

PERIOD POVERTY, SOCIO-CULTURAL RESTRICTIONS AND MENSTRUAL HYGIENE BEHAVIOUR OF FEMALE ADOLESCENTS IN THE CONTEMPORARY SOCIETY

Oluwunmi, M. Folorunso and Francisca, C. Anyanwu

Department of Health Education
University of Ibadan, Ibadan.

Abstract

Period poverty is inaccessibility of menstrual products, safe, hygienic spaces to use them and the right to manage menstruation without shame or stigma, but unfortunately this is not a reality for many female adolescents. This is not just a potential health risk it can also mean girls' education, well-being, and sometimes entire lives are affected. Although period poverty is a prevalent and global problem, lack of data and limited research on the topic are other areas of challenges. In Nigeria, it is an extension of widespread poverty because of poor economic situation. This condition can put adolescents at higher risk of urogenital infections, which are infections of the urinary and genital and it can negatively affect their mental health. Availability of menstrual products, Government and private institutions investing in public health infrastructure, incorporation of menstrual health in the curriculum and more research on this topic are part of the measures to reduce this problem.

Introduction.

Period poverty occurs when someone cannot afford sanitary products or when there is lack of hygiene facilities, menstrual education, waste management or a combination of these. Period poverty refers to the social, economic, political, and cultural hindrances to menstrual products, education, facilities and sanitation. (Geng and Yockey, 2021). Although period poverty is a prevalent and global problem, lack of sufficient data and limited research on the topic are other areas of challenges. In Nigeria, it is an extension of widespread poverty because of poor economy situation. Briefly, period poverty means that millions of women and girls are subjected to injustice and inequity due to menstruation. Period poverty affects not only middle or low-income countries but also developed countries. Globally, an estimated 500 million people who menstruate lack access to menstrual products and hygiene facilities. Evidenced fact showed that 10% of girls in the United Kingdom have been unable to purchase menstrual products, 15% have struggled to access them, and 19% have switched to less appropriate products because of high costs. (Jaafar, Ismail and Azzeri, 2023). It affects many women globally causing physical, mental, and emotional challenges. The stigma that surrounds periods further prevents individuals from discussing it. (Michelle, Mettler, Schonenberger and Gunz, 2022). Period poverty does not just refer to those who have no access to menstrual products, in some cases, limited access to these products leads to prolonged use of the same tampons or pads, which can cause infection. Access to menstrual products, safe, hygienic spaces in which to use them and the right to manage menstruation without shame or stigma, is essential for anyone who menstruates. But for many, this is not a reality. This is not just a potential health risk it can also mean girls' education, well-being, and sometimes entire lives are affected. (ActionAid, 2022).

According to Geng and Nigeria Health Watch, (2021), Period poverty is a reality to many women and girls in low and middle-income nations, who are forced to use rags, tissue paper or leaves in place of menstrual hygiene products. There are an estimated 16.9 million people who menstruate living in poverty in the United States. A study involving college-aged individuals who menstruate reported that 14.2% had experienced period poverty in the past year. An additional 10.0% experienced it every month. Geng (2021), found that almost two-thirds of women in the U.S. with a low income could not afford menstrual products in the last year, while nearly half sometimes had to choose between buying food or menstrual products. Period poverty causes physical, mental, and emotional challenges, it can also make people ashamed for menstruating. Period poverty refers to the social, economic, political, and cultural barriers to menstrual products, education, and sanitation. In Africa, one in every 10 girls misses school when menstruating, mostly as a result of the inability to afford menstrual products, significantly affecting their education and possibly contributing to drop-out rates of girls from school. This is in addition to several health problems, such as urinary tract infections, that could result from poor menstrual hygiene to depression due to poverty. A 2018 study revealed that 39% of women and girls who suffer period poverty develop anxiety or depression, which could go on to affect them socially and economically for the rest of their lives. (Medical News Today and Nigeria Health Watch 2021).

