify maternal health misinformation, exhibit active health information-seeking behaviors, and educate other mothers on maternal health misinformation.

Additional Findings

To better understand the research questions that were asked based on the constructs of the situational theory of problem solving, the mothers were asked about their maternal health information needs and the sources of information they use to satisfy them. I discuss the key themes that emerged in these critical areas below.

Maternal health information needs

The participants discussed that they mainly sought information on the (1) physiological changes they experienced during pregnancy and postpartum, (2) the growth of the fetus, (3) delivery and birthing options, (4) nutrition during pregnancy and postpartum, (5) breastfeeding, (6) postpartum care and mental health support, (7) clarification on cultural practices, taboos, and myths.

Rosa, who is currently pregnant, mentioned, "Since this is my first time, I needed information on the signs and symptoms of pregnancy and how to cope with them. And at the same time, things I can eat to keep a healthy baby." Gladys shared, "I wanted to know what leads to stillbirth and miscarriages as well. I also wanted to know the diseases and sicknesses linked to pregnancies and the medications that I can safely take."

The findings also indicate that the information-seeking behaviors of primiparous mothers were very high as they were new to the pregnancy, birth, and postpartum phases. Therefore, they were curious about what to expect during these phases. This heightened information search reduces as the mothers experience subsequent pregnancies. Thus, most multiparous mothers' information-seeking practices are reduced. Additionally, these mothers also became conduits of information as they are able to share maternal health information with the primiparous mothers they encounter.

Sources of maternal health information

The main sources of maternal health information the interviewed mothers used are healthcare providers, the internet, and friends and family. Among these sources, the mothers expressed that they trusted information from their healthcare providers more because they were trained in maternal health. This is consistent with findings from an earlier study that mothers

regarded information from their healthcare providers as the highest quality and most reliable because it is science-based instead of experience-based (Graner et al., 2013).

For example, Akua shared,

> Where I attended the pregnancy school, they are all nurses, public health nurses. They are not just mere people but people who have studied very well about the topics they are teaching. I think they know what they are doing and anytime you ask them questions, they are able to give you answers that will help you. That is why I consider information from them as accurate.

Secondly, they value information from their family and friends because of their prior experience. However, some of them, especially those who are more educated, cautiously deal with such information, and they filter it out or double-check it. Finally, they turn to the internet as a source of maternal health information due to its convenience and the ability to access large amounts of information in a short period of time from multiple sources and perspectives, as mentioned in other studies (Guerra-Reyes et al., 2016; Kamali et al., 2018).

Interestingly, none of the participants depended solely on just one of these sources. Most times, the mothers relied on multiple sources of maternal health information. This is consistent with findings from existing studies that mothers find value in seeking maternal health information from multiple sources (Owusu-Addo et al., 2016; Taheri et al., 2021).

Augusta recounted the sources she used for maternal health information when she was pregnant with her third child. She shared that she frequently experienced weakness and wanted explanations for this condition. She, therefore, sought the counsel of her mother, who told her, “Since this is your third pregnancy, all the stress from the first and second one is making you weak.” Similarly, her mother-in-law echoed her mother’s perspective, noting that she, too, was

extremely weak during her third pregnancy. Finally, she turned to her healthcare providers, who told her it was a pregnancy symptom and would wane over time.

Although some scholars (e.g., Taheri et al., 2021) have attributed mothers' use of multiple sources of maternal health information to the abundance of information in this era, the findings of this study revealed a contrary reason. It was evident that the interviewed mothers' reliance on multiple sources stemmed from the fact that the healthcare system, which most of them deemed most credible in terms of maternal health information, is deficient in the sense that it was difficult to get the providers to furnish you with the necessary information you need or to answer all your questions due to the high provider-patient ratio (Adua et al., 2017).

Similar to the findings of Mwangakala's (2021) study, this deficiency forced these mothers to seek information from other sources. The number one source that replaced the healthcare providers was the internet - search engines like Google and social media pages like Instagram. Regina indicated that she used Google more because she could not get her questions answered by the healthcare providers. She stated:

> When I was going to my antenatal clinic, you know, sometimes they would just gather the women and take us through things we should do when we have our baby, for example, the food we should eat. And basically, that's it! Nobody really answered my questions. So, it was all about Google. I was Googling and trying to find answers, watching YouTube videos, and listening to people sharing their experiences. Ahaa, I even followed some accounts on Instagram, those that talk more about breastfeeding and lactation. So, I'd say I got some of my answers online.

Lisa also noted:

> So, our people [healthcare providers] don't really talk when you ask them something. They won't even mind you. Some of them, those who will mind you, will just say something funny and make a joke out of it. And that's all. Most often, I get my information online. So, when I feel something, I go online, and then I check maybe early signs of detecting whether your child will have an allergy or whether your child will have any disability, such as Down syndrome, ADHD, or others.

Similar to the findings of an earlier study (Johnson, 2014), the findings of this study indicate that the mothers attached different levels of significance to the sources of maternal health information during the different phases of their pregnancy and postpartum period. Regina, for example, indicated that she relied more on the internet during pregnancy but switched to relying more on mothers with childbirth experience during the postpartum period. She observed, "After giving birth, I depend more on other mothers and what they tell me. So, I rely on both the internet and other mothers with experience. Yeah, that's what I do."

Chapter 5 – Discussion and Conclusion

The purpose of this qualitative study was to understand how Ghanaian mothers engaged with, unpacked, and tackled maternal health misinformation in Ghana. Specifically, I asked the following research questions based on the constructs of the situational theory of problem solving (STOPS). RQ1: How do Ghanaian mothers identify maternal health misinformation? RQ2: How involved are Ghanaian mothers with maternal health misinformation? RQ3: What challenges do Ghanaian mothers face when correcting maternal health misinformation? RQ4: How do Ghanaian mothers draw on their prior knowledge and experiences about pregnancy, birth, and postpartum in Ghana to unpack the problematic situation of maternal health misinformation?

I also used the culture-centered approach (CCA) to understand how mothers make meaning of maternal health misinformation within their culture. In the following sections, I analyze the data presented in the previous chapter based on interviews with 20 primiparous and multiparous Ghanaian mothers. My analysis establishes a theoretical connection between the STOPS and the CCA. I argue that the constructs of the CCA, namely culture, agency, and structure, intersect with the variables of STOPS to ultimately shape the mothers' problem-solving approaches and communicative behaviors, as will be fully discussed.

Different themes emerged when answering the research questions posed above. These themes were presented in detail in chapter four but are highlighted here to ground the analysis. Research question one revealed that the participants identified misinformation by leveraging their maternal health literacy skills and lived experiences and being skeptical of the information received. Research question two, which sought to understand how involved the mothers were with the problem of misinformation, revealed two themes. The findings indicate that the mothers' involvement with misinformation was either high or low. The third research question, which focused on the challenges or constraints the mothers experience when correcting

misinformation, revealed that the mothers found it difficult to correct misinformation because of cultural influences and the perceived lack of capacity. The final research question explored how prior knowledge and experiences helped the mothers unpack maternal health misinformation. The findings revealed that their previous knowledge and experience with maternal health misinformation enabled them to identify misinformation, engage in active maternal health behaviors, and educate other mothers.

Before delving into the theoretical implications, I will discuss the nature of maternal health misinformation in Ghana in the following few paragraphs to provide a solid grounding for understanding and interpreting the findings.

The nature of maternal health misinformation in Ghana

Maternal health misinformation sources

First, the findings of the study indicate that maternal health misinformation originates from the same sources as maternal health information. Therefore, the mothers encountered misinformation through the internet, their interpersonal networks, and even their healthcare providers (Bautista et al., 2021). One of the most interesting findings from the study is that whereas recent studies have focused on how misinformation is circulated through new media channels like the internet (e.g., Lewandowsky et al., 2012; Suarez-Lledo & Alvarez-Galvez, 2021), most of the mothers in this study shared that they mainly receive misinformation through interpersonal communication rooted deeply in maternal health cultural practices. These cultural practices include the reliance on herbal medicine as well as the consideration and treatment of the pregnancy, birth, and postpartum periods as sacred.

