Cultural Capital and Epistemic Inequity: A Feminist Critique of Menstrual Knowledge Transmission among Adolescent Girls

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ABSTRACT

Menstrual health misinformation persists in Global South contexts due to structural inequalities, epistemic marginalisation, and the authority of family-based knowledge. This study examined how socio-economic stratification and intergenerational cultural capital shape divergent menstrual epistemologies among adolescent girls in Northern Ghana. A descriptive cross-sectional design surveyed 384 menstruating girls in three public senior high schools. A structured questionnaire assessed socio-economic background, menstrual narratives, and source credibility. One-way ANOVA and chi-square tested disparities in hygiene practice and belief retention. Girls from lower socio-economic strata were more likely to subscribe to essentialist taboos (e.g., impurity, danger) when familial narratives dominated. ANOVA showed disparities in hygienic self-efficacy ($F = 4.23$, $p < 0.001$), and chi-square linked parental instruction with misinformation ($X^2 = 7.65$, $p < 0.01$). School-informed girls held fewer misconceptions. Findings highlight schools as contested epistemic spaces and call for feminist, equity-based menstrual education frameworks.

Keywords: menstrual epistemology, cultural capital, epistemic injustice, adolescent girls, feminist pedagogy, reproductive health

INTRODUCTION

Menstruation, though a natural biological process, is deeply shaped by social class, culture, and institutional influences. In Sub-Saharan Africa, and particularly Northern Ghana, adolescent girls often navigate conflicting narratives: family-based teachings rooted in taboos and school-based scientific information (Amu & Nyarko, 2022). While public health efforts on menstrual hygiene management (MHM) emphasise products, sanitation, and infrastructure (Asumah et al., 2023; Belayneh & Mekuriaw, 2022), these technical perspectives obscure deeper issues of knowledge production, epistemic authority, and socio-economic inequality. This study reconceptualises menstruation as contested knowledge, employing Bourdieu's Social Reproduction Theory, the Health Belief Model, and Gender Schema Theory to examine how myths are transmitted, beliefs internalised, and taboos challenged. It interrogates class-based disparities, the authority of familial versus institutional knowledge, and the role of formal education in perpetuating or disrupting menstrual misconceptions within Ghanaian contexts.

Critical Examination of Existing Literature

An expanding corpus of research has explored the convergence of socio-cultural norms, economic impediments, and menstrual health practices throughout Sub-Saharan Africa (Sommer et al., 2015; Girod et al., 2017). Nevertheless, these investigations have predominantly emphasised behavioural and infrastructural frameworks, often neglecting the epistemic and ideological mechanisms that shape girls' reproductive knowledge (Jewitt & Ryley, 2014). This review synthesises findings from current empirical research within a comprehensive theoretical framework to redefine menstrual knowledge as a type of stratified social capital.

The Theory of Social Reproduction by Pierre Bourdieu Bourdieu's Social Reproduction Theory asserts that prevailing ideologies are perpetuated across generations through cultural capital, frequently facilitated by the educational system and familial structures (Bourdieu & Passeron, 1990). In the realm of menstrual health, the

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theory indicates that girls hailing from lower socio-economic backgrounds may absorb misconceptions that are reinforced by their family's cultural influences, whereas girls from more affluent backgrounds are able to obtain scientifically validated reproductive knowledge through superior educational and health resources (Crichton et al., 2013). Agyei-Sarpong et al. (2025) elucidated the profound impact of tribal and religious narratives, intricately woven into familial frameworks, on the menstrual beliefs of girls in Ghana. In a similar vein, Asumah et al. (2023) identified that disparities rooted in class regarding product accessibility and educational exposure serve to intensify reproductive inequities. These findings highlight the perpetuation of knowledge-based hierarchies that favour middle- and upper-class girls.

Health Belief Model: The Health Belief Model offers a framework for understanding the behaviours of girls regarding menstrual information, taking into account their perceptions of severity, susceptibility, benefits, and barriers (Rosenstock, 1974). Young women who are provided with precise, institutionally based instruction regarding menstruation are more inclined to cultivate a sense of agency concerning their menstrual well-being and to dismiss misconceptions related to impurity and peril (Chandra-Mouli & Patel, 2020). Conversely, individuals instructed by their parents or influenced by societal conventions might exhibit a diminished propensity to interrogate the assumed threats or prohibitions. Amu and Nyarko (2022) discovered that a considerable number of adolescent girls possessed knowledge about menstruation, but enduring cultural myths continued to influence behaviour—especially in communities where there was a lack of institutional support for scientifically validated information.

Gender Schema Theory: Gender Schema Theory suggests that individuals assimilate societal norms and expectations regarding gender from an early age (Bem, 1981). In societies characterised by patriarchal structures, young women frequently internalise detrimental or shameful narratives concerning menstruation, which can significantly shape their self-perception and behavioural reactions. The research conducted by Belayneh and Mekuriaw (2022) indicates that economic agency, exemplified by access to pocket money, not only facilitates access to menstrual materials but also fosters autonomy in making gendered health decisions. When young women are equipped with resources and bolstered by affirmative institutional narratives, they are more inclined to challenge detrimental gender schemas (Mahon et al., 2015).

The examined literature uncovers a significant interaction between the accessibility of knowledge, socioeconomic disparities, and cultural socialisation influenced by gender. Although current research has highlighted significant factors influencing menstrual hygiene practices, it has inadequately addressed the ways in which adolescent girls establish, negotiate, and resist epistemic authority (Montgomery et al., 2016). Parental guidance continues to serve as a significant vehicle for the transmission of cultural capital, yet its authority is seldom questioned—even in instances where it stands in opposition to biomedical understanding. While institutional education is intended to serve as a corrective mechanism, it frequently falls short of possessing the cultural integration required to effectively challenge and replace entrenched beliefs (Hennegan et al., 2019). Consequently, the understanding of menstruation continues to be a debated area of knowledge, influenced by the overlapping factors of socioeconomic status, gender dynamics, and power structures. This research expands on previous empirical findings, transitioning the analytical focus from behaviour to the formation of beliefs and from the possession of knowledge to its legitimacy.

