

**Awareness and practices of tattoo-related health risks among university students of
Ambrose Alli University, Ekpoma**

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ABSTRACT

Tattooing is increasingly popular among youth and young adults, including university students. While tattoos are often pursued for aesthetic or personal reasons, they pose significant health risks—both infectious and non-infectious—especially when obtained from unregulated sources. This study assessed the awareness, attitudes, and practices related to tattoo-associated health risks among students of Ambrose Alli University, Ekpoma. A descriptive cross-sectional study was conducted among 200 students using a structured questionnaire covering demographics, knowledge of health risks, and tattooing practices. Ethical approval was obtained, and data were analyzed using descriptive statistics. Of the 200 participants, 101 valid responses were analyzed. The average age was 22.15 ± 3.4 years, with females constituting 65.3% of the sample. A high percentage (77.2%) recognized that tattoos could pose health risks. Awareness of infectious complications like HIV and hepatitis was high (83.2%), but fewer respondents (64.4%) were aware of non-infectious risks such as scarring and allergic reactions. While 82.2% had tattoos, only 30.7% signed informed consent before the procedure. Notably, 22.8% reported complications following tattooing. Despite good awareness of infectious tattoo-related risks, knowledge of non-infectious complications and safe practices remains suboptimal among university students. There is a pressing need for educational interventions and stricter health regulations concerning body art practices within and around academic environments.

Keywords: awareness; body art; health risks; tattooing; university students.

INTRODUCTION

Tattoos, a form of body modification involving insertion of ink into the dermis, have existed since Neolithic times and are practiced worldwide for cultural, spiritual, aesthetic, or personal reasons (KAMAL & ALAM, 2025; SARAWAN, 2025). While initially marginal, tattooing has gained mainstream popularity among youths, including students in higher institutions (ATLI et al., 2022). However, this surge in acceptance is accompanied by growing health concerns, especially when performed by untrained individuals in unhygienic facilities. Social media, globalized cultural trends, and celebrity influences have contributed to the normalization and popularity of tattoos among young adults (LEFF et al., 2023; JOORABCHI et al., 2026).

Despite the aesthetic appeal and social acceptance, tattooing carries inherent health risks, particularly when conducted by untrained personnel or in unhygienic settings. Medical complications from tattoos range from mild (e.g., bruises and swelling) to advanced reactions such as granuloma, keloids, allergic responses, and infections including hepatitis B, hepatitis C, HIV, and tetanus (GALLE et al., 2012; ISLAM et al., 2016). Despite this, awareness of these risks - especially non-infectious complications - remains low, even among populations presumed to be more informed, such as medical students (SERDYUK et al., 2019).

In Nigeria, empirical data on students' knowledge, attitudes, and practices regarding tattoo-related health risks are scarce. Understanding students' awareness and behaviors is crucial for developing targeted educational strategies and informing public health policies aimed at minimizing preventable complications associated with tattoos. This study, therefore, seeks to assess the level of awareness and preventive practices related to tattoo health risks among students at Ambrose Alli University, thereby addressing a critical gap in the existing literature.

MATERIALS AND METHODS

This descriptive cross-sectional study was conducted between July and September 2022 at Ambrose Alli University (AAU), Ekpoma, Edo State, Nigeria, targeting students from the Faculty of Basic Medical Sciences. Using simple random sampling, 200 students were recruited to participate in the study.

Data collection was carried out using a pre-tested, semi-structured questionnaire administered online via Google Forms, ensuring efficient distribution and participant anonymity. The questionnaire comprised three sections: socio-demographic characteristics, knowledge of health risks associated with tattoos, and tattoo-related practices. A pilot study was conducted among 20 students outside the study population to test the clarity, reliability, and relevance of the questions. Feedback from the pilot was used to refine the questionnaire before the main data collection.

Ethical approval for the study was obtained from the Institutional Research and Ethical Review Committee (Health Research Ethics Committee) of Ambrose Alli University, Ekpoma, with approval number 282/25. Participation was voluntary, and informed consent was obtained electronically from all respondents prior to completing the questionnaire. The study adhered to the principles of the Declaration of Helsinki (GENERAL ASSEMBLY OF THE WORLD MEDICAL ASSOCIATION, 2014).