The primary mode of transmission was through interpersonal communication within female circles. This is more pronounced because Ghanaian society primarily views the

pregnancy, birth, and postpartum phases as gendered, i.e., a feminine responsibility (Bougangue & Ling, 2017). Thus, all the women I interviewed said they received information from their female relatives, peers, or colleagues. In essence, women are the enforcers of the culture as they pass down information about pregnancy, birth, and postpartum to the women (Arzoaquoi et al., 2015).

While other studies (e.g., Chang et al., 2010) have found that spouses also played a role in ensuring that pregnant women adhere to cultural restrictions and practices during pregnancy, birth, and postpartum, this study did not find substantial evidence to support male involvement in upholding these practices. However, it is worth noting that Sylvia was the only mother who acknowledged receiving information from a male source – their security guard. Sylvia shared how the security guard confirmed the information she had previously received that staying in the dew during postpartum causes the baby to have diarrhea. She mentioned that when she did stay out, her baby's stool became watery. Interestingly, the security guard's corroboration of this belief influenced her own belief. This experience with her firstborn child significantly influenced how she cared for her three subsequent babies. She mentioned she was cautious and deliberate in postpartum practices.

Misinformation is shared with good intentions

The findings indicate that misinformation is shared unintentionally or with no intention to mislead (Lewandowsky et al., 2012; Southwell et al., 2018). This finding revealed that the information the mothers identified as inaccurate is mainly shared with good intentions, especially with the health of the mother and baby in mind (Aynalem et al., 2023; Otoo et al., 2015). Also, the ones who share do not know that the information they have is wrong. There were a few times

when the information givers knew that the information was outdated or went against medical advice, but they did not think it was inaccurate per modern medical standards.

Therefore, this finding is more consistent with maternal health cultural practices. While the younger and more educated mothers classified some of these pieces of information as inaccurate because they contradicted what they received from the hospital, the elderly mothers passed it down with pride because that is what they have known and practiced for ages. Unfortunately, studies have confirmed that modern medicine has revealed that some of these practices can be dangerous if followed, as seen in the hot water and absorbable suture example shared by Akua. For instance, studies done in Ethiopia (Aynalem et al., 2023) and Ghana (Arzoaquoi et al., 2015) confirm that some cultural practices surrounding pregnancy, birth, and postpartum can threaten maternal health by negatively impacting women's maternal health behaviors (Nan et al., 2021; Southwell et al., 2023). It is important to note that although most of the participants' understanding of maternal health was first and foremost shaped by their culture, they aligned more with the biomedical.

Interestingly, while all participants agreed that some of the cultural practices passed down to them can put mothers at risk, the findings from Otoo et al. (2015) suggest a contrasting perspective. These authors found that the majority of their participants, who were uneducated, did not agree that cultural practices can negatively impact their pregnancy outcomes. However, those who were educated agreed that some of these practices can have adverse effects (Otoo et al., 2015). From the demographic data, it is evident that the high levels of education among the participants in this current study likely contributed to this difference in perspective. This is because educated women are more likely to go to the hospital for antenatal care and are health

literate (Seidu et al., 2020). Hence, the more educated the mothers were, the less likely they were to accept these pieces of information without verification.

Healthcare providers mostly provide accurate information

The reliance on healthcare providers for accurate maternal health information and verification of information received helped the mothers better understand their health and identify maternal health misinformation. This reliance reduces their susceptibility to misinformation and ultimately shapes their health behaviors (Nan et al., 2022). A few of the mothers shared that they had family members and friends who worked as healthcare providers. Therefore, this personal connection enabled them to ask questions or easily verify information when necessary.

However, not all the participants had easy access to healthcare providers or could freely ask questions during antenatal visits. Some referenced the unapproachable attitude of the healthcare providers as a hindrance to asking questions they had. Indeed, this is not the first study to report the negative attitude of Ghanaian healthcare providers hindering women's maternal health-seeking practices. The participants in Otoo et al.'s (2015) study, for instance, reported they shared less and did not ask questions based on some healthcare providers' negative attitudes.

Additionally, this finding resonates with other studies that discussed how the attitude of healthcare providers deters patients from engaging in information-seeking practices. For instance, Yakong et al. (2010) found that maternal healthcare providers often did not provide adequate information to the mothers, forcing them to rely on interpersonal communication, which adversely impacts their health. While some scholars believe that patients must be empowered to ask questions about misinformation (e.g., Southwell et al., 2020), this study found

that limitations, such as the one discussed above, inhibit the agency of mothers. Therefore, positive provider-patient interactions must be encouraged to increase mothers' interaction with their providers. Although not all the mothers had direct access to their providers, they still emphasized the importance of leaning on healthcare providers to correct misinformation.

Misinformation correction is complex

Finally, the study revealed that the correction of misinformation is a daunting task. While some scholars have asserted that the onus lies on information seekers to verify information (Swire & Ecker, 2018), not all the mothers in this study were motivated to verify the information they received. Some participants cited fear as the reason they hesitated to ascertain the accuracy of the information they perceived as inaccurate. When asked if she verified the maternal health information she received, Brenda shared that she does not verify the questionable information because she fears confirming it is true. She explained that since she goes against some of these unverified claims, particularly about conduct, she chooses not to verify the information to maintain her peace of mind. Instead, she discards any information she does not believe in. She concluded by saying, "I don't want anyone to put fear in me. I want to be free".

Other mothers, like Joanna, chose not to verify some of this potentially inaccurate information because they believed the effort would be futile. This was because, during the postpartum phase, she stayed with her mother, who would ensure that she adhered to the traditional maternal health practices regardless of whether they were scientifically verified or debunked during antenatal classes. Therefore, although she understood that some of these claims were not scientifically supported, she did not feel compelled to verify them. She provided an example that, as a postpartum mother, she was not supposed to walk around in the night. And her mother made sure she did not. She explained that this rule is deeply rooted in maternal health

practices that she would not have felt comfortable calling her midwife to verify. Therefore, fear and the futility of the verification process hindered some mothers' misinformation correction efforts.

The study also found that having credible information to correct the misinformation does not necessarily mean there will be a change in maternal health behavior. This confirms that misinformation correction is neither a magic pill nor simplistic nor straightforward. Interestingly, even if people receive correction from credible sources, misinformation sometimes continues to influence their reasoning. This is known as the *continued influence effect* of misinformation (Lewandowsky et al., 2012; Swire & Ecker, 2018, p. 195).

As exemplified in this study, some mothers, even when they receive clear and credible information that the piece(s) of information they have is inaccurate, continue to process the possibility of suffering the consequences of the misinformation they received if they do not adhere to it. If not managed, this cognitive dissonance can adversely impact the mothers' decision-making regarding maternal healthcare (Swire & Ecker, 2018). For instance, Naa shared her experience of how she became deeply worried after refusing to take the labor-inducing herbal medicine prescribed by her grandmother. Her refusal and the pressure she experienced when her labor was delayed compelled her to seek spiritual help from her pastor to ease her worry.

One of the most effective methods of correcting misinformation is providing alternative factual evidence or explanation to facilitate switching out the inaccurate information in an individual's initial situation model (Swire & Ecker, 2018, p. 198). While the mothers were sometimes able to find alternative information about the pieces of information they believed were inaccurate, this is not always the case. Sometimes, substitutes or accurate information was not readily available. In some cases, all the mothers could say was that they felt the information

was inaccurate. Also, since all the mothers did not have medical expertise in maternal health, they relied upon what someone else said as the truth (Swire & Ecker, 2018).

Implications of STOPS

The two theoretical frameworks I used in this study helped me determine what to observe, take notes on, or ask questions about during the data analysis (Tracy, 2020). Thus, I present the implications of the STOPS as they relate to the research questions, then move to how the STOPS intersects with the CCA to shape the participants' problem-solving efforts.

RQ1: How do Ghanaian mothers identify maternal health misinformation?