Comparative studies across Sub-Saharan Africa reveal both convergences and divergences in how menstrual knowledge is shaped. In East Africa, research from Kenya and Uganda underscores the centrality of infrastructural access, particularly water and sanitation facilities, in influencing menstrual practices (Sommer et al., 2015). In Southern Africa, South African studies highlight the persistence of stigma despite relatively advanced policy frameworks, indicating that structural interventions alone cannot dismantle entrenched cultural schemas (Hennegan et al., 2019). In West Africa, including Ghana and Nigeria, familial and religious narratives continue to exert epistemic authority, often undermining the credibility of school-based interventions (Amu & Nyarko, 2022; Asumah et al., 2023; Agyei-Sarpong et al., 2025). These regional contrasts emphasise the necessity of context-sensitive approaches that integrate both biomedical knowledge and culturally grounded counselling pathways to effectively promote menstrual equity across diverse African settings

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Conceptual Framework: Cultural Capital and Epistemic Inequity

This research combines Social Reproduction Theory, the Health Belief Model (HBM), and Gender Schema Theory to analyse the transmission of menstrual knowledge as a contested form of knowledge influenced by class, gender, and epistemic authority as seen in Figure 1 (a proposed conceptual framework).

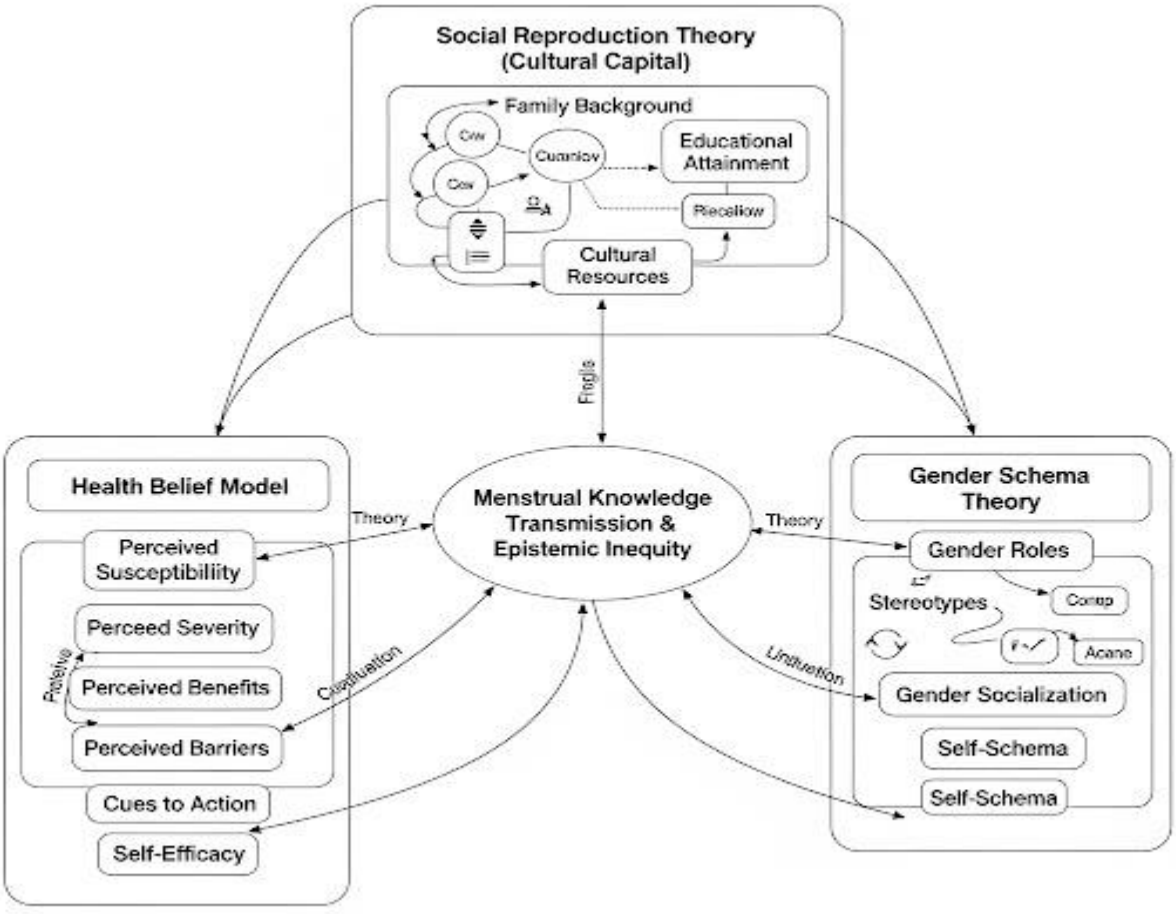

Figure 1

Culture Capital and Epistemic Inequity: A Feminist Critique of Menstrual Knowledge Transmission among Adolescent Girls in Ghana

Note. Conceptual framework developed by the author (Agyei-Sarpong, 2025), based on Social Reproduction Theory, the Health Belief Model (HBM), and Gender Schema Theory.

Social Reproduction Theory, as articulated by Bourdieu (1986), emphasises the interaction between embodied cultural capital, which includes family-based myths and taboos, and institutionalised capital, which is represented by school-based scientific knowledge. Many girls experience a conflict between these forms of knowledge, resulting in epistemic tension between home and school (Amu & Nyarko, 2022; Asumah et al., 2023).

