Introduction

Healthcare issues of incarcerated females remain a daunting challenge across the globe. [1] Female prisoners who comprise 1–3% of the total population of convicts in most prisons across Africa [2] have had to grapple with issues of overcrowding and unsanitary conditions. These unsavory conditions encourage poor health resulting in the spread of common infections. Again, women face unique healthcare challenges related to menstruation, pregnancy and childbirth, childcare in and out of prisons, violence, and sexual abuse. [3]

The work of Todrys et al., [3] established that female inmates of a prison in Zambia have poor access to basic amenities such as soap, toothpaste, and sanitary pads. They also exposed the challenges that confronted women in accessing general prison healthcare campaigns such as Tuberculosis and human immunodeficiency virus (HIV) prevention, testing and treatment campaigns. Similarly, experts have advocated that women should be held in environments “suitable for their condition and ensure that they are treated with dignity.” [3]

The Southern African Development Community protocol on gender and development has tasked member states to ensure the provision of hygienic sanitation facilities, as well as meet the nutritional requirements of female prisoners. [4]
The Kumasi Central Prison was established in 1901 by the British colonial authorities as an all-male facility to accommodate about 800 prisoners. The facility now houses around 3000 inmates including females after the backyard had been converted into a female prison. Issues on the accessibility to quality healthcare for female prisoners in Ghana and parts of West Africa have not been well-elucidated. This study examines the background characteristics of female prisoners and how it influences their assessment of the quality of accessible healthcare in the Kumasi Female Prisons. This will provide a baseline data that can be used to inform service planning or monitor change in this population.

**Subjects and Methods**

**Study site and design**

This descriptive, cross-sectional study was conducted from June to December 2011 in the female section of the Central Prisons situated in Kumasi. It is the only facility with a prison for females in the Ashanti Region; a region with a female population of 264,328. Qualitative and quantitative methods were used for data collection and analysis. Open-ended questions and key informant interviews were used to generate qualitative data whereas quantitative data were obtained from closed-questions.

**Study population and ethical issues**

All 39 female prisoners in the facility were enrolled in the study. Ethical clearance was granted by the Committee for Human Publications, Research and Ethics of the Kwame Nkrumah University of Science and Technology, School of Medical Sciences and the Komfo Anokye Teaching Hospital. Written informed consent was sought from the Ghana Prisons Service and the participants.

**Sampling techniques/sample size/pre-testing**

A non-randomized sampling technique involving a census of all the 39 inmates in the female prisons was employed. Pre-testing of the study (pilot) was conducted in the Sunyani Female prison, in the Brong Ahafo Region, Ghana.

**Data collection techniques and tools**

Techniques of data collection included administration of a questionnaire to the inmates and a key informant interview with the prison’s health caregiver.

During the study, data were collected on two categories of variables.

**Background variables**

- Level of education
- Type of incarceration
- Occupation
- Marital status
- Ethnicity
- Age.

**Access to health care**

- Screening on incarceration
- Access to medication
- Access to specialist care.

The 12 point scale inventory questionnaire employed in this study rated the quality and accessibility of healthcare delivery: Poor (0–5 points); good (6–8 points); excellent (9–12 points).

The age grouping of inmates employed that of Eric Erikson Psychosocial developmental stages.[5]

**Data analysis**

Data were analyzed with Epi Info Version 3.5.1, (Centers for Disease Control and Prevention (CDC) 1600, Clifton Road Atlanta, GA 30329-4027, USA), Excel, and GraphPad Prism version 5.00 for Windows (GraphPad software, San Diego California USA, www.graphpad.com).

**Results**

**Quantitative data**

Almost one-in-five (7/39) (18.0%) of the respondents were on remand. The ages of inmates ranged from 17 years to 57 years with a mean age of 31.7 years. Respondents were mostly single with about a third (29.0%) being married. About five percent (2/39) (5.0%) of the population interviewed had tertiary, education. However, 28.5% (11/39) of the study population had no formal education. Seventy-nine percent [31/39 (79.0%)] of the respondents had worked in the informal sector whereas (6/39) 15.4% had been unemployed. Seventy-four percent [29/39 (74.0%)] of the inmates were of Akan extraction; however, 2.6% (1/39) of the inmates were foreigners (Togolese) [Table 1].

A 12-point scale inventory questionnaire was used to assess healthcare quality as shown in Table 2. Twenty-three [23/39 (58.7%)] of the female prisoners interviewed rated the quality and access to healthcare in the facility as poor (0–5 points), but in the view of 2/39 (5.1%), the delivery and access to healthcare at the Kumasi prisons was excellent (9–12 points).