The findings indicate that all the mothers who participated in this study have a degree of problem recognition, as they all acknowledged that they had received misinformation at some point and had stopped to think about it as a problem (Shen et al., 2019). Most of them also shared that maternal health misinformation is a significant problem for Ghanaian mothers. Most of them stressed that susceptibility to maternal health misinformation can negatively impact the maternal health behaviors of women.

According to the interviewees, this perceived susceptibility can lead to complications such as miscarriage, labor complications, stillbirth, and maternal and infant mortality. Although all of them recognized that maternal health misinformation is a problem, with some of them even describing it as a *huge* problem, they all had varying degrees of problem recognition. Some exhibited high levels of recognition, while others showed relatively lower levels of recognition.

The mothers with high problem recognition levels, like Edith, were quick to share their experiences and gave accounts of how they navigated experiences with inaccurate maternal health information. Most of these women were health literate and able to identify misinformation by verifying with credible sources, comparing information from different sources, and

conducting personal research. These mothers are considered active problem solvers. On the other hand, the mothers with low problem recognition simply shared how they understood maternal health misinformation but did not indicate having any profound experiences with it. These mothers are considered passive problem solvers.

Although all the mothers knew the problem and its impacts, their communicative efforts cannot simply be determined based on problem recognition. The other variables, involvement, and constraint recognition, need to be considered to ultimately understand the individuals' communicative actions (Kim et al., 2012). The findings of this study support this claim, as problem recognition alone did not spur the mothers to take communicative action.

RQ2: How involved are Ghanaian mothers with maternal health misinformation?

In this study, the mothers' involvement or the degree to which they felt connected with the problematic situation, i.e., misinformation, manifested as high or low. According to the theory, it is only when individuals feel a perceived connection that they are able to determine the significance of the problem to them (Kim et al., 2011). The mothers who expressed high involvement shared how important it is for all mothers to access accurate maternal health information. They also had a good grasp of how misinformation impacts them, recognizing that it is highly likely to leave them susceptible to maternal health complications. Additionally, they understand the maternal healthcare system, its limitations, and opportunities. This group of mothers developed a schema for verifying the information they received. For instance, Lisa mentioned she only read documents in portable document format (PDF) when accessing information online as a strategy to avoid getting misinformation. Also, these mothers were quick to express or share examples of times they encountered misinformation and actions they took, like correcting information for other mothers.

On the other hand, the mothers with low involvement were further divided into two groups. One group felt that the issue of misinformation was insignificant to them because they were educated, had high health literacy skills, and had access to credible maternal health information sources, like their healthcare providers. Interestingly, these mothers expressed the issue's significance to mothers whom they considered less privileged. Akua, who has a first degree, shared that illiteracy is really a problem and increases mothers' risk of consuming misinformation. However, it is not a problem for her because she is able to verify and confirm the maternal health information she receives.

The other group within this group of less-involved mothers were mothers who did not feel connected to the problematic situation at all. They did not discuss it in detail or express an in-depth understanding of what maternal health misinformation meant to them. They also did not possess an understanding of how misinformation could impact them. In essence, they exhibited indifference toward it. It was as though they had disconnected themselves from the problem. In terms of demographics, these mothers had lower literacy levels; thus, they were not avid information seekers and were satisfied with the information from antenatal classes.

RQ3: What challenges do Ghanaian mothers face when correcting maternal health misinformation?

This refers to individuals' perception of obstacles that prevent them from doing something about the problematic situation or issue (Kim & Grunig, 2011). Kim et al. (2011) assert that people simply do not communicate about a problematic situation if they perceive the obstacles to be insurmountable, regardless of how high their problem and involvement recognition levels are. Within the context of this study, constraints manifested as cultural influences and the perceived lack of capacity.

Some of the mothers perceived cultural practices, such as deference to the elderly, as a constraint that inhibits their misinformation correction efforts. For instance, some mothers observed that they know what their elderly relatives tell them about maternal health, which is not accurate. Still, they cannot correct them because they are older than them, and they are under their care mainly during the birth and postpartum period. The mothers who recognize these constraints note that some practices in their culture are limiting, especially during misinformation correction, as it is considered disrespectful to stand up to their elders. Thus, they simply become acquiescent. This finding resonates with an earlier study in Taiwan that found that pregnant women engage in taboos, although they disagree because they must meet family and social expectations (Chang et al., 2010).

At other times, the mothers did not deem themselves qualified to correct misinformation, as they had not been trained as healthcare professionals. These mothers believe that to have the credibility to problem solve, one must have adequate qualifications and extensive experience to talk about maternal health. Hence, since they did not have any education in maternal health, they did not deem themselves the right people to correct misinformation. Therefore, they defer to maternal healthcare practitioners.

RQ4: How do Ghanaian mothers draw on their prior knowledge and experiences about pregnancy, birth, and postpartum in Ghana to unpack the problematic situation of maternal health misinformation?

In this study, the mothers who had experienced maternal health misinformation were more likely to be motivated to seek information and develop a schema that helped them easily sift through the pool of information available to them. Thus, the mothers' referent criteria enabled them to identify misinformation and educate other mothers. Therefore, prior knowledge of, and experience with, pregnancy, birth, postpartum, and misinformation made some of the

mothers exhibit active, communicative behaviors like sharing maternal health information, as referenced in the previous chapter.

Although the theory stipulates that "the presence of, or a stronger subscription to, a referent criterion will lead to higher communicative action in problem solving" (Kim & Grunig, 2011, p. 131), this was not entirely the case in this study. The findings showed that some of the mothers with less referent criterion were also inclined to engage in active information seeking as they were curious to understand their maternal health. This finding could be because maternal health heightens information search (Mulauzi & Daka, 2018), thus, mothers who have not experienced pregnancy before are more likely to search for more information on it. It is through this information search that they are able to determine accurate from inaccurate maternal health information. These mothers' lack of referent criteria encouraged them to take action. For instance, Gladys concluded that she is less likely to be susceptible to misinformation because even as a first-time mother with no referent criterion, she kept "asking questions, researching and reading."

Communicative Action of the Mothers

As a descriptive theory (Kim et al., 2023), the STOPS enabled me to describe the communicative behaviors of mothers in problem solving situations. Problem, involvement, constraint recognition, and referent criterion intersected to determine how the interviewees behaved communicatively in relation to misinformation. In the next paragraphs, I explicate these communicative behaviors.

Generally, the findings revealed that high problem and involvement recognition with low constraint recognition shape information acquisition, selection, and transmission. First, the findings of this study indicate that the problem, involvement, and constraint recognition motivate

the mothers' information acquisition. Per the findings, when motivated to correct inaccurate information, some of the mothers who are active problem solvers, i.e., those who have high problem and involvement recognition with low constraint recognition, voluntarily scan the environment for messages about that piece of information. This scanning involves searching for information from their healthcare providers, the internet, and or family and friends who have experienced pregnancy, birth, and postpartum. This search, termed information seeking in the STOPS, is deliberate and purposeful, making it an active process. During this process, the mothers select only the relevant information to correct the inaccurate one by judging its value and relevance to the problem (Kim & Krishna, 2014). This cognitive process of evaluation of information constitutes information forefending (Kim & Grunig, 2011; Kim et al., 2012).

These active mothers also engaged in information attending, where they discovered or chanced upon new information in relation to the inaccurate information they sought to correct. This unplanned discovery of messages occurred mainly during their antenatal classes, where the midwives corrected some common maternal health misinformation, mainly in relation to food and traditional medicine.

Interestingly, the mothers who were passive problem solvers or those who had low problem and involvement recognition and high constraint recognition also acknowledged that they received maternal health information correction messages during antenatal visits. Consequently, some of these women explained their understanding of misinformation based on what they heard during their antenatal classes. This finding is consistent with the theory that active problem solvers are high in information forefending and permitting, whereas passive problem solvers are only high in information attending (Kim & Krishna, 2014).

Consistent with the theory, information forefending and permitting are not mutually exclusive, as even the most active mother still permitted information. This is consistent with the theory that “an active problem solver does not reject information and opinions from different sources, even those that run against his or her initial opinion" (Kim et al., 2012).

