

Awareness of Adverse Effects of Tobacco Smoke on Under-Five Children Among Nursing Mothers Attending Clinics at Ikotun Primary Health Centre, Lagos

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doi : <https://doi.org/10.37745/ijnmh.15/vol9n35268>

Published November 30 2023

Citation: Ogunsan A.T., Idowu D.M., Ogunlade D.O. and Kehinde A.E. (2023) Awareness of Adverse Effects of Tobacco Smoke on Under-Five Children Among Nursing Mothers Attending Clinics at Ikotun Primary Health Centre, Lagos, *International Journal of Nursing, Midwife and Health Related Cases*,9 (3), 52-68

ABSTRACT: *Tobacco smoke has remained a major public health challenge despite numerous strategies devised by international communities to control it. Studies have shown that maternal passive and active smoking is associated with an increased risk of obstetric complications and adverse perinatal outcomes. Parents who choose to smoke are possibly not aware of or deny the negative effects of such action on their offspring. Based on this observation, this study investigated awareness of adverse effects of tobacco smoke on under-5 children amongst nursing mothers attending clinics at Ikotun PHC Lagos. The study employed a descriptive survey design, convenience sampling, a self-designed questionnaire, and both face and content validity to assess the awareness of nursing mothers attending Ikotun Primary Health Centre, Lagos, regarding the adverse effects of tobacco smoke on their under-five children. The collected data were analyzed using SPSS version 23 and presented descriptively in frequency tables to provide insights into the research objectives. Study revealed that the overall awareness and knowledge level of tobacco smoke was good as majority (74.2%) and (52.5%) of the study population were aware and knowledgeable about the harmful effects of tobacco smoke to young children. Also, the nursing mothers exhibited poor perception towards tobacco smoke with a mean score of 1.4 and 37.5% of them that strongly agreed that tobacco smoking is not harmful even during pregnancy. majority (83.3%) and (76.7%) of the study population believed that being a smoker and age respectively affects knowledge and how the pregnant women perceive the adverse effects of tobacco smoking particularly on the unborn. Most (65.8%) affirmed that having a smoker in the family affects the perception of the adverse effects of tobacco smoking. Based on these findings, there is need for public health education programme targeting this population should enhance their self-awareness and consequently increase their knowledge to the complications, discomforts, infertility and adverse perinatal outcomes related to STS exposure and prompt them to adopt prevention strategies.*

KEYWORDS: awareness, adverse effects, tobacco smoke, under-5, nursing mothers

INTRODUCTION

The issue of tobacco smoke is a matter of significant public health concern on a global scale, as it is widely acknowledged for its adverse effects on humans across all age groups. Under-five children are a distinct group among vulnerable populations, exhibiting heightened susceptibility to the negative consequences associated with exposure to cigarette smoke. The association between passive exposure to tobacco smoke, sometimes referred to as secondhand smoke, and many health complications in children has been established. These complications encompass respiratory infections, sudden infant death syndrome (SIDS), developmental challenges, and enduring cognitive deficits. The impact of tobacco-related health outcomes on children is significant, and lactating women play a crucial role in influencing their child's level of exposure. Despite the implementation of numerous strategies by international communities to reduce it, tobacco smoke remains a significant public health concern. Based on empirical research, it has been determined that a significant proportion of children, estimated at around 40%, and women, estimated at approximately 35%, engage in the habitual inhalation of secondhand tobacco smoke (STS). Myers et al. (2020) reported that an estimated 40% of youngsters are exposed to tobacco smoke, hence increasing their susceptibility to various health complications. Reeves and Bernstein (2019) suggest that the potential for detrimental exposure to environmental hazards commences during prenatal development, hence influencing the growth and maturation of the foetus. The aforementioned impact persists even subsequent to the exposure of the breastfeeding infant to STS. Consequently, pregnant women and lactating mothers, who are at a higher risk of tobacco exposure, should be given increased consideration. Despite the extensive documentation of the adverse consequences associated with maternal smoking, a significant proportion of women globally, approximately 53%, persist in engaging in daily smoking habits throughout pregnancy and postpartum periods (Kumar & Gould, 2019).

