

The Perception, Practice, and Awareness of Potential Harm in the Use of Safety Pins on Clothing Among Pregnant Women in North-Central Nigeria

¹M.O. Fijabiye, ²A.O. Ojuronbe, ¹O.O. Aworinde, ¹A.D. Adekunle, ¹O.E. Oyedeji, ³T.O. Fijabiye, ⁴O.A. Ojuronbe

¹College of Health Sciences, Department of Obstetrics and Gynaecology,
Ladoke Akintola University of Technology Ogbomoso.

²Department of Obstetrics and Gynaecology, Federal Medical Centre Keffi, Nasarawa State

³Department of Family Medicine, Federal Medical Centre Keffi, Nasarawa State

⁴General Hospital Owode-Egba, Owode, Ogun State.

Abstract

Background: Some cultural practices are helpful to pregnant women; however, many are baseless and could even be harmful. The use of safety pins on clothing is gaining popularity among pregnant women throughout sociodemographic regions. Pregnant women attending Federal Medical Centre Keffi's prenatal clinic were assessed for perception, practice and awareness of potential harm associated with safety pins use on clothing.

Materials and Methods: The study was cross-sectional descriptive study, involving 420 consented women selected through simple random sampling. The data was analysed using SPSS IBM 25.

Results: Three hundred and ninety-three completed questionnaires were analysed. Majority of respondents (85.2%) were aware of safety pins use on clothing, 42% perceived the practice to be beneficial, and 25% reported the practice could be dangerous. Over a third of respondents have attached it to their clothes. Needle pricks were the most common injury among respondents who perceived the practice to be harmful.

Conclusion/Recommendations: The level of awareness and practice of use of safety pins on clothing among pregnant women is rapidly increasing. There is a great concern for safety and thus should not be encouraged.

Keywords: Safety pins, Pregnant women, Potential harm, Clothing, Nigeria.

Introduction

Pregnancy is a period of transition in women's life. This time frame is linked to a lot of uncertainty, anxiety, and mental and physical stress.¹ Regardless of their socioeconomic status, many women turn to their close friends, family, coworkers, carers, or previous pregnant women for information in order to receive the much-needed support during this vulnerable time. Unfortunately, generational folktales and cultural practices that are frequently unsupported by science and harmful to their health make up the majority of the information these women access.² Since the majority of these customs have persisted for many generations and have become ingrained in our way of life, they are sensitive and controversial topics in the public domain.³

A group of people or community's accepted values, beliefs, customs, morals, and practices are known as its culture. These are frequently passed down from one generation to the next through the dissemination of knowledge and the application of these practices. Such intergenerational cultural values exist only to help people live moral lives. Nevertheless, some of these practices are harmful and have damning consequences, particularly on pregnant women.³ The World Health Organisation highlights the effects of traditional practices on pregnant women's physical and mental health in their model for antepartum and intrapartum care, which is designed to protect the fundamental cultural rights of expectant mothers during these times.⁴ Therefore, providing high-quality prenatal care and considerate maternity care requires an understanding of women's cultural pregnancy practices.^{5,6} Absolutely countless cultural customs have been passed down to women in many African countries. Some of these are benign, helpful, or may be detrimental to the developing fetus's or mother's health.^{7,8} In addition to other superstitious traditional beliefs, it is noteworthy that these pregnancy-related cultural practices include food taboos, the consumption of herbal drinks,

Correspondence to:

Dr. A.O. Ojuronbe

Department of Obstetrics and Gynaecology,
Federal Medical Centre Keffi, Nasarawa State.