According to Agbede and Ekeanyanwu, (2021), between 31 and 56% of school girls in Nigeria are using toilet tissue, cotton wool, or cloth to absorb menstrual blood as opposed to sanitary pads. Menstrual products usually are not reusable and so must be bought every month. With more than 83 million people living below the poverty line in Nigeria, menstrual products are a luxury many cannot afford. For girls and women in that situation, it means missing school or work, or resorting to the use of cloth strips or foams which could result in discomfort and even infections. (Abubakar, 2021). Period poverty is an extension of widespread poverty in Nigeria with over 40% of people living in poverty which amounted to approximately 83 million people, according to Statistic. Priority is not given to educating young girls about their bodies and menstrual hygiene when they are only concerned about daily survival. (Ajayi, 2021).

Period poverty can prevent people from participating in the workforce, which can have significant economic implications for them and their families. People who menstruate can have a negative experience of school if they are uncomfortable, distracted, or unable to participate due to menstrual leakage and odour. This experience can have long-term consequences. Poor school attendance affects a person's future earning potential, self-esteem, health outcomes, and sense of control. (Medical News Today, 2021). Although period poverty is a global public health crisis, the shame surrounding menstruation means that it goes largely unaddressed. The shame associated with periods prevents people from talking about them. This leads to a lack of dialogue regarding access to menstruation products, the tax on these products, and even the ingredients that they include. People who live in low income countries, may experience greater period poverty. Many African countries including Nigeria lack access to safe, clean, private spaces for menstrual hygiene, Access to sanitary pads varies among countries. Due to lack of access, 37% of women in Nigeria do not use sanitary pads. (Medical News Today 2021). Michel, et al (2022) wrote that many

women without access to menstrual products improvise with old blankets, chicken feathers, old rags, newspapers, mud, and even cow dung. Odours and leakages become a challenge and for school girls, these negative experiences of menstruating can lead to discomfort, distraction, absenteeism and even dropping out of school. School drop-outs have difficulty entering the job market and if they do, they find themselves in low pay jobs without security, predisposing them to economic and social poverty. There are other factors that affect the menstrual health and behaviour of the female adolescents like social and cultural factors.

Social factors in relation to period poverty.

Religious perceptions of impurity include women being told if they enter holy grounds or go near images of God, they will pollute those spaces. Some also believe that polluting an image of god will invoke the god's anger upon them. Stemming from this belief, women are sometimes prevented from entering temples and prayer rooms during menstruation. This prevention of women from entering temples is indicative that discriminatory sociocultural perceptions persist in the community despite significantly improved physical indicators of menstrual hygiene management. Throughout messages from major religions, diction noting the 'impurity' of menstruating women consistently appears. Hinduism emphasizes the power of pollution a woman possesses during menstruation. This pollution often translates into danger as beliefs include that menstruating women can endanger the total catch for a fishing village or incur curses of the Gods For Muslim women, there is restrictions from touching the Quran, entering mosques, offering ritual prayer, and having sex with one's husband while menstruating, because menstruation itself "is an impurity". In some early European churches, "intercourse with a menstruating woman was defined as a mortal sin; it was still considered a venial sin at the beginning of the twentieth century" and some opposed menstruating women taking communion. In the Eastern Orthodox Christian Church, menstruating women were unable to touch the bible or religious icons as they were perceived as impure. (Scales, 2019). Recently, Christianity is a bit relaxed when it comes to menstruation unlike Islam with several restrictions for women and girls during their monthly periods such as Prohibition from entering the mosques for prayer, prevention from reading the Holy book and barring fasting. This is because menstrual discharge is considered dirty and haram. Most Christian doctrines would not imposed such restrictions while some would. It is acknowledged that religion is intricate and diverse.(UNICEF, 2021). A lack of information about menstruation leads to damaging misconceptions and discrimination, and can cause girls to miss out on normal childhood experiences and activities. Stigma, taboos and myths prevent adolescent girls from the opportunity to learn about menstruation and develop healthy habits. (Unicef 2021). Consequently, there are many misconceptions and superstitions associated with menstruation in this part of the world. Ignorance has led to many kinds of practices especially among the school girls, some of which are very much harmful. (Busari, 2012).

Cultural factors in relation to period poverty.