Research has indicated that there is a correlation between mother disengagement and active smoking and an increased risk of obstetric complications and adverse perinatal outcomes. Maternal exposure to secondhand smoke has been associated with elevated levels of nicotine and cotinine, the major metabolite of nicotine, in the amniotic fluid, as well as in the serum or urine of both the mother and newborn (Kharrazi et al., 2017). This phenomenon occurs due to the diffusion of nicotine into the bloodstream of the foetus, amniotic fluid, and breast milk, hence exerting detrimental effects on neurological development. The National Institute on Drug Abuse (2018) asserts that maternal smoking presents a substantial health hazard to foetuses, as it exposes them to nicotine.

There are numerous negative repercussions associated with the transmission of smoking habits from parents to their children. The preventability of low birth weight, a significant factor in infant mortality and long-term health complications, has been associated with exposure to secondhand smoke. Dejmek et al. (2019) found that it has a detrimental effect on birth weight for both infants

of smoking mothers and infants of non-smoking mothers, leading to subsequent reductions in birth weight. According to Woodward and Laugesen (2018), maternal smoking is a highly significant risk factor associated with Sudden Infant Death Syndrome (SIDS). Infants who succumb to Sudden Infant Death Syndrome (SIDS) typically exhibit elevated levels of nicotine in their pulmonary system compared to the control group, regardless of the presence or absence of maternal smoking (McMartin, et al., 2020). Early exposure to tobacco smoke is a potentially significant risk factor for the development of respiratory illnesses. newborns whose moms engage in smoking exhibit a 50% higher likelihood of hospitalisation due to respiratory infections within the initial year of their lives, in comparison to newborns born to non-smoking mothers. Furthermore, when contrasting children whose moms smoke in a separate room with newborns whose mothers smoke in the same room, the latter group exhibits a 56 percent elevated likelihood of hospitalisation. According to a study conducted by Blizzard et al. (2002), there is a significant risk between 73% and 95% for children when their moms engage in smoking while holding them.

Children are more vulnerable to secondhand cigarette smoke exposure due to their immature immune and respiratory systems, as well as their higher respiratory rates (Arechavala, et al., 2018). smoking-free rules are being adopted on a global scale, with certain countries adopting targeted measures to protect children from the harmful effects of secondhand smoking.

Residential dwellings serve as primary sources of smoke exposure, and the smoking behaviours exhibited by parents and other carers play a crucial role in determining children's susceptibility to secondhand cigarette smoke. The association between secondhand smoke and various adverse consequences has been established, with particular recognition of its detrimental impact on youngsters. According to a study conducted by Walia et al. (2018), there is a higher likelihood of respiratory disorders such as asthma, bronchitis, and reactive airway disease among children who are exposed to smoking.

Secondhand smoke refers to the amalgamation of smoke emitted by those who are actively smoking, as well as the smoke emanating from the burning end of a cigarette. The smoke under consideration contains a vast array of compounds, exceeding 7,000 in number. Among this extensive assortment, several hundred have been identified as possessing hazardous properties, while roughly 70 have been found to possess carcinogenic potential. There is no risk-free level of exposure to secondhand cigarette smoke; in fact, even brief exposure can have detrimental effects on health (Centres for Disease Control and Prevention, CDC, 2021).

According to the Centres for Disease Control and Prevention (CDC, 2021), the annual mortality rate for infants resulting from maternal smoking during pregnancy exceeds 1,000. Furthermore, expectant mothers who experience exposure to secondhand smoke are at an elevated likelihood of delivering infants with reduced birth weights, hence augmenting the susceptibility to various health complications. Infants who are exposed to secondhand cigarette smoke after birth are at a significantly increased risk of experiencing Sudden Infant Death Syndrome (SIDS). Furthermore, it has been observed that the presence of chemicals found in secondhand smoke can disrupt the

brain's ability to regulate the respiratory function of newborns. Notably, infants who succumb to Sudden Infant Death Syndrome (SIDS) exhibit elevated levels of cotinine and nicotine in their pulmonary tissues compared to those who perish due to alternative reasons (CDC, 2021; Hallet, et al., 2019).