<table>
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<th>Table 1: Eric erikson psychosocial developmental stages</th>
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All the inmates on remand rated the accessibility to healthcare as poor, whereas 16/32 (50%), 14/32 (43.8%) and 2/32 (6.3%) of the sentenced prisoner population rated healthcare delivery and accessibility as poor, good, and excellent, respectively.

Of the 11 married respondents, 8/11 (72.7%) felt the healthcare delivery in the female prison was poor. The majority of single women [15/28 (53.6%)] affirmed that there is poor accessibility to health care in the Kumasi female prisons.

Nineteen (19/39) (48.7%) of the inmates had basic education while 11/39 (28.2%) had no formal education. With the exception of the group without any formal education, majority of inmates in each of the educational levels rated the quality of accessible healthcare in the facility as poor for basic (12/19 [63.1%]), secondary (4/7 [57.1%]) and tertiary scoring, (2/2 [100%]). The average age on admission of females to the Kumasi Central prisons was 31.70 ± 1.70 years.

Erik Erikson’s stages of psychosocial development was used to classify inmates as adolescents, young adults, and middle-aged adults. Two of the adolescent prisoners (2/3) (66.3%) rated the quality of assessable healthcare as poor, whereas 16/27 (59.3%) and 5/9 (55.6%) fell in the young adult and middle-aged adults groups.

The mean scores of female inmates ratings of health provision in the study setting is shown in Figure 1. The female inmates with no form of formal education had the highest mean health provision assessment score (6.0) whereas those with tertiary education had the lowest (4.5). Females serving prison sentences gave the highest mean health assessment score whereas those on remand gave the lowest. Marital status influenced the mean health provision assessment scores of inmates, in that, the single females scored 5.7 while married inmates scored 4.9.

The mean scores for employment status were similar; the unemployed scored 5.8, informal 5.4 while civil servants scored 5.0.

**Qualitative data**

According to the prison health caregiver, she was trained as a village health worker to provide health care service in places where there are no doctors.

When asked questions about the screening of inmates on admission, she confirmed that inmates do not go through any laboratory examination prior to admission into the facility. She added that “on admission inmates are physically examined to rule out pregnancy and/or other ailments.” This is done without the help of any apparatus since no functioning sphygmomanometer or thermometer, exist.

The healthcare giver also stated that inmates who report with health problems are treated with the available medication. If
symptoms persist for days or weeks, the inmate is sent to a hospital. However, this she said has been a challenge since some inmates are likely to take advantage of this and abscond. In view of the above, she explained the need for availability of drugs to cure common ailments like malaria, candidiasis, and symptoms like headache and fever since they could not send inmates to hospital with conditions like “simple malaria” she intimated.

The healthcare giver further added that pregnant inmates with chronic conditions like ulcer, hypertension normally visit the hospital to see the doctor on duty.

Under reproductive health, her duties included; ensuring that inmates with babies are retained and stayed until first birthday of the child after which social welfare or the family will take custody of the child.

In the case of chronic or serious ailments, inmates are sent to the hospital she added. She also stated that pregnant inmates are allowed to visit the hospital for antenatal care and finally deliver at these facilities when they are due. Unless otherwise specified by a doctor, pregnant women receive the same treatment like everyone else in the prison. In addition, depending on the type of sentence, they are restricted (handcuffed) while going for antenatal or postnatal services. She stated further that inmates do frequently report with candidiasis, which she treats. However, some are not treated due to nonavailability of drugs. She associated the reoccurrence of the disease (candidiasis) to the single water closet available for all inmates. In general, the caregiver stated that they make sure inmates keep the facility clean as much as possible; however there still existed skin infections and bed bugs in the cells. She explained that the cells are of different sizes and are overcrowded.

When asked whether she had attended any health refresher training she said no (and mostly they are not invited for such meetings as they are the minority group). The healthcare giver intimated that their major concern is the nonavailability of drugs as the metro health directorate fails to come to their aid any time they send a request for nonprescription drugs.

The issue of female inmates being at a disadvantage as compared to their males counterparts was evident. Whereas healthcare givers in the male prisons were provided with everything including drugs and opportunities to update their skills, their female counterparts were often left in the dark. Finally, the inmates were not on any form of health insurance including the state-run National Health Insurance Scheme which placed a huge burden of the facility as drugs and other materials for healthcare had to be bought from the resources of the prisons. She thus appealed to all stakeholders to come to their aid to improve and promote healthcare in the facility.