Many cultures see menstruation as dirty and something that people should hide. There is a wide range of cultural beliefs and practices connected with menstruation, from simple

seemingly harmless rituals such as the “Mikvah”, in Judaism, a form of ritual bathing performed by women at the completion of their menstrual period or the cultural /religious taboos in some Hindu societies in India that forbid menstruating women from going to places of worship, to farm or even cooking food during menses to the more harmful and debasing practice of “Chaupadi”, which is the confining of menstruating women in dark huts as was the practice in Nepal. (Edet, Bassey, Esienmoh, and Ndep. 2021.). Taboos and stigmas of menstruation materialize as social and cultural restrictions imposed on women. These socio-cultural restrictions consequently prevent women from achieving effective menstrual hygiene behaviour, access to private facilities, and solutions for suitable disposal. Women are physically stigmatised impure as a result of the perception that menstruating women bodies are dirty. There have been reports of women being unable to touch anyone in their household physically as well as having to take cleansing baths with cow urine to purify their bodies. That the menstrual discharge is filthy, and the body is purified as it's being released is another report. Women have been reported abstaining from sex during menstruation to prevent imposing the harmful effects of menstruation on them and their spouses body. It is also added as part of the clarifications for this practice that menstruation releases heat which can cause irritation if one has intercourse and that intercourse prevents the release of the blood which causes the woman to contract diseases.

Menstrual hygiene behaviour

Menstrual hygiene management is jointly defined by World Health Organization (WHO) and UNICEF (2012) joint monitoring programme as ‘Women and adolescent girls using clean menstrual management materials to absorb or collect menstrual blood that can be changed in privacy as often as necessary for the duration of the menstruation period, using soap and water for washing the body as required and having access to facilities to dispose of used menstrual management materials’. In addition, ‘they understand the basic facts linked to the menstrual cycle and how to manage it with dignity and without discomfort or fear’. In addition, for an effective menstrual hygiene behaviour, the taboos and the negative societal beliefs relating to menstruation should be addressed. In the recent times there has been increasing global attention to management of menstrual hygiene. (Duru, Ikeanyi, Merenu, 2021). Menstrual hygiene behaviour is critical in the life of the woman. For optimal attendance and participation in school activities, future reproductive and sexual health; quality menstrual hygiene practice is crucial. Menstrual hygiene behaviour is the practice of using clean materials to absorb menstrual blood that can be changed privately, safely, hygienically, and as often as needed throughout the duration of the menstrual cycle. (Abita, Ali and Admassu, 2019). In 2019, experts from academic institutions, NGOs, Governments, UN organizations, and elsewhere came together to form the Global Menstrual Collective to solve this issue. The Global Menstrual Collective defines menstrual health as “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity, in relation to the menstrual cycle.” It notes that people should have access to information about menstruation, life changes, and hygiene practices the ability to care for themselves during menstruation, access to water, sanitation, and hygiene services the ability to receive a diagnosis for menstrual cycle disorders and access to healthcare positive,

supportive environment in which to make informed decisions, and the ability to participate in all aspects of life, such as going to work and school. (Global Menstrual Collective, 2019). Learning about menstrual hygiene-related practices is a significant part of health education for adolescent girls. This could enable them to continue to work and keep up with hygienic habits during their adult life. It will also help to improve maternal health; which can have an impact on the sustainable development goals (SDGs). For a number of girls and women, menstruation comes with unbearable costs as they find menstrual hygiene products practically unaffordable. Poor menstrual hygiene can pose physical health risks and has been linked to reproductive and urinary tract infections and can lead to poor educational outcomes. In Africa, discussions around puberty is still considered a taboo, which is why parents and educators seldom approach the subject and leave issues around reproductive health untapped with adolescents and teenagers. The reason for this lack of attention is usually cultural or religious, especially in rural areas, allowing a persistent absence of information about menstruation such as what will happen to a girl's body when they menstruate, when most girls expect their first period and how they should track their periods on a calendar. (Masterson, 2022).