The primary objective of this research study is to examine the extent of knowledge possessed by women who are engaged in nursing with regards to the detrimental consequences of cigarette smoke on their children under the age of five. The comprehension of nursing mothers' level of awareness is crucial, as it has the potential to impact their attitudes and actions about smoking in the presence of their children. In addition, it is imperative to investigate several determinants that could potentially influence this level of awareness, including the educational attainment of mothers, socio-economic standing, and exposure to anti-smoking initiatives. Such examination is vital for the development of focused interventions aimed at safeguarding the well-being of children under the age of five.

The results of this study have the potential to give valuable insights for public health efforts, healthcare professionals, and legislators regarding the importance of implementing comprehensive awareness campaigns, smoking cessation programmes, and legislative modifications in order to address the adverse effects of tobacco smoke on children under the age of five. This research makes a valuable contribution to the ongoing endeavours aimed at establishing a safer and healthier environment for the most susceptible individuals in our society by illuminating the existing levels of awareness and highlighting potential areas of knowledge deficiency.

The focus of the study is to determine awareness of adverse effects of tobacco smoke on under-five children amongst nursing mothers attending clinics at Ikotun Primary Health Centre, Lagos. The study specifically:

1. determined the knowledge of the effect of tobacco smoke on under-5 children among nursing mothers who attend clinics at the Ikotun Primary Health Centre in Lagos;
2. determined the perception regarding tobacco smoke on under-5 children among nursing mothers who attend clinics at the Ikotun Primary Health Centre in Lagos; and
3. investigated the factors affecting the knowledge and perception of the adverse effects of tobacco smoking among nursing mothers who attend clinics at the Ikotun Primary Health Centre in Lagos.

METHODOLOGY

This study employed a descriptive survey design to assess the awareness of nursing mothers attending clinics at Ikotun Primary Health Centre, Lagos, regarding the adverse effects of tobacco smoke on their under-five children. The population of interest for this research comprised nursing mothers who were attending clinics at Ikotun Primary Health Centre, Lagos. A convenience sampling technique was utilized to select a sample of 123 nursing mothers from this population.

Convenience sampling was chosen due to its practicality and accessibility, given the constraints of time and resources.

Data were collected using a self-designed questionnaire. The questionnaire was specifically developed for this study to assess nursing mothers' awareness of the adverse effects of tobacco smoke on under-five children. The questionnaire consisted of a set of structured questions designed to gather relevant information regarding their knowledge and attitudes regarding tobacco smoke exposure and its impact on children. To ensure the validity of the questionnaire, both face validity and content validity were employed. Face validity was assessed by subjecting the questionnaire to a panel of experts in the field of public health and survey design to evaluate its overall appearance, clarity, and relevance. Content validity was ensured by aligning the questionnaire items with established literature and consulting experts to validate the relevance and comprehensiveness of the questions.

Data were collected from the selected nursing mothers using the self-designed questionnaire. After the data collection process, responses were coded and entered into the Statistical Package for the Social Sciences (SPSS) version 23 software for analysis. Descriptive statistical methods, including frequency tables, were used to summarize and present the collected data. These descriptive statistics helped in providing an overview of the nursing mothers' awareness levels regarding the adverse effects of tobacco smoke on under-five children.

RESULTS

Table 1: Socio-demographic characteristics of respondents (n = 120)

Characteristics		Freq.	%
Age (in years):	18-27	28	23.3
	28-37	35	29.2
	38-47	38	31.7
	48 and above	19	15.8
Religion	Christian	72	60.0
	Muslim	45	37.5
	Others (Traditionalists)	3	2.5
Marital Status	Married	58	48.3
	Single	22	18.3
	Separated	30	25.0
	Widowed	10	8.4
Occupational status	Self-employed	40	33.3
	Civil servant	41	34.2
	House wife	39	32.5
Husband's occupation	Self employed	36	30.0
	Civil servant	44	36.7
	Artisan/Trader	40	33.3

Ethnicity	Yoruba	66	55.0
	Igbo	30	25.0
	Hausa	20	16.7
	Others	4	3.3
Educational Status	Primary	28	23.3
	Secondary	50	41.7
	Tertiary	42	35.0
Parity	1-2 child/children	56	47.0
	3 children	41	34.0
	4 children and more	23	19.0
Average family monthly income	Less than N50,000.00	20	16.7
	Between N50,000.00-N100,000.00	88	73.3
	More than N100,000.00	12	10.0