After data collection, responses were exported from Google Forms to Microsoft Excel for initial cleaning and coding. Data analysis was conducted using IBM SPSS Statistics version 25, with descriptive statistics (frequencies and percentages) used to summarize socio-demographic characteristics, knowledge, and practices.

To quantify participants' awareness and behaviors, knowledge and practice scores were calculated. Each correct answer on the knowledge section was scored one point, and total scores were categorized into poor, fair, or good knowledge based on tertiles. Practice scores were computed similarly, with participants classified as having poor, fair, or good tattoo-related practices. This scoring system allowed for a quantitative evaluation of the students' awareness and preventive behaviors concerning tattoo-related health risks.

RESULTS AND DISCUSSION

From the 200 questionnaires distributed, 101 (50.5%) were correctly filled and analyzed. The average age was 22.15 years ($SD = \pm 3.4$). Most participants were female (65.3%) and from the Nursing and Medical Laboratory Science departments (Table 1).

Table 1. Socio-demographic Characteristics of Respondents.

Variable	Frequency (n)	Percentage (%)
Age (Mean \pm SD)	–	22.15 \pm 3.4
Gender: Male	35	34.7%
Gender: Female	66	65.3%
Department: Nursing	33	32.7 %
Department: MLS	22	21.8 %
Others	46	45.5 %
MLS (Medical Laboratory Sciences)		

77.2% of respondents believed tattoos carry health risks. Awareness of infectious disease transmission (e.g., HIV, hepatitis B & C, and tetanus) was high (83.2%), but only 64.4% knew tattoos could be surgically removed. Notably, 16.8% were unaware of non-infectious risks like allergies and scarring (Table 2).

Table 2. Awareness and Knowledge of Tattoo-Related Health Risks.

Awareness Item	Yes (%)	No (%)
Tattoos carry health risks	77.2	22.8
Aware of infectious risks (HIV, hepatitis, tetanus)	83.2	16.8
Aware of non-infectious risks (scarring, allergy)	64.4	35.6
Aware tattoos can be surgically removed	64.4	35.6

Although the majority of participants were aware of infectious risks such as HIV, hepatitis B, and tetanus, awareness of non-infectious complications like allergic reactions, granulomas, keloids, and scarring was considerably lower. Similar knowledge gaps have been documented in both European and Asian populations (DIECKMANN et al., 2016; KINKAR et al., 2010), reflecting a broader global issue of incomplete risk perception. This is concerning, particularly among students in medical-related.

82.2% had at least one tattoo. Only 30.7% signed informed consent before the procedure. While 82.2% believed the instruments used were sterile, 22.8% experienced complications post-tattooing. Motivations ranged from aesthetics (15.8%) and fashion (15.8%) to undefined personal reasons (57.4%) (Table 3).

Table 3. Tattoo Practices and Related Experiences.

Item	Response	Value
Have at least one tattoo		82.2%
Signed informed consent before tattooing		30.7%
Believe instruments were sterile		82.2%
Experienced complications after tattooing		22.8%
Common reasons for tattooing	Aesthetic	(15.8%)
	Fashion	(15.8%),
	Undefined personal	(57.4%)

The findings suggest high engagement in tattooing practices among university students, with 82.2% of respondents reporting at least one tattoo. This aligns with international trends highlighting the normalization of tattooing among young adults (ATLI et al., 2022). Interestingly, this high prevalence within a health-oriented academic environment underscores a critical gap between knowledge and preventive health behavior.

Motivations for tattooing were primarily linked to fashion and personal aesthetics, echoing existing literature suggesting that body modification is often driven by identity formation and social influence (ATLI et al., 2022). However, the fact that only 30.7% of tattooed respondents signed informed consent forms highlights a lapse in procedural ethics, raising concerns about regulation and public health safeguards. Additionally, the 22.8% complication rate reinforces that even when conducted in per.

CONCLUSION

This study found a high prevalence of tattooing among university students, with good awareness of infectious risks but limited knowledge of non-infectious complications, alongside common risky practices such as inadequate consent and unregulated procedures. These findings highlight the need for comprehensive education on tattoo-related health risks, integration of safe tattooing practices into public health initiatives, and enforcement of consent protocols in tattoo establishments. Further research is needed to explore the psychological, cultural, and behavioral drivers of tattooing among students, including gender differences. The study is limited by its cross-sectional design, reliance on self-reported online data, and potential selection bias, but it provides important baseline evidence to guide educational and policy interventions.

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