

SCHOOL OF PUBLIC HEALTH

COLLEGE OF HEALTH SCIENCES

UNIVERSITY OF GHANA



**ASSESSMENT OF FACTORS INFLUENCING ACCESS TO QUALITY HEALTHCARE AMONG
INMATES AT THE JAMES CAMP MALE PRISONS, GREATER ACCRA**

BY

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DECLARATION

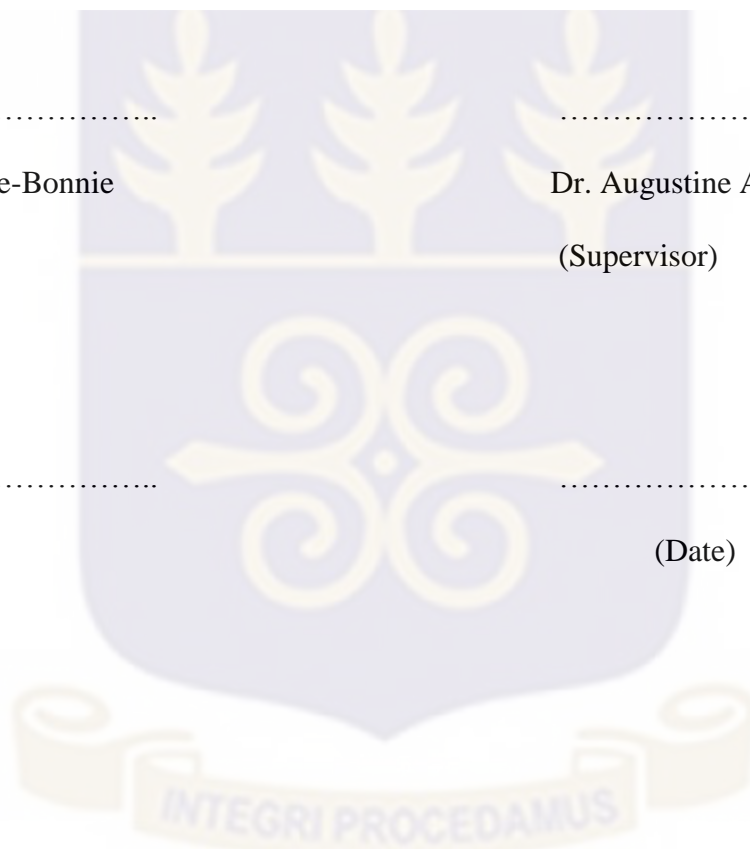
I, Terrylyna Baffoe-Bonnie, hereby declare that apart from the references used and duly acknowledged, this dissertation is my own work, done under supervision and has not been submitted in whole or part for any other degree. Where other people's research have been used, these have been acknowledged accordingly.

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DEDICATION

This dissertation is dedicated to my beloved parents, Paul and Patience Baffoe-Bonnie. You are my inspiration.



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My first appreciation goes to God, for all the miracles in the past year that brought me to the successful completion of this degree.

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ABSTRACT

Background: In Ghana, the incarceration rate is estimated at 48/100,000 and rising. The health of the Prisoner is known to have enormous public health significance but appears to be of poorer quality globally due to unhealthy prison conditions and prisoner characteristics.

Objective: This study was done to examine factors influencing access to quality healthcare by Inmates of the James Camp Male Prisons.

Methods: A mixed methods approach was applied to collect data. A structured quantitative questionnaire was used to obtain information from two hundred prisoners using a total population sampling to select participating prisoners. Qualitative interviews were conducted with purposively selected health providers and administrators, including an observational checklist at the health facility. Chi square test was used to analyse the quantitative data. A level of significance was set at $p < 0.05$. Qualitative interview data was analysed using Framework analysis and themes were developed for the discussion.

Quantitative Results: Overall, access to healthcare was rated poor to moderate with the greatest barrier to access being affordability of health services. Logistic Regression analysis conducted at 95% Confidence interval showed that apart from religion ($p = 0.039$), no other client/prisoner factors were found to have an influence on the inmate's access to health. Gap analysis was done between inmate expectations and perceptions of health provider factors to determine quality. There was an overall negative gap due to expectations exceeding the perception (1.24). The greatest gap was in the responsiveness dimension (1.46) with the lowest gap in the tangibles dimension (1.09). Health system factors such as inadequate funding for

health services, lack of skilled personnel and a paucity of essential medical supplies and drugs negatively affected the quality of healthcare provided to inmates.

Qualitative Findings: The qualitative findings indicated that overall access to healthcare by inmates was poor due the following: unavailability of adequate health facilities in the prison, incomplete use of medical examination and health certificates, poor medical records system, lack of skilled health personnel, inadequate supply of medical equipment, supplies and drugs, problems with referrals and external reviews, and selective remuneration and welfare packages for health workers due to administrative structure of the prison service. The national health insurance scheme was the financing options for prisoners' access to free health care.

Conclusion: The study concludes that access to healthcare was poor as the inmates rated the overall healthcare quality as poor, including health system challenges confronting the healthcare workers and administrators in their attempt to deliver quality healthcare.

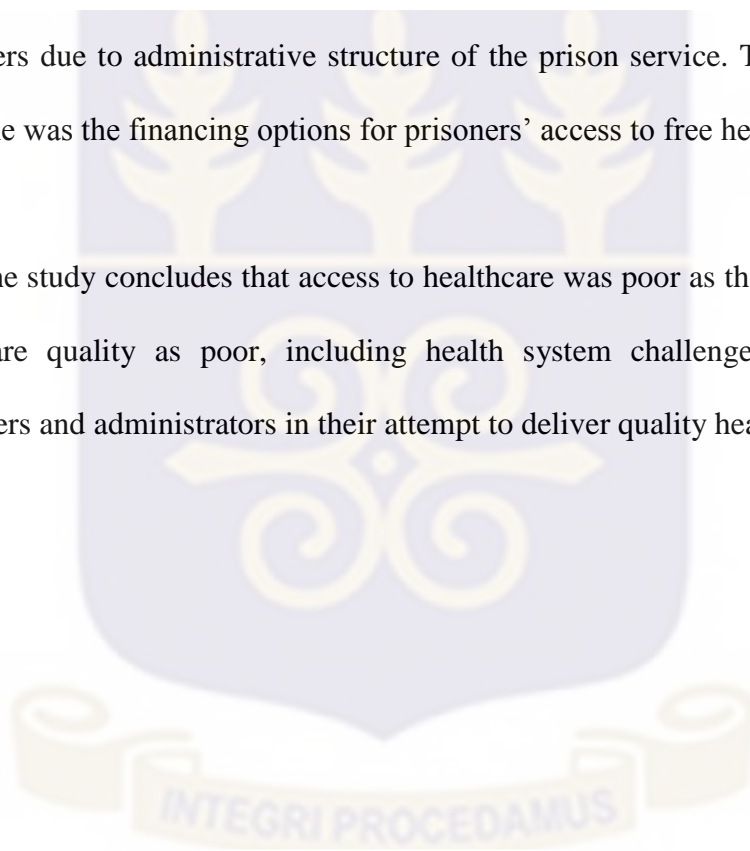
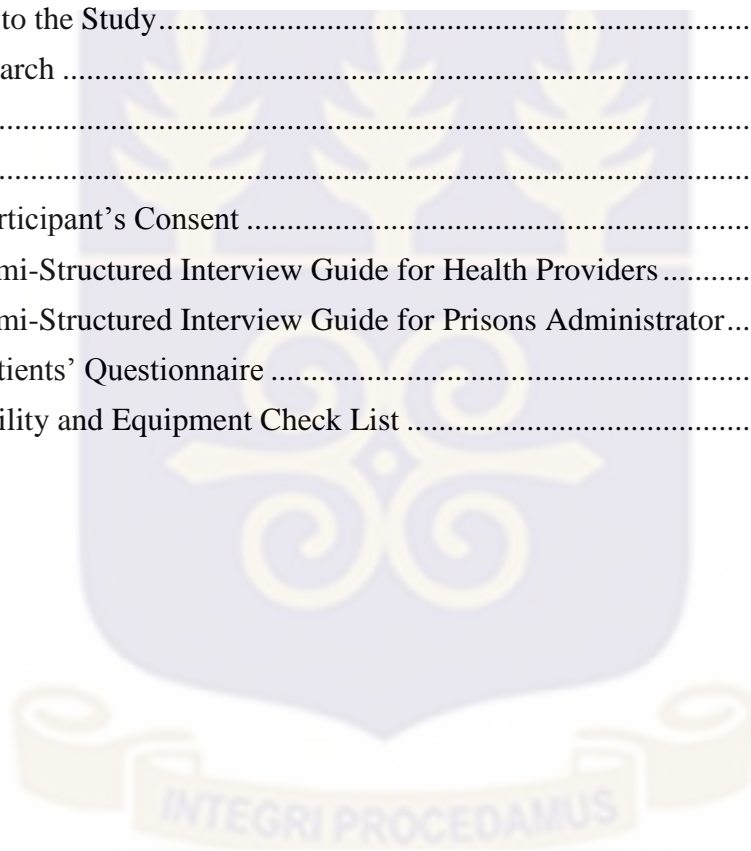


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LIST OF ACRONYMS

CDP	Contagious Disease Prison
GHS	Ghana Health Service
GPS	Ghana Prisons Service
HP	Health Provider
HW	Health worker
IOM	Institute of Medicine
JCP	James Camp Prison
MOH	Ministry of Health
PHC	Primary healthcare
POTS	Prison Officers Training School
SCC	Senior Correctional Centre
SMR	Standardized Mortality Ratio
UN	United Nations
UNCHR	United Nations Commission for Human Rights
WHO	World Health Organization
NHS	National Health Service



CHAPTER ONE

INTRODUCTION

1.0 Background to the study

The World Prison Brief (WPB, 2018) report estimates that of the world's population of more than seven billion, more than 10.35 million people are held in correctional institutions at a rate of 144 per 100000 of the population. This number includes remand prisoners and convicts. Worldwide figures show that a higher percentage of incarcerated persons are male, ranging from approximately 80% in Hong Kong to 100% in San Marino (WPB, 2018).

The WPB report continues that United States has the highest rate of incarceration at 698 per 100000 populations, with more than two million persons in their penal institutions. The total number of incarcerated persons in Ghana is estimated at 13,955 with a prison population rate of 48 per 100,000 of the national population as at October, 2017. This rate is one of the lowest in the world, ranked at 201st out of 222 countries that are compared. The prison population was predominantly male and about 1.2% of this population was female (WPB, 2018).

The World Health Organization (WHO) defines health as a 'state of complete physical, mental and social well-being and not merely the absence of disease or infirmity' (WHO, 1946). The extent to which the WHO can achieve what it terms a 'healthy' prison is in this sense debatable. However, as far as possible, this is the aim of the international community. For this reason, several International bodies have set what should be the required standards for Prison Health just as there are standards for health of the general public. This need arose due to research showing the deplorable nature of prisons and the health status of prisoners when compared with the general population (MUNUC, 2017).

The second principle in the WHO constitution states that the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition and this is applicable as a fundamental human right to all persons, including incarcerated persons (WHO, 1946). Article 12 of the International Covenant on Economic, Social and Cultural Rights also establishes that it is the right of everyone to enjoy the highest attainable standard of physical and mental health (United Nations, 1966).

The Revised Standard Minimum Rules for the treatment of Prisoners, also known as the Nelson Mandela Rules (2015) provides regulations and standards specific to the quality of healthcare in prisons. Rule 24 is the principle of equivalence, which states that ‘the provision of health care for prisoners is a State responsibility. Prisoners should enjoy the same standards of health care that are available in the community, and should have access to necessary health-care services free of charge without discrimination on the grounds of their legal status’. It further explains that health care services should be provided by the country’s National Health Service rather than by prison authorities or judicial institutions.

The state of prisons the world over have been studied and found to fall short of the standards stipulated, satisfactory to basic Human rights (Barry *et. al.*, 2010; Sarpong *et. al.*, 2015). It was reported that many penal institutions suffer from overcrowding and poor amenities among other problems (MUNUC, 2017). Incarceration is also reported to have increased exponentially over the years with United States reporting a staggering 500% increase in incarceration rate over the past forty years (MUNUC, 2017). The number of prisoners exceeds prison capacities in at least, 115 countries, with the highest in Haiti 454.4 percent of total capacity (WPB, 2018).

The total population of incarcerated persons in Ghana has increased from 4,852 in 1982 to 9,507 in the year 2000 to almost 14000 in 2018 (WPB, 2018). These increases do not appear to have been accompanied by much infrastructural increase. The increase in prison population without commensurate increase in prison infrastructure naturally leads to overcrowding. In Ghana, the current occupancy level based on the official prison capacity is 141.7% making Ghana the 56th most overcrowded in the world (WPB, 2018).

Prisoner characteristics also introduce certain conditions that make them a more at risk and vulnerable group. There is a vicious cycle that exists amongst incarcerated persons. Research has shown that there is an increased prevalence of poverty and subsequently poor health status, drug use, infectious and chronic disease in the general population (Wyant & Harner, 2016). Wyant *et al.* (2016), noted that poverty is closely associated with the above mentioned factors and also closely related to a life of crime. Hence, more poor people with their attendant health issues are more likely to be incarcerated. When released, they are more likely to fall back into a life of crime due to untreated medical condition, mental illness and drug dependence (Wyant *et al.*, 2016).

More than half of incarcerated persons suffer from drug dependence compared to 2 percent of the American population, and mental disorders have a 70 percent comorbidity rate with substance abuse (MUNUC, 2017). In female prisons, it is noted that there is an increased prevalence of sexually transmitted infections because these women are more often likely to have been involved in sex work in the past than their male counterparts (Tewksbury & Connor, 2014; Stevens, 2017). This puts other females at risk since sexual activity during incarceration though prohibited is well documented (Tewksbury & Connor, 2014; Stevens, 2017).

It is open knowledge that the prison population suffers from certain health conditions and generally has a poorer health status (Binswanger *et al.*, 2009). The WHO report on Mental Health in Prisons (WHO, 2018), describes several factors in the prison system that have deleterious effects on the mental health of prisoner; overcrowding, inmate violence, solitary confinement, lack of privacy, isolation from social networks, and inadequate health services, in prisons. The presence of these factors leads to increased risk and incidence of suicide in prisons than the general population.

Studies argue that many chronic conditions such as diabetes, hypertension, and obesity are rising in prevalence in part due to the lack of healthy food options, but more significantly as a result of the poor medical history of many incarcerated people (Macmadu, 2015). This author noted that the importance of good healthcare to treat a prison population with a diverse set of health and social issues is neglected. Indeed, the author explains that prisoners have limited options for diet, exercise and medical attention because these are dependent on the prison staff and out of the control of the prisoners.

The problem is further worsened by lack of personnel and lack of equipment (MUNUC, 2017; Chamberlain, 2001). It is informed that even when prisoners do receive examination or treatment, documentation is poor leading to interruption in the continuity of care and worse, undocumented clinical conditions (MUNUC, 2017; Chamberlain, 2001). The incarcerated population also has high levels of chronic medical and mental conditions and tends to have these conditions in more advanced stages than do age-adjusted comparators (Binswanger, Redmond, Steiner, Hicks, 2012; Cuddeback, Scheyett, Pettus-Davis, & Morrissey, 2010; Regenstein, Christie-Maples, 2012),

In Ghana, research done on the prevalence of infectious diseases also demonstrates a higher prevalence of infectious as well as chronic medical conditions (Adjei *et al.*, 2008). Adjei *et al.* (2008), observed that there was a higher prevalence of HIV and HCV in correctional facilities and prisons than in the general population in Ghana. This suggested a likely transmission through intravenous drug use, unsafe sexual behaviour and tattooing as noted in other prison studies worldwide.

Additionally, there is increased mortality amongst prison inmates post-release as a result of the poorer health state they exit the prison with. Spaulding *et al.* (2011), studied mortality amongst prisoners during and after release and found that mortality rates amongst this population was somehow underreported. These researchers determined the 15.5-year survival persons imprisoned in the state of Georgia in the United States and calculated the standardized mortality ratio and noted that the cohort experienced more mortality than the general population. Furthermore, mortality during incarceration was lower than while post-release mortality although there was higher mortality post release; lower mortality recorded during incarceration has been shown by these researchers to be due to incarceration being protective for deaths as a result of accidents, but not those mortalities from chronic illnesses such as diabetes and infections.

Binswanger *et al.* (2011), also found that there were elevated mortality rates in the post-release period noting that these findings were an indictment on the quality of healthcare provided to prison inmates during incarceration and continuity of care post-release.

Some researchers argue that matters related to incarcerated persons are often neglected due to financial constraints and lack of policies concerning their needs and even in the presence of

these policies, failure to implement them (Adjei *et al.*, 2015). Adjei *et al.* (2015), observe that this neglect is even more palpable in third world countries where resources are already few and overstretched in the general population and by extension almost nonexistent among the incarcerated.

The health needs of prisoners have for years been made a secondary issue because once incarcerated, prisoners are often stigmatized and ostracized and as such not considered significantly in planning, budgeting or policy formulation and this has contributed significantly to degree of deprivation in prisons (Adjei *et al.*, 2015). Financing of prisoners' healthcare appears to be a global problem, for instance in the United States, where budget constraints are leading to earlier release of prison inmates in some states (Binswanger *et al.*, 2011).

United Nations Human Rights Commission (MUNUC, 2017), summarized the reasons why prison health has important implications for public health and suggest that this should be managed as a public health issue. From the above, it can be noted that prisoners tend to enter the prison system unhealthy and return to their communities unhealthier as a result of poor healthcare received inside.

It is estimated that about 95 percent of incarcerated people will eventually return to the communities they came from, including those with poor health and infectious diseases (MUNUC, 2017; Hughes *et al.*, 2004). The challenge is also that even while incarcerated, these prisoners engage with other non-incarcerated persons such as prison officers and other prison staff, family, during visiting hours among others. In Ghana, many of the prisons are not secluded and many like the James Camp Prison are located in the heart of urban centres. Thus,

the lack of adequate health care in prisons is a public health issue, not just isolated behind bars (MUNUC, 2017).

To make these issues worse, continuity of care is difficult to maintain because records are essentially non-existent, prisoners are not aware of their clinical diagnosis and the health staff do not communicate with those on the outside (MUNUC, 2017; Chamberlain, 2001). On release, the mostly poorer former inmate who is yet to obtain employment post incarceration finds it difficult to finance healthcare in the very possible event of illness (MUNUC, 2017). Evidence available shows that in the United States, many of formerly Incarcerated persons end up homeless and on the streets (Visher & Travis, 2011). Visher and Travis (2011), note that this further worsens their already unsatisfactory health status since chronic medical conditions will be complicated by mortality as earlier established, whereas communicable diseases will lead to mortality as well, but also complicated by increased transmission, especially of HIV/AIDS, Hepatitis B and Tuberculosis.

If the health of prisoners was considered the public health concern as it actually is, it is likely that much more resources would be invested. It would be seen as an opportunity to catch and treat, or manage issues that would otherwise have gone unnoticed only to rear its head at a later time (Dumont *et al.*, 2013). Dumont *et al.* (2013), suggest that incarceration provides an important public health opportunity to reduce health disparities for a population that have more health problems but have a reduced access to healthcare, but because this opportunity is underutilized by stakeholders, there are poor long-term health outcomes.

The idea of incarceration is that the prisons are supposed to reform inmates who will return to the community upon completion of their sentences (Adjei *et al.*, 2015). Thus, it is expected

that majority of prisoners will return to the community after serving their sentences, regardless of the duration of incarceration. Indeed, statisticians in the United States Bureau of Justice estimate that at least 95% of all state prisoners will be released from prison at some point (Hughes *et al.*, 2018). This shows that, after being exposed to the abovementioned conditions that have the potential to create new health problems, or worsen existing ones, they are then to be released into the general population (Adjei *et al.*, 2015). Hence, they are likely to pose issues of great public health concern thereby increasing the burden on the family, the health system and the government as well (Adjei *et al.*, 2015).