Email: dradegoriola@gmail.com

abdominal massages, rituals, behavioural taboos, taboos on wearing colourful clothing, the insertion of herbs into the vagina, the avoidance of hair knotting, the avoidance of walking in the sun, and the use of safety pins on clothing.^{9,10} It has been observed that some of these practices have a detrimental effect on pregnant women's health-seeking behaviour, which in turn has an adverse effect on the mother's health and the outcome of the pregnancy.^{11,12} Pregnant women, especially those from the southwestern region of Nigeria (Yoruba), frequently affix safety pins to their garments. Among its many other perceived benefits, it is thought to protect expectant mothers and the growing foetus from evil spirits and aid in a safe delivery.⁹ The use of this pregnancy-related cultural belief may have negative consequences, even though it has no direct adverse consequences on the outcome of the pregnancy. According to a study conducted in Ogbomoso by Owonikoko et al., the prevalence of safety pin use by pregnant women was 54.2%. Traditional worshippers are most inclined to use it, and most pregnant women who do so have experienced an unintentional pinprick at least once.⁹ Other risks have also been documented in literature, such as the accidental swallowing of safety pins when they are not appropriately kept out of infants' and young children's reach.¹² The purpose of this study was to evaluate pregnant women receiving ANC at a tertiary institution in North-central Nigeria's perceptions, practices, and awareness of the possible risks associated with putting safety pins on clothing.

Materials and Method

Study setting and design

This was a cross-sectional prospective study conducted among pregnant women attending antenatal care in Federal Medical Centre Keffi, Nasarawa state Nigeria. The study was carried out from 16th September 2024 to 16th November 2024. During the two (2) month period, a total of 420 pregnant women were recruited using a random sampling method. An opaque envelope containing a small piece of paper with either a "yes" or "no" written on was randomly picked from a bag. All consenting patients who picked the envelope containing "yes" were given a questionnaire and information including their sociodemographic, and obstetrics status, if participants used the safety pins, used in their previous pregnancy(s), who told her about the use of the safety pin, what is the belief concerning the use of safety pin, points of attachment and recorded any injury(s) among many other data were gotten and analyzed using IBM SPSS version 25. Categorical variables were presented as frequencies and percentages.

Sample size determination

The sample size was calculated using the using the

Cochrane formula.¹³

$n = pqz/d^2$

n=minimum sample size

Z= 1.96 which is the standard normal deviation at 95% confidence level.

P= prevalence of safety pin usage among pregnant women

The prevalence of 54.2% was reported by Owonikoko et al in a similar study conduction in Ogbomoso, Oyo State.⁹

q= 1- p

d= absolute precision level of 5%

Therefore, $n = 0.54 \times (1-0.54) \times 1.96^2 / (0.05)^2 = 382$

10% Non response consideration = 38.2

A total of 420 participants were included in the study.

Ethical approval

The ethical approval for this study was obtained from the Health Research Ethics Committee Federal Medical Centre Keffi with a reference number FMCK/KF/HREC/02778/24. all participants gave consent for their participation in the study. All informations were made confidential and the rule of medical ethics were strictly adhered to.

Results

The tables below show the results of respondents on the variables assessed the perception and practice of safety pins in pregnancy. In this study, 420 questionnaires were administered, only 393 respondents who completely filled the questionnaires were analyzed.

The socio-demographic characteristics of the respondents shows that majority (96.2%) of respondents in this study were between 21 and 40 years old, although the mean age was 30.32 ± 5.119 years. Regarding the occupational status of respondents in this study, slightly above one-third (35.4%) were unemployed, about one-fourth (26%) were traders, a few were traders (8%) and artisans (6.4%). The study setting had a diverse multi-ethnic group, with Hausa/Fulani accounting for more than one-third (39.7%), Igbo were slightly above one-fourth (27.7%) and Yoruba slightly below one-fourth (22.9%).

Regarding marital status, the majority were married (96.7%), a few were single (3.0%), and very few were divorced (0.3%). The predominant religion in the study population was Christianity (60.8%) followed by Islam (38.4%) with only very few being traditionalist (0.8%). In this study, most of the respondents had a tertiary level of education (65.1%), more than a quarter had secondary education (28.5%) and very few had no formal education (1.3%). Regarding gravidity, slightly above average (58.5%) were multigravida, about a quarter primigravida (25.7%) and few were grand multipara (15.5%). The majority of respondents in this

Table1: Respondent Socio-Demographic Characteristics (n=393)