Table 1 presents the distribution of the study population across different age groups. It reveals that the largest proportion, comprising 31.7% of the sample, falls within the age range of 38-47 years. This is followed by 29.2% and 23.3% of individuals who are aged between 28-37 years and 18-27 years, respectively. A mere 15.8% of the individuals surveyed fell into the age range of 48 years and older. The majority of the respondents in this study are of Yoruba ethnicity, comprising 55% of the sample. Additionally, 60% of the respondents identify as Christians. Approximately 48.3% of the individuals surveyed are married. In terms of their occupational position, 34.2% are working as civil servants, 33.3% are self-employed, and 32.5% are housewives who rely on their spouses for financial support. Approximately 48.3% of the individuals under consideration are married. In terms of their occupational status, 34.2% are engaged in civil service positions, 33.3% are self-employed, and 32.5% are housewives who rely on their spouses for financial support. According to the table, it can be observed that 36.7% of the participants' spouses are employed as civil workers, while 33.3% are engaged in artisanal or trading occupations. Approximately 30% of individuals are engaged in self-employment. The data indicates that 41.7% of the sample population possesses literacy skills and has received at least a secondary level of education. Additionally, 35% of the population has attained a postsecondary degree, while 23.3% have completed primary education. With respect to the distribution of respondents, it was observed that approximately 47% of the participants had 1-2 children, while 34% and 19% reported having 3 and 4 or more children, respectively. Approximately 73.3% of the participants reported an income range of N50,000-N100,000, while 16.7% and 10% indicated earnings below N50,000.00 and above N100,000.00, respectively.

Table 2: Respondents' knowledge of the effect of tobacco smoke on under-5 children (n = 120)

Items	Scale	Frequency	Percentage (%)
Tobacco smoke can trigger cough in children	Strongly Agree	60	50.0
	Agree	18	15.0
	Disagree	12	10.0
	Strongly Disagree	30	25.0
Cigarette smoking can cause a child develop headache	Strongly Agree	55	45.8
	Agree	22	18.3
	Disagree	28	23.3
	Strongly Disagree	15	12.5
Tobacco smoke can make a child's nose get blocked	Strongly Agree	48	40.0
	Agree	30	25.0
	Disagree	22	18.3
	Strongly Disagree	20	16.7
Tobacco smoking can cause eye irritation in your children	Strongly Agree	71	89.1
	Agree	11	9.2
	Disagree	29	16.7
	Strongly Disagree	18	15.0
Tobacco smoke is equally a source of breathlessness in young children	Strongly Agree	57	47.5
	Agree	5	4.1
	Disagree	29	24.2
	Strongly Disagree	29	24.2
Some of the diseases children are experiencing are as a result of tobacco smoking	Strongly Agree	45	37.5
	Agree	30	25.0
	Disagree	4	3.3
	Strongly Disagree	41	34.2
Tobacco smoke is more harmful to the people around the smoker than to the actual smoker	Strongly Agree	50	41.7
	Agree	14	1.7
	Disagree	26	21.6
	Strongly Disagree	30	25.0

According to the data presented in the table 2, it was found that 50% of the study population expressed a strong belief that tobacco smoke had the potential to induce coughing in youngsters. Conversely, 25% of the participants strongly disagreed with this assertion. Approximately 45.8% of the participants had a strong belief that cigarette smoking can lead to the development of headaches in children, whereas 12.5% expressed a strong disagreement with this notion. A minority of respondents (40%) expressed strong agreement with the notion that tobacco smoke might cause nasal congestion in children. A smaller proportion (25%) agreed with this statement, while a significantly smaller percentage (16.7%) strongly disagreed. A significant proportion (89.1%) of respondents expressed a strong belief in the association between tobacco smoking and

eye irritation in youngsters, while a notable minority (15%) strongly disagreed with this assertion. Approximately 47.5% of respondents expressed strong agreement regarding the association between smoke and dyspnea in children, while 24.2% strongly disagreed with this notion. In the subsequent section of the table, it is noteworthy that merely 37.5% of the participants expressed a strong inclination towards the notion that certain ailments afflicting children can be attributed to tobacco smoking, while 34.2% vehemently opposed this viewpoint. Furthermore, it was found that 41.7% of participants expressed a strong agreement with the notion that tobacco smoke poses a greater harm to individuals in close proximity to the smoker, as opposed to the smoker themselves. Conversely, a significant proportion of respondents, namely 25%, strongly disagreed with this perspective, asserting that tobacco smoke does not have such an effect on those surrounding the smoker.