Nevertheless, it appears that most of the prisons, especially in Sub-Saharan Africa in general and Ghana in particular, do not have well-structured health care facilities (Adjei *et al.*, 2015). This presupposes that inmates could harbour certain health conditions for a long while till they are released into the general population. Since the surveillance system is relatively weak to identify such cases, it means that they can join the general population upon their release, thereby heightening the rate of contamination or infection (Binswanger *et al.*, 2011). It is in this light that a study of this nature is being set out to examine the factors influencing access to quality health care among male prisoners at the James Camp Prisons in Accra.

1.1. Statement of the Problem

From the above discussion, it can be noted that the prison population is a vulnerable one with factors that predispose them to poorer health states than the general population and their conditions are generally worsened by the prison system behind bars.

Binswanger *et al.* (2009), observe that although the number of prison inmates is increasing in the United States, they are excluded from most national health surveys. Binswanger *et al.* (2010), found a higher prevalence of chronic medical disorders, psychiatric disorders, drug

dependence among incarcerated women than men, even for conditions that, in the general population, were typically seen among males.

Mallik-Kane and Visser (2008) found that many prisoners with health conditions did not receive treatment while incarcerated, and treatment rates decreased further upon release due to lack of continuity of care.

Environmental influences on human behaviour and health have been well documented (Awofeso, 2010). The influence of Prisons on the transmission and outcomes of infectious and communicable diseases has also been well documented. It appears that very few interventions have been instituted to minimize the adverse impacts prison settings exert on the epidemiology of communicable diseases (Awofeso, 2010). In this authors view, the prison could be used as reference points for public health interventions.

The World Health Organization defines a health system as all the activities whose primary purpose is to promote, restore, or maintain health (WHO, 2018). Kok (2017), defined a health system as a social institution, in which health worker performance is shaped by transactional processes between different actors. Many researchers have noted the necessity of a well-functioning health system in dealing with poverty illness and disease burden from communicable diseases and cancers (Coker, Atun, & McKee, 2004; Atun, 2012).

Atun (2012), indicates the need for health system innovation in all health system but acknowledges that there are challenges to understanding how these innovations can be effectively introduced in health systems and how these innovations interact with health system variables to influence health outcomes.

It appears that there are challenges facing the delivery of effective and comprehensive health care in Ghana with the prisons health being no exception - there is no well-structured health

care facilities for the prisons either different from the general population or integrated into the overall health system (Adjei *et al.*, 2015).

1.2. Justification of the study

It would appear that most studies conducted on prisoners worldwide have focused on either female only or male prisoners or both male and female prisoners (Binswanger *et al.*, 2010; Visher & Travis, 2011). Binswanger *et al.* (2010), suggested that there was a need for targeted attention to the chronic medical, psychiatric, and drug-treatment needs of women at risk for incarceration, both in jail and after release.

However, no study has examined the health care challenges and factors influencing access to quality healthcare among male prisoners in Ghana (Adjei *et al.*, 2015).

There is the need to examine how client/prisoner factors influence access to quality health care. Some studies have been done on the health of the prison population worldwide (Mallik-Kane & Visher, 2008), with few in Africa and in Ghana (Sarpong *et al.*, 2015). Much of the research done in Ghana have been conducted on female incarcerated populations or at bests both sexes because of their peculiar reproductive needs with regard to menstruation and pregnancy (Sarpong *et al.*, 2015; Adjei *et al.* 2015). That is to say that there appears to be no singular study that has focused attention on access to health care among men only prison inmates in Ghana (Adjei *et al.*, 2015).

However, a staggering majority of the Ghanaian Prison population (86%) is male (WPB, 2018).

It is therefore, important to examine how the male prison population access healthcare and the quality of the healthcare accessed, in an attempt to fill the gap in literature. This study assessed the prison inmates access to quality healthcare and also assessed what factors influence this quality in a prison population nearing its release.

Studies have shown that from the patient's perspective, attitude of health staff and the quality of the client-staff interaction affects satisfaction with healthcare given and hence, their perception of its quality. It has been discovered for some clients that the most significant predictor for client satisfaction health services provided was health providers' behaviour or attitude (staff interpersonal relationship) especially respect and politeness, ranking as more important than even the technical competence of the provider (Aldana *et al.*, 2001; Boateng, 2008; Juma & Manongi, 2009). Several health provider attitudes and traits have been shown to determine how a patient perceives the quality of care. It is argued that, although clients cannot assess the technical quality of a health service system, they can assess the non-technical aspects which are frequently the attitude of the health providers. These attitudes include respect and empathy.

The health system in Ghanaian Prisons is generally under-researched with gaps in the research. Topp (2015), demonstrated in the research in Zambian Prisons a deficiency in health system factors such as the presence of qualified personnel in the prison system that affects the quality of Health Service provide to Prison Inmates. These system factors include lack of essential medical equipment, and medications in the prisons necessitating external referrals, lack of qualified personnel and inability to pay for health services rendered. Therefore, it is imperative to understand how the health system challenges influence access to quality health care among prisoners. This study attempts to do this in order to fill the gaps and contribute to literature accordingly.

There appears to be a lack of relationship between the prison system and the national health system towards the provision of quality healthcare to prisoners in Ghana (Sarpong *et al.*, 2015). Additionally, in order to show the direct link between the quality of the healthcare provided

during incarceration and how it is a public health concern, it is important to choose a population which is or will soon be in direct contact with the community like that of the James Camp Prison. Despite this deficiency in the literature, it seems that no study has critically examined how male prisoners at the James Camp Male Prison access quality health care (Adjei *et al.* 2015). This study will seek to fill this gap consequently.

Reflexivity

The interest in undertaking this study stems from the reality that the researcher is a health care practitioner who has interacted with the Ghana health care for some time. The considerable experience gained over the course of practice will help to bring more understanding on the topic under consideration.

1.3. Objectives of the study

The objectives of the study have been grouped into general and specific as explained below.

1.3.1. General Objective

To assess factors influencing access to quality health care among male prisoners of James Camp Male Prisons in the Greater Accra Region.

1.3.2. Specific Objectives

The specific objectives of the study were:

1. To assess the influence of clients'/prisoners' factors on access to health care among male prisoners at the James Camp Prison.
2. To investigate the inmates' perception of quality of healthcare in the James Camp Prisons

3. To identify the influence of health system factors on access to quality health care among male prisoners at the James Camp Prison.

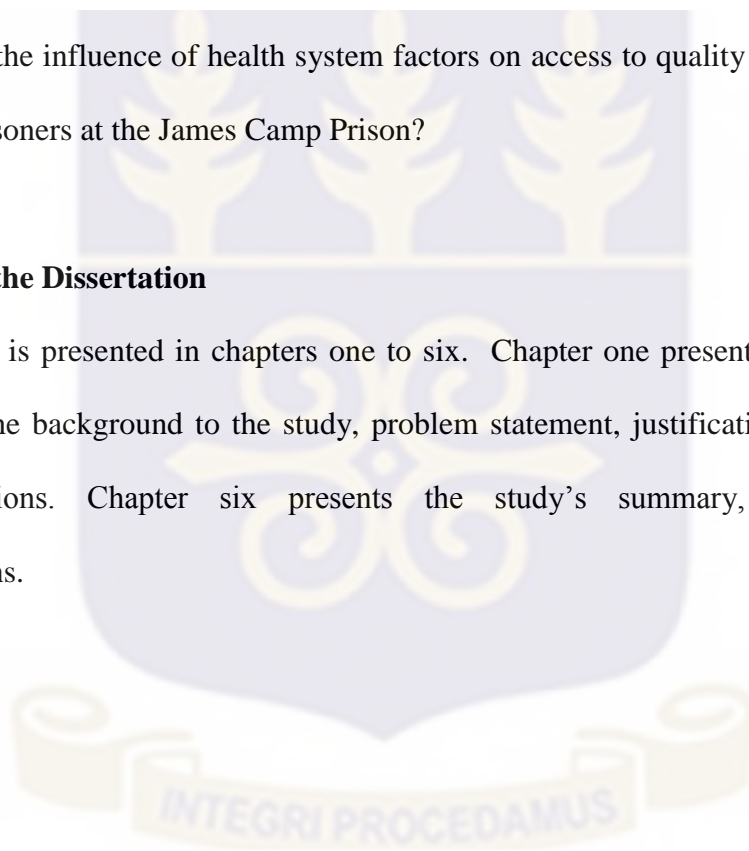
1.3.3. Research Questions

The following questions were answered to achieve the specific objectives:

1. What is the influence of clients'/prisoners' factors on access to quality health care among male prisoners at the James Camp Prison?
2. What are the inmates' perceptions of quality of Healthcare in the James Camp Prisons?
3. What is the influence of health system factors on access to quality health care among male prisoners at the James Camp Prison?

1.4. Outline of the Dissertation

The dissertation is presented in chapters one to six. Chapter one presents the introduction, which reveals the background to the study, problem statement, justification, objectives and research questions. Chapter six presents the study's summary, conclusion and recommendations.



CHAPTER TWO

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.0 Introduction

This chapter presents analysis of related literature on the topic under study. It is divided into four sections. Section one presents literature on access to health care and the challenges associated with accessing health. Section two presents literature on quality of care. Section three presents literature of studies conducted on how clients' factors influence quality of care. Section four is a presentation of the review of literature on how health care provider factors, as perceived by inmates, influence quality of care. Section five presents literature on how health system factors influence access to quality healthcare.

2.1 Access to health care

Access to care has been extensively studied. Several researchers have conceptualized access to healthcare and identified determinants which affect it including the health system, health providers and individual and population factors (Levesque, Harris, & Russell, 2013). Access to care is one of the seven pillars of access to healthcare as postulated by Donabedian (1990). However, Guagliardo (2004) argues that the exact definition of access to healthcare has been evasive. Guagliardo (2004) explains that this difficulty arises because the word access in itself has two possible meanings in this context.

For instance, it could be used as a noun, where it refers to ability to get care i.e. potential for healthcare use and used as a verb, where it implies the act of using or receiving healthcare i.e. the act of seeking care, and the actual or realized delivery of care. Whereas potential exists when a needy population coexists in space and time with a willing and able healthcare delivery

system, realized care, or actualized care, follows when all barriers to provision are overcome (Guagliardo, 2004).

Penchansky and Thomas (1981), defined access as the degree of fit between the consumer and the service; hence, the better the fit, the better the access (Saurman, 2015). They described five groups of access barriers, otherwise known as dimensions, to the progression from ability to receive care when needed and actually receiving care: availability, accessibility, affordability, acceptability and accommodation. These dimensions are independent of each other but they are all interlinked and important to the attainment of access to healthcare (Penchansky & Thomas, 1981; Saurman, 2015).

Levesque *et al.* (2013), defined access as the opportunity to identify healthcare needs, to seek healthcare services, to reach, to obtain or use health care services, and to actually have a need for services fulfilled. According to these experts' framework, there were five dimensions of accessibility namely Approachability, Acceptability, Availability, Affordability and Appropriateness, which interacted with five corresponding abilities of the population namely ability to perceive, ability to seek, ability to reach, ability to pay and ability to engage to generate access.

The five dimensions used to examine access in this study have been explained below (Penchansky & Thomas, 1981; Saurman, 2015). The first two dimensions of healthcare access have often been referred to as spatial accessibility (Guagliardo, 2004).

Accessibility refers to the location of the health service and the proximity in distance and time to the consumer of this service. Ejiagha, Johnbusco, Ojiako, Chijioke and Eze (2012), studied the accessibility of residents of the Enugu Urban Area in Nigeria to healthcare and noted that population growth had increased without commensurate increase in the number of health

facilities due to urbanization. This, the analysts indicated, had increased the demand for and utilization of the now limited healthcare services. Ejiagha *et al.* (2012), further noted that there was no definite route to these healthcare facilities and congestion due to traffic and business in the locality surrounding the health facilities all contributed to the delay. The net effects of these problems were noted to be self-medication, patronage in traditional medicines, infant and maternal mortality, among others.

Availability refers to the extent to which this service can meet the needs of the consumers of the services in terms of resources. It may also mean or examine whether the service or certain parts of the service exists at all. Peters *et al.* (2006), note that there was the need to have the right type of care available to those who need it. The right type of care included availability of the appropriate service providers, and working hours and waiting times that met the demands of the people who used the care,

Affordability refers to the costs involved in accessing this service. It refers to the costs incurred in providing this service by the healthcare provider and also those incurred by the consumer in accessing this service. Peters *et al.* (2008), noted that people in developing countries have less access to health services than those in developed ones and the poor in all countries also have reduced access to health compared to their wealthier counterparts. This is especially the case in countries that have non-existent or unreliable health insurance systems and health is entirely dependent on whether a sick person can afford to pay or not. They suggest that there was the need for the poorer in the community to be given a say in policy making and implementation to improve their access to health. It could be argued that the prison population would also require a say in such decision making and implementation processes.

Acceptability refers to consumer perception of the service being provided. This perception is affected by the consumers' social, religious and cultural background, for example, contraception use amongst Roman Catholics. Peters *et al.* (2008), note that when health service providers are perceived to be responsive to the social and cultural expectations of individual users and communities, there is increased access to health. They argue that in medical systems, where multiple methods of accessing healthcare exist, it is expected that patients will consult different types of providers, some of whom are formally trained in Western medicine, others who practice traditional medicine; and others who are shopkeepers or informally trained providers. The decision on which kind of health provider to use was taken based on how acceptable their services were to them. This has also been explained as the reason for the increased uptake of traditional medicine in Ghana (Barima *et al.*, 2015)

Adequacy of a service, otherwise known as accommodation, refers to the organization of the healthcare service. It talks about the extent to which services are organized and structured to enable ease of use. This includes appointment systems, and facility structures such as wheelchair access.

In a related study, Saurman (2015), includes a sixth component called awareness. This researcher described it as communication and information provided to consumers about the service. Saurman (2015), argues that consumers cannot use a service they do not know exists and as such awareness is more than knowing that a service exists, but also includes understanding and using that knowledge. Saurman (2015), concludes that access is about enabling a patient in need to receive the right care, from the right provider, at the right time, in the right place, dependent on context.

In Ghana, it appears that research on access to health care involving the prison population are few (Sarpong *et al.* 2015). Sarpong *et al.* (2015) studied the quality of accessible healthcare among incarcerated female Ghanaian women in Kumasi Central Prisons. These researchers determined client factors influencing their perception of accessible healthcare and concluded that perception of access to quality healthcare was generally poor and this perception was influenced by inmates' demographic characteristics such as marital status, occupation and educational background. However, no such study has examined these factors among the male prisoners at the James Camp Prison in Accra.

2.2. Quality of healthcare

Any system that delivers service must of necessity be subject to periodic assessment of quality for accountability and improvement (Mosadeghrad, 2012). However, over the years, quality assessments have proven to be difficult as quality means different things to different people (Mosadeghrad, 2012). Mosadeghrad (2012), explains that for an individual, quality healthcare may be measured by the pleasantness of the healthcare provider, for another, it may be measured by being able to acquire certain services and medications of their own choice whether it is necessary in the particular health concern or not. Mosadeghrad (2012), explains further that for yet another group of people, quality of care may be measured by the overall improvement in wellbeing. This means that in assessing healthcare, differing perspectives must be assessed in order to obtain a complete measure of its quality. These perspectives may include that of the client or patient, the healthcare provider and/ or community.

Several tools have been designed by various researchers to create an all-encompassing means of assessing and defining what quality healthcare means (Mosadeghrad, 2012).

Institute of Medicine (IOM)'s definition of quality of health, is one of the most commonly used definitions of quality and it states that quality is "the degree to which health services for

individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge” (Chung, 2012).

Donabedian (1990), a pioneer in healthcare quality assessment, defined healthcare quality as the application of medical science and technology in a manner that maximizes its benefit to health without correspondingly increasing the risk. This model (which is adapted for this study) has three dimensions, namely; structure, process, and outcome.

Structure: This researcher describes structure as the setting in which healthcare is provided and received (Donabedian, 1990). This describes the healthcare provider (whether physician, nurse etc.) and their skills and attributes, the health facility and its characteristics including total number of staff, equipment available and facilities and the organization and funding of the healthcare system as a whole.

Process: Process describes the interaction between the patient and healthcare provider (Donabedian, 1990). Kairy, Lehoux, Vincent and Visintin (2009), identified clinical outcomes, clinical process, healthcare utilization and costs associated with telerehabilitation for individuals with physical disabilities and found that clinical process outcomes, such as attendance and compliance, were high with telerehabilitation.

Outcome: Outcome refers to the status of the patient following care, that is, cure, morbidity or mortality (Donabedian, 1990). Kairy *et al.* (2009) found that clinical outcomes were generally improved following a telerehabilitation intervention and were at least similar to or better than an alternative intervention.

Donabedian (1990), used another criteria or attributes of health care to determine its quality. These were *efficacy*: the ability of care to improve health; *effectiveness*: the degree to which attainable health improvements are realized; *efficiency*: the ability to obtain the greatest health improvement at the lowest cost; *optimality*: the best balance of costs and benefits; *acceptability*: conformity to patient preferences regarding accessibility *legitimacy*: conformity to social preferences concerning all of the above; and *equity*: fairness in the distribution of care and its effects on health. Braveman *et al.* (2003), explains that equity in health is the absence of systematic disparities in health between groups with different levels of underlying social advantage/disadvantage.

In a related study, Mosadeghrad (2012), assessed the quality of healthcare in Iran, using environment, efficiency, efficacy, empathy and equity, also known as the 5Es, adapted from the Donabedian Model (1990). Øvretveit (2009), also defines quality care as the provision of care that exceeds patient expectations and achieves the highest possible clinical outcomes with the resources available. Øvretveit (2009), developed a system for improving the quality of healthcare based on three dimensions of quality, which are: professional, client and management. According to this researcher explains that professional quality is based on professionals' views of whether professionally assessed consumer needs have been met using correct techniques and procedures. The researcher continues that client quality is whether or not direct beneficiaries feel they get what they want from the services. Additionally, the researcher indicates that management quality is ensuring that services are delivered in a resource-efficient way.

Other methods of assessing quality healthcare include the service quality (SERVQUAL) scale or model (Parasuraman *et al.*, 1985; Van Iwaarden *et al.*, 2003; Alrubaiee & Alka'aida, 2011).

The SERVQUAL model is originally a service quality measurement model developed by Parasuraman *et al.* for use in business settings (1985). It compares expectations before a service encounter and their perceptions of the actual service delivered (Alrubaiee & Alka'aida, 2011). It can however, be and has been adapted by many health researchers to assess the quality of health service rendered (Van Iwaarden *et al.*, 2003). Van Iwaarden *et al.* (2003), described the dimensions of the SERVQUAL as:

Tangibles: This assesses the characteristics of the physical facilities, that is, consultation rooms; ward beds, equipment and appearance of the health providers.

Reliability: This assesses the ability of the health facility and providers to perform the promised service in a dependable and accurate manner.

Responsiveness: This is the willingness of staff to help clients and provide prompt service. This is a measure of healthcare providers' attitude.

Assurance: This assesses the knowledge and courtesy of employees and their ability to inspire trust and confidence; it includes the service providers' competence, courtesy, credibility and security. This dimension is also a measure of health providers' attitude.

Empathy: This assesses access to the facility and healthcare provider, communication with and, understanding the customer, and the individualized attention that the facility provides to its customers.