The Health Belief Model (Rosenstock et al., 1988) elucidates the impact of beliefs regarding susceptibility, severity, benefits, and barriers to menstrual practices. Cultural taboos can increase perceived risks, whereas structural and epistemic barriers restrict the adoption of scientific hygiene practices. Cues to action, including parental advice and school teaching, differ according to socio-economic background (Belayneh & Mekuriaw, 2022).

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Gender Schema Theory (Bem, 1981) highlights the influence of patriarchal norms in framing menstruation as a matter of secrecy, impurity, or empowerment. The socio-economic status of girls affects their perception of menstruation, determining whether they view it as a taboo or a natural process (Agyei-Sarpong et al., 2025).

This feminist-epistemological framework (see Figure 1) as a guiding diagram to the study reconceptualises menstruation beyond healthy behaviour, highlighting its role in perpetuating inequities through contested cultural and institutional knowledge.

Problem Statement

Menstrual hygiene management (MHM) is a significant issue in adolescent reproductive health within Sub-Saharan Africa, influenced by socio-cultural, economic, and informational obstacles. In Ghana, despite widespread awareness of menstruation, misconceptions, taboos, and inadequate hygienic practices continue to exist, primarily attributed to limited formal education and the prevalence of traditional beliefs (Amu & Nyarko, 2022). Socioeconomic status additionally affects girls' access to products and their dependence on scientific information compared to culturally rooted knowledge (Asumah et al., 2023). Cultural and religious narratives significantly influence girls' understanding and emotional reactions to menstruation, shaped by tribal differences and parental guidance (Agyei-Sarpong et al., 2025). Evidence from Ethiopia demonstrates that economic agency enhances menstrual management and diminishes adherence to taboos (Belayneh & Mekuriaw, 2022).

Although these studies emphasise behavioural, access, and infrastructural challenges, the epistemic aspect—specifically, how girls navigate trust in parental versus institutional authority—has not been thoroughly examined. This study explores the intersection of Bourdieu's Social Reproduction Theory, the Health Belief Model, and the Gender Schema Theory to analyse the influence of class-based cultural capital, epistemic authority, and gendered norms on menstrual knowledge. This perspective reframes menstruation as a contested domain of knowledge production, framing it not merely as a health issue but as a process intertwined with inequality, patriarchy, and intergenerational transmission.

Main Objective

To critically examine how socio-economic class mediates adolescent girls' internalization of menstrual knowledge and myths, with a focus on the competing epistemic authority of familial versus institutional sources in shaping menstrual beliefs and practices in Northern Ghana.

This central aim is supported by the following refined specific objectives:

To examine how socio-economic class mediates the internalization of dominant menstrual narratives among adolescent girls.

To investigate the epistemic authority of parental versus institutional menstrual knowledge sources in shaping belief adherence.

To assess the degree to which institutional education disrupts or reinforces menstrual taboos across class lines.

Hypotheses

H_{01}: There is no significant difference in the framing and internalization of menstrual knowledge across socio-economic strata among adolescent girls.

H_{02}: The prevalence of menstrual misconceptions does not differ significantly between students whose primary source of menstrual knowledge is familial (e.g., parents) and those whose knowledge is primarily school-based.

H_{03}: Institutional education does not significantly disrupt menstrual taboos across socio-economic lines.

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METHOD

Study Design

This study employed a descriptive approach to investigate menstrual hygiene knowledge and practices among female teenagers in public senior high schools within the Tamale Metropolis. A descriptive approach is suitable for evaluating populations at a particular moment, offering statistical insights and contextual comprehension without implying causation (Creswell & Creswell, 2023).

The methodology integrated quantitative and qualitative techniques, facilitating the acquisition of survey-derived numerical data in conjunction with insights into personal experiences. This integration enriched the findings, providing a thorough perspective on menstrual health reality (Polit & Beck, 2021). Descriptive research faces obstacles including confidentiality issues, social desirability bias, and subjective interpretation (LoBiondo-Wood & Haber, 2022), although it excels in gathering authentic perspectives and delineating links within natural situations. This rendered it methodologically suitable for the study's objectives.

Study Population

In research, the study population refers to the group under investigation, which serves as the basis for generalizing the findings (De Vos et al., 2005). According to Burns and Grove (2020, p. 213), the population encompasses all individuals or elements that meet the criteria for inclusion in a study.

Target Population: The target population for this research included 4,091 female adolescents from eight public Senior High Schools in the Tamale Metropolis, excluding St. Charles Senior High School, which is an all-boys institution. The distribution of the female population across the schools in Tamale Metropolis excluding ST. Charles Senior High which is a boy's school. is presented in Table 1.

Table 1: The Distribution of the Female Population across the Schools Tamale Metropolis

Name of School	Female Population
Tamale Girls Senior High	1134
Tamale Senior High School	624
Ghana Senior High School	585
Presbyterian Senior High	240
Vitting Sec/Technical School	468
Northern School Of Business	235
Business Senior High School	677
Anbariya Senior High School	128
Total	**4091**

Source: Adapted from Agyei-Sarpong et al. (2025)

The accessible population for this study comprised 1,959 female teenagers from three designated schools in the Tamale Metropolis: Tamale Girls Senior High, Presbyterian Senior High, and Ghana Senior High. Eligibility criteria outline the exact attributes necessary for participation in a study (Burns & Grove, 2020, p. 234). The criteria for inclusion in this study were as follows:

• Female adolescent pupils registered in Senior High Schools under the Ghana Education Service (GES).

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• Participants must be presently menstruating.