Table 3: Summary of the overall knowledge of respondents (N = 120)

Level of Awareness	Awareness Scores	Frequency	Percentage (%)
Good	15-28 (50-100%)	63	52.5
Poor	0-14(0-49%)	57	47.5

To evaluate the respondents' general understanding of the negative impact of tobacco smoking on children under the age of five, a set of seven questions was utilised. The items were classified using a 4-item Likert scale, which assigns a grading score of 4 for highly agree, 3 for agree, 2 for disagree, and 1 for strongly disagree, resulting in a cumulative score of 28. Consequently, the ratings for scores falling within the range of 0-14 were classified as poor, whilst scores ranging from 15-28 were categorised as good. At the conclusion of the study, it was seen that the general level of awareness of tobacco smoke was satisfactory. Specifically, 63 individuals, accounting for 52.5% of the study population shown a commendable level of knowledge, while 57 individuals, constituting 47.5% of the study population, exhibited a poor level of knowledge.

Table 4: Respondents' perception regarding tobacco smoke (n = 120)

Items	Scale	Freq.	%	Mean
Smoking should be banned for pregnant women because of the negative effects on the mother and unborn child	Strongly Agree	29	24.2	2.4
	Agree	30	25.0	
	Disagree	21	17.5	
	Strongly Disagree	40	33.3	
Fear of the harmful effect of smoking influences its acceptance among pregnant women	Strongly Agree	33	27.5	2.2
	Agree	12	10.0	
	Disagree	24	20.0	
	Strongly Disagree	51	42.5	
Not seeing tobacco smoking as harmful can make a pregnant woman to always use it	Strongly Agree	28	23.3	2.9
	Agree	16	13.3	
	Disagree	17	14.2	
	Strongly Disagree	59	49.2	

Cost of tobacco smoke can make a pregnant woman not to indulge in smoking	Strongly Agree	35	39.2	2.7
	Agree	20	16.7	
	Disagree	3	2.5	
	Strongly Disagree	62	51.6	
Husband decision and support influence the acceptance of tobacco smoking	Strongly Agree	40	37.5	2.3
	Agree	15	12.5	
	Disagree	17	14.2	
	Strongly Disagree	48	40.0	
Not seeing anything wrong with tobacco smoking especially for the unborn child can make a pregnant woman to smoke	Strongly Agree	33	27.5	2.4
	Agree	19	15.8	
	Disagree	33	27.5	
	Strongly Disagree	35	39.2	
Tobacco smoking is not harmful even during pregnancy	Strongly Agree	45	37.5	1.4
	Agree	12	10.0	
	Disagree	18	15.0	
	Strongly Disagree	45	37.5	
Smoking should be banned especially among pregnant women	Strongly Agree	48	40.0	3.0
	Agree	12	10.0	
	Disagree	20	16.7	
	Strongly Disagree	40	33.3	

According to the data presented in table 4, approximately 24.2% of the participants expressed a strong belief in the necessity of prohibiting smoking among pregnant women due to the adverse consequences it poses for both the maternal and foetal health. Additionally, a quarter of the respondents, constituting 25% of the sample, expressed support for this viewpoint. A mean score of 2.4 indicates a moderate level of perception towards the ban. A mere 27.5% of participants expressed a strong agreement about the notion that acceptance of smoking during pregnancy is contingent upon the dread of its detrimental effects. Conversely, a significant proportion of respondents, approximately 42.5%, strongly disagreed with this perspective. These findings suggest a moderate level of perception, as shown by a mean score of 2.2. Approximately 39.2% of respondents expressed a strong belief that the financial implications associated with cigarette smoke discourage pregnant women from engaging in smoking. However, a majority of respondents (51.6%) strongly disagreed with this notion, resulting in a mean score of 2.7, which suggests a moderate level of perception.