Some questionnaires have been used to assess quality of care from the perspectives of both inpatients and outpatients (Webster *et al.*, 2011). For instance, Webster *et al.* (2011), developed the Patient Assessment of Health Care for Inpatient (I-PAHC) and outpatient (O-PAHC) care questionnaires. These questionnaires were adapted from the Consumer Assessment of Healthcare Providers and Systems (CAHPS) questionnaire, which is a health quality assessment tool mainly used in the United States. Webster *et al.* (2011), developed these questionnaires to be used in low income countries based on qualitative research done in Ethiopia.

In this study, the assessment of quality of care was adapted from the Donabedian (1990), model: structure, process, and outcome and integrated with the SERVQUAL model: tangibles, reliability, responsiveness, assurance, and empathy (Van Iwaarden *et al.*, 2003; Alrubaiee & Alka'aida, 2011). The SERVQUAL scale has been applied in several contexts as a method of measuring quality of healthcare however it is only recently being applied to the health sector (Ramsaran-Fowdar, 2008; Venagre, and Neves, 2008; Lim and Tang 2000; Andaleeb, 2001; Babakus and Mangold, 1992; Parasuraman *et al.*, 1988). For instance, Babakus and Mangold (1992), measured the service quality in a US hospital and concluded that the greatest gap was in the assurance dimension followed by reliability, responsiveness, empathy and tangibles. When researchers, Lim and Tang (2000), applied the SERVQUAL scale in a hospital located in Singapore, the greatest gap score was in the responsiveness dimension, followed by assurance and reliability. Each of these authors proceeded to make recommendations based on the gap score, in order to decrease the gap and improve the overall quality of health.

Particularly, the SERVQUAL model used in earlier studies (Alrubaiee & Alka'aida, 2011) was be adapted to assess the outcome of the quality of healthcare from the perspective of

clients/prisoners at the James Camp Prison. The reason is that this model assesses much of the quality of health from the non-technical perspective and expectations of the client or patient, which is the goal of the second objective, and does not integrate much of the perspective of the health care providers or the organization (Chung, 2012). Secondly, apart from the tangibility dimension, which describes the availability of certain facilities, the remaining four dimensions' focus on the health provider-patient interaction, otherwise known as the process, as an important aspect of quality.

Against this backdrop, it was important to examine literature in relation to factors that influence access to quality health care in the subsequent sub-sections of this chapter.

2.3. Influence of client / prisoner factors on quality of clinical care (among male prisoners)

Significant work has been done on the patient (client or prisoner) factors that influence the quality of clinical care (Mosadeghrad, 2012). These include those conducted amongst the incarcerated population as well those in the general population (Sarpong *et al.*, 2015). The documentation from studies involving persons not incarcerated is relevant as they shed more light on these conditions.

Socio-demographic characteristics

Socio-demographic characteristics of clients can be used to assess their level of access to quality health care (Binswanger *et al.*, 2009). Binswanger *et al.* (2009), used socio-demographic characteristics (age, sex, race, education, employment) to compare the prevalence of some chronic medical conditions among 6,582 jail and 14,373 prison inmates and 76,597 non-institutionalized adults. These researchers concluded that the higher burden of medical conditions among the incarcerated population than the general population was associated with

access to healthcare. The various socio-demographic variables that can be used to evaluate access to quality healthcare have been examined below.

Ethnicity

Ethnic disparities have been established to exist in the delivery and access to health as well as in the quality of healthcare received (Binswanger *et al.*, 2012). In the United States, there are more minorities, especially blacks in penal institutions (Mauer, 2011). Binswanger *et al* (2012), also argue that the health disparities due to race may be exacerbated or mitigated at several stages of the criminal justice system, that providing better health services for individuals involved in the criminal justice system could be used as a strategy to reduce disparities in the general population.

Dumont, Allen, Brockmann, Alexander, and Rich (2013), reviewed the social determinants of the recent surge in incarceration, and described inmate morbidity and mortality within the context of U.S. health disparities. It was noted that there were differential rates of incarceration between whites and blacks or minorities, and that the disparities in healthcare delivery and health status that already exists in the general populations could be worsened not mitigated by imprisonment.

Spaulding *et al.* (2011), reported based on the standardized mortality ratios analysed that, that black men were the only demographic subgroup to experience significantly lower mortality while incarcerated, while white men experienced elevated mortality while incarcerated. Mallik-Kane and Visher (2008), concluded similarly that the mortality of black prisoners was lower than that of black state residents for both traumatic and chronic causes of death; and the mortality of white prisoners was lower than that of white state residents for accidents, but greater for several chronic causes of death, further emphasizing the burden of chronic disease

Gender

Binswanger *et al.* (2010), investigated gender disparities in chronic medical conditions, psychiatric illnesses and substance abuse among jail inmates and found that compared with men, women had a significantly higher prevalence of all medical and psychiatric conditions and drug dependence, but women had a lower prevalence of alcohol dependence. They note that gender differences persisted after adjustment for socio-demographic factors and substance dependence.

Van den Bergh, Gatherer, Fraser, and Moller (2011), noted another gender difference, that the special health needs of women prisoners were frequently neglected. It was observed that globally, health care provided to incarcerated women failed to meet their needs and in many instances even fell short of human rights and international recommendations. This was attributed to a lack of gender consideration both in policy development and prison practices, violations of women's human rights and failure to accept that imprisoned women have more health-care needs and that these needs differ from those of their male counterparts. They argued that these were not only with respect to reproductive health needs as would be expected, but also mental health problems, drug dependencies and histories of violence and abuse (Van den Bergh *et al.*, 2011).

Zlodre and Fazel (2012), examined possible demographic factors associated with variation in mortality rates following release from prison; and found that standardized mortality ratios (SMR) was significantly higher in female prisoners. Other researchers also intimate that gender inequities in health services are also common, particularly for poor women, and

manifest as health services that are not available or acceptable to women (Standing, 1997; Theobald, Tolhurst, & Squire, 2006; Peters *et al.*, 2008).

Age

The populations of elderly people in the prisons appear to be increasing worldwide (Williams *et al.*, 2009). Williams *et al.* (2009), observed that this rise in the number of older prisoners is creating new and costly challenges for the criminal justice system, state economies, and communities to which older former prisoners return to in the United States. This is the scenario as well in England as observed by Ginn (2012). Ginn (2012), noted that many older male prisoners in England were incarcerated for sexual offences and asserts that prisons were initially created for younger offenders and not for older ones and this makes life difficult for the rising population of older prisoners (Ginn, 2012).

Ahalt *et al.* (2013), observed that as the population ages, the morbidity of inmates also increase, healthcare costs rise and many prisons are unable to cater to this burden leading to suffering in a population which is susceptible to a host of medical conditions. When these older prisoners are eventually released, they also affect community healthcare systems and lead to increased mortality. Zlodre and Fazel (2012), conducted a systematic review on mortality following release from prison and examined possible demographic factors associated with variation in mortality rates and observed that younger prisoners had higher standard mortality ratios than older ones.

Socioeconomic Status (SES) / Employment / Occupation

These include educational background, occupational status, and for this purpose, marital status and family support. Sarpong *et al.* (2015), assessed access to quality of health amongst female

inmates in Kumasi, Ghana. These researchers noted that, inmates with no formal education rated their health provision higher in quality than those with a higher educational background. Single females also rated the healthcare received as higher than married women and unemployed inmates rated higher than employed ones. They concluded that these socio-economic parameters affected the perception of prison inmates of the quality of healthcare received.

Saydah, Imperatore and Beckles (2013), determined how risk for mortality was associated with measures of socioeconomic status among adults diagnosed with diabetes. The findings suggest that after adjustments for other factors, the level of education attained and financial wealth remained strong predictors of mortality risk among adults with diabetes.

Peters *et al.* (2008), noted that the poor in poor countries are at a disadvantage in each dimensions of access and this need not be the case. These analysts suggested proven approaches to improve healthcare access by the poor such as involvement of government and nongovernmental organizations and use of different health financing strategies. The solution they noted, was ensuring that the vulnerable populations have a say in how the strategies are developed, implemented, and evaluated.

Social History / Family Support

It is to be observed that despite the current implementation of the National Health Insurance Scheme (NHIS) in Ghana, there are a number of people in the informal population who still cannot access health care due to their lack of qualification for the exemptions or unable to pay premiums (Kusi, Enemark, Hansen & Asante, 2015). This means that in the event of sickness, such people would have to pay directly from out of pocket or rely on family members to be

able to pay such costs. This action from family members is based on solidarity (an element of social capital) existing among people in the communities (Insaadoo, 2015; Pitkin, Derose & Varda, 2009).

Pitkin *et al.* (2009), conducted a systematic review of social capital and how it influences health care access. The review however, found a lack of congruence in how social capital was measured and interpreted and a general inconsistency in findings. They discussed that this gap in literature made it difficult to draw firm conclusions about the effects of social capital on health care access and hence, quality of health. These researchers therefore, suggested the need to reexamine social capital and its sources, dimensions and potential benefits and in the area of access to health.

Religion

Koenig (2009), argues that religion is a powerful coping behaviour that enables people to make sense of suffering, provides control over the overwhelming forces of nature (both internal and external), and promotes social rules that facilitate communal living, cooperation, and mutual support. Nevertheless, barriers identified as causing challenges to health care and health-seeking behaviours among black men in the United States included among other things, socioeconomic status, racism, stigma in the case of prisoners, peer influences, and religious beliefs (Cheatham, Barksdale, & Rodgers, 2008).

Studies have examined the relation of religiousness/spirituality; demographic characteristics such as age, race, and type of crime; and physical and mental health among 73 older male inmates in the state of Alabama, United States (Allen, Phillips, Roff, Cavanaugh, & Day, 2008).

Allen *et al.* (2008), found that having a greater number of daily spiritual experiences and not

feeling abandoned by God were associated with better emotional health; and therefore, suggested the need to examine whether increased daily spiritual experiences and decreased feelings of abandonment by God foster better mental health among older inmates.

Padela and Curlin (2013), argue that religions influences individuals' health seeking behaviour. These researchers focused on Islam and American Muslims to outline the ways in which a shared religion could impact the health of a racially, ethnically, and socioeconomically diverse minority community, proposing that a fuller understanding of the relationships between religion and health in communities in order to reduce unwarranted health disparities.

2.4. Influence of Health Providers/Perception of Quality of Healthcare (among male prisoners)

In Ghana, as in many African countries, prior to a sick person seeking care at a facility, several means of seeking health such as self-medication with over the counter medications, and traditional or herbal remedies are employed - it is when these have failed that one may seek care in a health facility (Kuuire *et al.*, 2016). During incarceration, these options are limited or eliminated altogether. Therefore, it is important to make the prison infirmary or clinic accessible and able to meet the health needs of the prisoner.

In this study, the goal was to examine the health provider factors from the perception of prisoners, which influence access to quality of care. The questions that will be answered are 'what do prison inmates expect of the quality of healthcare delivery?' and 'what is their perception of the quality of care that is provided?'. The clients' assessment is non-technical as they cannot assess the technical aspects of healthcare provision. Although this assessment is not complete, it is of great value in health care quality assessment (Alrubaiee & Alka'aida, 2011). The health provider factors examined in this study are attitude of health staff,

competence of health staff, trust in the health staff, waiting time at the facility, among others. These factors as have been examined below are incorporated in and related to the variables in the SERVQUAL model.

Trust in health staff

Whetten *et al.* (2008), studied the health seeking behaviour of persons living with HIV/AIDs and noted that trust in care providers was associated with improved reported physical and mental health because there was overall increase in health seeking behaviour. These researchers concluded that distrust may be a barrier to service use and therefore, to optimal health leading to more emergency room visits and overall poorer health status in this group of people. Some researchers suggest that key ingredients of success in encouraging access to health care and boosting the confidence between the health providers and clients/patients include concerted efforts to reach the poor, engaging communities and disadvantaged people, encouraging local adaptation, and careful monitoring of effects on the poor (Peters *et al.*, 2008).

Attitude of health staff

Studies have shown that from the patient's perspective, attitude of health staff and the quality of the client-staff interaction affects satisfaction with healthcare given and hence, their perception of its quality. It has been discovered for some clients that the most significant predictor for client satisfaction health services provided was health providers' behaviour or attitude (staff interpersonal relationship) especially respect and politeness, ranking as more important than even the technical competence of the provider (Aldana *et al.*, 2001; Boateng, 2008; Juma & Manongi, 2009). Juma *et al* (2009), assessed quality of care in a Tanzanian Hospital. Focused group discussions and Key Informant Interviews yielded a recurring theme: health workers did not have good attitude to patients and were not responsive to patients' needs.

They suggested the need for health providers to get training on customer care and on how to show compassion to patients

Competence of health staff

In accessing health, a key factor influencing the choice of health worker or even health facility is the perceived competence of healthcare worker, in providing the particular health Service under discussion. This is assessed by the outcome of the treatment received by the patient (Juma *et al*, 2009). Juma *et al*. (2009) discovered that clients attributed the poor care they received to be as a result of absence of qualified staff. The clients perceived that the younger doctors were not yet competent and often lacked supervision by older more experienced doctors. They therefore suggested that this led to poorer quality of care. Ross *et al*. (2011), report positive prison environments were ones that facilitated interactions between prison officers, health care providers and prisoners, while in negative climates correctional staff acted as a filter or barrier between inmates and health services. Indeed, there health workers suggest that they are themselves influenced by prison climate leading to poorer quality of care (Ross *et al*., 2011).

Waiting time

Waiting time refers how long a patient waits, before being seen by health providers. It could also refer to the time it takes for a patient to receive treatment after being referred to hospital (NHS, 2018). Patient clinic waiting time is an important indicator of quality of services offered by hospitals (Adamu, 2013)

In the unincarcerated population longer waiting time at a facility prior to receiving medical attention has been argued by many schools as a barrier to access (Ahalt, 2014; Adamu 2013). Atinga, Abekah-Nkrumah and Domfeh (2011), demonstrated that waiting time amongst other factors determines patients' satisfaction with and affected their perception of quality of

healthcare services. Boateng (2008), assessed the quality of Healthcare at the Accident Centre in Korle-Bu Teaching Hospital and noted that longer waiting times led to customer dissatisfaction. This researcher noted that shortening of waiting time was more important to patients than the prolongation of the usually short consultation time (Aldana *et al.*, 2001). Amongst the incarcerated population, because many prisons do not have a full complement of the specialist care that may be needed to fully cater to a prisoners need, there is sometimes the need for external referrals. The waiting time to receive consultation both within a prison and externally will therefore be assessed in this study.

2.5. Influence of health system factors on quality of care (among male prisoners)

It would be recalled that some analysts showed the view that governments in Low-to-Middle Income Countries (LMICs) rarely focus on the poor in their policies or the implementation or monitoring of health service strategies (Peters *et al.*, 2008). However, in the context of Ghana, Primary Health Care (PHC) is the required level of care in the prisons as indicated by the Ghana Health Service organization structure (Ghana Health Service, 2018). In 1978, when WHO member countries met in Alma Ata, they recognized PHC as an essential right, and committed governments to launching and sustaining PHC as part of a national health system (Ministry of Health, 2018). Although there are some infirmaries in some of the prisons in the country, these usually lack stockpiles of essential medicines, equipment, technologies and other medical consumables necessary for providing quality health care to prisoners (Adjei *et al.* 2015). Arguably, the prison population would benefit from quality health care if there are provisions of suitable health amenities within the prisons and effective linkages with other levels of the health care system.

The framework by WHO recognizes six elements of the health system, which are leadership/governance, information and research, healthcare financing, service delivery, Human Resources/Health workforce and finally Medical products and technology; all these elements interact with one another to ensure quality health delivery to the people who are at the centre of the health system(WPRO, The WHO Health Systems Framework, 2017) (WPRO, 2018). The Prison Health System can be said to have the same elements as any other health system because an inmate is entitled to enjoy the same standards of healthcare that are available in the community. The only differences are in the context which is the prison, and the people who are the prison inmates.

A number of factors have been shown to influence the ways in which health systems achieve good health efficiently (Atun, 2012). These includes the capacity/abilities of both individuals and institutions within health systems, to seize opportunities, and some contextual characteristics such as sociocultural beliefs and economic setup in which the health system operates. (Balabanova, McKee, & Mills, 2011; Atun, 2012). The review in this part looks at the needed material resources (structure factors) that would help ensure the provision of quality health care for prisoners as examined below.

Availability of health facilities

Studies reveal that geographic access is an important part of accessing health care in LMICs - an inverse relationship between distance or travel time to health facilities and use of health services has been demonstrated as an important barrier to access (Hjortsberg, & Mwikisa,2002; Hjortsberg, 2003; Peters *et al.*, 2008). Peters *et al.* (2008), postulate that good roads, are required not only for people to reach the health facilities but also for the easy distribution of

medicines and medical supplies to health facilities, for timely referrals in the event of an emergency, and for better supervision of health workers.

Availability is a component of spatial accessibility as previously mentioned (Guargliardo, 2004). As a result, in order for an individual to access healthcare, the health facility must first be available and in an acceptable distance to the clients. For instance, in a developing country, it was observed that village doctors were more patronized not only because they had more convenient working hours and locations and available drug stocks, but they also had fewer social barriers with their fellow villagers and had helpful attitudes and longstanding relationships with them (Brugha, & Zwi, 1998; Rohde, & Viswanathan, 1995; Peters *et al.*, 2008).

Ross *et al.* (2011), note that correctional institutions are authoritarian organisations and may control access to health care services by using staff to identify and facilitate inmate medical care. In Norway, unlike Ghana, all prison health services are integrated into the general health services in the local community and the larger health region where the prison is situated (Bjørngaard *et al.*, 2009). In the United Kingdom as well, current health policies are aimed at aligning the prison health service and practices with those of the National Health Service (Bowen, Rogers & Shaw, 2009). These countries follow the recommendations of the Mandela Rules that the health services for prisoners should be a responsibility of government and not of the Prison Service.

Medical equipment

The provision of quality health care will also depend on the availability of state of the art and modern medical equipment (Boateng, 2008). For this reason, Boateng (2008), demonstrated

that the absence of required medical equipment and medications led to poor quality of health care. Kruk, Paczkowski, Mbaruku, de Pinho, and Galea (2009), found that the most important facility attributes that encouraged women to deliver in health facilities in Tanzania, included availability of drugs and medical equipment.

Availability of Medicines and Drugs

Bowen *et al.* (2009), considered medication management during the early stages of custody and the impact it could have on prisoners; and observed that how medications were managed by patients and staff was a good marker of the extent to which the health practices in prison settings could equate with those of the NHS.

Mueller, Lungu, Acharya and Palmer (2011), identified that a major constraint implementing the essential health package in Malawi was lack of essential medicines in all facilities at varying levels although health workers noted some improvement in infrastructure and working conditions. The study recommended that these constraints should be managed in order to ensure the success of the essential healthcare policy.

A related study compared the quality of services of private health sector providers and public sector providers towards improving health outcomes (Berendes, Heywood, Oliver, & Garner, 2011). Berendes *et al.* (2011), concluded that although quality in both provider groups seemed poor, it was better in the private sector because there was better drug availability and their services were more client oriented.

Achan *et al.* (2011), highlighted the challenges of correctly managing severe malaria in resource poor settings. These researchers found that management of severe malaria was poor

and led to poorer outcomes due to challenges with medical technology for diagnosis and lack of medicines. These researchers suggested that priority areas for improvement should include among others availability of medicines and quality of diagnosis and treatment

Qualified health personnel

Qualified health personnel are needed to provide quality healthcare with available adequate medical equipment. The presence of qualified health personnel can help to attract clients / patients to access the services of a health facility. This is because patients are found to have different expectations from the different providers, which in part explains whom they will consult (Ashraf, Chowdhury, S., & Streefland, 1982; Young, 1983; Peters *et al.*, 2008). Kruk *et al.* (2009), evaluated health-system factors that influence women's delivery decisions in rural western Tanzania and found that among the most important facility attributes was a respectful provider attitude. Using policy simulations, these researchers suggested that if these attributes were improved at existing facilities, the proportion of women preferring facility delivery would rise from 43% to 88%.