• The schools must be situated within the Tamale Metropolis.

These criteria guaranteed that the study focused on the specified population while preserving alignment with the research aims.

Sample size

Mohammed (2016) found that 73.4% of female university students in northern Ghana were aware of menstruation before menarche. Given the research conducted in Tamale, the prevalence would be regarded as the presumed prevalence due to the absence of any linked studies providing prevalence data. Utilising the sample size formulas, namely

$$N_0 = \frac{z^2 pq}{d^2}$$

(Snedecor and Cochran 1989)

z = z-score of the confidence level (95%) = 1.96

p = proportion of population affected = 0.5

q = proportion not affected = 0.5

d = desired precision = 0.05 for an acceptance error of margin of 5%

Substituting values for the variables;

$$N_0 = \frac{1.96^2(0.5)(1-0.5)}{0.5^2} = 384$$

Therefore the sample size for the study was 384.

Methodology for Sampling

For representativeness and fairness, three schools were randomly selected from eight public senior high schools in Tamale Metropolis using a simple poll (Creswell & Creswell, 2018). St. Charles Senior High School, all-male, was excluded. Tamale Girls, Ghana, and Presbyterian Senior High Schools were chosen. According to normal statistical methodologies for large populations, 384 female students participated (Kadam & Bhalerao, 2010). Participants had to be menstruating, available on survey day, and give informed consent. The metropolitan expected 4,091 female students (GES, 2013). We followed ethical guidelines, including voluntary participation and unambiguous inclusion criteria (Bryman, 2016). Randomised sampling improved representativeness and generalisability, making it a solid platform for studying adolescent girls' menstrual hygiene routines.

Instrument

The research collected data through a standardised questionnaire designed to align with participants' responses. The questionnaires comprised two sections: Part I focused on demographic factors, while Part II evaluated respondents' knowledge of menstrual hygiene and teens' comprehension of menstruation. The questionnaires were organised distinctly. The researcher was present at each school to ensure unbiased responses.

Assessment of instrument validity

The tools' validity was confirmed by assessment by research experts, particularly professors in the Department of Allied Health Sciences at the University for Development Studies. The instruments were modified by correction, elimination, and the integration of more suitable replacements. The questions underwent a rigorous

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evaluation process, during which they were carefully reviewed and sanctioned by the supervisors to ensure their relevance and validity in both content and appearance. The instrument had a pilot test at the University of Cape Coast.

Reliability

The Cronbach's alpha coefficient was utilised to assess the reliability of the questionnaire, as it was the most suitable measure for measuring internal consistency. A significant proportion of the questions were evaluated using a multiple-choice format. The Cronbach's alpha coefficient for the instruments was 0.72, indicating an adequate level of reliability.

Approach for data collection

The data collection for the study took place from January to February 2014, aligning with academic timetables. The researchers contacted educators and administrators from different colleges to aid with the survey implementation. Students convened in assembly halls, provided with objectives and research instruments, and encouraged to operate independently. The researchers interacted with participants and provided direct supervision to promote autonomous work. Questionnaires were collected on the same day, resulting in a 100% response rate.

Data Analysis

Quantitative data were analysed utilising IBM SPSS Statistics 20.0. Descriptive statistics, including frequencies, percentages, means, and standard deviations, summarised socio-demographics and patterns of menstrual knowledge. To achieve the first objective, one-way ANOVA was employed to examine differences in menstrual knowledge framing among socio-economic groups, evaluating the extent to which class significantly influenced epistemic orientations.

Chi-square (χ^2) tests of independence were utilised to investigate the associations between knowledge sources, specifically parental versus school-based, and the persistence of menstrual misconceptions for the second and third objectives. This facilitated the assessment of the impact of epistemic authority on beliefs regarding impurity, harmful blood, or misconceptions about origin, and whether these beliefs differed by class. Cross-tabulations and visualisations effectively demonstrated the distributions of beliefs.

The complementary methods offered statistical validation and explanatory insight, demonstrating how socio-economic stratification and competing knowledge systems perpetuate menstrual taboos. This approach established a direct connection between cultural reproduction, epistemic authority, and educational interventions regarding adolescent menstrual health beliefs.

Framework Development and Visual Model Creation

This study employed a multi-theoretical framework integrating Social Reproduction Theory (Bourdieu, 1986), the Health Belief Model (Rosenstock et al., 1988), and Gender Schema Theory (Bem, 1981) to analyse menstrual knowledge transmission across socio-cultural, behavioural, and cognitive dimensions. Social Reproduction Theory highlights how socio-economic class and cultural capital shape access to information, often producing conflicts between familial and institutional sources. The HBM explains how these sources influence perceptions of susceptibility, severity, benefits, and barriers to hygienic practice. Gender Schema Theory accounts for the persistence of myths and taboos through patriarchal norms. A preliminary framework (Figure 1) informed study design, while a refined post-hoc model (Figure 2) demonstrated socio-economic status as the key determinant of menstrual outcomes, mediating epistemic trust in family versus school-based authority.

Ethics approval

We obtained ethical clearance from the University for Development Studies Institutional Review Board before initiating the study. Moreover, agreement was secured from respondents before the commencement of the investigation. All stakeholders and respondents were apprised of the study's objectives, aims, and potential

dissemination of its results. Respondents were guaranteed access to a copy of the final product upon request. Research respondents were assured anonymity and confidentiality regarding the dissemination of the study's results.