In 2022, Unicef discovered that Every month, 1.8 billion people across the world menstruate. Gender inequality, discriminatory social norms, cultural taboos, poverty and lack of basic services like toilets and sanitary products can all cause menstrual health and hygiene needs to go unmet. Due to the misconceptions associated with menstruation, most adolescents do not have adequate information about how to maintain hygiene during menstruation. In order for women and girls to live healthy, productive and dignified lives, it is essential that they are able to manage menstrual bleeding effectively. This requires access to appropriate water, sanitation and hygiene facilities, having a place private to change clothes or disposable sanitary pads, facilities to dispose used cloths and pads, and access to information to understand the menstrual cycle and to manage menstruation hygienically. Agbede and Ekeanyanwu 2021, admitted that during menstruation, hygiene-related practices are fundamental particularly at the onset. Good hygienic practices require the use of sanitary pads, washing of the body and genital areas, frequently changing of menstrual absorbents as well as proper disposal of used menstrual absorbents. This will enhance the confidence of females in various aspects. On the other hand, if proper hygiene is not practiced during a menstrual period, it could lead to poor academic performance, school dropout, and predispose one to reproductive tract infections (RTIs), pelvic inflammatory diseases, and other complications like carcinoma of the cervix and infertility problems. Currently, the global prevalence of RTIs and their complications is unacceptably high between 15-80% in most impoverished communities. Research has shown that women and adolescents girls with poor menstrual hygiene are three times more likely to have RTI than those with proper and adequate menstrual hygiene. The World Health Organisation (WHO) acknowledges that about 80% of the global burden lies in low- and middle-income countries especially in the rural settlements as a result of ignorance and inadequate support for managing menstruation.

The Female Adolescents

Adolescence is the stage of life extending between childhood and adulthood. Adolescent age is a very crucial stage in the life of all human being that is why it is important to critically monitor the stage and all that happens during this time. During adolescence, young people develop their adult identity, move toward physical and psychological maturity. Adolescence is clearly a time during which much changes occur. These changes occur on multiple developmental levels including changes that are emotional, social, and physical. Naturally these changes can carry an impact on adolescent health both psychological and physical. (William, Lorraine, Lauren. 2013). There are three stages of adolescence and each one has its characteristics. Early adolescence takes place from ages ten to fourteen, and is characterized by close relationship with friends, a changing body, acting out, and some risk-taking behaviour. Middle adolescence occurs from ages fifteen to seventeen and is characterized by increased importance on intimate relationships, trying to achieve independence from parents, physical growth slows for girls continue for boys and interest in moral reasoning and meaning of life. Late adolescence takes place from ages eighteen to twenty-one and is characterized by interest in moral reasoning and ideas, firmer sense of identity, intimate relationships, and a closer relationship with parents, increased concern for future and others. (Williams, 2022. and American Academy of Child and Adolescent Psychiatry, 2008).

One of the most easily identifiable indicators that a girl is hitting adolescence is the change in her body. Sometime between the ages of seven and eleven, a girl's hormones start telling the rest of her body that it's time to move toward adulthood. A girl's height significantly increases anywhere from a year to six months before she starts her period. At her peak, she will grow about three and one-half inches in a year. Getting a first period is greeted sometimes with anticipation, other times with indifference, and occasionally even with fear. Many girls see it as the entry into the grown-up world and breathe a sigh of relief that they finally get to catch up with their friends. (Ginny, 2006). In the lives of females, puberty is marked by the onset of menarche. Menarche is the first natural menstruation that marks the onset of ovulation and signals reproductive maturity in the girl child. Its timing, pattern and associated physical, social and emotional influences vary from one girl child to another. It may indicate underlying pathology if it occurs too early; under the age of ten or absent after the age sixteen years. Menstruation is strictly and inherently feminine and regular menstruation largely indicates quality health and fertility. (Duru, Ikeanyi, and Merenu, 2021). From menarche onwards until menopause, reproductive health and menstrual hygiene are important aspects of women's lives. The menstrual period is a natural phenomenon that occurs throughout the reproductive life of every female, this periodic vagina bleeding that occurs with the shedding of the uterine mucosa is one of the signs of puberty, and occurs one or two years following appearance of secondary sexual characteristics. Menstruation is an important feature throughout women's fertility. For many girls the onset of menses is a time of biological development that immediately comes with it restrictions, rules, confinement and changed expectations in many cultures. (Ibaishwa and Achakpa 2016).