Variable	Frequency	Percentage
Age (Years)		
Mean($\pm$ SD)	± 5.11	30.32
≤ 20	8	2
21 – 30	200	50.9
31 – 40	178	45.3
>40	7	1.8
Employment Status		
Unemployed	139	35.4
Civil Servant	95	24.2
Artisan	25	6.4
Trader	102	26
Farmer	32	8
Tribe		
Hausa/ Fulani	156	39.7
Igbo	109	27.7
Yoruba	90	22.9
Igala	1	0.3
Mada	3	0.7
Others	34	8.7
Marital Status		
Single	12	3
Married	380	96.7
Divorced	1	0.3
Religion		
Islam	151	38.4
Christianity	239	60.8
Traditionalist	3	0.8
Educational Status		
No formal education	5	1.3
Primary	20	5.1
Secondary	112	28.5
Tertiary	256	65.1
Gravidity		
Nulligravida	1	0.3
Primigravida	101	25.7
Multigravida	230	58.5
Grand Multigravida	61	15.5

Table 2: Respondents' parity and number of children alive

Variables	Frequency	Percentages
Parity		
Low Parity (0-3)	341	86.8
High Parity (>4)	52	13.2
Number of Children Alive		
None	128	32.6
1 to 5	259	65.9
>6	6	1.5

Table 3: Respondents' Awareness and Practice of Safety Pin Use in Pregnancy

Variable	Frequency	Percentage
Awareness		
Yes	335	85.2
No	58	14.8
Previous use		
Yes	144	36.6
No	249	63.4
If Yes, Recommended By		
Family members	93	64.6
Friends	9	6.2
Colleagues at work	20	13.9
Religious groups	6	4.2
Read about it	9	6.2
Hospital staff	7	4.9
If previously used, part of clothing it was attached to		
Undergarment	92	63.8
Outer garment	19	13.2
Either garment	33	23
If previously used, part of body pin is in close contact with		
Arm/ Forearm	27	18.8
Chest	10	6.9
Abdomen	70	48.6
Pelvic region	9	6.3
Head	26	18
Other	2	1.4
If previously used, the role it played		
Protection of mother and foetus against evil spirit	112	77.8
Averting accident and unforeseen harm	14	9.7
I do not think it has any role but I used it because I heard it's good	18	12.5

study were low parous women (86.8%) and far below a quarter were high parous women (13.2%). Most had between 1 and five children alive (65.9%) while about 1.5% had six or more children. A larger number of

respondents in this study 335 (85.2%) were aware of the use of a safety pin in pregnancy. With regards to respondents' perception of the use of safety pins in pregnancy, slightly below average (42.7%) affirmed a

Table 4: Respondents' Awareness of Harm, and Injury Suffered following Safety Pins Use in Pregnancy

Variable	Frequency	Percentage
Awareness of Harm from Use		
Needle prick	267	67.9
Rash from skin irritation	83	21.1
Being swallowed by children	43	11
Harm Associated with Practice Among Safety Pins Users		
Yes	15	10.4
No	129	89.6
If yes, harm was suffered by		
Pregnant woman	6	40
Husband	4	26.7
Children	5	33.3
Nature of Harm Suffered		
Needle prick	10	66.7
Rash from skin irritation	3	20
Being swallowed by children	2	13.3
Thought on if practice should be encouraged		
Yes	158	40.2
No	235	59.8

beneficial effect, slightly above one-third perceived it does not have a benefit, while about a quarter (25.0%) perceived a harmful effect.

Most of the respondents have not used safety pins (63.4%) and out of those who had used, far above average got the information from family members (64.6%), while very few were recommended by hospital staff. Most of the safety pins used were attached under the garment (63.8%) in close contact with the abdomen (48.6%). With regards to the benefit of the use of safety pins in pregnancy, a larger number 112 (77.8%) said it Protects of mother and foetus against evil spirit.