Discussion

Accessibility to healthcare for females in detention worldwide is an issue that has generated intense discussions among stakeholders.\(^6\)–\(^8\) This study sought to examine the background characteristics of female prisoners and how it influences their assessment of the quality of accessible healthcare in the Kumasi Female Prisons. To the best of our knowledge, this study is the first to access the quality of accessible healthcare among female prisoners in Ghana. We observed that 32 (82.1\%) and 7 (17.9\%) of the inmates were on ordinary prison sentence and remand respectively. This implied that none of the inmates was on preventive detention an indication that there was no “dangerous but sane” individual during the
period of the study. Two-thirds of the participants were within the young adult group out of which only about a quarter were married. The present study adds to the evidence that married women are more likely to have a stable morale and social life when compared with single women and as such less likely to commit crimes.\(^\text{[9]}\)

The daily strive to satisfy needs coupled with low education level, therefore, make this group more liable to petty crime.\(^\text{[10]}\) On the whole, 29 (76.9%) participants had either basic or no education. This invariably attests to the fact that the majority of the inmates have very low level of education, which is likely to influence their assessment of the quality of health care, reproductive health needs, and environmental hygiene. Most informal workers earn less than the threshold for personal income. The tendency in most countries is that workers pay blanket levies which are too high for the very poor. The Penal Reform International\(^\text{[11]}\) confirms that women in prison frequently come from deprived backgrounds, and many have experienced physical and sexual abuse, alcohol and drug dependence, and inadequate health care before imprisonment.

Majority of the inmates were from the informal sector, which influenced their assessment of health care quality. Reviews of existing studies\(^\text{[12,13]}\) revealed problems in accessibility to health care services for female prisoners. These deficiencies in health care accessibility exist despite data confirming greater health care needs among women inmates. Condon \textit{et al.}\(^\text{[14]}\) revealed that prisoners considered health services as part of their personal prison journey, which started on the day of their imprisonment until their release. For those who did not access health services outside prison, imprisonment improved access to both mental and physical health services. This assertion however, contradicts the situation existing in the Kumasi Central Prison, where majority of the inmates (58.7%) concluded that the quality of and accessibility to health care was poor, and as such imprisonment could rather worsen their health status.

Maeve\(^\text{[15]}\) reported that the health care provided to women is often mediocre. It is largely an attempt to “catch up,” in that considerable effort is often necessary to raise women’s health status to legally acceptable levels he stated. In fact, most lawsuits filed by women in prison are for complications experienced during their imprisonment.\(^\text{[16]}\) This report however, contradicts findings made in the Kumasi Central prisons where inmates may not be able to file lawsuits as done by their counterparts in the United States judging from inmates’ background characteristics notwithstanding the mediocre healthcare facilities in the prisons.

Majority of the participants with no education rated quality and access to health care as excellent or good. However, most of the inmates with higher educational levels rated the quality and accessibility to healthcare as poor. The civil servants rated the healthcare quality and accessibility as poor indicating that one’s employment status is likely to influence her assessment of the quality of assessable healthcare. These findings are similar to the observation of Nobile \textit{et al.}\(^\text{[17]}\) who reported that the background of an inmate determined their perception of quality healthcare.

Furnee \textit{et al.}\(^\text{[18]}\) affirmed that a year of education improves the Quality Adjusted Life Years of an individual. In addition Grossman and Kaestner\(^\text{[19]}\) presented an overview of studies on the relation between education and health which showed that well-educated people are less likely to smoke, exercise more, wear seatbelts more often, and are more likely to participate in screening programs for breast cancer and cervical cancer.

Females serving prison sentences gave the highest mean health assessment score whereas those on remand gave the lowest. Marital status influenced the mean health provision assessment scores of inmates, in that, the single females scored 5.7 while married inmates scored 4.9.

The study has some limitations which may affect the generalization of our findings: This is a single center work among a small group of female prisoners in Kumasi, Ghana. The participants were relatively younger with a mean age of 31.5 years similar to the observations made in Greece.\(^\text{[20]}\)

\section*{Conclusion}

Female inmates of the Kumasi central prisons have poor access to quality healthcare. Their perception of the quality is influenced by background characteristics such as age, marital status, level of education and occupation. In general, qualitative analysis indicates poor quality of healthcare in the Kumasi Female Prisons. The prison authorities should provide basic healthcare materials and upgrade the skills of the healthcare giver to ensure the provision of primary healthcare in the facility. In addition, inmates should be encouraged to seek healthcare irrespective of their background characteristics.

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\section*{References}


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