Causes of Period Poverty

1. Lack of access to sanitary products: Access to menstruation products is one of the growing concerns around the topic of period poverty. This can take place in a variety of ways, such as the cost of menstrual products and its availability.
2. Lack of WASH facilities: poor access to safe water, sanitation and hygiene (WASH) persists despite the United Nations General Assembly's adoption of two resolutions in 2010 and 2015 that recognise the human rights to water and sanitation.
3. Socio-cultural restrictions: the taboo placed on menstruation by most culture helps inflict indignity upon millions of women and girls, but it also does worse, the grave lack of facilities and appropriate sanitary products can push menstruating girls out of school temporarily and sometimes permanently. Socio-cultural factors like family structure, media exposure, religion practices, disposal and sustainability, segregation practices, and myths. The reappearing stigma that the woman is impure and polluted during menstruation is also a factor.
4. Lack of education about menstruation: many girls do not understand what is happening when they start menstruating, and they have limited knowledge on biological processes. (Tull, 2019). The school curriculum lacks the content on issues relating to menstruation and its management.

Effects of Period Poverty on The Adolescent

Period poverty can affect people in a variety of ways. It can make them feel embarrassed or ashamed of themselves, and it causes young people to miss out on school attendance due to a lack of menstrual products. The following are some of the effects of period poverty on the adolescent girl.

a. Mental health and well-being

Being unable to manage their period with the appropriate menstrual products can make people feel upset, distressed, and uncomfortable. Research has found that a lack of access to these products can negatively affect someone's mental health. When girls are on their periods and cannot get pads, it is demeaning for them and affects their self-esteem and ability to function effectively.

b. Poor hygienic practices

People unable to access menstrual products have been reported using rags, toilet paper, bed linings, leaf, ashes, children's diapers etc. Some people have also used the menstrual products they did have for longer than intended. The use of these alternative products can put adolescents at higher risk of urogenital infections, which are infections of the urinary and genital systems. These infections include urinary tract infections and bacterial vaginosis. Using products longer than intended can also be dangerous. Leaving a tampon in for too long can increase a person's risk of toxic shock syndrome, a rare but dangerous infection.

c. Work and school activities

Menstruation affects women's participation in daily life, so period poverty can prevent people from participating in the workforce, which can have significant economic implications for them and their families. The shame surrounding periods is often a deterrent to asking for help in buying menstrual products, resulting in missing school, job interviews, and more. According to Krenz and Strulik, 2021, Menstrual period length varies but most periods last from 3 to 5 days on the average women bleed for approximately 2000 days, that is about 5 years of their lives. Most of the menstrual periods are experienced in working age, and expect that the influence of menstruation on work participation depends on the quality of the method of menstrual hygiene management (MHM).

People who menstruate can have a negative experience of school if they are uncomfortable, distracted, or unable to participate due to menstrual leakage and odour. Girls worldwide miss 10-20% of school days per year due to lack of menstrual supplies, inadequate sanitation, toilets, period pain, or social stigma. Girls who have missed many school days as a result of their period fall behind in school and too often drop out altogether. In addition to this being a massive loss of human potential, girls who have dropped out of school are more likely to be trafficked, forced into child marriage, or have an unplanned pregnancy.

d. Social Sanctions and restrictions

All over the world, menstruating women and girls are often regarded as unclean, dirty, moody, or as powerful pollutants to be restricted. This can result in being prohibited from daily activities, from eating certain foods, or from engaging in rituals and religious practice.

e. Stigmatization

Social stigma or period taboo, rooted in gender inequality, and discriminatory norms about women's and girls' status and place in society, cause women and girls to feel persistent shame and fear during periods. As a result of social stigma, girls and women are often expected to refrain from normal activities. Fear of accidents and deep shame about this natural biological process are pervasive among girls and women. Discussions about periods are avoided, even between mothers and daughters, and women loath to even speak the words pertaining to menstruation. (Schuyler, 2020). The shame surrounding periods is often a deterrent to asking for help in buying menstrual products, resulting in missing school, job interviews, and more. For example menstruation in adolescent girl for the first time (menarche) comes unannounced and so can start when the girl is seated in the classroom, on standing up from the seat to go out, she discovers that her cloth has been soiled with blood. The shame that comes with this might prevent her from going to school for days. If in a mixed school the boys will fun of the girl.

Strategies to End Period Poverty

Having discussed the causes of period poverty these are some of the measures that can be put in place to end it.