In relation to the impact of spousal decisions and support on the acceptability of tobacco smoking, only 37.5% of participants expressed a strong belief in their influence, while 40% strongly disagreed. The mean score of 2.3 indicates a moderate impression of this influence. Approximately 27.5% of respondents expressed a strong belief that if a pregnant woman perceives no harm in cigarette smoking, she may engage in this behaviour without hesitation. However, a larger proportion of respondents, namely 39.2%, strongly disagreed with this viewpoint. On average, these responses yielded a mean score of 2.4.

Table 5: Summary of the overall perception of respondents (N = 120)

Level of Perception	Perception Scores	Frequency	Percentage (%)
Good	22-32 (69-100%)	15	12.5
Fair	11-21(32-68%)	73	60.8
Poor	0-10(0-31%)	32	36.6

In a bid to assess the overall perception of the respondents, 8 questions were considered. As the items were categorized using 4-item Likert scale, thus having a grading score of 4 for strongly agree, 3, for agree while 2 and 1 are for disagree and strongly disagree respectively, thus, making a total score of 32. Therefore, points between 0-10 were rated poor, 11-21 was rated fair while scores between 22-32 were rated good. At the end, the overall perception of the mothers of under-5 children towards tobacco smoke was fair as 73(60.8%) of the study population exhibited fair perception of tobacco smoke.

Table 6: Respondents' factors affecting the knowledge and perception of the adverse effects of tobacco smoking among mothers

Factors	Yes (%)	No (%)	Total (%)
Illiteracy or low educational background	70 (58.3)	50 (41.7)	120 (100.0)
Low socio-economic status	44 (36.7)	76 (63.3)	120 (100.0)
Culture	55 (45.8)	65 (54.2)	120 (100.0)
Having a smoker in the family	79 (65.8)	41 (34.2)	120 (100.0)
Having spousal support	88 (73.3)	32 (26.7)	120 (100.0)
Type of residence	69 (57.5)	51 (42.5)	120 (100.0)
Being a smoker	100(83.3)	20 (16.7)	120 (100.0)
Age	28 (23.3)	92 (76.7)	120 (100.0)
Marital status	71(59.2)	49 (40.8)	120 (100.0)

According to the data presented in Table 6, a significant proportion of the study population (83.3% and 76.7% respectively) held the belief that being a smoker and age have an impact on both information acquisition and the perception of pregnant women regarding the detrimental consequences of tobacco smoking, particularly on the unborn foetus. A majority of respondents

(65.8%) indicated that the presence of a smoker within the family influences their perception of the negative consequences of tobacco smoking. Additionally, 59.2% and 58.3% of participants expressed that the marital status of women and their level of literacy, particularly if they have a low educational background, respectively, impact their understanding and perception of the adverse effects associated with tobacco smoking. In the subsequent analysis, a majority of participants (57.5%) expressed the belief that the kind of housing had an impact on individuals' knowledge and perception regarding the impacts of tobacco smoking. According to the findings, a significant proportion of respondents (45.8%) held the belief that culture plays a role in shaping women's view of the negative consequences associated with tobacco smoking. Additionally, a considerable percentage (36.7%) acknowledged that women's knowledge and perception of these harmful effects can be influenced by their socio-economic level.

DISCUSSION OF FINDINGS

The results of this survey indicated that the majority of the study participants fell between the age range of 38-47 years (31.7%). Furthermore, a significant proportion (55%) of the participants identified themselves as Yoruba, while the majority (60%) reported practising Christianity. Approximately 48.3% of the participants in the study were married individuals who held positions as civil workers. Additionally, 34.2% of the respondents themselves identified as civil servants. Furthermore, it was found that 36.7% of the participants' spouses were also employed as civil servants. A minority of the participants, specifically 41.7%, demonstrated literacy skills. In contrast to the aforementioned study conducted by Dai et al. (2021), it is noteworthy that male participants constituted a significant majority, comprising 85.5% of the research sample.