Bjørngaard *et al.* (2009), note that while large prisons have health workers that work in the prison only, small prisons have part-time health workers that work in the community health services the rest of the time in Norway. When prisoners required hospitalisation, they were admitted to general population services. In contrast, Roberts *et al.* (2014), reported that the service provision especially in the area of mental health was mostly by nurses with few other professions groups present in Ghana as at 2011. This was noted to be a contributing factor to the poor state of mental health services in Ghana.

Financing options

There is demonstrably poorer access to quality healthcare in poorer countries and generally among the poor, worldwide (Peters *et al.*, 2008). The incarcerated population has been shown to have a higher representation of poor people. It is therefore expected, that their capacity to finance healthcare would be reduced there by reducing access to health (Bjørngaard *et al.* 2009).

It was reported that in 2007, the United States health care spending was about \$7,421 per person (Hartman, Martin, McDonnell, & Catlin, 2009).

Therefore, the question is: how much is really spent on prisons health care services in the areas of medicines and other consumables in Ghana?

Roberts *et al.* (2014) attributed weaknesses in Ghana's health system to low government spending on health services, especially mental health. The funding was also centred the bulk of services, were centred in urban areas around leaving much of the rest of the country with almost no provision as at 2011 (Roberts, Mogan, & Asare, 2014). Ghana's health sector is mainly financed by the government, its development partners, and Ghanaian households.

In Ghana, the National Health Insurance Scheme (NHIS) established in 2013 is the most used insurance scheme with coverage of approximately 40% in 2014 (Wang, Otoo, & Dsane-Selby, 2017). All residents of Ghana, including non-citizens, are eligible for NHIS coverage, but not all enrollees, for example, persons under the age of 18 or over the age of 70, are required to pay premiums. Indigent people, institutionalized people and beneficiaries of social protection programmes may also be exempted from premium payments (Wang *et al.*, 2017).

These exemptions, however, initially did not exclude prisoners from payment of premiums in order to be enrolled on the scheme. However, in the annual report of the National Health Insurance Authority (NHIA, 2013), there is a provision for exempting a certain category of persons. Within this, prisoners who are deemed poor based on the assessment of the prison officers benefit from exemptions. Crucially, this is based largely on subjectivity since there appears to be no specific criteria for the assessment. Access to healthcare was noticed to be challenging to prison inmates and the Ghana Prison Service because they were saddled with bills owed to healthcare providers and government hospitals (Ministry of Gender, Children and Social Protection, 2017).

Subsequently, attempts were made to enrol prisoners unto the national health insurance scheme to provide financial risk protection and improve their access to quality healthcare. The Ministry of Gender, Children and Social Protection (MOGCSP, 2017), argue that due to the fact that these interventions were not associated with Policy changes, they remained highly subjective and unsustainable. Hence, in December 2017, the Ministry of Gender, Children and Social Protection relaunched the Nationwide Free NHIS Registration for Prison Inmates at the Nsawam Prison (Safo, 2017).

As already mention, for instance, the prison health services in Norway are funded and run by the health authorities, not the correctional services. All health services are funded and provided by the national health system, completely independent of the prison system. This is the recommendation of the United Nations and has been proven to improve access to quality healthcare (Bjørngaard *et al.*, 2009)

Literature shows that there are variations in access, especially financial access to the available health care services among the population; hence, wealthier families have more access to health because they can afford private and higher quality clinics to overcome obstacles of availability (Peters *et al.*, 2006). The prison population may lack the needed finance to access the available health care. Peters *et al.* (2008), suggest as a solution that poorer populations are allowed to have a say in how strategies are developed and implemented.

2.6. Theoretical Perspective

The theoretical perspective underlying this study will be based on the health systems thinking and innovation as explained by Atun (2012). Different researchers have defined what health systems are in numerous ways (Shakarishvili *et al.*, 2010; Atun, 2012). Underlying these definitions is the fact that, a health system is a ‘means to an end’ - a system which ‘exists and evolves to serve societal needs’ - with ‘components’ that can be utilised as policy instruments to alter the outcomes (Hsiao, 2003; Atun, 2012). A further explanation is that health systems are open systems, with interlinked components that interact within the context within which the health system is situated, thereby forming a whole with properties beyond the component parts (Checkland, 1981; Atun, Lebcir, Drobniewski, McKee, & Coker, 2007a; Atun, 2012). For the purposes of this study, it is argued that it is mandatory for policy makers and health care stakeholders to understand and appreciate the reality that the provision of quality healthcare for prisoners is part of the entire system of health care service delivery in Ghana and as such must be given the needed attention.

This study postulates the urgent need for health policy makers and all concerned to see the prisons health care system as part of the entire health care dynamic system such that there will

be the need for an integrated approach to ensure that the entire health care system achieves set objectives in response to the PHC concept (Ministry of Health, 2018).

The various elements of the health system interact with each other and either positive feedback (amplify) or negative feedback (balance) each other to determine the behaviour of the health system (Senge, 1990; Atun, 2012). Atun (2012), argues that a system response can only occur when the interaction among the various elements of the system is altered and not from alteration of just one component. It is essential to understand and apply this concept of interconnectedness and complexity as the essence of systems thinking, which views the system as a whole rather than its individual component parts (Senge, 1990; Sterman, 2001; Atun, 2012).

This study perceives that the provision of an effective referral system, for instance, between the prisons health care system and the entire health care system of the country will help provide the needed results to improve efficiency in delivery. This is as a result of the concept of interconnectedness of the various elements of the health system. The position of this study is that until a careful and deliberate efforts are made by policy makers and other health stakeholders to take a second look at the way the current prisons health system is alienated from the overall health care system, achieving overall health goals, especially the sustainable development goals (SDGs) of the country may be hampered considerably (Ministry of Health, 2018).

In the light of the above arguments, this study contends that there is the crucial requirement of the health care decision makers to establish or intensify the relationship between the prisons health care system and the general health system in Ghana in order to address the health care needs of the people without excluding the prison population. Indeed, it is the view of this

study, that exclusion of the health care needs of the prison population is to the detriment of the general population because, prison health is a reflection of the health of the community and also has a direct impact on it. Simply put, prison health is public health (Macmadu, 2015)

One pitfall to avoid in health systems innovation and thinking is the limits of the human mind. Atun (2012) suggests that it is common for the brain to ignore the complexities in health systems because its ability to process information is somewhat limited. This may result in oversimplistic analyses of situations, with misperception of feedback, so that even when information is available, consequences of interactions cannot correctly be deduced (Sterman, 1994; Diehl & Sterman, 1995; Atun, 2012). This may mean that even though there may be an existing problem with the provision of quality health care for prison inmates, the challenge still remains that policy makers might have turned a 'blind eye' to them. When this happens interventions that are instituted can fail. The need for overhaul of Ghana's health system direction with respect to the prisons health care is overbearing.

This study takes a cue from the reality that the current health financing system of Ghana excludes a section of the population from accessing even the limited available quality health care due to financial constraints (Nguyen, Rajkotia, & Wang, 2011), and its equity ramifications not convincing (Jehu-Appiah *et al.*, 2011). The imbalance can be addressed by explanation the findings of the study from the systems thinking perspective. In systems thinking an organization and its respective environment (context) is viewed as a complex whole of interrelated and interdependent parts rather than separate entities (Cummings, 1980; Atun, 2012).

This study portends that the findings of the study in relation to the challenges of inadequate health care provision for the prison population can be explained from the viewpoint of systems thinking, which requires that health policy makers address the entire health system difficulties

from a holistic approach rather than in bits (Ministry of Health, 2018). The advantage of health systems thinking is that it helps to anticipate and prepare for challenges rather than react to them (Atun, 2012). It is important to apply this theory because it will help the researcher to explain how the health policy makers and authorities of the Ghana Prison Service will have to collaborate and coordinate in a unified way to undertake policy analysis in an effort to reform the prisons health care system in the country.

The adopted systems thinking in health systems model for the interpretation of the findings of this study is depicted in Figure 1 below. The framework was to help the researcher explain how the components of the prisons health system would need to interact with the entire Ghana's health care system to ensure the provision of quality health care for prisoners in the country thus emphasizing the public health importance of Prison Health.

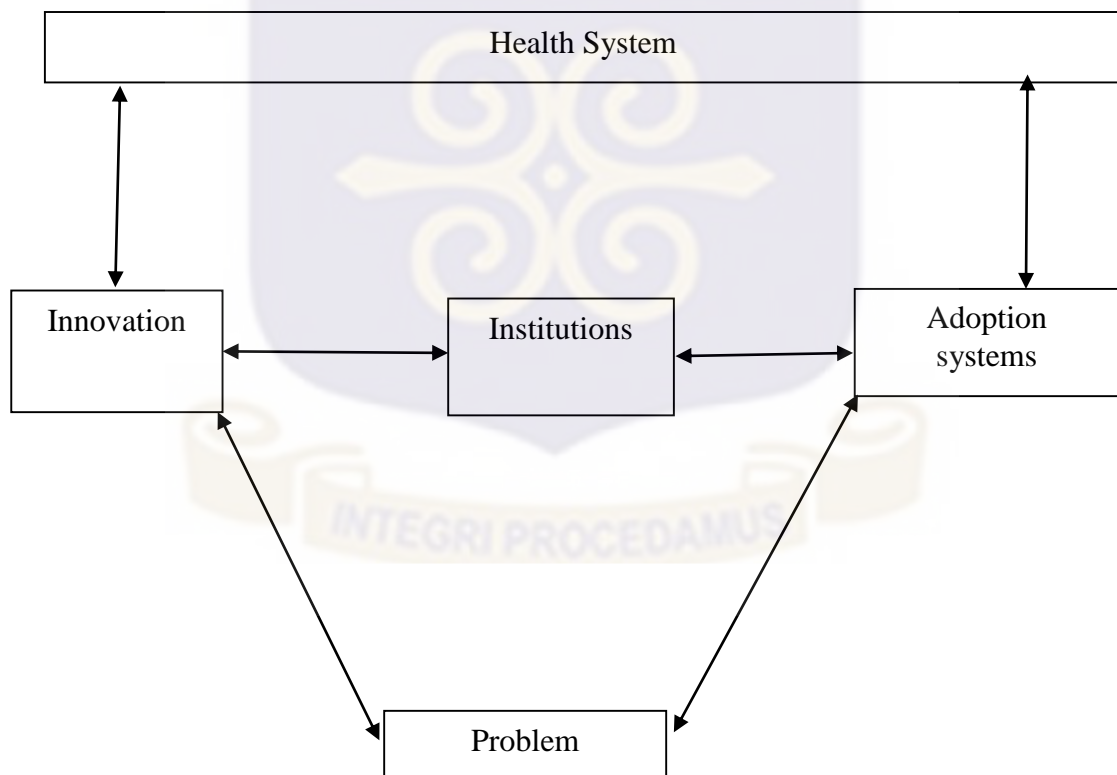


Figure 1: Framework for analysing adoption and diffusion of innovations in health systems.

Source: Adopted from Atun (2012): Health systems, systems thinking and innovation.

2.7. Conceptual framework

Based on the analysis of the relevant literature, the conceptual framework in Figure 2 was developed for the study. A conceptual framework is a scheme of variables a researcher operationalizes in order to achieve the set objectives (Oso & Onen, 2002). The conceptual framework in Figure 2, shows the association between the dependent and independent variables that are likely to influence access to quality health care among the male prisoners at the James Camp Male Prisons. This is based on the Donabedian's (1990), model of quality of care, describes structure, process and outcome as explained earlier.



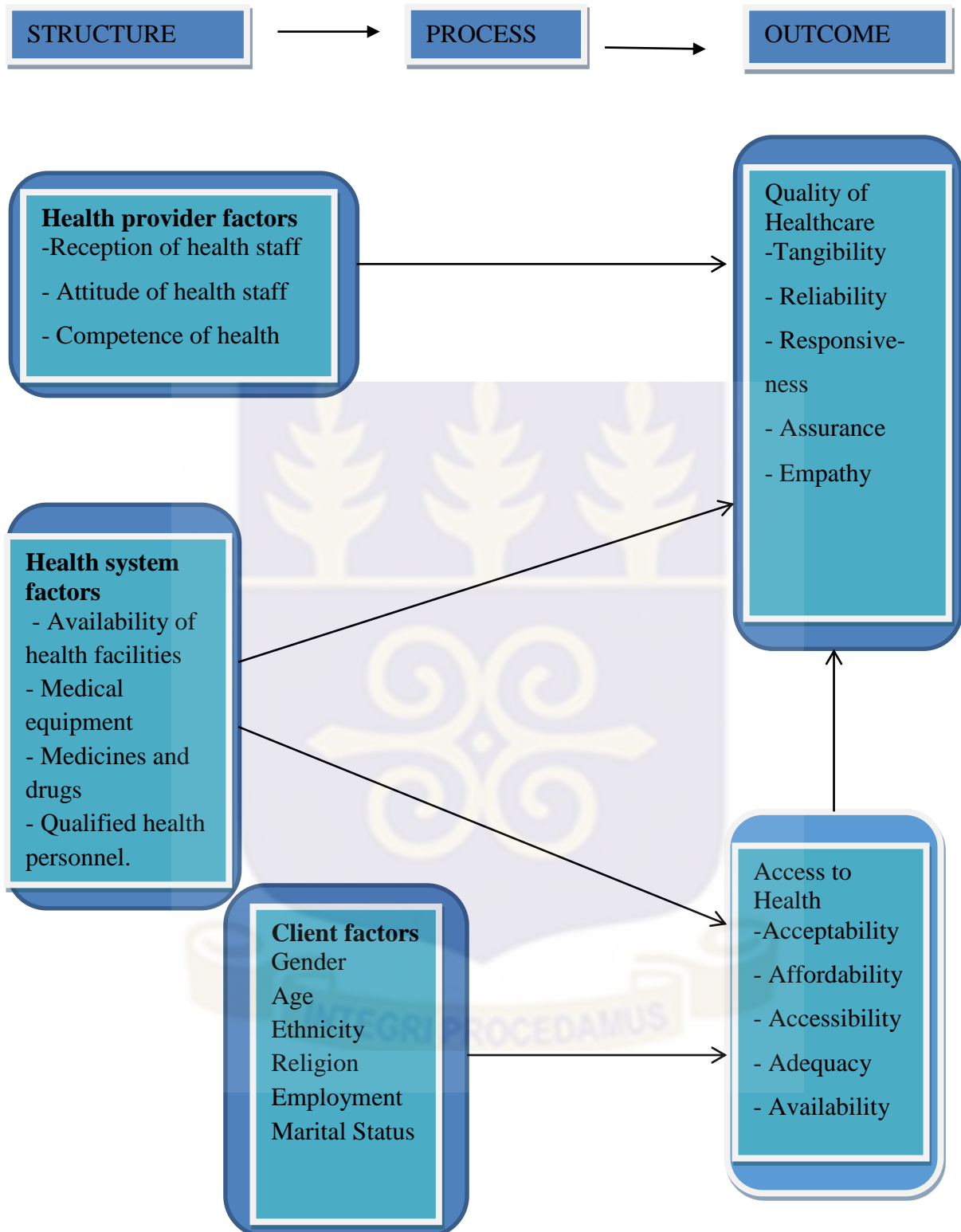


Figure 2: Conceptual Framework of Access to Quality Health Care among Prisoners

2.8. Summary of the chapter

This chapter has defined Access to healthcare and Healthcare Quality. It also reviewed extensively the available literature on access to healthcare and quality of Healthcare and the different ways of measuring them. It has also described from literature the various client factors that influence access to healthcare and healthcare quality and finally introduced the conceptual framework which guides this dissertation.

The next Chapter describes the methodology of the study which includes the study population the sampling methods and the quantitative and qualitative methods used in the data collection as well as the methods of data analysis.



CHAPTER THREE

METHODOLOGY

3.0. Introduction

This chapter presents the methods that were applied to collect data for analysis to be able to answer the research objectives and questions of the study.

3.1. Study Design

The study applied a mixed methods approach to collect primary data for subsequent analysis. This approach was adopted because a combination of both forms of data can provide the most complete analysis of problems; and researchers can situate numbers in the contexts and words of participants, and they can frame the words of participants with numbers, trends, and statistical results (Creswell & Creswell, 2017).

Creswell and Creswell (2017), describes mixed methods research as a research design with philosophical assumptions as well as methods of inquiry. Thus, the use of quantitative and qualitative approaches in combination provides a better understanding of research problems than either approach alone (Creswell & Creswell, 2017).

3.2. Study Area

The study was conducted in the James Camp Prisons in the Greater Accra Region. Accra is the national capital of Ghana, and serves as a hub for most of Ghana's economic, and tourist activities. It has a population of approximately 2.27 million, which amounts to 8% of Ghana's estimated population of 29.46 million (World Population Review, 2018). The Accra Metropolis has a total area of about 200km² and is inhabited by close to 3 million people out of the total population of Ghana. The geographical coordinates of Accra are 5° 33' 0" North and 0° 13' 0" West. The local dialect spoken is Ga, but other languages such as English, Twi

and Fante are also popular due to the ethnic diversity in the region. In the Accra Metropolis, health care is provided by both public and private institutions. There are a host of private health insurance schemes available as well as the national health insurance schemes for financing health with out of pocket payments for services not covered by the insurance schemes (Wang *et al.*, 2017).

The James Camp Prison is one of 43 prisons in Ghana (Ghana Prison Service, 2018). It is located at Roman Ridge in Accra, an area bustling with economic activity. The James Camp Male Prison sits on the same compound with the Juvenile Detention Centre and the Ghana Prisons Service Training School as well as accommodation or barracks for Prison Officers (Ghana Prison Service, 2018). It is also close to several schools, including the Jack and Jill School and Roman Ridge School. It is unique in that it is one of three Open Camp Prisons and serves as a 'halfway home' where rehabilitation and training of prisoners are undertaken before being discharged from prison. The prison generally holds short sentenced prisoners; it does not receive convicts directly from the courts. Instead it receives inmates from several prisons in the southern part of Ghana. The population of the prison is quite dynamic due to this structure ranging from 200 to more than 300 inmates at any given time (Ghana Prison Service, 2018).

At an Open Camp, prisoners have more interaction with the community than in a walled prison, the atmosphere is more relaxed as compared to a walled prison and this is suitable for their reintegration into wider society upon discharge. Because inmates in this prison are transferred in from other prisons, information obtained from studying this population could be extended to prisoners in many prisons in the southern part of Ghana (Ghana Prison Service, 2018). The staff strength of the Prison is 232 officers. The Prison has an estimated area of 79,747,200 m² with fifteen blocks housing the inmates. Figure 3, shows the map of the Greater Accra Region.



Figure 3: Map of Greater Accra Region

3.3. Study Population and Size

The study population comprised all inmates of the James Camp prisons who were willing and able to give informed consent. This was expected to be about 250.

3.3.1. Inclusion Criteria

Adult Males i.e. aged more than 18 years in the James Camp male prisons were included in the study.

3.3.2. Exclusion Criteria

Inmates who were unable or unwilling to give informed consent were excluded.

3.4. Sampling Technique

A sample is a portion of a population or universe (Tailor, 2005).

Firstly, a purposive sampling technique was applied to select the study site; and participants for the qualitative research study (heads of institution and health care providers) and quantitative study (prison inmates). Etikan, Musa, and Alkassim (2016), describe the purposive sampling technique as the deliberate choice of a participant due to the qualities the participant possesses. This technique is also called judgment sampling and it is a non-random technique where the researcher decides what needs to be known and sets out to find people who can and are willing to provide the information by virtue of knowledge or experience (Etikan *et al.*, 2016). Purposive sampling technique does not need underlying theories or a set number of participants.