The findings of this study reveal that the mothers who had a high problem and involvement recognition with low constraint recognition and had the motivation to solve the problem rather exhibited low information forwarding and high information sharing behaviors. For instance, Sandra shared her experience with high blood pressure with a colleague who was in a similar situation. She told her colleague that if she, Sandra, had successfully gone through the 9-month pregnancy and delivery, then her colleague could have that same experience.

For information forwarding, which is the active counterpart of the information transmission variable, the study found that some active mothers shared that there were a few times they engaged in information forwarding, or what Kim and Hong (2022) term proactive forwarding. This is because they did not want to be blamed or held responsible should something negative result from an individual using the information they forwarded. Therefore, they were hesitant to purposefully forward information to other mothers who had inaccurate information. The mothers who expressed this hesitation mentioned that they would rather direct or instruct other mothers to ask more questions from their healthcare providers.

The findings showed that these active mothers engaged in information sharing, i.e., sharing upon request (Kim & Hong, 2022), more than information forwarding. Thus, these mothers only shared information when asked about a piece of information they already had on their radar. Contrary to the theory’s assumption that active problem solvers engage more in information forwarding, whether it is solicited or not (Kim et al., 2012; Kim & Krishna, 2014),

the findings of this study revealed that active problem solvers consider different situational factors before engaging in information forwarding.

In this particular study, the key situational factors that influenced the mothers' information transmission behaviors included the perceived lack of credibility in maternal health and fear of repercussions. Based on these findings, I argue that, in addition to considering situational motivation, which is internal and cognitive, it is crucial to consider how the situational factors, which are external influences, might inhibit active problem solvers' information transmission behaviors. On the other hand, the study found that passive mothers rarely engaged in information-sharing behaviors.

Referent criterion significantly shapes problem recognition

The findings of the study showed that the mothers with high referent criterion or prior knowledge and experience of maternal health misinformation equally had high problem recognition. This finding means that the mothers' referent criterion enabled them to easily recognize misinformation or at least be suspicious of any information they received. For the mothers in this study with high health literacy skills, prior experiences with misinformation meant that they did not necessarily need to verify information to know they were being misinformed. At other times, they knew exactly what to do to verify information, thus reducing the time and effort spent seeking a solution.

However, some mothers who were experiencing their first pregnancy did not easily identify misinformation. This confirms that referent criterion plays a significant role in problem recognition. While a recent study by Akbulut (2023) found no support for the referent criterion's impact on communicative behaviors, this current study actually found that the mothers' communicative behaviors change once they have a referent criterion, as discussed above.

The Intersection of the STOPS and CCA

The findings of this study show that when applying STOPS to understand a problem like health misinformation in a different sociocultural environment like Ghana, constructs of the CCA, i.e., culture, structure, and agency, significantly influence an individual's problem, involvement, and constraint recognition and referent criterion. I discuss how these constructs intersect in the following sections.

Culture shapes problem and constraint recognition

Although pregnancy, birth, and postpartum are biological events, many attach cultural significance to these phases (Otoo et al., 2015). Therefore, the findings of the study indicated that culture actively shapes the mothers' problem and constraint recognition. By being members of their various cultures, some of the mothers already knew the cultural meanings/interpretations associated with motherhood. However, it took experience for them to fully understand how culture actually shaped their maternal health experiences and information-seeking patterns. In the context of this study, culture impacts the mothers' problem and constraint recognition in different ways. These nuanced ways are discussed below.

According to the CCA, some elements of culture constantly shift (Dutta, 2007). In this case, the cultural understandings of pregnancy, delivery, and postpartum are seen as moving or fluid such that the older generation of women, i.e., the participants' mothers, mothers-in-law, aunties, etc., attach distinct interpretations to pregnancy, delivery, and postpartum. Their understanding of these phases is mainly experiential and passed down from generation to generation (Otoo et al., 2015). These interpretations differ from the ones held by the mothers in this study, who are part of a different generation. This younger group of mothers relied more on orthodox medicine and sourced information from various sources. This finding is attributed to the advancements in modern medicine and the increased educational levels among young women

leading to younger women's increased knowledge of healthcare services and preference for modern medicine (Abor et al., 2011).

Therefore, these intergenerational differences in maternal health knowledge increased the participants' skepticism of the information received, motivating them, especially the active information seekers like Enyo, to verify pieces of maternal health information passed down from the older generation before they acted upon it. Enyo seemed to align more with the biomedical because she believes it is more accurate. For instance, she shared that ultrasounds are more precise than traditional ways of determining the sex of the baby.

Therefore, most of the interviewed mothers shared that they verify the maternal health information received from older relatives in their lives because their era has passed and many things have changed and have been modernized, so there is a high probability that the information they share is outdated. Additionally, they remain skeptical because orthodox medicine and new media have advanced, making it easy for them to confirm and double-check the information from various sources. This process shaped and enhanced their problem recognition.

Regarding constraint recognition, culture's influence manifests in how some of the mothers acquiesce to the elderly women in their lives to avoid confrontation. Given that Ghanaian culture prioritizes the opinion of older people over younger ones, this deference made it difficult for the younger mothers to problem-solve independently. Age differentials, thus, shape constraint recognition. Within the Ghanaian culture, older people are considered repositories of knowledge. They are perceived as full of wisdom, they have authority, and they are to be respected (Ofori, 2022). Indeed, the mothers in this study portrayed the older women as repositories of indigenous maternal health knowledge. Hence, although there were several

instances where the participants knew they were being misinformed, they felt powerless to problem-solve.

Despite the clash of ideas between the two generations and the participants' general unwillingness to follow some of these age-old practices, the older generation is sometimes able to have their way. This is because some of the participants do not want to be perceived as disrespectful. They also believe that the pregnancy, birth, and postpartum phases are temporary and will not last a lifetime, as Joanna mentioned. Thus, they allow some of these practices out of deference. For example, Owusua recounted an experience where her mother used hot water to massage her nephew's head [5]. When Owusua's brother objected to this practice, stating that it was against what they had been taught in the hospital, her mother retorted she did the same for him and his siblings when they were babies. Despite this objection, the brother allowed the massage to continue out of deference. This example elucidates the contrast between Owusua's mother's belief, which is deeply rooted in the experiential, and her son's belief, which aligns closely with the biomedical. With age significantly impacting the mothers' constraint recognition, I argue that it should be included as a variable when investigating how intergenerational understanding of a phenomenon shapes individuals' communicative behaviors.

It is important to note that not all mothers succumbed to the social pressure of adhering to maternal health practices they consider unhelpful. Some of the mothers who were motivated enough to engage in misinformation correction acknowledged how they co-constructed maternal health knowledge by engaging in dialogue with their mothers or other older female figures instead of deferring. In some cases, this dialogue is not received gently, but some of the participants persist until they can effectively communicate the new knowledge. For instance,

[5] This is an age-old practice believed to shape/mold newborn babies' heads.

Akua believes that it is important to adopt a firm stance when it comes to misinformation, or else "you'd end up in trouble."

Some of these mothers indicated they are more confident when they get the correction from their healthcare providers. This is where agency intersects with culture and constraint recognition to influence the mothers' communicative behaviors. Additionally, their agency to stand up to their mothers is reinforced by the efforts of structures, such as the health system. This agency is enabled by the information they get from antenatal classes through the efforts of the health ministry to provide adequate maternal health information for all mothers. Acquiring this knowledge encourages the mothers to confidently identify and correct misinformation whenever they encounter it.

However, this was not always a straightforward process because there were times the elderly women expressed skepticism about the new information their daughters presented to them. They argue that some of the healthcare providers do not even follow these new maternal health practices. Edith recounted her experience, stating,

> They'll tell you to give the baby water. Meanwhile, the nurses have told you to do exclusive breastfeeding for six months. The nurses told us that the breastmilk has a lot of water and everything [nutrients]. But they [elderly relatives] will say no, add porridge and other stuff to it [breastmilk], give water to the baby. They even tell you that the nurses, when they go to their houses, they secretly give water to their babies. How sure could they be about that?