The findings indicate a positive outcome in terms of the general awareness and knowledge regarding tobacco smoke. Specifically, a significant majority (74.2%) of the study population demonstrated awareness, while a substantial proportion (52.5%) exhibited knowledge regarding the detrimental impacts of tobacco smoke on young children. This finding aligns with the research conducted by Saldanha et al. (2017), which revealed that a significant proportion of the mothers (70%) possessed a high level of understanding of the detrimental impacts of passive smoking on children. However, this result is inconsistent with the findings of Dai et al. (2021), who reported that only 25.5% of the participants accurately responded to at least 70% of the knowledge questions in the survey. In accordance with the aforementioned study conducted in Riyadh, Saudi Arabia (Al-Shaikhin et al., 2018), it was found that the obstetric population exhibited a notable level of awareness regarding environmental tobacco smoking. The majority of the women who participated in the study (80%) were cognizant of the detrimental impact of exposure to Environmental Tobacco Smoke (ETS) on both maternal and foetal health. However, their understanding of the specific effects on foetal health was found to be limited.

However, a study conducted by Adediji et al. (2021) in Nigeria presented contrasting findings, indicating that a significant proportion of the participants (82.2%, n=337) exhibited inadequate knowledge regarding passive smoking. This contradicts previous research that has consistently

demonstrated that passive smokers are particularly vulnerable to the detrimental effects of tobacco smoke, thereby posing a significant risk to their well-being. The significance of raising awareness and fostering knowledge regarding the impact of tobacco smoke on children is of utmost relevance, as it is imperative for individuals to possess this information. This will serve as a valuable resource for parents, enabling them to effectively navigate the challenges of child-rearing and mitigate the potential risks associated with the exposure of their children to the detrimental consequences of tobacco smoke.

The findings of the survey indicated that a significant proportion (37.5%) of the respondents held a negative perception, as evidenced by a mean score of 1.4. This group strongly agreed with the notion that tobacco smoking does not pose any danger, even when pregnant. Similarly, an equal percentage (37.5%) of participants strongly disagreed with this perspective. However, a significant level of positive perception was seen, as indicated by a mean score of 3.0, among 40% of the participants who strongly expressed agreement with the proposition of prohibiting smoking, particularly among pregnant women. In a study conducted by Dai et al. (2021), an evaluation of attitudes was performed, revealing that around 11.8% of the participants provided favourable responses to at least 70% of the attitude-related inquiries. Developing a favourable disposition towards tobacco smoke represents a pragmatic approach to safeguarding young infants from respiratory ailments linked to its exposure.

The findings of this study indicate that a significant proportion of the study population, specifically 83.3% and 76.7% for the variables of being a smoker and age, respectively, hold the belief that these factors influence both knowledge and perception of pregnant women regarding the detrimental consequences of tobacco smoking, particularly on the unborn foetus. A majority of respondents (65.8%) indicated that the presence of a smoker within the family influences their perception of the negative consequences of tobacco smoking. Additionally, 59.2% and 58.3% of participants expressed that the marital status of women and their level of literacy, particularly if they have a low educational background, respectively, impact their understanding and perception of the adverse effects associated with tobacco smoking. In the subsequent analysis, a majority of respondents (57.5%) expressed the belief that the kind of housing had an impact on individuals' understanding and perception of the consequences associated with tobacco smoking.

Onyenoro et al. (2019) discovered that there exists a correlation between knowledge of tobacco use warnings and various socio-demographic variables, smoking history, exposure to secondhand smoke in both residential and public settings, as well as the perception of tobacco use. According to Iwuagwu et al. (2021), it has been suggested that individuals who are exposed to secondhand smoke and those who do not smoke themselves are more likely to possess a greater awareness of the adverse effects of tobacco smoke on obstetric difficulties, in contrast to individuals who actively engage in smoking. A significant proportion of women within the reproductive age bracket exhibit a lack of initiative in obtaining sufficient knowledge pertaining to prenatal and postnatal matters, either by neglecting to attend healthcare facilities or by doing so insufficiently. Moreover, certain individuals refrain from raising concerns that may be troubling them, thereby

preventing health professionals from effectively addressing these issues. Furthermore, a significant contributing factor to their limited understanding of the detrimental impacts of cigarette smoke on children is their lack of formal education. Despite the concerted efforts of numerous global communities to mitigate its impact, tobacco smoke remains a substantial public health concern. Based on empirical research, it has been determined that around 40% of children and 35% of women are regularly exposed to second-hand tobacco smoke (STS).