In interviewing the inmates for the quantitative data, no sampling was done.

All inmates of the James Camp Prison who were able and willing to participate were interviewed. Since all inmates of the James Camp Prison were included, there was no sample size calculation.

3.5. Variables

The variables of the study to be measured have been grouped into dependent and independent as explained below.

3.5.1. Dependent Variables

The dependent variable was access to quality healthcare, which was divided into access to healthcare and quality of healthcare as explained below.

Access to healthcare (measured using acceptability, affordability, accessibility, appropriateness and adequacy).

Quality of healthcare (measured using tangibles, reliability, responsiveness, assurance, and empathy).

3.5.2. Independent Variables

The independent variables were:

Patient (client or prisoner) factors / Socio-demographic characteristics: age, education, religion, racial/ethnic background, occupation/employment

Health care provider factor/Inmates' perception of Health care quality: SERVQUAL dimensions, health professional attitude, trust in health providers, competency of health professionals, waiting time at the facility.

Health care system factors: availability of health facility, availability of medicines, availability of health professionals, and health care financing options.

3.6. Data Collection

Since the study adopted mixed methods approach, both qualitative and quantitative methods were applied to collect data from June to July, 2018. These have been explained below.

3.6.1. Qualitative data collection

Qualitative research method was applied to collect data from the heads of the James Camp Prisons and health care providers attached to the infirmary. In-depth interviews conducted with heads of the institution (James Camp Prison) as well as the healthcare providers attached to the Infirmary using a semi-structured questionnaire interview guides.

This method was applied because qualitative research is known to yield detailed information reported in the voices of participants and contextualized in the settings in which they provide experiences and the meanings of their experiences (Creswell, 2008). It is a useful method for

health science research to develop theory, evaluate programs, and develop interventions (Baxter, 2018). Additionally, qualitative methods are known to achieve depth of understanding unlike quantitative methods, which achieve breadth of understanding (Patton, 2002).

Semi-structured interviews

Qualitative semi-structured interviews were conducted with seven (7) participants working at the James Camp Prison. Kvale (1996), explains that a qualitative research interview seeks to cover both a factual and a meaning level, though it is usually more difficult to interview on a meaning level. A semi-structured interview is explained as predetermined questions, but the order can be modified based upon the interviewer's perception of what seems most appropriate; question wording can be changed and explanations given; inappropriate questions for a particular interviewee can be omitted, or additional ones included (Van Teijlingen, 2014).

Interviews with Administrative Heads of the Prison

Three (3) administrative heads of the prison were interviewed in-depth. The focus on these heads of the prison was to solicit their views on health system factors, which could influence the prisoners' access to quality healthcare.

Interviews with Health Care Providers Attached to the Prison

Four (4) health care providers attached to the prisons were also interviewed in-depth. The focus on these participants was to investigate their perceptions of the provision of quality healthcare to prisoners and how health system factors also influence health care delivery at the prison. The interviews were conducted at suitable locations and times suitable to the participants. Each interview lasted between 30 minutes and 1 hour. Some interviews were transcribed because participants did not permit voice recording. The semi-structured interview

guides for both the heads of the organization and health providers are shown (see appendices A and B). This approach was applied by Bowen *et al.* (2009), to interview prisoners and staff at four prisons in the United Kingdom.

Participant Observation using a Checklist

A participant observation strategy was applied to collect information relating to how the availability of facilities and medical equipment at the infirmary and related institutions help to contribute to providing access to quality health care for the inmates of James Camp Prisons. In this respect, a non-active participant observation method was used to observe and take notes of the medical consumables/materials, facilities and equipment available for providing health care at the infirmary using a checklist. This checklist served to confirm the health care system factors such as: availability of health facilities, medical equipment, medicines and drugs, and qualified health personnel (see appendix E). This has been previously done by Bowen *et al.* (2009), in some prisons to support and inform the interview process in their study in the United Kingdom.

Participant observation involves spending time being, living or working with people or communities in order to understand them, and is a useful tool for collecting data about people, processes, and cultures in qualitative research (Laurier, 2010; Kawulich, 2005). Laurier (2010), explains that this is a method based on participating and observing in which field notes, sketches, photographs or video recordings are used as a method of data collection.

3.6.2. Quantitative data collection

The study applied a descriptive cross-sectional study using quantitative methods to collect data from male prisoners at the James Camp Prison. A cross-sectional study design is a type of observational study where the investigator measures the outcome and the exposures in the study

participants at the same time (Setia, 2016). Cross sectional studies are particularly suitable for estimating the prevalence of a behaviour or disease in a population; and are generally quick, easy, and cheap to perform. Sedgwick (2014), observe that there is no loss to follow up when using a cross sectional design because participants are interviewed only once within the study period (Sedgwick, 2014).

Questionnaire Design and Administration

The quantitative tools employed were questionnaires developed using questions adapted from the SERVQUAL (Parasuraman *et al.*, 1985), to measure health service quality and other questions to assess Access to healthcare.

Data was collected by administering a structured questionnaire to the inmates/clients. A structured questionnaire with sections was designed to solicit answers to questions to address the research objectives. The design was arranged in sections.

Section A of the questionnaires included questions on patient (client or prisoner) factors / socio-demographic characteristics (age, gender, ethnicity, educational level, and occupation/employment status, religion, and social history), the prison history, and medical history for prisoners.

Section B of the questionnaire solicited answers to questions on access to health care such as: acceptability, affordability, accessibility, accommodation and adequacy. The Access to healthcare questionnaire included items to measure healthcare quality by asking inmates to rate the services that were provided. A five-point Likert scale ranging from “strongly disagree” (1) to “strongly agree” (5) was applied.

Sections C and D were adapted from the SERVQUAL model used in earlier studies (Alrubaiee & Alka'aida, 2011; Topp *et al.*, 2009), was adapted to assess the quality of healthcare and satisfaction from the perspective of clients/prisoners at the James Camp Prison. The modified SERVQUAL-type questionnaire was constructed by retaining some items from the updated SERVQUAL dimensions: tangibles; reliability; responsiveness; empathy and assurance as suggested by Parasuraman *et al.* (1994). Selected items were paraphrased to apply in this context. The final questionnaire included 36 items to measure healthcare quality by asking inmates to rate the services that were provided. A five-point Likert scale ranging from “strongly disagree” (1) to “strongly agree” (5) was applied.

These were based on health care provider factors such as: reception/attitude of health staff, trust in health providers, competence of health staff, and waiting time.

The questionnaires were interviewer-administered by the two trained research assistants to the study participants, on a strictly voluntary basis. Each questionnaire was administered within a period of 10 minutes at locations designated by the prison officers. The structured questionnaire is shown (see appendix D).

3.7. Data Analysis

Appropriate analytical techniques were adopted to analyse both the qualitative and quantitative data as shown below.

3.7.1. Qualitative data analysis

Qualitative interview data was transcribed verbatim using Microsoft application in text format before analysis. Framework method (Gale, Heath, Cameron, Rashid, & Redwood, 2013), was applied to theoretically analyse the interview data.

Gale *et al.* (2013), explain that framework method sits within a broad family of analysis methods often termed thematic analysis or qualitative content analysis. In these approaches, similarities and differences are identified in the qualitative data, before focusing on relationships between different parts of the data, thereby seeking to draw descriptive and/or explanatory conclusions clustered around themes. The framework method was adopted for analysis since it is most commonly used for the thematic analysis of semi-structured interview transcripts (Pope, Ziebland, & Mays, 2000; Gale *et al.*, 2013). The key components/elements of the framework method have been explained below (Gale *et al.*, 2013):

Transcription

Gale *et al.* (2013), explain that a good quality audio recording and, ideally, a verbatim (word for word) transcription of the interview is needed. They indicate that the process of transcription is a good opportunity to become immersed in the data and it is to be strongly encouraged for new researchers. In this study, the interview data from both the heads of the organisation and health providers were transcribed verbatim to ensure that emerging ideas were not lost.

Familiarisation with the interview

The researcher attempted to re-listen to all or parts of the audio recording to be able to make sense of the interviewees' perspective. This is a vital step in interpretation. The researcher familiarizes himself with the interview using the audio recording and/or transcript and any other notes that were recorded during the interview (Gale *et al.*, 2013). In this study,

Coding

Gale *et al.* (2013), note that codes could refer to substantive things (e.g. particular behaviours, incidents or structures), values (e.g. those that inform or underpin certain statements, such as a belief in evidence-based medicine or in patient choice), emotions (e.g. sorrow, frustration, love) and more impressionistic/methodological elements (e.g. interviewee found something difficult to explain, interviewee became emotional, interviewer felt uncomfortable) (Phillimore, Goodson, Hennessy, & Ergun, 2009; Gale *et al.*, 2013). In this study, since coding comes after familiarization (Gale *et al.*, 2013), the transcript was read line by line, and labels ('code') applied to describe what was interpreted as important

Interpreting the data

Here, it is important to identify the characteristics of and differences between the data, which may help to generate theoretical concepts or map connections between categories to explore relationships and/or causality (Gale *et al.*, 2013). All these strategies were applied to identify relevant themes for analysis. Similarly, Bowen *et al.* (2009), used thematic analysis of the interview data and interpretation of the observational field-notes in their study of four prisons in the United Kingdom.

3.7.2. Quantitative data analysis

The returned questionnaires were cleaned, edited before coding to ensure that there were no multiple answers to the same questions, among others. Data obtained from the returned questionnaires were entered into the STATA software package, version 15 and analysed using descriptive and inferential statistics.

Accessibility, adequacy and affordability were assessed using three questions each. Highest possible score was 15. Scores 9 and below were defined as poor access; scores between 9 and 12 defined as moderate and scores above 12 defined as high. Similarly, acceptability was measured using four questions. Highest possible score was 20; scores 12 and below were defined as poor access; scores between 12 and 16 defined as moderate and scores above 16 defined as high. Availability was measured using five questions. Highest possible score was 25; scores 15 and below was defined as poor access; scores between 15 and 20 defined as moderate and scores above 20 defined as high.

The socio-demographic characteristics considered were age, level of education, occupation, marital status and ethnicity. Socio-demographic characteristics of clients can be used to assess their level of access to quality health care (Binswanger *et al.*, 2009). Bivariate analysis was done for each of the socio-demographic factors in relation to access to healthcare. Level of significance were accepted at $p < 0.05$. Logistic regression analysis was also conducted to determine the predictors of access to health care at a 95% Confidence Interval.

The internal consistency of the SERVQUAL scale was determined calculating the Cronbach's alpha value for the overall scale and for the five individual dimensions.

Alpha is a value that ranges from 0 to 1; the commonly accepted limit of the alpha value is 0.7 (Nunnally, 1978) but values as low as 0.6 and 0.5 have been used as limits in literature (Wright, 2007; Hair *et al.*, 1998).

Service quality was calculated as the difference between the perception and the expectation for each dimension, known as the gap (Parasuraman *et al.*, 1988). Generally, the higher the gap score, the lower the quality.

3.8. Ethical Consideration

The following activities were undertaken to ensure that ethical issues underlying the study were complied with.

3.8.1. Quality Assurance and Pretesting

Questionnaires were coded using numbers to identify each questionnaire sheet. The questionnaire was pre-tested in a randomly selected male prison in the Accra Metropolis before administration. Two (2) research assistants were then trained and provided Standard Operation Procedures (SOPs) to follow during data collection at the Prison and also handling of filled questionnaires thereafter. The activities of the research assistants were monitored to ensure compliance with SOPs. Completed questionnaires were manually checked for correctness. Incomplete or inconsistent questionnaires were excluded from analysis, but kept for discussion in the final report. Data were entered in duplicates during analysis to confirm accuracy of entries.

3.8.2. Ethical Clearance

A dissertation proposal was submitted to the Ghana Health Service Ethical Review Committee and approval was given to undertake the research.

3.8.3. Risks and Benefits

The procedure was at no physical risk to participants. The hope is that the results of the study will provide evidence and guidelines for future policy interventions.

3.8.4. Compensation/ Payment

No payments were given for participating in this study.

3.8.5. Right to refuse

Participation in this study was on a strictly voluntary basis. A few Participants chose not to participate in the study although full participation was encouraged.

3.8.6. Anonymity and confidentiality

Information provided by participants was taken in strict confidence and utilized purely for research purposes. Participants were identified by ID numbers only and responses were not shared with anybody outside the study team.

3.8.7. Participant's Consent

A participant's consent form was attached to the questionnaire (see appendix A). The form included information on the title, institutional affiliation, background information and the study procedure. These were further explained to respondents prior to the data collection. Participants were required to sign a statement of declaration, indicating they have understood the purpose, procedures, risks and benefits of the study and their free will to participate. For participants who could not read, the procedure was explained in a language they comprehend and their thumbprints taken.

3.8.8. Data storage/ Security and Usage

Completed questionnaires are stored in a locked file cabinet. Electronic data files are also stored in a password protected folder. Access is limited to only the principal investigator and supervisor. The data will be deleted 2 years after the completion of the study.

3.9. Summary of the chapter

This chapter presented the methods of sampling, data collection, analysis and storage. The next chapter is presents a summary of the results and analyses of the results obtained from the field.



CHAPTER FOUR

RESULTS

4.0. Introduction

This chapter presents the results of the study based on the analysis of the quantitative and qualitative studies conducted with the inmates, healthcare providers and members of the management of the James Camp Prison. The chapter has been divided into two main sections. The first main section presents the results of the quantitative study as analysed from the survey questionnaires. The second main section presents the results/findings of the qualitative study conducted with the staff of the James Camp Prison. All these main sections have their related sub-sections as well. The last section, three is the summary of the chapter.

4.1. Quantitative Results

This section presents the quantitative results of the study. There are sub-themes.

4.1.1. Socio-demographic Characteristics

Results of the socio-demographic characteristics of the respondents have been presented in Table 1. The respondents surveyed for this study were inmates who were males in the prison. All the 200 inmates had their opinions represented in this survey. The age, marital status, level of education, religion, ethnicity and employment status prior to incarceration of participants were studied. Majority of the respondents, 84 (42%) had ages between 26-35 years, followed closely by the 18-25 years' age group which comprised 77 (38.5%). Respondents with ages 55 years and over accounted for the lowest percentage, 6 (3%). Majority of respondents were either married or cohabiting, 110 (55%), 80(40%) were single and only 3 (1.5%) were widowed.

Majority of respondents 75 (37.5%), had junior high school education. Fifty-three (26.5%) respondents had up to primary school education and 37 (18.5) respondents had no education experience. The least numbers of respondents 35 (17.5%) had received secondary education or beyond. In terms of occupation of the respondents, 156 (78%) were self-employed prior to incarceration, whilst 11 (5.5%) were unemployed. The majority of inmates 78 (39%) identified as Akan, and 66 (33%) identified as Ewes, 27 (13.5%) were Ga and Norther Extraction.

Table 1: Sociodemographic Factors of Respondents

		Frequency	Percent%
Age	18 – 25	77	38.5
	26 – 35	84	42
	36 – 45	24	12
	46 - 55	9	4.5
	Above 55	6	3
	Total	200	100
Education	Secondary and above	35	17.5
	JHS	75	37.5
	Primary	53	26.5
	None	37	18.5
	Total	200	100
Marital status	Married/cohabiting	110	55
	Single	80	40
	Divorced	7	3.5
	Widowed	3	1.5
	Total	200	100g
Occupation/ employment	Employed	33	16.5
	Self employed	156	78
	Unemployed	11	5.5
	Total	100	200
Religion	Christian	143	71.5
	Muslim	41	20.5
	Others	16	8
	Total	200	100

Ethnicity	Akan	78	39
	Ewe	66	33
	Ga	27	13.5
	Northern	27	13.5
	Others	55	27.5
	Total	200	100

Inmate description

Most inmates in the James Camp were short sentence inmates, mostly incarcerated for theft or robbery. All inmates were transferred in from other prisons after serving more than half of their sentence; none was received directly from court. Almost 60% of inmates had been transferred from Nsawam Prisons; Koforidua (21%) and the remainder from the Ho (8%), Winneba (5 %) and Kpando (4%) and Aflao Prisons (3%).

4.1.2. Access to Care

Findings show that 127 (63.5%) respondents representing the majority rated the overall access to healthcare as poor, 73 (36.5) respondents rated the access as moderate and no respondent rated access as high.

Table 2: Access to Healthcare

Access to Healthcare	Freq.	Percent	95% CI
Poor Access	127	63.5	56.7 – 70.2
Moderate Access	73	36.5	29.8 – 43.2
Total	200		

4.1.3: Individual Dimensions of Access

The individual dimensions were also assessed separately as shown below. A sum total of the answers for each dimension were computed and scoring done as described in Table 3 below.

Table 3: Individual Dimensions of Access

Access Parameter	Frequency (Number of Respondents)	Percent	95% CI
Availability			
Poor	70	35	28.3-417
Moderate	92	46	39.0-53.0
High	38	19	13.5-24.4
Acceptability			
Poor	50	25	18.9-31.1
Moderate	65	32.5	26.6-39.0
High	85	42.5	35.6-49.4
Accessibility			
Poor	35	17.5	12.2-22.8
Moderate	96	48	41.0-55.0
High	69	34	27.9-41.0
Adequacy			
Poor	50	25	18.9-31.1
Moderate	99	49.5	42.5-56.5
High	51	25.5	19.4-31.6
Affordability			
Poor	122	61	54.1-67.8
Moderate	65	32.5	26.0-39.0
High	13	6.5	3.1-9.9

Availability

This dimension assessed availability of quality drugs, variety of services and effective treatments. In all, 92 respondents rated availability as moderate and 70 respondents rated availability as poor.

Acceptability

The acceptability factors queried included health provider confidentiality, honesty and trust worthiness. Overall, majority of respondents, 85 (42.5%), found the healthcare provided in the Prisons as highly acceptable to them. This dimension of access had the highest number of respondents reporting high access, compared with the four other dimensions.

Accessibility

These questions sought to find out whether the infirmary and healthcare was easily accessible in terms of distance or geography and time, including access considerations for the disabled persons. Ninety-six (48%) respondents representing the majority rated accessibility as moderate while 69 (34%) rated accessibility as high. The least number, 35(17.5%), of respondents thought accessibility was poor.

Adequacy

The adequacy dimension of access asked respondents to rate patient-health provider contact time, and waiting time to see a health provider and for referral. Ninety-nine (49.5%) of respondents rated this dimension as moderate, while the remaining half of respondents were split almost evenly, 50 and 51 between poor and high ratings respectively.

Affordability

This dimension assessed funding options for healthcare. It considered financial support, insurance coverage and had the lowest rating overall with 122 (61%) respondents rating it as poor.

To summarize, the overall access to healthcare by inmates was found to be poor. However, the access dimension of acceptability was rated the highest while affordability was rated the poorest.

4.1.4. Inmate Factors that influence access to health care

The first objective of the study was to assess the client factors that influence access to health care by the prisoners. The results are presented in Table 4 below.

It was noticed that age, marital status, educational level, ethnicity and employment status/occupation were not statistically significant in relation to access. Religion, on the other hand, was statistically significant ($\chi^2=6.4952$ $p=0.039$) on bivariate analysis.