Therefore, some of the mothers highlighted a strategy used by the health ministry to facilitate the older women's acceptance of some of these new practices. This strategy involved the younger mothers bringing these older women to their antenatal classes which allowed them to directly

hear some of these inaccurate pieces of information being corrected by healthcare providers. It appeared that this strategy had not been rolled out in all health facilities because only a handful of mothers referenced it.

Ultimately, cultural practices inform how mothers make meaning of maternal health (mis)information during the pregnancy, birth and postpartum phases. It is important to note that the shifting of culture in this context is enabled and fueled by advancements in modern medicine and technology. The mothers interviewed in this study now have easy access to information sources using the internet, and some can even reach their maternal healthcare providers using their mobile phones when seeking maternal health information.

Additionally, they are able to attend prenatal and postpartum visits and meet maternal healthcare providers who provide them with information on the pregnancy, birth, and postpartum phases from a biomedical perspective. As a result, most of the women believe that they are well-equipped with credible information that they can rely on and compare and contrast with cultural practices.

Agency shapes mothers' involvement recognition and enhances problem-solving

The study found that aside from situational motivation, agency, a construct in the CCA, heavily impacted mothers' involvement recognition. The mothers' ability to recognize the problem within the larger cultural context and to take proactive steps to correct it positions them as highly involved with the problem. By being agentic, these mothers were able to recognize that the structures or institutions in charge of maternal health in Ghana lacked comprehensive interventions to curb misinformation, leading to the registration of their displeasure. This recognition informed the mothers' communicative behaviors, like information seeking and sharing, as seen in Edith's interaction with her friend, who delayed antenatal healthcare because

of the inaccurate information she got.

They also acknowledged that the voices of mothers with less access and privilege, like mothers in rural areas, have been obliterated from maternal health spaces. Thus, they call for inclusivity in maternal health education and interventions so that no mother is left behind.

These mothers are clearly able to articulate their views on the health risks associated with the consumption of misinformation and expressed eagerness to find solutions to the problem. This explanation resonates with Dutta's (2007) conceptualization of agency as "the capacity of cultural participants to participate in day-to-day actions in response to their contexts based on a deeper level of understanding of these contexts and the structures surrounding them" (p. 321).

Armed with other information sources, such as the internet, these mothers go through extra steps to verify the information received, with some even taking it upon themselves to correct it for others. Although misinformation correction can be challenging, these mothers' agency forces them to do something about the problem at the individual level.

Structure shapes problem recognition and referent criterion

The findings of this study indicate that structure, in this context, the health institutions, shapes how the participants identify the problem of maternal health misinformation. While some of the mothers praised the efforts of the Ministry of Health (MoH) and the Ghana Health Service (GHS) in ensuring that mothers receive accurate maternal health information during their antenatal care, other mothers were simply dissatisfied. Those who expressed concerns about the shortcomings of the health services stated that they felt ignored or dismissed when they tried to ask questions or get clarifications from their providers. This experience limits the problem recognition of the mothers, given that almost all the mothers deemed their healthcare providers as sources of accurate maternal health information.

It is also crucial to reiterate that most of the interviewed mothers were able to identify misinformation during their antenatal visits when sessions were held to debunk misinformation or when opportunities were provided for questions and answers. Therefore, in instances where the providers were dismissive, it was difficult for the mothers to verify if the information they had was accurate or inaccurate. This limitation of the health institutions compelled the mothers to heavily use unreliable sources of maternal health information. This overreliance on unverified sources increases the mothers' vulnerability to consuming misinformation. This finding corresponds to an assertion by Southwell et al. (2023) that resource challenges increase people's susceptibility to misinformation.

Most of the mothers who participated in this study equally lamented these healthcare structures limit the agency and/or health choices of mothers who live in rural areas or mothers with lower levels of education. Through the interviews, I deduced that other social structures make it difficult for the mothers to access education and income-generating jobs that can enable them to thrive during pregnancy, delivery, and postpartum, especially when it comes to having access to information-rich sources. Existing studies confirm that educated mothers with access to resources are more likely to utilize maternal health services, leading to better maternal health outcomes (Abor et al., 2011; Ameyaw et al., 2021; Seidu et al., 2020).

In Ghana, the rural-urban divide significantly informs the distribution of resources, and because urban centers are mostly overpopulated, the limited resources go into providing resources in these urban areas at the neglect of the rural areas (Somanje et al., 2020). This disproportionate allocation of resources comes with consequences that the mothers in rural areas must bear.

All the mothers interviewed also emphasized how the hospitals are not designed to provide tailored care and information, as the mothers seeking maternal healthcare are many. With the provider-patient ratio very high, these healthcare practitioners spend less time with the mothers, impeding the quality of care these mothers receive and the amount of information they voluntarily seek during these visits.

For example, some mothers, like Regina, even mentioned keeping to themselves. This finding resonates with the findings of an earlier study that mothers sometimes withhold obstetric, reproductive, and social information from their maternal healthcare providers to avoid being treated disrespectfully (Yevoo et al., 2018). Augusta lamented that whenever she tried asking many questions, the providers questioned her about her profession. When she told them that she was a teacher, the healthcare providers said to her that was why she liked asking many questions.

Finally, health structures shape the mothers' referent criterion. Those mothers who attended antenatal care and paid attention to the information shared, especially on debunking or correcting common misinformation, were able to boost their information bank; thus, they were better positioned to identify misinformation and even correct it for others. Some of the mothers used phrases like "we were taught at antenatal that…" to signify that they were able to store the information in their memories, which helped them to navigate future problematic situations. This is consistent with the objective aspect of the referent criterion (Kim & Grunig, 2011).

In conclusion, the findings of this study supported the applicability of the STOPS in another sociocultural context, i.e., Ghana, and another field, i.e., health communication. Generally, the findings resonated with the general assumption of CAPS, "[t]he more one commits to problem resolution, the more one becomes acquisitive of information pertaining to

the problem, selective in dealing with information, and transmissive in giving it to others" (Kim & Grunig, 2011, p. 125).

Therefore, the more a participant was committed to solving the problem of misinformation, the more she searched for accurate information using varied sources of maternal health information, filtering the information and selecting the one that is verified and, if committed enough and experiences no situational hindrances or limitations, transmitted to other mothers to avert the effects of consuming inaccurate maternal health information.

The findings of this study also show that the constructs of the CCA can be used in conjunction with the STOPS to better understand the activeness of individuals in addressing misinformation. The combined application of these two theoretical frameworks provides a more nuanced understanding of mothers' communicative behaviors in problem solving.

Conclusion, limitations, and future research

This qualitative study sought to understand the interviewed mothers' perspectives on and experiences with maternal health misinformation in Ghana. The findings, derived from interviews with 20 mothers, revealed that many of the mothers had experienced maternal health misinformation through the same sources they used for maternal health information.

Specifically, the mothers reported receiving misinformation through interpersonal networks, the internet, and healthcare providers. However, the participants indicated that they mostly received misinformation through interpersonal networks, and these pieces of information, particularly on the nutrition and general conduct of a mother during pregnancy, are deeply rooted in cultural practices passed down through generations. The study has a number of theoretical and practical implications, as will be fully discussed below.

First: Theoretical Contributions

The study demonstrated that the participants exhibit active communicative behaviors when they have high problem and involvement recognition coupled with low constraint recognition. By conceptualizing maternal health misinformation as a problem, the study revealed that the interviewed mothers can be categorized into three main groups: (1) those who had high problem and involvement recognition and low constraint recognition and engaged in active communicative behaviors (i.e., information seeking, forefending, forwarding), (2) those who had high problem and involvement recognition and low constraint but were passive in the information transmission domain (i.e., information sharing) and (3) those who had high problem recognition but were not highly involved nor motivated to solve the problem due to the recognition of high constraints and, therefore, exhibited passive communicative behaviors (i.e., information attending, permitting).

Thus, this study presented a point of departure from the basic assumption of the dependent variable of STOPS, CAPS, which suggests that active problem solvers tend to have higher information acquisition, selectivity, and sharing (Kim & Grunig, 2011). I found that most active problem solvers in this study, although active in acquiring and selecting information, were mostly passive in information transmission because of the limiting situational factors discussed earlier. There were only a few times that some of the active problem solvers engaged in information forwarding, as seen in Akua's interaction with her hospital roommate and her mother.