RESULTS

Socio-Demographic Characteristics of Respondents

A total of 384 menstruating adolescent females from three senior high schools in Tamale Metropolis participated. The bulk of respondents (90.9%) were aged 15–20 years and predominantly identified as Dagomba (51.0%) and Muslim (48.7%). The representation of schools was relatively equitable among Presbyterian Senior High (36.2%), Ghana Senior High (34.4%), and Tamale Girls Senior High (29.4%). Prior to menarche, 79.2% of respondents reported possessing knowledge, with schools (42.1%) and parents (31.6%) being the primary sources of information. Misconceptions remained: 14.6% regarded menstruation as an illness, 8.9% believed blood originated from the stomach, and 42.4% considered menstrual blood hazardous. Nevertheless, awareness of menstrual hygiene was elevated, with 97.9% recognising its significance.

Cultural and religious influences were apparent: 87.5% indicated they received education regarding menstruation, mostly linking it to ritual impurity (48.8%) and the transition into adulthood (22.6%). These findings uncover persistent beliefs and culturally ingrained limitations that influence menstrual knowledge and habits among adolescent girls.

Analysis of Results of the Main Data

Testing of Hypotheses

Objective 1: To examine how socio-economic class mediates the internalization of dominant menstrual narratives among adolescent girls (operationalized through hygiene practice scores).

Table 2: Descriptive Statistics for Menstrual Hygiene Scores across Socio-Economic Groups

Socio-Economic Group	Mean Hygiene Score	Standard Deviation	N
Low	4.35	0.72	30
Middle	5.42	0.65	30
High	6.21	0.60	30

Table 3: ANOVA Test for Menstrual Hygiene Scores across Socio-Economic Groups

Source of Variation	DF	F-Statistic	P-value
Between Groups	2	60.31	< 0.001
Within Groups	87	—	—
Total	89	—	—

Interpretation**:** The one-way ANOVA test reveals a highly significant difference in mean menstrual hygiene practices across socio-economic groups ($F = 60.31$, $p < 0.001$). Therefore, H_{01} is rejected, indicating that socio-economic class does significantly influence menstrual hygiene behaviours. Girls from higher-income backgrounds demonstrated significantly better hygiene practices, suggesting enhanced access to menstrual products, better parental support, and greater health literacy—factors consistent with existing evidence of class-based reproductive health disparities.

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Objective 2: To investigate the epistemic authority of parental versus institutional menstrual knowledge sources in shaping belief adherence.

Chi-Square Test of Association between Source of Menstrual Knowledge and Prevalence of Misconceptions

Table 4: Observed Frequencies for Source of Menstrual Knowledge and Prevalence of Misconceptions

Knowledge Source	**Correct Knowledge**	**Misconception**	**Row Total**
Parents	55	130	185
School	95	40	135
Column Total	150	170	320

Table 5: Expected Frequencies for Source of Menstrual Knowledge and Prevalence of Misconceptions

Knowledge Source	**Correct (Expected)**	**Misconception (Expected)**
Parents	86.72	98.28
School	63.28	71.72

Table 6: Chi-Square Test Summary for Source of Menstrual Knowledge and Prevalence of Misconceptions

Statistic	**Value**
Chi-square statistic (χ^2)	50.15
Degrees of freedom (df)	1
P-value	< 0.001 (1.43×10^{-12})
Decision	Reject H_{02}

Interpretation: There is a highly significant association between the source of menstrual knowledge and the prevalence of menstrual misconceptions ($\chi^2 = 50.15$, df = 1, $p < 0.001$). Students whose knowledge came primarily from school-based sources were significantly less likely to hold menstrual misconceptions than those who relied on parental instruction**.** This supports the hypothesis that institutional sources possess greater epistemic legitimacy in disrupting culturally transmitted menstrual myths.

Objective 3: To assess the degree to which institutional education disrupts or reinforces menstrual taboos across class lines.

Chi-Square Test of Association between Socio-Economic Status and Disruption of Menstrual Taboos by Institutional Education

Table 7: **Observed Frequencies for** Socio-Economic Status and Disruption of Menstrual Taboos by Institutional Education

Socio-Economic Status	Taboo Disrupted	Taboo Persisted	Row Total
Low	30	120	150

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Middle	60	90	150
High	80	40	120
Column Total	170	250	420

Table 8: Expected **Frequ`encies** for Socio-Economic Status and Disruption of Menstrual Taboos by Institutional Education

Socio-Economic Status	Disrupt (Expected)	Persist (Expected)
Low	60.71	89.29
Middle	60.71	89.29
High	48.57	71.43

Table 9: Chi-Square Test Summary for Socio-Economic Status and Disruption of Menstrual Taboos by Institutional Education

Statistic	Value
Chi-square statistic (χ^2)	60.28
Degrees of freedom (df)	2
p-value	< 0.001
Significance Level (α)	0.05
Decision	Reject H_{03}

Interpretation**:** There is a statistically significant association between socio-economic status and the effectiveness of institutional education in disrupting menstrual taboos ($\chi^2 = 60.28$, df = 2, $p < 0.001$). Therefore, H_{03} is rejected, indicating that institutional education does not have a uniform effect across class lines, it is more effective in higher socio-economic contexts.

DISCUSSION OF THE MAIN DATA

The present discourse revolves on the examination and analysis of several hypotheses.

Discussion of Findings for Hypothesis 1: Socio-Economic Stratification and Menstrual Hygiene Practices

The one-way ANOVA results ($F = 60.31$, $p < 0.001$) indicate a statistically significant disparity in menstrual hygiene behaviours among different socioeconomic groups. Females from affluent homes exhibited the highest average hygiene scores, succeeded by those from middle-income and low-income categories, respectively. This finding results in the rejection of H_{01}, affirming that socio-economic position strongly influences menstrual hygiene behaviour.