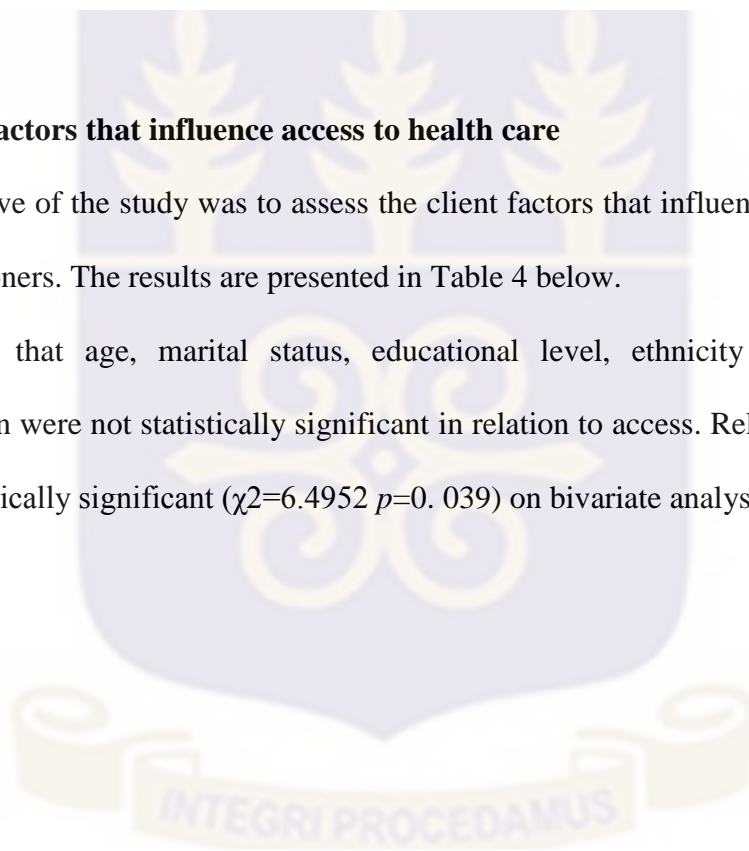


Table 4: Inmate Factors in relation to access to health care

Variables	Access to Healthcare		Chi square	P value
	Poor	Moderate		
Age				
18 – 25	54(42.52)	23(31.51)	6.1762	0.188
26 – 35	48(37.80)	36(49.32)		
36 – 45	16(12.60)	8(10.96)		
46-55	7(5.51)	2(2.74)		
Above 55	2(1.57)	4(5.48)		
Religion				
Christianity	83(65.35)	60(82.19)	6.4952	0.039
Islam	32(25.20)	9(12.33)		
Others	12(9.45)	4(5.48)		
Marital Status				
Married/Cohabiting	66 (51.97)	44 (60.27)	4.5441	0.208
Single	55 (43.31)	25(34.25)		
Divorced	3 (2.36)	4(5.48)		
Widowed	3 (2.36)	0(0.00)		
Educational level				
None	29(22.83)	81(0.96)	5.7917	0.122
Primary	33 (25.98)	20(27.40)		
JHS	47(37.01)	28(38.36)		
Secondary and above	18(14.17)	17(23.29)		
Ethnicity				
Akan	43 (33.86)	35 (47.95)	6.4334	0.169
Ewe	42(33.07)	24(32.88)		
Ga	19(14.96)	8(10.96)		
Northern Extraction	21(16.54)	6(8.22)		
Other	2(1.57)	0(0)		
Occupation				
Employed	24(18.90)	9(12.33)	2.7888	0.248
Self employed	98(77.17)	58(79.45)		
Unemployed	5(3.94)	6(8.22)		

Compared to Christians, inmates who were Muslim (cOR 0.389, 95%CI 17.29-87.51) or practicing other religions (cOR0.4611, 95%CI14.18-15.00) had reduced odds of having high or moderate access to healthcare.

Table 5: Odds Ratio Religion and Access to Healthcare

	cOR	95%CI	p-value
Christianity	Ref		
Islam	0.389	17.29-87.51	0.022
Others	0.461	14.18-15.00	0.198

4.1.5. Quality of Healthcare

This was assessed using the modified SERVQUAL scale and the gap scores calculated.

Internal Consistency of the SERVQUAL Scale

The internal consistency for the overall scale, the individual perception and expectation scales as well as each of the dimensions in the scale were tested. The Cronbach's alpha for the overall service quality scale had a value of 0.73. The scale was therefore determined to be valid in accessing the quality of health. The Cronbach's alpha values were 0.65 and 0.73 respectively for the perception scale and the expectation scale, The Cronbach's alpha for each dimension are illustrated in 6 below.

Table 6: Cronbach's alpha for the SERVQUAL Scale

Dimension	Expectation	Perception
Tangibles	0.809	0.634
Reliability	0.781	0.727
Responsiveness	0.817	0.722
Assurance	0.881	0.860
Empathy	0.825	0.824

Gap Analysis

The gaps calculated for each dimension in the SERVQUAL scale are represented in Table 7.

Table 7: Individual Dimensions of the SERVQUAL scale

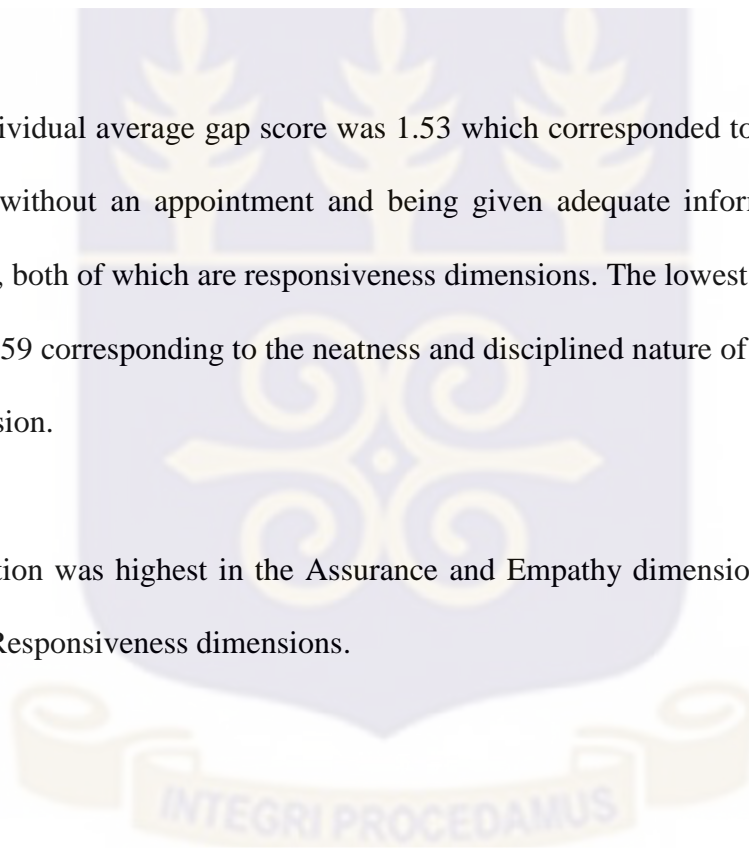
Dimensions of SERVQUAL scale	Expectation	Perception	Gap Score (E-P)
Tangibles			
T1	4.72	4.13	0.59
T2	4.67	3.86	0.81
T3	4.42	2.93	1.49
T4	4.48	3.03	1.45
Average	4.57	3.49	1.09
Reliability			
Rel1	4.35	3.18	1.17
Rel2	4.31	3.09	1.22
Rel3	4.32	3.15	1.17
Average	4.33	3.14	1.19
Responsiveness			
Resp1	4.76	3.52	1.24
Resp2	4.47	2.94	1.53
Resp3	4.67	3.14	1.53
Resp4	4.84	3.32	1.52
Average	4.69	3.23	1.46
Assurance			
A1	4.90	3.50	1.40
A2	4.83	3.66	1.17
A3	4.81	3.62	1.19
A4	4.88	3.76	1.12
Average	4.86	3.64	1.22
Empathy			
E1	4.66	3.32	1.34
E2	4.82	3.64	1.18
E3	4.86	3.72	1.14
Average	4.78	3.56	1.22

Average overall expectation was found to be 4.65 with the highest expectation in the assurance dimension. Average Perception was 3.41 with the highest perceived quality in Assurance dimension. The Inmates' expectations generally outweighed their perceptions of quality of healthcare with an overall gap of 1.24.

In this study, the dimension with the lowest gap score was the tangibles dimension (1.09), and the responsiveness dimension had the highest (1.46) as shown in the table. The assurance and Empathy had the same gap score of 1.22.

The greatest individual average gap score was 1.53 which corresponded to inmates receiving prompt service without an appointment and being given adequate information about their health condition, both of which are responsiveness dimensions. The lowest individual average gap score was 0.59 corresponding to the neatness and disciplined nature of health providers, a tangibles dimension.

Average perception was highest in the Assurance and Empathy dimensions and least in the Reliability and Responsiveness dimensions.



4.2. Qualitative Results

This section presents the qualitative results of the study. It presents analysis of the qualitative interviews conducted with the members of the management and health care providers of the James Camp Prison to ascertain the availability of health care provision for inmates

4.2.1. Health system Factors that influence access to quality Healthcare

Another objective of the research was to determine institutional characteristics that could influence access to healthcare by the prisoners. These factors included services provided at health facility, health work force, services by prison health workers, equipment within institutions, drugs availability and social security services. These sub-themes were organised according to the WHO health systems framework.

Information and research

Medical Examinations and Health Certificates

The interviews with the members of the James Camp prison management disclosed that when inmates were transferred, they were supposed to be accompanied with a health certificate and a warrant. It was however revealed that they only come along with the warrant and not the health certificate. A member explained that:

[...] I have been here for a few years but I have never seen a health certificate, I don't think inmates are examined prior to transfer. If an inmate does not disclose a medical condition to us we will never know [...] HW1.

The procedure is that an inmate is supposed to receive a full medical examination when being received into custody and also when being released. Unfortunately, this was not done in the

Prison. This is likely to affect the health of other inmates in the event that an inmate with any infectious disease. This was a concern expressed by the management:

[...] We know we are supposed to perform a medical exam when the inmates arrive. Unfortunately, the numbers do not permit us to be thorough. About 100 inmates are transferred in at a time... We only do inspection to identify obvious ailments and also to identify contrabands [...] HW2.

Attempts were however made to control transmission of infectious diseases. It was learnt that, in the first month after their transfer to the prison, new inmates were quarantined in a separate part of the prison. The rationale was to give them an orientation of the prison, and also to identify inmates with drug or alcohol problems, mental health problems and other chronic medical conditions. During this period, drug counselling was done. Screening for HIV was also done and although this screening was not compulsory, all inmates consented because of the incentives that came with opting in. The test kits were supplied or donated by PPAG and always available. However, it was understood that Hepatitis B and Tuberculosis testing was not routinely done unless there was a donation of test kits to the Prison:

[...] I cannot remember the last time we tested for Hep B when inmates were transferred. Most of the time if an inmate shows symptoms, they will be sent to the hospital where they will be diagnosed [...] HW4.

Once an inmate was diagnosed with HIV or Hepatitis B, treatment would be started usually at the Hospital. All inmates who were found to be positive for tuberculosis were transferred to CDP or contagious disease prison at Ankaful where they serve the rest of their sentence. This was seen as attempt to reduce spread of infections in the prison.

It was also noted that inmates were not examined before release or given a medical certificate as was the rule. For inmates with chronic medical conditions such as Hep B or HIV the referral health facility was usually informed about the discharge and arrangements made for continuity of care.

Medical Records

It was observed that the availability of medical records was important towards ensuring the continuity or management of the health conditions of inmates while in incarceration. It was revealed that all infirmary visits were documented in a large record/attendance book but there were no individual inmate folders. There was a separate record book for documentation of inmates with HIV/AIDS similar to that used in other health institutions. The process of recording the medical history of the prisoners was explained by the interviewees:

[...] We book all cases in the report/ attendance book. At the end of every week, we compile a return on types of illnesses, number of referrals and external reviews which is then forwarded to the Headquarters [...] HW3.

[...] Ideally, there should be independent records because sometimes it is difficult to trace back the history and treatments as the book is quite large as you can see and the inmates are many. If it has been a while since the inmate visited the infirmary, it is almost impossible to trace. We've been told that plans to get individual patients records are in the advanced stages so that's a good thing. It will help us give them better treatment [...] HW1.

Individual records were not seen by prison administrators as priority for a long time due to the relative short time prisoners spent in the Prison:

[...] In this prison, many of the inmates are first time offenders serving shorter sentences. By the time an inmate arrives here, usually more than half of the prisoner's sentence had already been served. Some stay with us for less than 6 months before discharge. Because of these relatively short sentences, the need for folders has been less. In other prisons like Nsawam, the inmates do have health records, which are kept at the infirmary, which they can even send to the hospital [...] ADM2.

This was determined by respondents to be a challenge because it posed a risk for the other inmates and the general population as well. The administration of the James Camp Prison however had initiated steps to provide proper records system to capture the various health conditions affecting the inmates.

Health Workforce

According to the Health systems framework, the availability of health care staff will ensure that a particular population receives the needed healthcare. To establish the availability of skilled health care providers who deliver health care to inmates, discussions as well as the use of a check list unearthed that there were four (4) Health Aids and one Physician Assistant taking care of the healthcare needs of the over 200 inmates in the prison.

The Physician Assistant was in Charge of the two other facilities in the surrounding area as well and would be called in by the Health Aids when they were faced with a new case that they could not handle.

Most of the care given was essentially first aid and from there the sick inmates were transported to the Police Hospital for further management if the need arose.

The challenges with the availability of skilled staff were discussed. It was noted that some of the health care providers did not undergo regular training to upgrade their skills in the current health care methods. This was also due to the way by which health personnel were recruited in the prison service. It was explained that all but one of the Health Aides were sent for training after being a Prison officer for several years:

[...] Most of our staff are health aides. The fully qualified nurses and PAs are very few. The whole service has one medical doctor who works in Nsawam. Most of the doctors that come to work here are here as volunteer workers. We have one psychiatrist and one physician who come here regularly. Even the number of their visits has decreased in recent times. You can't force them because their services are offered voluntarily. The service could create more opportunities so it is attractive to the health workers like the Police and Military do. Maybe in doing that we could get a Prison Hospital for staff and inmates [...] ADM1.

When asked whether they considered themselves equipped to handle the health needs of the prisoners, the responses from the health workers were split as seen from the explanations below:

[...] I was a Prison officer before I was sent for the 6-month health aide training. Not long after that I came back to the prison and that is it for the past 10 years and over. We do very little here so I have lost many of the skills I learnt because I haven't used them in a long time. Some basic equipment is not in this prison, so I don't know or remember how to use them. If

they sent us for some attachments at some clinics or hospitals, I think we would be able to do more for the prisoners [...] HW3.

[...] I was also trained by the Prison Service as a health aide. However, in addition, I've gotten a diploma in drug counselling and a degree in social work since then so I can handle a lot of those issues [...] HW2.

However, the staff in the prison thought that the numbers were sufficient for the number of cases they saw:

[...] For the number of cases we see, ideally the number should be enough. There are a total of 4 of us and we run 2 shifts. During the night, those of us that live in the nearby barracks can be called to come and see to an emergency but this is not a regular occurrence. Unfortunately, although we are off on the weekends, we run duties in the main yard which are not related to health so there is very little off duty time and this makes us tired and less effective [...] HW4.

Although the numbers were assumed to be enough, their lack of skills in certain areas meant that a lot of the work, including setting intravenous lines had to be done by the physician assistant:

[...] I think that more trained staff would be beneficial because I am the only trained PA in this prison complex which is composed of SCC, JCP and POTS each with at least 200 people at each time. I am also supposed to take care of prison officers and their dependents in the surrounding barracks as well as the school children in the surrounding schools. Hence, although I have fixed working hours, I am always on call. The other nursing staff are health

aids and do initial assessment, monitoring and dispensing of medications. The rest depends on me. If there were more trained staff, we could do more here [...] HW1.

It was also obvious that the provision of in-service training for the health workers was rare. They however, admitted that the service allowed an individual to undergo training of their choosing if that individual chose to, so long as it did not require financial input from the service.

Remuneration and Welfare of Health Workers

The delivery of quality healthcare, especially in the context of Ghana and other settings depends on a well-motivated and skilled staff. Thus, it was important to understand how the healthcare providers in the James Camp Prison were remunerated so as to enhance their performance:

[...] I am paid my salary and that is it...I think health workers in Ankaful receive extra risk allowance because they deal with infectious diseases like TB but we don't. I guess the service does not perceive that we are at risk as well [...] HW5.

Generally, the analysis on the above theme revealed that all healthcare workers were paid based on their rank. They did not receive any extra incentives for on call duties, extra duties and the risks associated with their work. This had led to dissatisfaction among some Prison health workers as they perceived that they were doing more work and exposed to more risk than they were being paid for.

Healthcare Financing

When asked to identify the sources of financing for health care for the prison and its inmates, it was revealed that health care was provided free to all inmates. That is, all inmates were registered with the NHIS, which covered a host of medical bills such as registration, and some lab investigations. For other services, payment was made by the Prison Service:

[...] If a patient is given a prescription at the hospital, we first check if we have the medication in stock and give accordingly. If we do not have, the prescription is made available to the head of the Prison, who forwards it to the headquarters. From there funds are made available to buy medications. This applies to other hospital bills as well [...] HW1.

Unfortunately, this process was long and often led to delayed medical attention, interrupted or missed doses of medications which delayed patient recovery.

Health Service Delivery

The Ghana Health Service and the Ministry of Health have produced a document on referral in the healthcare system of the country. Since the healthcare system in prisons service appears to be a quasi-government facility, the channels of referral are not clearly shown to be linked up with the public healthcare institutions. In other words, sick inmates were referred to the other parastatal health institutions such as the Police hospital if the condition was beyond the expertise of the health team or if supplies were not available at the James Camp Prison. The discussion with the healthcare staff and members of the management team revealed that if this occurred in an emergency setting, patients were given first aid before they were sent/referred to the hospital, mostly conveyed using the camp's vehicles:

[...] There is no ambulance here. There is only one ambulance for the whole service but that is kept at the main Headquarters [...] HW2.

[...] There are as such frequent external referrals. "In order to transport an inmate outside, it should be in a ratio of 2 officers to one inmate. However, because of the number of referrals, we sometimes send 2 or 3 prison officers with 3 to 5 inmates which is not the ideal. Transportation of an inmate outside the prison is risky because the officer can be harmed and there is also the risk of absconding. It also requires more resources like fuel, accompanying prison officers and time [...] ADM1.

It was disclosed that for reviews and other non-emergency conditions, the prison inmate would book sick and when the appointment was due, they were accompanied to the hospital by an officer. The Prisoners were often given prompt attention at the external health facilities and not delayed or given inferior care, or prescriptions because of their status. They were sometimes given preferential treatment because they were accompanied by the Prison officers.

Medical Products and Technologies

The provision of quality healthcare depends on the availability of suitable medical consumables and equipment. To confirm the availability of such medical equipment and supplies that would enable the healthcare providers in the prison to deliver quality healthcare, a checklist was used. However, it showed that many basic equipment was absent:

[...] As you can see, there is very little equipment in the infirmary. Even some basic equipment is not here. Most of the time I Have to arrange to get some basic things like suture kits and inhalers in my own box otherwise the least thing, will be referred to the Police Hospital. If

these get finished, and I'm not able to replace then I just refer. However, if more equipment was available, we would be able to do many of the procedures like suturing and treatment of minor ailments in-house without the need to transport the patient outside the facility [...] HW1.

It was observed that most of the few equipment and drugs available were from donations. This was confirmed during the analysis of the interview data, which showed that several respondents admitted to having bought essential drugs for inmates or sourced for donations from philanthropists. These findings were further confirmed by the observation checklist.

4.2.2 Summary of facility and equipment check list

An observation checklist was used to collect information on certain amenities or equipment available in the facility in order to relate how the availability or lack thereof of certain facilities and medical equipment at the infirmary impact on the access the prison inmates have to health and also impact on the quality of healthcare.

The checklist showed that the Prison had 5 health personnel made up of 4 health Aids and 1 physician assistant with no medical orderlies.