1. National advocacy: the Government at all levels need to support women and adolescents by providing adequate infrastructures like toilets and water in public places like schools markets, motor parks etc. and to make menstrual products accessible by removing tax and providing subsidy for the products.
2. Increased education and knowledge sharing: Knowledge sharing between organizations, in communities, and in schools can include female adolescents in the conversation and provide education without stigma. Information on menstrual hygiene can be included in primary and secondary school subject.
3. The private sector: Private organisations and companies can provide information and access to facilities and products, contribute to destigmatizing menstruation, and integrate menstruation management into their policies.
4. Non-governmental and charitable organisations: can sensitize and educate adolescents, provide necessary products, and support people and their communities.
5. Media: the media houses can transmit programmes to serve as a means of educating the people in order to reduce the stigma of menstruation.
6. Further research: More research is required on the effects of period poverty and how to overcome it in Nigeria.
7. Legislation: Protective legislation can ensure affordable access to proper facilities and menstrual hygiene products. Governments can also reduce taxes on menstrual products, making them more affordable. (Olson, 2023).
8. Provision of special containers in schools, public places, hotels, religious or worship centres and communities for proper disposal of menstrual products by stakeholders and companies.

Conclusion

1. Period poverty has been an issue of great concern to the reproductive health and rights of women and girls globally and its negative implications are not something that can be overlooked in low and middle-income countries like Nigeria. Infrastructural inadequacies in WASH and socio-economic, cultural, and educational integration of this essential reproductive rights of women and girls has led to the heart-wrenching state of menstrual hygiene management in Nigeria. This is an issue that targets vulnerable population and puts their health and well-being at risk. Periods do not wait, so there are few areas to focus on, that can change the narrative around menstruation and pick up the pieces left by the effects of period poverty. The following recommendations are made to manage period poverty.
2. Availability of menstrual products without this female adolescents are at risk of school absenteeism poor health and increased stress.
3. Government and private institutions should make it a priority to invest in core public health infrastructure, provision of sanitary products including water and sanitation systems. Furthermore, community-based responses on the felt need for

interventions on period poverty and improving menstrual hygiene management must be generated.

4. There should be adequate incorporation of menstrual hygiene management into remote and online learning curriculum to ensure that individuals, particularly; adolescent girls have the understanding they need in menstrual hygiene management.
5. There is a need for more research as well as to push for policies and implementation work plans on interventions that can best address the unique challenges experienced by women and girls on menstrual hygiene management.
6. Government should make policies on removal of tax on sanitary products to ease affordability of the products.
7. Parents and guardian should educate the adolescent and make the home environment more friendly for menstruating girls.
8. Non-governmental organizations can promote, sensitize and distribute menstrual products, they should also provide cleaning facilities in the community.

References

- Abita , Z., Alli, R., and Admassu, B. 2019. "Menstrual hygiene management practice and associated factors among secondary school girls in Finot Selam Town, northwest Ethiopia" *International Journal of sexual and reproductive health care* 4(1): 053-061.
- Abubakar B. 2021. "Cupping the flow: Reusable cups putting an end to period poverty in Nigeria". *Nigeria Health Watch Torchlight series*. 2022.
- ActionAid 2022. "Period poverty" www.actionaid.org.uk Retrieved on 22/09/22.
- Agbede, C. O. And Ekeanyanwu U.C. 2021. "An outcome of educational intervention on the menstrual hygiene practices among School girls in Ogun State, Nigeria: A quasi-experimental study" *Pan Afr Med J.* 2021 8; 40:214.
- Ajayi A. 2021. "How period poverty forces Nigerian girls and women to use rags, cloths during menstruation" *Peoples Gazette*. Published 01/03/2022.
- American Academy of Child and adolescent Psychiatry, (AACAP) 2008. *Child sexual abuse. Facts for families* 9. 1-2.
- Brittany A. 2020. "The plight of period poverty in Nigeria" *The Borgen project*. Retrieved from <https://borgenproject.org/period-poverty-in-nigeria>.
- Bulejo O. And Ayodele C. 2019. "Students to menarche and menstruation in Ekiti state secondary schools" *Researchgate.net*.
- CEO Water Mandate 2020. "Period poverty: What is it and how can we help? *UN Global Compact*
- Druet A. 2021. "How did menstruation become taboo? A look at the historical roots and theories behind menstrual stigma. helloclue.com.
- Duru, C. O., Ikeanyi, E. M. And Merenu, I. 2021. "Knowledge and practice of menstrual hygiene among adolescent school girls in Umunna, Imo state, South East Nigeria:

- Implications for parents, healthcare providers and policy makers" *International Journal of reproduction, contraception, obstetrics and gynaecology* 10(2): 458.
- Edet, O. B., Bassey, P. E., Esienumoh, E. E., and Ndep, A. O. 2021. "Attitudes beliefs and perception of menstruation related socio-cultural practices and menstrual hygiene management among in-school adolescent girls in Cross River state, Nigeria". *African Journal of Biomedical Research* Vol 24,363-369.
- Fayemi, K.J., Adanikin, A.I., Adewusi, Ajayi, Olomjobi, Oso and Fasubaa 2013. "Survey of the Problems of the girl child in Ekiti State Nigeria". *Researchgate.net*.
- Fehintola F.O., Fehintola A.O., Aremu A.O., Idowu A., Ogunlaja O.A., and Ogunlaja I.P. 2017. "Assessment of knowledge attitude, attitude and practice about menstruation and menstrual hygiene among secondary high school girls in Ogbomoso, Oyo State, Nigeria" *International journal of reproduction, contraception, obstetrics and gynaecology*. Vol. 6 No 5 (May 2017).
- Geng C. And Yockey K.021. "What to know about period poverty" *Medical News Today Newsletter*. September 16, 2021.
- Global Menstrual Collective 2019. *Collective advocacy to drive and guide investment in menstrual health and hygiene*.
- Humanitarian Aid Relief Trust 2017. "The urgent need to Break Nigeria's Menstruation Taboo" www.hart-uk.org. Retrieved on 22/09/22.
- Ibaishwa, R. L. & Achakpa, P. M. (2016). "Menstrual hygiene management amongst marginalized physically challenged women and adolescent girls in 10 states of Nigeria". *Women Environmental Programme*. 1-60
- Jaafar H, Ismail S.Y., and Azzeri A. 2023. Period poverty: A neglected public health issue. *Fam Med* Jul 44 (4): 183-188.
- Krenz A. And Strulik H. 2021. "The impact of menstruation hygiene management on work absenteeism of women in Burkina Faso" *Economic and Human biology* . Volume 43. www.sciencedirect.com.
- Michel J., Mettler A., Schonenberger S., Gunz D., 2022. "Period poverty: why it should be everybody's business" *Journal of Global Health reports*. Volume 6. 2022.
- Muhammed S., and Larsen-Reindorf R.E. 2020. "Menstrual knowledge, sociocultural restrictions, and barriers to menstrual hygiene management in Ghana: Evidence from a multi-method survey among adolescent schoolgirls and schoolboys" www.researchgate.net.
- Obasanjo O., Olorunfemi A., Temitope O. 2014. "Knowledge, practices and socio-cultural restrictions associated with menstruation and menstrual hygiene among in-school adolescents in Ile-ife Nigeria" www.semanticscholar.org retrieved 3rd October 2023.
- Odey G.O., Amusing O., Oghenetejiri P.O., David S., Ali A., and Lucero-Prino D. E., 2021. "Period during a pandemic: The neglected reality of Nigerian girls and women". *Public health in Practice*. Volume2, November 2021.
- Olson M., 2023. "The impact of period poverty on low-income adolescents in the United States" *University honours thesis, Portman state University*.

- Sánchez E. And Rodriguez L. 2019 "Period poverty: Everything you need to know" Retrieved from www.globalcitizen.org.
- Scales, A. 2019. "Socio-cultural norms and perception of menstruation: An interdependent study project (ISP) collection 3206. https://digitalcollections.sit.edu/isp_collection/3206.
- Schuyler K. 2020. "The devastating consequences of period poverty for girls" Global G.L.O.W. globalglow.org.
- Tull K. 2019. "Period poverty impact on the economic empowerment of women" University of Leeds Nuffield Centre for International health and development. Helpdesk reports.
- Unicef 2018. "Nine things
- Unicef 2019. "Menstrual hygiene" www.unicef.org Retrieved on 15/04/2022.
- Vanguard Health 2021. "Menstrual Hygiene Day: 3 women fighting period poverty in Nigeria" www.vanguardngr.com. Published May 28 2021.
- Williams T. O., Lorraine, T.B., and Lauren, W. T. 2013. "Handbook of Adolescent health psychology" 2013th Ed.