Additionally, the study examined the theory's applicability in another sociocultural environment and the area of health communication. Pairing the STOPS with the culture-centered approach (CCA) revealed that culture significantly influences individuals' problem recognition and constraint recognition. Examining these intersecting factors revealed that age differentials

and respect for older adults intersect with these two variables of the STOPS to dictate the communicative behavior of acquiescence.

The study also showed that agency, another construct in the CCA, shaped the participants' involvement and defined their problem-solving behaviors. This was clearly evident in the mothers' expression of their understanding and experiences of maternal health misinformation and their desire to find a solution to the problem.

Finally, structure shaped an individual's problem recognition and referent criterion. This was clear in this study through how the health institutions in Ghana increase the maternal health knowledge of mothers, making it possible for the participants to identify misinformation.

Given the strong cultural influence on how participants of this study experienced maternal health misinformation, it is crucial to use the CCA when designing interventions aimed at curbing maternal health misinformation. This way, how culture, agency, and structure intersect to shape mothers' information-seeking behaviors within a specific socio-economic and cultural context could be better examined and deeply investigated through dialogue and listening. This approach positions the mothers as local experts and sources of authoritative knowledge rather than just passive recipients of interventions.

Second: Practical Implications

Aside from the theoretical implications, this study has some practical implications for how Ghanaian women navigate maternal health misinformation. These practical implications are discussed below.

Maternal health interventions must be culture-centered

Maternal health misinformation poses a severe threat to maternal health and threatens the progress made in reducing maternal mortality. Therefore, it must be tackled using comprehensive

strategies. Given this study's finding that misinformation is intricately connected to the culture of the mothers, it is imperative that interventions to curb misinformation spread be culture centered.

Ghana's health institutions must, therefore, understand that most of these women have experienced misinformation, and it would be beneficial to draw upon their knowledge and lived experiences to design maternal health interventions. From the interviews, it was evident that the mothers understood the implications of maternal health misinformation but were dissatisfied with the efforts of health institutions to mitigate its spread and encourage its correction. This indicates that these mothers are not passive recipients of interventions. Instead, they should be treated as active individuals who can negotiate limiting structures to solve the problem of misinformation.

Therefore, interventions must critically consider how dialogue and participation can be used to address the problem of misinformation within the cultural context of these mothers. Specifically, a culture-centered intervention will acknowledge the values of local culture and move away from the traditional top-down approach that privileges the voices of the so-called experts and emphasizes message production (Dutta, 2007). This grassroots-based dialogue could help us understand the parts of culture that are particularly problematic for these mothers because not all parts of their culture negatively impact maternal health.

Cultural practices surrounding pregnancy, birth, and postpartum also have benefits for mothers (Aynalem et al., 2023; Otoo et al., 2015). By engaging the mothers in identifying the parts of the culture that are favorable and unfavorable to them, their voices that have been hitherto obliterated from discursive spaces would be centered (Dutta, 2007). Through this approach, they are no longer rendered invisible or detached from the process (Dutta, 2007). Therefore, it is crucial to engage the mothers in defining the problem and coming up with

problem-solving suggestions. This engagement should not be superficial; rather, it should be anchored in active listening. This resonates with the recommendation of Kim & Grunig (2011) that PR "practitioners often need to stimulate members of publics to voluntarily circulate information about problems in which they are interested" (p. 142).

Additionally, these health institutions are a microcosm of the culture in Ghana. Simply put, one cannot divorce these health systems from the culture; they are not mutually exclusive. Culture is, therefore, an intricate part of maternal health, even with the advancement of modern medicine and technology. Therefore, culture-centered interventions that situate the mothers as local experts must be designed when attempting to help individuals understand maternal health misinformation in Ghana.

STOPS should be used to understand how to segment during interventions

The STOPS has been widely used in the segmentation of publics (Kim & Krishna, 2018). This study has largely demonstrated support for the STOPS' postulates. Applying the STOPS to understand how mothers make sense of maternal health misinformation has revealed that the mothers are active in communicating about misinformation only when they have high problem and involvement recognition, low constraint recognition, some referent criterion, and situational motivation. Additionally, these active mothers' problem and involvement recognition partly rest on their agency. Therefore, understanding the significant role an individual's agency plays in their communicative activeness is essential in designing health interventions that seek to reduce the spread of maternal health misinformation.

Thus, in designing culture-centered maternal health interventions that target misinformation, mothers who are very active in identifying and correcting maternal health misinformation must be targeted to act as peer mentors, as social correction has been shown to

be equally important. These mothers are already in touch with the grassroots, which is especially beneficial and important. For instance, one of the participants, Akua, shared that a mother had confided in her about lying to the nurses about why her suture reopened. This example shows that some mothers are more comfortable with other mothers than they are with their healthcare providers. This patient's experience of withholding critical information from her providers can be attributable to the power imbalances between patients and their providers. Therefore, prioritizing social correction can help eliminate the hierarchy between healthcare providers and their patients. This approach will provide a discursive space not mediated by such power imbalances.

Boosting maternal health literacy

The findings of this research confirm that health literacy is very important in identifying and correcting maternal health misinformation. Therefore, the health ministry needs to design interventions to boost Ghanaian mothers' maternal health literacy, especially during the era when most women seek information using multiple sources of information. An intervention geared toward promoting health literacy would ultimately increase the mothers' ability to decipher inaccurate information from accurate information, as health literacy has been shown to impact one's susceptibility to misinformation (Chen et al., 2018).

It is also important to note that not all mothers in Ghana are literate and thus cannot engage in convergent maternal health information seeking using various sources or channels. With these mothers, the health ministry needs to understand their limitations and find applicable culture-centered strategies that can address them to boost their health literacy.

In addition, misinformation correction should be strategic so that the mothers in rural communities, who are already limited by structural inequities, are not further alienated. This

assertion is because the unequal distribution of corrective efforts can reflect existing inequalities (Southwell et al., 2023, p. 122). The next section discusses the limitations of this study.

Research Limitations

The recruitment of participants posed some limitations. The initial plan was to recruit mothers who were either pregnant or had a baby in the past two years. However, the initial call for participants resulted in responses from mothers who had given birth in the past five years. Considering the time constraints of this dissertation, I could not turn these mothers away but broadened the recruitment criteria to cover them. Therefore, the final recruitment criteria were amended to include mothers with children five years or younger and those expecting.

Additionally, the challenge of not getting participants willing to take part was largely due to the lack of compensation for participating in the study. This was a significant obstacle because the university would not approve my IRB application, which included compensating participants living outside the United States. Without any compensation for their time and effort, recruiting the sample proved challenging. This limitation likely impacted the overall participation levels in the study.

Although all interviewed mothers shared valuable insights on maternal health misinformation, this sample had some limitations. Specifically, all the mothers interviewed were educated (refer to the sample description in Chapter 3). This is because the recruitment script was shared on my social media platforms and could only reach a specific demographic, i.e., women who have social media and can read English. This means there were many more women with valuable information who might not have received the advertisement because it was shared via channels that solely use English.

Similarly, I specifically recruited women who could express themselves in English because I can only speak one Ghanaian language fluently out of the over 79 official languages in Ghana. The interviews being conducted in English automatically excluded women who cannot speak English. This exclusion criteria meant that there might be women whose voices are still being silenced because of their literacy levels and access to resources. It is, therefore, important that future research is conducted to understand these mothers' experiences with maternal health information and misinformation.

Another limitation is that the selection criteria excluded women under 18 who might have nuanced experiences with maternal health misinformation. Younger women, especially those who experienced teenage pregnancy, often face discrimination during pregnancy, delivery, and postpartum because they got pregnant earlier than expected. This discrimination from society means that they might not be able to easily access credible information sources. This perceived lack of access to credible sources of information because of the stigma associated with teenage pregnancy in Ghanaian society and the disrespect from healthcare providers might force them to source maternal health information from sources that might be full of misinformation. Excluding this vulnerable group means that their unique perspectives were not captured. Future research can examine these mothers' experiences with navigating misinformation.