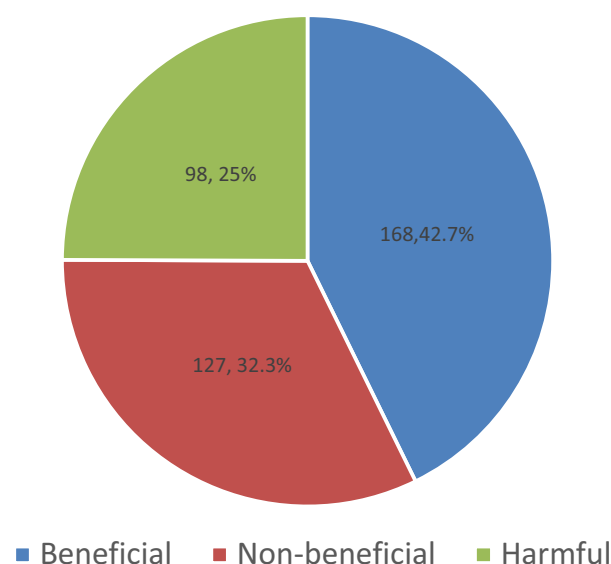
The majority of the respondents (96.4%) in this study did not know of the harmful effect associated with a safety pin while those who were aware of the harm said it may be suffered by the woman (40%), her husband (26.7%) or the children (33.3%). Needle prick was the most (67.9%) common harm reported in this study. About two- third of the respondents (59.8%) do not want the practice to be encouraged.

Discussion

Women often look for information on how to safely navigate this important time because pregnancy is a time of many unknowns, anxiety, and fear. The information obtained most frequently is ingrained in the people's long-standing culture, which may be

Figure 1: Respondents' Perception of the Use of Safety Pins in Pregnancy

Respondents' Perception of the Use of Safety Pins in Pregnancy



detrimental and frequently lacks scientific support.^{2,3,4} Fixing safety pins on clothing is one of the acknowledged cultural customs that has become more common during pregnancy, in addition to food taboos, drinking herbal beverages, and inserting herbs into the vagina.¹⁴ In Nigeria's southwestern region (Yoruba), pregnant women frequently engage in this practice.^{9,15} It is thought to aid in a safe delivery and protect expectant mothers and the growing foetus from dangerous spirits.^{9,14,15} The only available study on the use of safety pins during pregnancy in Nigeria was that conducted by Owonikoko et al.⁹ Our study found that 36.6% of respondents used safety pins, which was less than the 54.2% that Owonikoko et al. reported. The reason may be that, in contrast to Owonikoko's study, which focused primarily on pregnant women of Yoruba descent, our study included pregnant women from various tribes in Nigeria. Nonetheless, the Hausa/Fulani and Igbos are the two most common tribes in this study. In the study, the average age was 30.32 ± 5.119 , 256 (65.1%) of the participants had a university degree, and 239 (60.8%) of them were Christians, while only 3 (0.8%) were traditional worshippers. The Hausa/Fulani extraction accounted for over 156 (39.7%) of the multiethnic study population. According to the study, multiparous women were the most likely to use safety pins on their pregnant clothes. These results were comparable to those of Owonikoko et al. The majority of respondents who had safety pin used on their clothing, 93 (64.6%),

obtained their information from relatives, including aunts, grandmothers, and mothers-in-law. The importance of family in our everyday life might be the rationale for this. The results of Owonikoko, Aworinde, and Jimenez were comparable to this finding.^{9,15,16} A total of 335 (85.2%) of the participants in our study were aware that safety pins are clutched to clothing during pregnancy, and 168 (42.7%) thought the practice was beneficial. About 60% of the respondents thought that the practice shouldn't be encouraged, despite the high level of awareness. This might be owing to people's concerned about the possible harm that such practices could cause to the pregnant women and the household. In reference to the point of attachment on the garment among those that embraced such practice, 92 (63.4%) of the respondents positioned the pin on their undergarment, 70 respondents (48.5%) attached the pin in close proximity to the abdomen. The perception that the safety pin shields their foetuses from harm may be the reason behind this. Among the users, 112 (77.8%) strongly agreed that the pin shields them and their unborn children from evil spirits. This result was comparable to what Owonikoko et al. reported. The majority of respondents (89.4%) in our study who used safety pins on their clothing reported no negative effects from doing so. This finding contrasts considerably with Owonikoko et al.'s report of 91.5% harm among safety pin users.⁹ Regarding the recipients of harm from injury associated with use of this pins, pregnant women, their kids, as well as their husbands have all been reported.⁹ Finding from our study shows that needle pricks were the most frequent harm. This was reported among 10 (66.7%) respondents. Swallowing the safety pin which occurred among 2 of the respondents' children (13.3%) was the most devastating harm. This highlights the need for extra vigilance in the handling of these pins in order to avoid such accidents.