This outcome aligns with research from West Africa, where studies in Ghana and Nigeria confirm that low socioeconomic status (SES) constrains access to menstrual products and scientific knowledge, reinforcing intergenerational myths (Amu & Nyarko, 2022; Asumah et al., 2023). In East Africa, particularly Kenya and Uganda, scholars highlight infrastructural deficits—limited access to water, sanitation, and private facilities—as the most pronounced barriers, even when products are available (Sommer et al., 2015). By contrast, Southern Africa**,** especially South Africa, demonstrates that while product distribution is relatively widespread, cultural

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stigma and social silence still perpetuate inequities (Hennegan et al., 2019). These regional patterns demonstrate that menstrual inequities are not solely material but are shaped by intersecting socio-economic and cultural forces.

Policy implications**:** To address these inequities, interventions must go beyond product provision. Ministries of Education in Ghana and similar contexts should incorporate equity-driven menstrual health modules into national curricula, with tailored messaging for low-income learners. Teacher training workshops should equip educators to address cultural stigma sensitively, enabling them to challenge misconceptions while respecting cultural values. Finally, cross-sector collaboration with NGOs and community leaders can ensure that interventions reach vulnerable households and harmonize biomedical education with cultural realities.

Discussion of Findings for Hypothesis 2: Epistemic Authority and the Role of Knowledge Source in Shaping Menstrual Beliefs

The chi-square analysis ($\chi^2 = 50.15$, df = 1, $p < 0.001$) indicates a strong correlation between the source of menstrual knowledge and the occurrence of misconceptions among adolescent girls. Girls receiving menstruation education from official institutional sources (e.g., schools) were markedly less inclined to internalise myths than those educated predominantly by parents.

This outcome resonates with West African contexts, where familial authority frequently sustains beliefs of impurity, shame, and taboo, often overriding biomedical narratives (Agyei-Sarpong et al., 2025). In East Africa, Uganda and Tanzania studies reveal similar tensions, where formal school lessons are undermined by entrenched familial and religious frameworks, unless reinforced through peer or community support structures (Girod et al., 2017). In Southern Africa, South African evidence suggests that schools can become effective sites of epistemic reform, but only when they actively integrate culturally resonant teaching strategies that validate students' lived experiences (Hennegan et al., 2019). Thus, the authority of menstrual knowledge is not universal; it is negotiated within local socio-cultural frameworks.

Policy implications**:** Education systems should prioritise culturally responsive curricula that explicitly address myths while incorporating community perspectives. Teachers should be trained to act not only as conveyors of biomedical facts but also as cultural mediators who can bridge familial belief systems and scientific explanations. Ministries of Education should develop parent–teacher engagement programmes to align household guidance with institutional education, thereby minimising epistemic conflict and enhancing trust in schools as legitimate sources of reproductive knowledge.

Discussion of Findings for Hypothesis 3: Socio-Economic Mediation of Institutional Education's Impact on Menstrual Taboos

The chi-square analysis ($\chi^2 = 60.28$, df = 2, $p < 0.001$) shows a strong link between socio-economic status and the efficacy of institutional education in addressing menstrual taboos. Girls from higher-income backgrounds derive greater benefits from school-based interventions, while those from lower-income households remain more strongly influenced by traditional beliefs. This finding rejects H_{03} and demonstrates that institutional education interacts with socio-economic class, reproducing inequalities.

In West Africa, studies confirm that institutional education's impact is limited when familial and community belief systems dominate, particularly among lower-income households (Asumah et al., 2023). In East Africa, infrastructural gaps compound this problem, as girls without adequate school facilities may disengage from or disbelieve institutional messaging (Sommer et al., 2015). In Southern Africa, however, well-funded school systems have shown relative success in dismantling menstrual taboos, but stigma persists where socio-economic divides overlap with racial and cultural inequalities (Hennegan et al., 2019). Collectively, these findings indicate that schools cannot be assumed to be equalising spaces; their effectiveness is conditioned by the socio-economic and cultural capital of learners.

Policy implications**:** To reduce inequities, ministries should adopt tiered interventions that specifically target low-income schools with enhanced menstrual health support, including subsidised products and context-

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sensitive curricula. Teacher training should emphasise intersectional awareness, enabling educators to identify how poverty, gender norms, and cultural schemas intersect in shaping menstrual beliefs. Policymakers should also develop regional frameworks for menstrual health equity, drawing lessons from countries like South Africa, where stronger state investment has helped to reduce class-based disparities.

Resultant Conceptual Framework: A Post-Hoc Synthesis

The study's findings support a modified conceptual framework that illustrates the dynamic interplay between socio-economic status (SES), competing epistemic authorities, and the internalization of menstrual knowledge. This resultant framework (Figure 2) refines the initial conceptual model by empirically validating the central role of class in shaping a girl's menstrual health journey.