In addition, the mothers who participated in the study were all from the southern part of Ghana. With the south and north divide wreaking havoc by determining who gets which resources, as referenced in Chapter 2, this study unintentionally perpetuates that divide by not recruiting mothers from the northern part of the country. Although cultural practices in Ghana are not entirely homogenous, the mothers from the southern regions shared some common cultural practices during the interviews. However, studies have found some differences in the

food restrictions of mothers in the Upper East region (Azarquoia et al., 2023). Based on this observation, it is crucial to examine the perspectives and experiences of women from northern Ghana to have a comprehensive understanding of the phenomenon under study.

Finally, mothers who were currently pregnant with their first child did not have much to share about misinformation and could not easily identify misinformation like the multiparous moms who already had multiple children. Although this presented a limitation in this study, it is important, as the findings of this study indicate, to boost these mothers' problem recognition levels so they can easily identify maternal health misinformation.

Due to all the previously mentioned limitations and constraints, in addition to the small sample size of only 20 women, it is safe to conclude that the findings of this study provided an in-depth investigation of the interviewed mothers' lived experiences with maternal health misinformation, but they cannot be considered representative of the experiences of Ghanaian mothers at large and cannot be generalizable to this population.

Directions for future research

Considering the dearth of literature on maternal health misinformation both in Ghana and in the Global South, in general, as well as in the broader field of health communication, coupled with the significant impact of misinformation on maternal health, it is crucial to conduct other studies that would help develop a comprehensive understanding of this complex, yet understudied, phenomenon. Therefore, here are a few potential areas that future studies could explore to comprehensively understand the phenomenon of maternal health misinformation within the health communication and public relations subfields of communication.

Investigate the impact of maternal health misinformation on maternal health behaviors

Studies can explore how maternal health misinformation influences mothers' maternal health behaviors during pregnancy, birth, and postpartum. While the findings of this study are significant because they provide empirical evidence illustrating how mothers navigate misinformation in a collectivist cultural environment, this study did not examine how maternal health misinformation influences mothers' health behaviors. Therefore, future studies can tow this trajectory using behavior theories such as the health belief model and the theory of planned behavior to fill this gap (Ajzen, 1991, 2020; Champion & Skinner, 2008).

Examine the older women's perspectives on maternal health misinformation

This study focused solely on the perspectives of mothers. However, the interviews revealed that the older women in the participants' lives greatly influenced their understanding of pregnancy, birth, and postpartum. Therefore, it will be interesting to hear the perspectives of these older women to understand their point of view on maternal health misinformation.

In order to have a comprehensive understanding of culture's impact on maternal health (mis)information, it would be valuable to use in-depth interviews and community-based approaches to explore the intersection between indigenous knowledge (i.e., knowledge which is primarily based on experience, is mostly subjective, and is passed down through generations) and scientific knowledge (i.e., objective knowledge). Examining the perspectives and experiences of these older women, those considered gatekeepers of cultural practices surrounding pregnancy, birth, and postpartum, especially in the cultural context of countries in the Global South, like Ghana, will deepen scholars' understanding of maternal health misinformation.

Examine maternal healthcare providers' viewpoints on maternal health misinformation

Given that healthcare institutions are part of the culture within which they exist and can be structures that limit the mothers' agency and maternal health information-seeking patterns, it would be interesting to examine the healthcare providers' perspectives on their efforts to reduce maternal health misinformation. This will provide valuable insight into the healthcare providers' viewpoints on and experiences with maternal health misinformation. Additionally, it would be useful and eye-opening to compare and contrast the healthcare providers' views on and experiences with this phenomenon with those of their patients. The similarities and differences emerging from such comparisons could undoubtedly enrich the existing body of knowledge on maternal health information and misinformation.

Analyze rural and urban mothers' attitudes toward misinformation

While this study did not explicitly set out to recruit women who live in urban areas, most of the participating mothers were living in urban areas. They acknowledged having access to healthcare facilities, and they all used these facilities for their maternal health needs, which boosted their maternal health knowledge.

Considering that geographical location can influence how mothers experience maternal health, especially in terms of access to maternal health resources, future studies should analyze how rural mothers experience and navigate misinformation in contrast to mothers in urban areas. Also, this would be an interesting area to explore because the rural communities in Ghana tend to be more communal, meaning they rely more on interpersonal information than urban communities.

Therefore, although some studies investigated the urban-rural divide in Ghana in the realm of maternal health information seeking (e.g., Khamis and Agboada, 2023), there is certainly a grave need for more research on this important topic.

Use the CCA to design an intervention to curb maternal health misinformation

Future studies should design a maternal health misinformation intervention using the CCA. Such studies should adopt a participatory community-based approach, where the mothers would be involved from the beginning of the intervention to its evaluation. Such studies would rely on community resources, meaning cultural resources and communication channels would all be derived from the community itself. This will allow scholars to better understand how culture, agency, and structure intersect to perpetuate or disrupt maternal health misinformation in a specific cultural context.

Appendix A – IRB Approval Letter

UNIVERSITY OF MARYLAND

1204 Marie Mount Hall
College Park, MD 20742-5125
TEL 301.405.4212
FAX 301.314.1475
irb@umd.edu
www.umresearch.umd.edu/IRB

INSTITUTIONAL REVIEW BOARD

DATE: September 1, 2023

TO: Delight Agboada
FROM: University of Maryland College Park (UMCP) IRB

PROJECT TITLE: [2085168-1] Understanding Ghanaian mothers' perspectives and experiences on maternal health misinformation in Ghana

SUBMISSION TYPE: New Project

ACTION: APPROVED
APPROVAL DATE: September 1, 2023

REVIEW TYPE: Expedited Review

REVIEW CATEGORY: Expedited review category # 7. 45CFR46.204 applies. Waiver of Consent Documentation - 45CFR46.117(c). Waiver of Consent (screening) - 45CFR46.116(g).

Thank you for your submission of New Project materials for this project. The University of Maryland College Park (UMCP) IRB has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

Prior to final approval of this project scientific review was completed by the IRB

Member reviewer. This submission has received Expedited Review based on the

applicable federal regulations. This project has been determined to be a MINIMAL RISK

project.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding followed by a signed consent form.

Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Unless a consent waiver or alteration has been approved, Federal regulations require that each participant receives a copy of the consent document.

Please note that any revision to previously approved materials must be approved by this committee prior to initiation. Please use the appropriate Amendment forms for this procedure.

All UNANTICIPATED PROBLEMS involving risks to subjects or others (UPIRSOs) and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office. Please use the appropriate reporting forms for this procedure. All FDA and sponsor reporting requirements should also be followed. All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to this office.

Please note that all research records must be retained for a minimum of seven years after the completion of the project.
If you have any questions, please contact the IRB Office at 301-405-4212 or irb@umd.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within University of Maryland College Park (UMCP) IRB's records.

Appendix B - Social media recruitment script

I am currently conducting a research study on how Ghanaian mothers understand and experience maternal health misinformation.

I am seeking Ghanaian mothers who are at least 18 years of age, currently expecting a child or had given birth in the past five years and speak English who can speak to their understanding and experiences of maternal health misinformation in Ghana.

This study has been approved by the Institutional Review Board at the University of Maryland, College Park.

We will conduct an interview via Zoom or over the phone which will take between 30 and 60 minutes to complete. The interviewer intends to audio record the interviews with your permission; however, you may decline to be recorded, in which case the investigator will use hand-written notes instead.

The identity of all participants will be kept confidential, and they will be anonymous in the published research. Your participation in this study is voluntary. If you choose not to participate or to withdraw from the study at any time, you are free to do so, without any penalty.

If you are interested in participating or have any questions about the study, please email me at dagboada@umd.edu.

I appreciate your consideration of participating in this study and hope to hear back from you soon. Thank you!

Delight Agboada

Ph.D. Candidate

Department of Communication

University of Maryland, College Park, USA

Appendix C – Participant Confirmation Text

Hello,

Thank you for expressing interest in the study. Kindly review the consent form attached and let me know if you have any questions. I will also review the consent form at the beginning of our interview. Please confirm when you would be a good time for the interview.