At the time of the study, the Prison Population was 262; interviews deduced that this number could be more than 300 at certain times of the year.

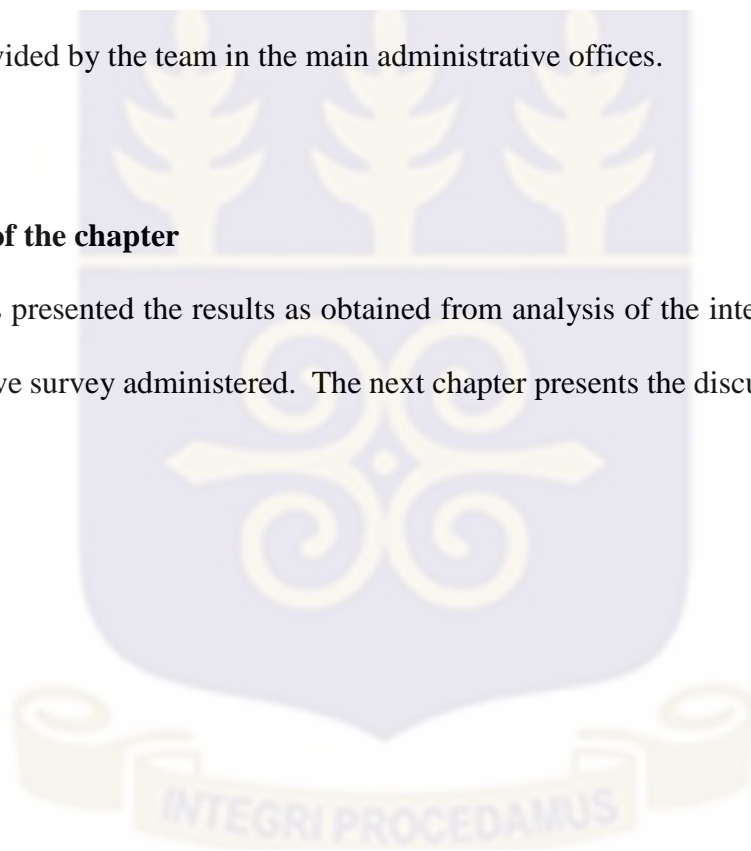
There were two rooms dedicated for healthcare service delivery at the prison, each with an area of approximately 25m². One of these rooms was dedicated to consultation, storage of patient records, equipment and medication while the other room served as the make shift ward, for short term detention. These rooms were found to be inadequate in terms of size as it could not accommodate more than one patient without breaching patient confidentiality. The rooms were however well cleaned and well ventilated.

Notably present were measuring tapes for height, weight scales, stethoscopes, a sphygmomanometer, thermometers, disposable gloves and a wash-up area. There was also direct telephone line to the administrative offices.

Notably absent were an examination couch, secure filing cabinets for notes and confidential papers, secure drug storage, emergency medications, sterile surgical dressings, surgical instruments and an appropriate waste disposal system among others. The veranda served as the waiting area, and there were no toilet facilities at the infirmary. Due to proximity to the dormitories, prisoners used the toilet facilities in the dormitories. Secretarial support, when needed was provided by the team in the main administrative offices.

4.3. Summary of the chapter

This chapter has presented the results as obtained from analysis of the interview data as well as the quantitative survey administered. The next chapter presents the discussion of the study.



CHAPTER FIVE

DISCUSSIONS

5.0. Introduction

This chapter presents the discussion of the findings of the study and show their relationship with extant literature. The discussions are presented on the basis of the findings obtained from both the qualitative and quantitative studies. It is divided into three sections.

5.1 Socio-Demographic Characteristics of the study population

Age

It was observed that majority of the inmates were aged less than 45 years; this concurs with findings in literature that most incarcerated persons are younger men, although worldwide the number of older persons who are incarcerated is increasing

On bivariate analysis, there was no association between age and access to healthcare contrary to findings in Literature that, access to health is related to age, which reported that age was related individually and independently with access problem when controlled for race and other sociodemographic factors and the elderly have poorer access to quality health (Fitzpatrick *et al.*, 2014). This finding in literature can be attributed to the increasing morbidity in the elderly population, which negatively affects their access to quality healthcare. A second explanation is that most prisons are built for younger inmates, with very little consideration made for older ones, until recent times (Ginn, 2012)

The finding in this study was likely due to the relative fewer numbers of older inmates, thereby affecting the power of the study.

Marital status

Majority of respondents (110) were married or cohabiting and only a few were divorced (7) or widowed (3). Analysis did not yield a significant association between marital status and access to health. Again, this does not concur with research which associates marital status with improved access to healthcare (Ginn, 2012). This was because marital status provided improved social support which contributed to improved overall access to healthcare. Inmates in this Prison however rated financial support from family members as poor or moderate. Majority of inmates, 101 (50.5%) were neutral when asked about family support with only 51 (26.5%) agreeing or strongly agreeing to family financial support in seeking health. The dissociation between marital status and access to health could therefore be attributed to the lack of social support, which is usually protective.

Education Status

This study showed that majority of inmates had a junior secondary education or lower. This was similar to the findings at Kumasi Female Prisons (Sarpong *et al.*, 2015).

Although literature has it that an individual's education level is associated with increased access to health, this study failed to yield an association between an inmate's level of education and their access to health (Mwanyangala *et al.*, 2010).

These researchers noted that, inmates with no formal education rated their health provision higher in quality than those with a higher educational background (Sarpong *et al.*, 2015).

Generally, it has also been found that a higher educational status improves access to healthcare because education improves the ability of an individual to inform himself about their health condition (Ginn, 2012). A higher educational level is also associated with a higher socioeconomic status (Ginn, 2012).

This difference in the results is possibly due to the fact that inmates while incarcerated have fewer means of informing themselves about their health conditions and also probably due to the lack of social or family support.

Employment/Occupation

The three bands of employment used in this study were employed, self-employed and unemployed. The employed category comprised of people in the formal sector such as public servants whereas the self-employed category referred to in the informal sector such as artisans. It was noted that majority of inmates had been self-employed prior to incarceration. It is known that most informal workers earn less than the threshold for personal income (Sarpong et al, 2015).

Employment prior to incarceration also did not have an association with access. This could also be attributed to the lack of family financial support since inmates in prison are not gainfully employed (Ginn, 2012).

Ethnicity

It was noted from the results that all respondents were Ghanaian, with the majority of respondents being Akan. There was no association between ethnicity and access, contrary to findings in literature, which associates ethnicity with access to care amongst the incarcerated and the general population (Mauer, 2011). However, these studies compared access different races in the United States, which are known to have differences in access to Healthcare (Binswanger et al, 2015).

The disparity in the findings is likely due to the fact that all respondents were Ghanaian and black, hence affecting the power of the study.

Religion

Religion was found to be linked with access to healthcare with Muslims and inmates practicing other religions having reduced odds of having high or moderate access to healthcare. This concurs with findings by some researchers who notice that religious people were more likely to have improved access to health, due to their coping mechanisms, and shaping of their health seeking behaviours (Padela et al, 2013).

It is estimated that about 95% of incarcerated people will eventually return to the communities they came from, including those with poor health and infectious diseases (MUNUC, 2017). The challenge is also that even while incarcerated, these prisoners engage with other non-incarcerated persons such as prison officers and other prison staff, family, during visiting hours, among others. In Ghana, many of the prisons are not secluded and many like the James Camp Prison are located in the heart of urban centres. Thus, the lack of adequate health care in prisons is a public health issue, not just isolated behind bars (MUNUC, 2017).

5.2 Access to healthcare by the Inmates

From this study, it was noted that overall access to health was poor; most inmates rated access as poor and the remainder rated it as moderate. No inmate rated the access to healthcare in the Prison as high.

This finding concurs with a study that examined accessibility to health care facilities in Montreal from the perspective of prisoners, and found that accessibility to health care was lower in Montreal Island among the prisoners (Antonio *et al.*, 2010). The results from this study may be attributed to several factors such as perception and theories. One theory is the hardiness theory (Bushy, 2000). Bushy (2000), defines hardiness as the state of being hardy; a capacity

for sustaining hardship and the capability of surviving under unfavourable conditions; courage; boldness; and audacity.

It is known that prison inmates delay seeking healthcare (hardiness theory); with the first onset of symptoms resulting in deteriorating condition by the time health care is eventually sought (Weinert & Long, 1990). This hardiness theory may account for a sicker population among the prisoners, resulting in an increased risk of vulnerability for some prison populations (Allison, 2005).

There were contrasting findings in the individual indicators used to measure Access. *Accessibility* was assessed based on proximity to health facility as well as availability of health services at any time. This was generally rated favourably with 96 inmates rating accessibility as moderate and 69 rated it as high. This is not surprising as the health facility of James Camp Prison is on the same premises as the inmates' dormitories. The shift system ran by the health Providers also ensure that, for majority of the day, there is access to a health provider and by extension the facility.

Availability was assessed by asking the inmates to rate the quality of drugs available, the existence of a variety of services and ease of referrals. It was generally rated unfavourably as majority (92) of respondents rated it as moderate, 70 as low. This is explained further by the qualitative interviews which noted the absence of quality drugs, and a limitation in the number of services provided by the facility due to lack of skilled personnel and a lack of basic equipment.

Affordability of health Services rated the lowest by inmates and contributed significantly to the overall poor rating of Access to Healthcare. It was found that many inmates lacked family

support, and finances were provided mainly by the Prison Service. This finding was congruous with findings from literature which noted that generally poorer people had reduced access to healthcare especially in the absence of social support systems (Peters *et al.*,2008).

Acceptability dimension assessed the health provider characteristics such as compassion, honesty and confidentiality and was rated the highest, compared to the four other dimension. This emphasizes the role of health provider attitude on access to healthcare and quality of healthcare. In this study, it can be concluded that health provider attitude to inmates was generally good and this informed their perception of access to healthcare. This finding resonate well with the findings of a study, which applied both quantitative and qualitative approaches to examine consumers' perspectives of health care and found that lack of comfort with providers was a major barrier to access of health care services (Higgs, Bayne & Murph 2001). It also emphasizes the importance of health provider attitude in inmates' perception of access and quality of Healthcare.

Adequacy of a service assessed Patient-Health Provider contact time, and waiting time to see a health provider and for referral. The responses in this dimension were mostly moderate. This resonates with findings in literature that longer waiting time at a facility prior to receiving medical attention was a barrier to access in the unincarcerated population and is further explained by the qualitative findings of the bureaucracy involved in obtaining an external referral (Ahalt, 2014).

5.2.1 Quality of Healthcare

The SERVQUAL instrument was adapted to determine quality in this study mainly because of its focus on clients' perspective of quality and its focus on attributes and attitudes of the health providers.

This study found that inmates' expectations generally outweighed their perceptions, meaning that there was an overall lower quality than expected. The gaps showed that for the individual dimensions in terms of quality, tangibles dimension was ranked highest since it had the least gap, followed by reliability, assurance and empathy, with the responsiveness dimension having the lowest rating of quality.

Tangibles/tangibility dimension was rated as the most quality with the lowest overall gap score for the neatness and disciplined nature of the prison health providers. This was quite in contrast with findings in the literature where in many developing countries, the tangibles dimension received the highest gap score (Yousapronpaiboon, 2014). This is however, not unexpected due to the fact that all health providers were Prison Officers and required to present a certain way as per the standards of the service. They should therefore, be commended and encouraged.

However, still in the tangibles dimension, presence of modern equipment and good toilet facilities had some of the lowest gap scores (01.49 and -1.53 respectively). These findings were confirmed by the interviews and observational checklists done and also confirmed findings in the literature, which emphasized the use of modern equipment as an indicator of quality (Yusof *et al.*, 2012).

Responsiveness was rated the lowest quality with the greatest gap score overall weighting it the poorest or least quality dimension (1.46). Two variables under the responsiveness

dimension; prompt service delivery and communication of health information received had the overall greatest individual gap as well (1.53). This is supportive of findings in the literature that patients' perceptions of the quality of the healthcare they received were highly dependent on the quality of their interactions and information received from health providers (Ha & Longnecker, 2010). Longer waiting times to access health care has been associated with overall perception of lower health quality and also seen as a barrier to access (Ahalt, 2014).

Assurance assesses the accuracy of the health service provided and to a large extent, the competence of the health provider and the health providers' ability to inspire trust and confidence. The gap recorded in this dimension was 1.22 and this is a considerable gap. This finding is consistent with findings in the literature as a predictor of quality (Yusof *et al.*, 2012). This gap could be minimized by improving skills of health providers through continuous training so they could provide more quality service. This is further confirmed by the qualitative results, which showed that many health providers did not perceive themselves skilled enough to handle some complaints by prisoners.

The empathy dimension had the second highest average expectation (4.78) and perception (3.55) indicating the value inmates placed on empathy factors as a determinant of quality. This is similar to findings in the literature, which says that empathy, which is the approach to the patient, has an implication for the quality of healthcare (Karydis, 2001).

Reliability had the second lowest gap score, consistent with findings in the literature that it is an important predictor of quality of care (Yusof *et al.*, 2012).

5.2.2 Influence of Health System Factors on access to quality healthcare

For this study, the prison health System was considered as a health system, with the elements as described by the WHO frame work. This section therefore discusses the health system factors affecting quality of care while relating it to the WHO framework for health systems. This has a similarity with the theoretical perspective of health systems thinking and innovation (Atun, 2012).

Health Workforce

This refers to the human resource component of the health system.

Competence can be defined as the ability to perform a specific task in a manner that yields desirable outcomes - it refers to the knowledge skill and abilities of the healthcare provider (Kak, Burkhalter, & Cooper, 2001). Capacity and skill of the health providers (HPs) was investigated to ascertain the extent to which the health personnel themselves felt able to provide health services to a sick inmate. Among the health workers interviewed, 2/5 staff (40%) felt that they were adequately trained for their job while the remaining felt they would benefit from more training.

Some health providers indicated that, although they were willing, certain treatments could not be performed because of their lack of capacity and expertise. This assessment was attributed to loss of experience with certain procedures and equipment and further worsened by a lack of opportunities for training or continuous education. This they suggest contributed significantly to them rendering poorer quality health services. This corresponds with findings in the literature, which directly relates lack of skill, or competence to overall poor service delivery and worse patient outcomes (Das, Hammer, & Leonard, 2008).

Although the health workers generally agreed that their numbers were sufficient, one health worker surmised that as a result of the lack of adequate skills, the effective number of qualified health workers was less than the workload. This introduced the issue of inadequate numbers of staff, in this case skilled staff. The study showed that the reduced number of qualified health workers placed an excessive demand on the few qualified ones, which in their view led to them delivering poor quality health services. This has been well demonstrated in literature (Mosadeghrad, 2014). (Mosadeghrad, 2014), suggests that the quantity and quality of healthcare providers affect the quality of services; and adequate numbers of high-quality providers are critical to producing high-quality outcomes.

Another issue that was raised was the remuneration of health workers, which was affecting their morale. All agreed that they were placed at risks that were unrecognized by the service while other prison health workers were paid more. This perception of risk is not unfounded. Indeed, it has been well documented that there is a probable occupation-related transmission of certain infectious diseases (Adjei *et al*, 2008). It is also known that poor remuneration reduces health worker motivation and output and subsequently, reduces the quality of healthcare provided (Alhassan *et al.*, 2013; Vujicic, 2009).

Health Information and Research

A well-functioning health information system is one that ensures the production, analysis, dissemination and use of reliable and timely information on health determinants, health systems performance and health status (WHO, 2018). It was identified that although contrary to prison policy, inmates were not being transferred with medical certificates. The system in use at the prison for recording and storing inmates' health information was generally poor, and this

according to the health providers impacted negatively on the quality of care they could give to inmates.

All health providers and administrators bemoaned the lack of folders for individual inmates. The observational checklist also noted a lack of a secure filing cabinet for patient records. Although there were good records kept for morbidity referrals, which were returned periodically to the headquarters, it appeared that this was not enough. The main problems cited by the providers was their inability to trace patient histories, and poor continuity of care within the prison, with the referral facility and finally when released. This contributed to a poorer quality of healthcare provided to inmates. This conclusion suggests the need to consider the findings in the literature that a good patient information system is necessary for effective patient diagnosis and treatment (Ledikwe et al., 2014; WHO, 2010).

Medical Products and Technology

A well-functioning health system ensures equitable access to essential medical products, vaccines and technologies of assured quality, safety, efficacy and cost-effectiveness, and their scientifically sound and cost-effective use (WHO, 2018). It was ascertained from the qualitative results that a major challenge in providing quality health services to the inmates was a lack of basic equipment and supplies. Availability of resources affects the quality of medical services. Lack of medical equipment and supplies is a well-established barrier to access to care and has been linked with poorer health service quality and overall poorer health (Mosadeghrad, 2014). This was confirmed by the results of the observation checklist, which noted the absence of sterile surgical dressings, surgical instruments, appropriate waste disposal system and a secure storage for medications. Many essential medicines were also absent as were emergency drugs.

This was attributed to the fact that most medications were obtained from donations from some organizations. The disadvantage of this method of obtaining medications they noted was that many drugs were near expiry or expired at donation. In effect, there is an inadequate supply of medications, basic equipment and supplies. This is known to be a direct cause of poor quality of healthcare as observed by the health workers similar to what has been documented earlier (Mosadeghrad, 2014).

Health Financing

A good health financing system raises adequate funds for health, in ways that ensure people can use needed services, and are protected from financial catastrophe or impoverishment associated with having to pay for them (WHO, 2018).

The study revealed a great gap or deficiency in the health financing aspect of the prison health system as all administrators agreed that financing for the health of inmates were grossly inadequate. All inmates were registered under the health insurance scheme and were exempted from paying premiums. This is in accordance with recent provisions made by the Government of Ghana in collaboration with the National Health Insurance Authority (NHIA) and the Ghana Prison Service for all prison inmates in the county (Safo, 2017).

The prison officers interviewed asserted that enrolment of inmates onto the NHIS had helped improve financial access to care because it allows for the inmates to get certain services such as registration for free. However, there are limits to the services provided under NHIS as indicated in earlier studies (Aryeetey, Nonvignon, Amissah, Buckle, & Aikins, 2016). The supplementary financial support from the Headquarters of the Prison Service was noted to be insufficient and untimely, leading to less quality healthcare for inmates.

There was also a perceived overdependence on philanthropy and the good will of people and organizations for health provision, leading to poor quality healthcare. These findings were confirmed by the quantitative data, which rated financial access or affordability as the greatest barrier to access (61%). It is known from literature how important it is for health systems to have a definite way of obtaining adequate funds for health to ensure its sustainability and efficiency, thus, an adequate health financing system is imperative to provision of quality accessible healthcare (Etiaba, Okwuosa, Envuladu, & Onwujekwe, 2015).

Health Service Delivery

The study found that there was no medical screening when a patient was transferred to the prison although this is a requirement by the UN and the Ghana Prison Service (GPS) (UNDP, 2018). This was attributed to the lack of funding, test kits and high prisoner health provider ratio at the time of transfer. The fact was that inmates were transferred without health certificates, relying often on inmates to report illnesses. However, denial of medical illnesses, especially chronic and infectious ones, is well documented as a reason for delayed reporting, treatment and compliance with medications (Wringe *et al.*, 2009). It is also known that there is a higher burden of diseases among incarcerated persons than the general population (Flanigan *et al.*, 2009). All these factors contribute to poor healthcare quality amongst inmates. They also identified a great gap in disease surveillance, which could potentially affect the outcome of national programmes.

The observed increased rate of external reviews and referrals were thought to lead to reduced quality of care. This was a side effect of inadequate health services provided at the facility and lack of skilled health workers in the facility – a similar observation has been made (Mosadehrad, 2014). This increased rate of referrals could have a possible side effect of increasing transmission of certain communicable diseases.