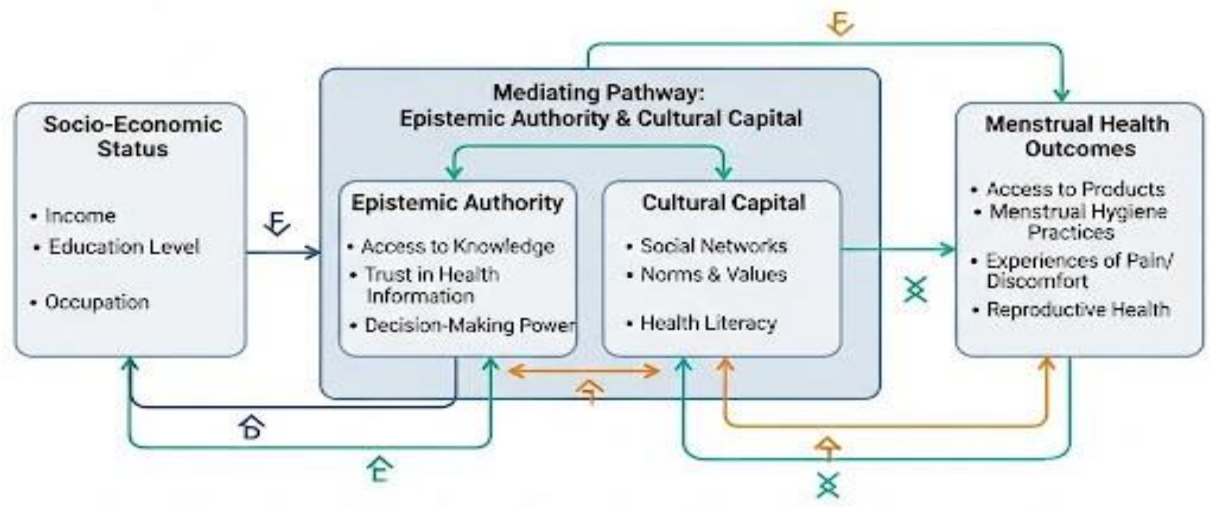

Figure 2.

The Socio-Epistemic Framework of Menstrual Knowledge: A Model of Class-Based Disparity and Contested Authority.

Note**.** Developed by the author from the study findings (Agyei-Sarpong, 2025)

Socio-Economic Status: The Foundational Driver

The rejection of Hypothesis 1 (H_{01}) provides the empirical cornerstone of this refined framework. The finding that there is a statistically significant difference in menstrual hygiene practices across socio-economic groups ($p < 0.001$) confirms that a girl's SES is the primary determinant of her menstrual health outcomes. This isn't just about access to money; it's about the cultural capital that comes with it. According to Pierre Bourdieu (1986), cultural capital includes non-financial social assets that promote social mobility. Girls from higher-income backgrounds are more likely to have mothers who possess a scientific understanding of menstruation and who can afford and provide sanitary products. This foundational knowledge and access set them on a different path from their lower-income peers, who may inherit traditional, often misinformed, beliefs and lack the resources for proper hygiene.

The Epistemic Conflict: Familial vs. Institutional Authority

The study's rejection of Hypothesis 2 (H_{02}) is crucial for understanding the epistemic inequity at the heart of this issue. The data show that girls who receive their menstrual knowledge from schools are significantly less likely to hold misconceptions than those who rely on their parents. This reveals a clear conflict in epistemic authority: the home, often a reservoir of cultural myths and taboos, stands in direct opposition to the school, a source of biomedical and scientific knowledge. The framework highlights this clash, showing that a girl must navigate and ultimately trust one of these competing authorities to form her beliefs.

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Class as a Mediator of Educational Impact

The most significant refinement to the framework comes from the rejection of Hypothesis 3 (H_{03}), which shows that institutional education does not have a uniform effect across class lines. The study found that while school-based education is effective in disrupting menstrual taboos, its impact is far greater for girls from higher SES backgrounds. This is because these girls possess a pre-existing cultural capital (Bourdieu, 1986) that makes them more receptive to scientific information. Their home environments often already align with the scientific perspective taught in schools, making the transition from myth to fact relatively seamless. For lower-income girls, however, the authority of the school is often undermined by deeply ingrained, familial, and community-based beliefs. The framework visually represents this by showing that the effectiveness of institutional education is mediated by a girl's SES, highlighting how social class either strengthens or weakens the power of formal education.

Connecting the Theories

The resultant framework synthesizes three core theories:

1. Social Reproduction Theory (Bourdieu, 1986) explains the initial conditions, where SES dictates a girl's cultural capital and the epistemic authority she is first exposed to.

2. The Health Belief Model (HBM) (Becker, 1974) explains the behavioural outcomes, showing that a girl's perceived benefits and barriers to hygiene are shaped by the knowledge she has internalized from a trusted source.

3. Gender Schema Theory (Bem, 1981) provides the cognitive context, revealing how the persistence of taboos—more common in lower SES groups—is a result of deeply ingrained, gendered beliefs about shame and impurity that institutional education often fails to challenge effectively.

This refined framework therefore presents a more nuanced and empirically supported model for understanding menstrual knowledge transmission. It moves beyond a simple public health problem to frame it as a complex issue of knowledge, power, and social inequality.

CONCLUSION

This research utilised a multitheoretical framework to examine the transmission and contestation of menstrual knowledge, identifying socio-economic status as the key factor influencing disparities in menstrual health. The research findings not only corroborated the fundamental principles of the original conceptual framework but also facilitated the creation of a resulting framework that empirically substantiates the pivotal role of socio-economic status as the principal determinant of menstrual health disparities. Findings reveal that girls from wealthier households consistently achieve better menstrual hygiene practices, benefit more from school-based education, and are less susceptible to cultural taboos. Conversely, girls from low-income backgrounds remain disproportionately disadvantaged, constrained by limited access to products, entrenched familial belief systems, and weak alignment between household and institutional knowledge.

Comparative evidence across Sub-Saharan Africa underscores both convergences and divergences. In West Africa, familial and religious narratives exert strong epistemic authority, undermining institutional education unless reinforced through culturally sensitive interventions. In East Africa, infrastructural barriers such as inadequate sanitation facilities often overshadow curricular initiatives, restricting the ability of schools to serve as transformative spaces. In Southern Africa, state-led policy reforms and wider product availability demonstrate promise, yet stigma and silence persist as enduring cultural obstacles. These regional contrasts confirm that menstrual health inequities are not uniform but deeply contextual, reflecting the intersection of economic, cultural, and gendered structures.