Conclusion

The use of safety pins has transcended across different cultures and socio-demographic strata. In this study, the awareness and practice of the use of safety on the garments of pregnant women was quite high. The injury arising from the use of such pins to the pregnant women, their spouses and their children are of great concern. Therefore, this practice should not be encouraged.

Acknowledgement

The authors express sincere gratitude to all the pregnancy women who participated in this study for their time and cooperation. Also appreciation goes to all the nurses and the support staffs of the department for their roles in making this study a success.

Authors' contributions

All the authors participated in the conceptualization of this study, the manuscript writing, editing and the final draft.

Funding

This study received no funding support from any organisation.

Conflict of interest

The authors declared no conflict of interest.

References

1. Tretter M. Mitigating Health related uncertainties during pregnancy: The role of smart Health Monitoring technologies. *J Med Internet Res* 2024; 26: 48493.
2. H Gedamu, A Tsegaw, E Debebe, . The prevalence of traditional malpractice during pregnancy, childbirth and postnatal period among women of childbearing age in Meshenti town. *International Journal of Reproductive Medicine*. 2018;2018(1):5945060
3. Rachymayanti RD, Diana R, Anwar F, Khomsan A, Riyadh H, Christianiti DF, Kusuma R, et al. Cultural, traditional beliefs and practices during pregnancy among the Madurese tribe in Indonesia. *British Journal of Midwifery* 2023;31(3):148-156
4. World Health Organization. WHO recommendations: intrapartum care for a positive childbirth experience. 2018
5. Puthussery S, Bayih WA, Brown H et al. Promoting a global culture of respectful maternity care. *BMC Pregnancy Childbirth*. 2023;23(1):798.
6. Felisian S, Mushy SE, Tarimo EA, Kibusi SM. Socio-cultural practices and belief during pregnancy, childbirth, and postpartum among indigenous pastoralist women of reproductive age in Manyara, Tanzania: a descriptive qualitative study. *BMC Women's Health* 2023; 23: 123.
7. M'soka NC, Mabuza LH, Pretorius D. Cultural and health beliefs of pregnant women in Zambia regarding pregnancy and childbirth. *Curationis* 2015; 38(1):1-7.
8. Chakona G, Shackleton C. Food taboos and Cultural Beliefs influences Food choice and dietary preferences among pregnant women in the Eastern Cape, South Africa. *Nutrients*. 2019;11(11):2668.
9. Owonikoko KM, Tijani AM, Bajowa OG, Atanda OO. Use of safety Pin on Garments in Pregnancy: A Belief and Cultural practices with Potential Harmful Effect. *AIMS Public Health*, 2017,4(1):154-171.
10. The research team of the Minzu University of China. Study on Traditional Beliefs and Practices Regarding Maternal and Child Health in Yunnan, Guizhou, Qinghai and Tibet. 2010.
11. Adatara P, Strumpher J, Ricks E, Mwini-Nyaledzigbor PP. Cultural Beliefs and practices of women influencing home births in rural Northern Ghana. *Int J Women's Health*. 2019;11:353-61.

12. Shyram TC, Mohan RB, Sijju K Smriti R, Neeraj M. Safety pin- a question to its safety. Nepal Medical College Journal 2010;12:53-54
13. Barlett JE, Kotrlik JW, Higgins CC. Organizational research: Determining Appropriate Sample Size in Survey Research. Information Technology, Learning and Performance Jour 2001; 19(1):43-50.
14. Igberase G. Harmful cultural practices and reproductive health in Nigeria. Cont. J Trop Med. 2012, 6:27.
15. Aworinde O.O, Olufemi-Aworinde K.J, Awotunde O.T, Adeniji A.O. Behavior modifying myths, practices and effect on health seeking behavior among pregnant Yoruba women, South western Nigeria – a cross-sectional study. Rwanda Medical Journal. 2019;76 (1):1-6
16. Jimenez J. The history of grandmothers in African-American Community. Soc Rev. 2002;76:523-551.