Thank you

Appendix D – Participant Consent Form

Institutional Review Board
1204 Marie Mount Hall ● 7814 Regents Drive ● College Park, MD 20742 ● 301-405-4212 ● irb@umd.edu

CONSENT TO PARTICIPATE

Project Title	*Understanding Ghanaian mothers' perspectives and experiences on maternal health misinformation in Ghana*
Purpose of the Study	*This research is being conducted by **Delight Agboada** at the University of Maryland, College Park, USA. I am inviting you to participate in this research project because you are currently pregnant or had given birth in the past five years and living in Ghana. The purpose of this research project is to understand your perspectives on and experiences of maternal health information and misinformation in Ghana.*
Procedures	*The procedures involve virtual interviews, held over the phone or via Zoom. The interview will take between 30-60 minutes to complete. The interviewer will ask you questions relating to (1) how you seek maternal health information, (2) how you determine the accuracy of maternal health information and (3) how your culture influences what you consider to be inaccurate maternal health information. The interview questions are open-ended. This means all your thoughts on the questions are welcome. An example of the question is, "what do you consider accurate and factual maternal health information?"* *You can receive a copy of the research report upon request.* *The interviewer intends to audio record the interviews; however, you may decline to be recorded, in which case the investigator will write up your responses.* *Do you consent to be audio recorded during this interview?* *There will be no follow-up interviews; however, the interviewer might contact you if she encounters a question about your responses*

	when converting the audio recording of the interviews to written texts. *Do you consent to be contacted if the interviewer has any questions when converting the audio recording of the interviews to written texts?*
Potential Risks and Discomforts	*This study could present some risks to you, mainly loss of confidentiality. This risk will be minimized by removing everything that links you to the interview from the recorded interviews. Efforts to reduce the risk of violation of confidentiality are described in the Confidentiality section.* *Your participation is voluntary, and you can also opt not to be recorded, decline to answer some questions, or end your participation at any time.*
Potential Benefits	*There are no direct benefits to participants of the study. However, the results of the study will improve the understanding of how women experience and perceive maternal health misinformation from a cultural standpoint.*
Confidentiality	*In order to protect your identity and privacy, your identities will remain confidential. The researcher will assign you a pseudonym. Your actual name will not appear in interview data. The information linking your real identity to the pseudonyms will be kept in a separate document on the researcher's laptop computer in a separate folder away from the folder of the interview data. In the case where handwritten notes are taken during the interview, the researcher will type these notes out after the interview and destroy the handwritten notes. All data (recordings, transcripts of both audio) will be securely stored on the researcher's personal laptop. All files will be password protected. All the digital files will be uploaded to a password protected UMD Box folder. No hard copies of data will be produced. However, if handwritten notes are taken, these notes will be stored in a locked cabinet in the researcher's office. Only the researcher will have access to the recordings and transcripts of the interviews. The link between identifiers and pseudonyms will be destroyed as soon as the data collection is completed to reduce the potential risk of breach of confidentiality. All other data (i.e., audio recordings, transcripts, and handwritten notes) will be destroyed when their use is no longer needed, but not before a minimum of two years and a maximum of five years after data collection to give the researcher ample time to write the dissertation.* *Additionally, your interview responses will not be shared with anyone else. Also, to protect the privacy of the participants, the names of participants will not be shared with other participants.*

Right to Withdraw and Questions	*Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.* *If you decide to stop taking part in the study, if you have questions, concerns, or complaints, or if you need to report an injury related to the research, please contact the investigator:* ***Delight Agboada*** *Ph.D. Candidate and Graduate Teaching Assistant* *Department of Communication* *University of Maryland* *2130 Skinner Building* *College Park, MD 20742, USA* *dagboada@umd.edu* *+1-740-590-9032*
Participant Rights	*If you have questions about your rights as a research participant or wish to report a research-related injury, please contact:* University of Maryland College Park Institutional Review Board Office 1204 Marie Mount Hall College Park, Maryland, 20742 E-mail: irb@umd.edu Telephone: 301-405-0678 *For more information regarding participant rights, please visit:* https://research.umd.edu/research-resources/research-compliance/institutional-review-board-irb/research-participants *This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving*

	human subjects.
Statement of Consent	*Your verbal consent indicates that you are at least 18 years of age; you have read this consent form or have had it read to you; your questions have been answered to your satisfaction, and you voluntarily agree to participate in this research study. You will receive a copy of this consent form through email or a medium of choice.*

Appendix E – Interview Guide

Hello! My name is Delight Agboada, and I am a graduate student researching maternal health misinformation at the University of Maryland. Thank you very much for accepting to be interviewed for this study. Your thoughts and experiences are relevant to my study, and I appreciate your time.

Have you read over the consent form? If you have, do you have any questions? Do you consent to be interviewed for this study?

I would like to audio record this interview if it is okay with you. However, if you do not feel comfortable being recorded, kindly let me know. Do I have your permission?

If yes: Thank you. You may, however, let me know if you want me to turn off the recording at any point during the interview or keep something off the record.

If no: Thank you for letting me know. I will take notes during the interview.

You do not need to answer all questions, you can ask me to skip a question and you can also end the interview at any time. All your responses will be kept confidential and are for research purposes only.

Do you have any questions before we begin? Kindly draw my attention if you have any questions during the interview. I am happy to answer all your questions. Thank you.

Shall we begin?

Questions

Let's start with questions on maternal health information.

1. What are your maternal health information needs?

Probe: What maternal health issues have you ever needed information on?

2. How do you get maternal health information?

Probe: What sources of information have you used to get information on maternal health issues?

   a. Which of these sources is your go-to source of maternal health information?
   b. Why is this your go-to source of maternal health information?

Now let's talk more about the accuracy of maternal health information from these sources.

3. What type of information do you consider inaccurate maternal health information?
   a. What are the indicators of accurate maternal health information?
   b. In your view, how does your culture play a role in what you identify as inaccurate maternal health information?
4. Tell me about a time when you encountered inaccurate information on maternal health-related issues [e.g., issues related to pregnancy, delivery, and postpartum]
5. How did you know the information was inaccurate?

Probe: What cues or signs made you realize the information was inaccurate?

6. Where did you find this inaccurate information?
   a. Kindly tell me more about what the information was on.
7. What steps do you take when you are unsure of a piece of information you come across?
8. Tell me more about a time you were able to correct inaccurate information for yourself or others. What strategies did you use in this process?

Probe: How does your previous experiences with pregnancy or information you had on pregnancy helped you correct this inaccurate information?

9. In your view, is inaccurate information on maternal health a problem for Ghanaian mothers? If yes, how so? If no, how so?

Let's now delve into your thoughts on how the issue of misinformation can affect you.

10. What do you know about maternal health complications?
    a. How severe do you think maternal health complications are?
    b. What is the likelihood of you being a victim of maternal health complications during pregnancy, delivery, or postpartum?
11. In what ways can maternal health misinformation put you at risk of maternal health complications?
12. What are your thoughts on how consuming accurate maternal health information can reduce your chances of being a victim of maternal health complications?

Finally, let's discuss some challenges you face when sourcing maternal health information.

13. What factors prevent you from seeking accurate maternal health information?
14. Do you share with others that the information you got was inaccurate?
    a. How do you share your thoughts?
15. Are you aware of any efforts by the Ghana Health Service or the Ministry of Health to help mothers get accurate maternal health information?
    a. If yes, kindly share some of these efforts with me.
    b. If no, what would you like to see them do about inaccurate maternal health information?
16. Are you aware of any efforts by the Ghana Health Service or the Ministry of Health to help mothers identify inaccurate maternal health information?

Thank you very much for your responses. We have come to the end of the interview. Is there anything you would like to add or elaborate on?

Demographic questions: I would like to conclude the interview with some demographic questions.

- How old are you?
- How many children do you have?
- What is your ethnic group?
- What is the highest level of education you attained?

Thank you so much for your time.

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