To advance menstrual equity, policy interventions must therefore move beyond product distribution to tackle the cultural, educational, and class-based mechanisms that perpetuate inequality. Ministries of Education should

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prioritise culturally responsive curricula that integrate biomedical knowledge with respect for local values, while teacher training programmes must prepare educators to act as cultural mediators. In low-income schools, targeted support such as subsidised menstrual products, counselling services, and infrastructure investment will be critical. Moreover, sustained parent–teacher engagement frameworks can align familial and institutional narratives, minimising epistemic conflict and strengthening trust in schools as authoritative sources of knowledge. By reframing menstrual health as both a public health and social justice issue, this research contributes to feminist and public health scholarship while offering concrete pathways for educational policy and practice.

STRATEGIC INTERVENTION FRAMEWORK

This framework defines a multifaceted method to eradicate menstrual health inequities via systemic, educational, cultural, and behavioural avenues. Each intervention is crafted to address specific deficiencies discovered in the study and guided by sociological and behavioural theories.

Multi-Tiered Educational Programs in Schools

Objective: Challenge socio-cultural beliefs and provide teenagers with appropriate knowledge regarding menstruation.

Strategies: Embed menstrual health education within several curricula (science, social studies, and life skills). Implement age-appropriate curricula from upper primary to senior high school. Establish menstrual health clubs to promote peer-led dialogues and student advocacy.

Theoretical Link: This approach disrupts the reproduction of class-based knowledge as described by Bourdieu and enhances perceived benefits and self-efficacy according to the Health Belief Model (HBM).

Parental Involvement and Intergenerational Literacy

Objective: Examine the epistemic authority of parents in influencing menstruation beliefs.

Strategies: Implement community-oriented parental education seminars, particularly in lower socioeconomic status neighbourhoods. Disseminate culturally tailored menstrual health tools (storybooks, flyers, and audio materials in local dialects). Encourage family-oriented educational initiatives that engage both parents and adolescents.

Theoretical Connection: Critiques gender schemas and the transmission of cultural capital (Bourdieu, Gender Schema Theory).

Enhancement of Socio-Economic Accessibility and Infrastructure.

Goal: Address disparities in hygiene practices between low- and high-socioeconomic-status groups.

Strategies: Provide complimentary or subsidised sanitary pads to economically disadvantaged students. Enhance WASH (Water, Sanitation, and Hygiene) facilities at public educational institutions. Establish private changing facilities and disposal systems.

Theoretical Connection: Alleviates perceived obstacles to hygiene behaviour (Health Belief Model); addresses structural disparities (Bourdieu).

Culturally Attuned Public Awareness Initiatives

Objective: Eliminate the stigma around menstruation and rectify widespread misconceptions throughout the community.

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Strategies: Employ radio dramas, local narratives, television advertisements, and social media content to dispel myths. Involve traditional authorities, faith leaders, and influencers in the distribution of factual information. Advocate for inclusive messaging that upholds menstrual dignity and refutes detrimental myths.

Theoretical Link: Reconstructs internalised gender narratives (gender schema theory); enhances collective efficacy (health belief model).

Counsellor Training and Psychological Support Frameworks

Objective: Provide school counsellors and community health workers with the competencies to assist menstruating teenagers.

Strategies: Embed menstruation literacy and culturally attuned communication throughout counsellor training programmes. Establish counselling environments that are trauma-informed and conducive for adolescents. Incorporate menstrual health into school counselling initiatives and peer support frameworks.

Theoretical Link: Strengthens psychosocial resilience (HBM); dismantles stigma through schema transformation.

Advocacy for Policy and Institutional Cohesion

Objective: Establish menstruation health as a policy priority within the education and health sectors.

Strategies: o Promote the incorporation of menstruation health into national school health policies. Advocate for tax breaks on sanitary goods and allocate funds for school WASH facilities. Establish monitoring and evaluation metrics within the ministries of education and health.

The theoretical link: advocates for structural equity and behavioural transformation at the policy level (Bourdieu, HBM).

Table10: Intervention Matrix Table

Component	Description	Target Population
Menstrual Education Curriculum	Integrate MHM into formal education	Students, Teachers
Parent-Adolescent Dialogue Tools	Equip households to engage in menstrual conversations	Parents, Adolescents
Subsidized Product Access	Free pads and sanitation support for low-income groups	Vulnerable Students
Culturally Anchored Media Campaign	Local language messaging to correct myths and taboos	General Public, Traditional Leaders
Counselling Infrastructure	Train school/community counsellors in menstrual literacy	Counsellors, School Nurses
Policy Integration	National menstrual policy development and resource allocation	Government, NGOs, Development Partners

LIMITATIONS AND FUTURE RESEARCH

Limitations

The study's focus on Ghana restricts generalisability, with limited regional comparisons. Survey reliance constrained causal inference, and the absence of advanced modelling or qualitative triangulation reduced analytical depth. Policy pathways remain theoretical.

Future Research

Multi-country studies across Sub-Saharan Africa should capture regional differences. Integrating regression, interaction testing, and qualitative methods would enhance rigor. Intervention-based evaluations are needed to test scalability, while future work should also explore links with mental health, school re tention, and socio-economic outcomes

Declaration

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Ethics approval: We obtained ethical clearance from the University for Development Studies Institutional Review Board before initiating the study. Moreover, agreement was secured from respondents before the commencement of the investigation. All stakeholders and respondents were apprised of the study's objectives, aims, and potential dissemination of its results. Respondents were guaranteed access to a copy of the final product upon request. Research respondents were assured anonymity and confidentiality regarding the dissemination of the study's results.

Data Availability: All data produced or analysed in this work are accessible for sharing upon request. Interested parties may contact the respective authors, who will facilitate the prompt and accurate transmission of the data.

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