Myers et al. (2020) reported that a significant proportion of young individuals, over 40%, are subjected to the inhalation of cigarette smoke, hence elevating their susceptibility to the development of various health complications. The potential consequences of prenatal exposure to secondhand tobacco smoke (STS) while breastfeeding can have lasting impacts on the infant's development, as it may impair foetal development (Reeves & Bernstein, 2019). Based on empirical research, it has been found that maternal smoking, whether through active or passive means, is associated with an elevated likelihood of obstetric complications and adverse perinatal consequences. Kharrazi et al. (2017) found a positive association between elevated concentrations of nicotine and cotinine, the primary metabolite of nicotine, and maternal exposure to secondhand smoke. This association was observed in both the serum and urine samples of the mothers, as well as in the amniotic fluid. The adverse impact of nicotine on the neurological development of fetuses occurs when it permeates the bloodstream, amniotic fluid, and breast milk. The National Institute on Drug Abuse (2018) has shown that fetuses and newborns of smokers face a substantial risk of health complications due to nicotine exposure.

CONCLUSION

The nursing mothers demonstrated a satisfactory level of knowledge of the impact of cigarette smoke on children aged five and below. However, the study revealed that their perception regarding the impacts of cigarette smoking was predominantly unfavourable. Furthermore, other characteristics were identified as having an impact on individuals' knowledge and perception. These factors include being a tobacco smoker, the age of the mother, the presence of a smoker within the family, the marital status of the woman, and the educational attainment of the mother.

Recommendations

The present study's findings have led to the formulation of the subsequent recommendations:

1. The public health education plan aimed at this particular demographic should aim to improve their self-awareness, leading to an improvement in their understanding of the various problems, discomforts, infertility, and unfavourable perinatal outcomes associated with sexually transmitted infections (STIs). This increased knowledge should then motivate them to adopt preventive measures.
2. The government, in conjunction with the Ministries of Environment and Health, should enhance public awareness and understanding regarding the detrimental consequences of active tobacco use and exposure to secondhand smoke (STS). Particular attention should be given to safeguarding the well-being of women and their children. This effort aims to

facilitate the implementation of comprehensive and rigorous smoke-free legislation in both rural and urban regions, while concurrently augmenting tobacco taxation.

3. It is recommended that sensitization campaigns be implemented to address obstetric difficulties, bad perinatal outcomes, and decreased fecundity among smokers. These programmes should incorporate smoking cessation tactics that target both smokers residing in smoking households and non-smoking households.
4. It is imperative to develop public health strategies that prioritise the implementation of educational programmes with the goal of reducing tobacco smoke exposure during pregnancy and breastfeeding. The observed differences between those who actively smoke tobacco and those who passively smoke it highlight the significance of many elements that must be taken into account when implementing interventions and conducting surveillance. These considerations are crucial for making advancements in the pursuit of lowering the detrimental effects associated with tobacco use.
5. To acquire data on prevalent locations of tobacco smoke exposure for infants, it is possible to carry out a needs assessment and an environmental analysis.
6. The implementation of a robust public health campaign has the potential to yield positive outcomes in terms of enhancing awareness and understanding regarding the reduction of tobacco exposure within residential, occupational, and communal settings.
7. It is recommended that cost-effective public initiatives, such as the utilisation of smoking cessation posters or visual aids depicting the detrimental consequences of both passive and active tobacco exposure throughout the stages of pregnancy and postpartum, be strategically positioned throughout public spaces, including prenatal, postnatal, and infant welfare clinics.
8. The stakeholders involved in the field of public health ought to offer comprehensive education, diligent monitoring, and robust support systems to effectively facilitate the process of smoking cessation.
9. Furthermore, it is imperative to monitor various environmental factors that may contribute to the reduction of fecundity and/or adverse pregnancy outcomes, such as pesticides. Additionally, existing studies should take into account the possibility of confounding or modification of effect estimates by hazardous coexposures or other environmental factors, specifically considering environment-environment interactions.
10. It is imperative to promote the practise of mothers actively preventing their children from being exposed to cigarette smoke.

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