The findings of this study correspond with the theoretical framework applied in this study. It would be recalled that some analysts have explained that the interacting elements of health systems influence each other with positive (amplifying) or negative (balancing) feedback, collectively determining the system's behaviour (Senge, 1990; Atun, 2012). This argues that there is an imperative need for health policy makers and the prisons' authorities to see the prisons health care system as part of the entire health care dynamic system such that there would be the need for an integrated approach to ensure that the entire health care system achieves set objectives in response to the primary health care concept (Ministry of Health, 2018).

There is an inter play among all the above-mentioned factors, leading to the overall poor quality of health observed among inmates.

Summary of the chapter

This chapter has analysed the findings of the study and their relationship with existing literature. The next chapter presents the summary, conclusion and recommendations of the study.

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.0. Introduction

This chapter presents the summary of the study in relation to the general objective, the conclusions in relation to the specific objectives, contribution to knowledge, recommendations, limitations to the study and future research.

6.1. Summary of the study

This study was done to examine factors influencing access to quality healthcare by inmates of the James Camp Male Prisons in Accra. Both quantitative and qualitative research strategies were adopted to examine the factors, including prisoners' perceptions of access to quality healthcare and an exploration of the health system factors from the perspectives of administrators and health workers at the infirmary of the prisons. The study's conclusion was that access to healthcare was poor as the inmates rated the overall healthcare quality as poor, including health system challenges confronting the healthcare workers and administrators in their attempt to deliver quality healthcare.

6.2. Conclusions of the Study

Apart from religion ($p < 0.039$), no other client/prisoner factors were found to have an influence on the inmate's access to health. A similar conclusion was found where religious people were more likely to have improved access to health, due to their coping mechanisms, and shaping of their health seeking behaviours (Padela *et al.*, 2013).

The study concludes that overall, access to healthcare was rated poor to moderate with the greatest barrier to access being affordability of health services. The study argues based on the gap analysis done between inmate expectations and perceptions of health provider factors to determine quality that there was an overall negative gap due to expectations exceeding the perception (1.24). The greatest gap was in the responsiveness dimension (1.46) with the lowest gap in the tangibles dimension (1.09).

This conclusion is supported by other studies done in other prisons (Antonio *et al.*, 2010).

The quantitative findings that health system factors such as inadequate funding for health services, lack of skilled personnel and a paucity of essential medical supplies and drugs negatively affected the quality of healthcare provided to inmates were confirmed by the qualitative study. There were: unavailability of adequate health facilities in the prison, incomplete use of medical examination and health certificates, poor medical records system, lack of skilled health personnel, inadequate supply of medical equipment, supplies and drugs, problems with referrals and external reviews, and selective remuneration and welfare packages for health workers due to administrative structure of the prison service. The national health insurance scheme was also found to be the financing options for prisoners' access to free health care with supplementation from the Ghana Prison Service. This is congruous with results of the study that documented health system factors that contribute to reduced quality of health and suggested remedies to improve them (Mosadehgrad, 2014)

6.3. Contribution to knowledge

The study's contribution to existing knowledge in the field of study has been explained below. The findings of this study are relevant for policy makers, prison authorities and practitioners in the health sector. It would be recalled that the health sector of Ghana seeks to provide

healthcare that is of quality to all citizens and residents in the country. It was against this background that the national health insurance scheme was introduced to ensure financial access to healthcare (Agyepong *et al.*, 2016). Even though the government has made efforts to provide healthcare to people who are incarcerated by providing infirmaries in the prisons, the evidence in this study suggests that these are inadequately resourced in terms of human, material and financial resources. The study findings provide a platform for health policy makers and the prison authorities to consider strategies that would enhance effective referral system between the prison healthcare set-up and the other health institutions in both the public and quasi-government health institutions. This would be possible if the health policy makers and the prison authorities link up resources to ensure the upgrade of both the facilities and human resources of the prisons' healthcare system.

6.4. Recommendations

From the results of the study, the following recommendations have been made towards enhancing the provision of quality healthcare to the prison population. These have been presented in line with the key stakeholders:

Recommendations to the Ministry of Health/ Ghana Health Service

The following are recommended for consideration by the policy makers in the health sector:

1. The Ministry of Health and Ghana Health Service should in collaboration with the Ghana Prison Service develop a health policy for prisoners, which will suggest sources of health service financing. The responsibility of funding healthcare for prisoners should be shifted from the Ghana Prison Service to the government of Ghana via the Ministry of Health in order to ensure equity in access to healthcare.

2. Collaboration should be made with certain local hospitals to provide regular scheduled physician and nurse visits to the prison to provide healthcare for inmates.

Recommendations to the Ghana Prison Service

The following are recommended for consideration by the authorities of the Ghana Prison Service:

1. Recruitment of more well trained health workers into the Ghana Prison Service should be prioritized.
2. In-service training for existing health staff should be made a priority as well. This should include but not be limited to general health training, education on human rights of the prisoner as well as training on prisoner specific issues such as drug use and abuse, addiction etc.
3. The infirmary must be equipped with essential medications, supplies and equipment to reduce the external referral rates and its associated risks. The ruled regarding medical examination and issuance of health certificates should be vigorously enforced.

Recommendations to Prison Health Providers

The following are recommended for consideration by the prison healthcare providers:

1. Health providers should seek opportunities for further training and skill acquisition to improve service delivery to prisoners.

2. Health workers should endeavour to conduct thorough examinations of prisoners at the time of transfer and also at release.

3. Health workers should also ensure proper documentation and record keeping to ensure continuity of care.

Recommendations for Inmates

The following are recommended for consideration by the prison inmates:

1. Inmates should educate themselves of their rights to health, in order to ensure safe and healthy conditions while in prison.

6.5. Limitations to the Study

The limitations to the study were encountered with respect to the limited facilities available and the number of healthcare workers and prison administrators available also impeded the achievement of varied views of healthcare professionals and prison administrators.

6.6. Future Research

In order to improve on the studies related to the health of prisoner populations, it is suggested that future studies should increase the sample size and number of prisons, including the bigger ones in the country such as the Nsawam Prisons. Research into health conditions affecting prisoners, their access to health and their quality of health should be conducted regularly to reduce their burden of disease and improve their overall health status. In addition, research should be conducted regularly into the health of prisons and the quality of health accessible to them.

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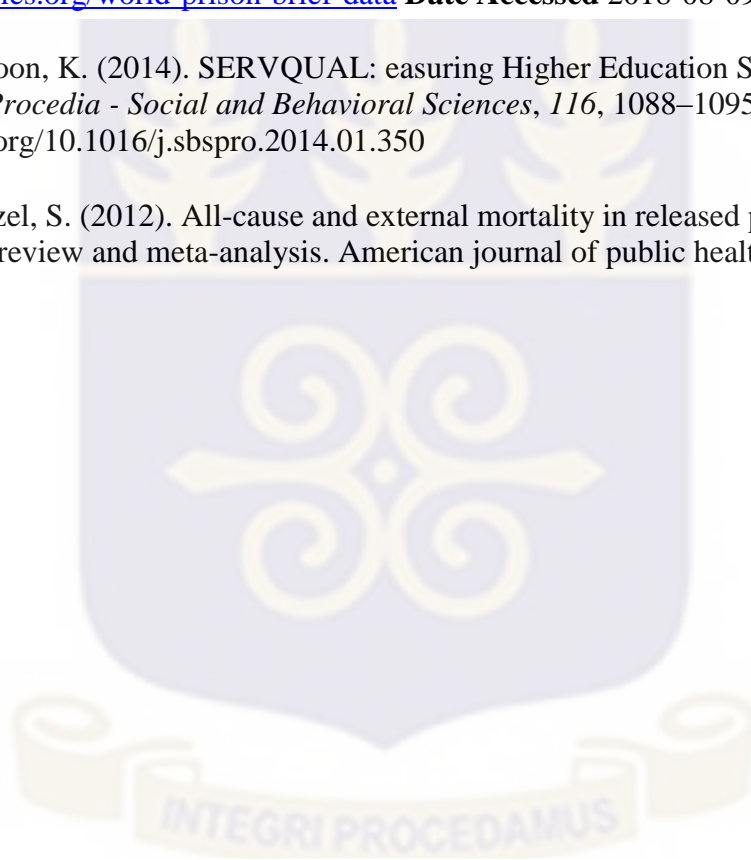
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APPENDICES

Appendix A: Participant's Consent

Title: Assessment of factors influencing access to quality healthcare among inmates in the James Camp Prisons, Greater Accra

Institution affiliation

Department of Health Policy, Planning and Management: School of Public Health, College of Health Sciences, University of Ghana, Legon.

Background

Dear participant, my name is Terrylyna Baffoe-Bonnie. I am a student from the School of Public Health, University of Ghana. I am conducting a study on how healthcare is accessed in James Camp Prison and what level of quality exists in the prison. The purpose of this study is to assess the factors that influence healthcare quality and access in this Prison. This study would be conducted from May to July 2018, and study participants would include all inmates of the James Camp Prison.

Procedure

Study participants will be asked to answer questions from a questionnaire about their demographic characteristics, how healthcare is accessed, and the challenges with accessing healthcare. This will take about 15 minutes. Your participation in this study will be appreciated. This is purely an academic research which forms part of my work for the award of a Master's degree.

Risks and Benefits

The procedure will not cause any discomfort to participants. The results of the study will provide evidence and guidelines for future policy interventions.

Compensation/ Payment

There are no incentives/ payment for participating in this study.

Right to refuse

Participation in this study is voluntary and you can choose not to answer any individual question or all questions. You are at liberty to withdraw from the study at any time. However, I will encourage your full participation since your response is important to making

Anonymity and confidentiality

I would like to assure you that whatever information you will provide will be taken in strict confidence and will be used purely for research purposes. Your responses will not be shared with anybody who is not part of the study team.

Consent

I, declare that I have read the foregoing information, or it has been read to me. The purpose, procedures risks and benefits of the study have been thoroughly explained to me and I have understood. I have also had the opportunity to ask questions about it and any question I have asked have been answered to my satisfaction. I consent voluntarily to participate as a subject in this study and understand that I have the right to withdraw from the study at any time. I hereby agree to answer the questionnaire.

Signature / thumbprint of participant..... Date/...../.....

Interviewer’s statement

I, the undersigned, have explained this consent form to the respondent and he/she understands the purpose and procedures to be followed as well as the risks and benefits involved. The respondent has freely agreed to participate in the study.

Signature of interviewer..... Date..... /...../.....

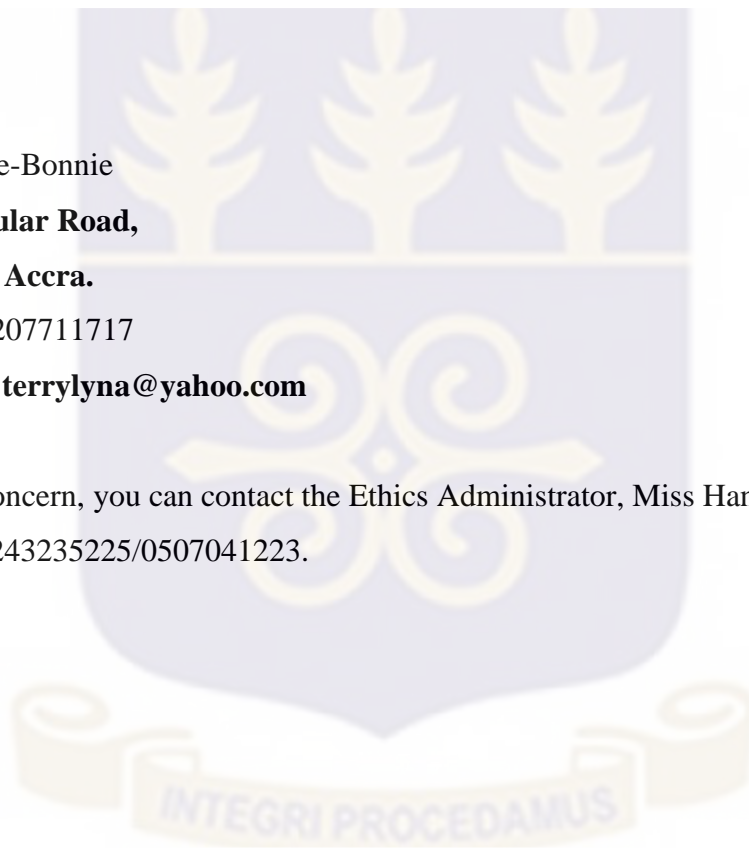
Address

Terrylyna Baffoe-Bonnie
**No.14, 2nd Circular Road,
Cantonments – Accra.**

Tel Number: 0207711717

Email address: terrylyna@yahoo.com

In case of any concern, you can contact the Ethics Administrator, Miss Hannah Crimping, GHS/ERC on 0243235225/0507041223.



QUESTIONNAIRES

School of Public Health

College of Health Sciences

University of Ghana

Appendix B: Semi-Structured Interview Guide for Health Providers

Name/Initials of health worker:

Sex:

Position/Rank:

Qualification / Training:

Speciality:

Employment status: Fulltime/Part-time/Voluntary

Duration of Employment/Voluntarism:

Availability of health facilities in the Prison

Please, would you indicate to me how in the event of admission, prisoners are given a medical examination by a physician or a fully qualified nurse?

Please, would you indicate to me how in the event of release, prisoners are given a medical examination by a physician or a fully qualified nurse?

Could you please explain to me how the infirmary maintains medical files of all prisoners separately from the general files (e.g. in a health centre) as well as a record of illnesses and number and causes of deaths in custody?

Qualified health personnel

Please do you consider yourself well equipped, in terms of qualification/ training to provide quality healthcare to this population?

Is there sufficient staff to handle the workload?

Please do you undergo regular in service training?

Medical equipment and Supplies

Please, would you be able to explain to me the extent to which the availability of equipment/ drugs affects your ability to provide quality health service?

Please, could you indicate to me whether there are sufficient medical supplies available in the prison, and are administered in line with national health policies?

Financing Options for Prisoners' Health Care

1. Please, would you be able to explain to me whether healthcare services are provided free of charge to the prisoners?

2. Please, could indicate to me the available sources of funding for healthcare at James Camp Prisons?

3. Please, would discuss with me how prisoners pay for the health services provided and how this affects their ability to access health services?

4. Could you please describe how you are remunerated as health workers in this prison?

Relationship between Prisons Healthcare System and Overall Healthcare System

1. Please, would you help me to understand how in the event of referral to an external facility, what factors determine when a patient accesses care?

2. Please, would you be able to tell me some of the factors influencing access to quality healthcare in the referral centre?

Challenges to Provision of Quality Healthcare in the Prison

1. Could you please discuss with me some of the main obstacles to delivering of quality healthcare at this prison?

**School of Public Health
College of Health Sciences
University of Ghana**

Appendix C: Semi-Structured Interview Guide for Prisons Administrator

Name/Initials of Administrator:

Position/Rank

Duration of Employment:

Health Care Provision in the Prison

1. Could you please explain to me how the prison administration maintains medical files of all prisoners separately from the general files (e.g. in a health centre) as well as a record of illnesses and number and causes of deaths in custody?
2. Please, would you indicate to me how in the event of admission, prisoners are given a medical examination by a physician or a fully qualified nurse?
3. Could you please explain to me how you get qualified healthcare staff to visit all prisoners in need of medical attention on a daily basis?
4. Please, would you be able to explain to me the extent to which the availability of equipment/ drugs/ competent health workers affects your ability to provide quality health service?
4. Please, could you indicate to me whether there are sufficient medical supplies available in the prison, and are administered in line with national health policies?

Relationship between Prisons Healthcare System and Overall Healthcare System

1. Please, would you help me to understand how in the event of referral to an external facility, what factors determine when a patient accesses care?
2. Please, would you be able to tell me some of the factors influencing access to quality healthcare in the referral centre?

Financing Prisoners' Health Care

1. Please, would you be able to explain to me whether healthcare services are provided free of charge to the prisoners?
2. Please, could indicate to me the available sources of funding for healthcare at James Camp Prisons?
3. Please, would discuss with me how prisoners pay for the health services provided?

4. Please, could discuss with me how this affects their ability to access health services?



Appendix D: Patients' Questionnaire

I would please like to take a few minutes of your precious time to answer these questions as candidly as possible. Your responses remain confidential and reports resulting from this research will in no way contain data that may possibly identify you.

Please answer each item by marking the appropriate box with \surd .

SECTION A: Demographic and Medical History

1. Age in years

2. Educational Level:
 - a. Tertiary
 - b. SH S
 - c. JHS
 - d. Primary

1. What is your marital status?
 - a. Married
 - b. Single
 - c. Divorced
 - d. Widowed
 - e. Cohabiting

2. What is your religion?
 - a. Christianity
 - b. Islam
 - c. Traditionalist
 - d. Other

3. Occupation (prior to Incarceration)
 - a. civil Servant
 - b. Public Servant
 - c. Artisan
 - d. Trader
 - e. other
 - f. Unemployed

4. Ethnicity
 1. Akan
 2. Ewe
 3. Ga
 4. Northern Extraction
 5. Other

Incarceration history:

- a. How long have you been incarcerated?
- b. How long have you been in this Prison?
- c. Which was your first prison?

Social history

- a. Do you smoke?
 Yes Often Sometimes No
- b. Do you take alcohol?

Yes Often Sometimes No

c. Do you use any other drug?

Yes Often Sometimes No

Medical History

a. Were you subjected to a physical /medical screening at the start of imprisonment?

Yes No

b. If yes, were you informed of any medical issues?

Yes No

c. Do you have any chronic illnesses for which you take medications? Yes No

d. Were you diagnosed before or during incarceration? Before After N/A

e. What is the main source through which you receive medical attention?

Prison Infirmary Local Hospital Medical Outreach
Other.....

f. Have you been sick during incarceration? Yes NO

g. Have you ever accessed healthcare at the Prison Infirmary? Yes No



SECTION B: ACCESS TO CARE	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Acceptability					
Health Providers (HPs) show compassion and are supportive to patients	1	2	3	4	5
HPs are trust-worthy and honest	1	2	3	4	5
HPs Receive patients well and listen to patients adequately	1	2	3	4	5
There is confidentiality and Privacy	1	2	3	4	5
Accessibility					
Considerations are made for disabled persons	1	2	3	4	5
Healthcare is accessible at anytime	1	2	3	4	5
Distance to the health facility is within reach	1	2	3	4	5
Adequacy					
Waiting time for consultation is not too long	1	2	3	4	5
In the event of Referral to external facility waiting time is not too long	1	2	3	4	5
Clinicians allow sufficient time for patients	1	2	3	4	5
Availability					
Clinicians make a good diagnosis	1	2	3	4	5
Treatment is effective for recovery and cure	1	2	3	4	5
Quality Drugs are available	1	2	3	4	5
A wide range of services are available at the health facility.	1	2	3	4	5
When needed, referral is readily arranged.	1	2	3	4	5
Affordability					
Health Services are covered by NHIS	1	2	3	4	5
Costs of services are affordable to me	1	2	3	4	5
Financial support is made available by family	1	2	3	4	5

Section C: EXPECTATIONS						
Tangibility		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
E1.	Health Providers (HPs) should be disciplined and neat	1	2	3	4	5
E2.	The facilities should be visually appealing and comfortable.	1	2	3	4	5
E3	There should be modern and up to date equipment.	1	2	3	4	5
E4	There should be good Toilet Facilities.	1	2	3	4	5
Reliability						
E5	Health services should be provided at the time promised.	1	2	3	4	5
E6	There should be Availability of sufficient HPs.	1	2	3	4	5
E7	HPs should be willing to listen carefully and help patients.	1	2	3	4	5
Responsiveness						
E8	HPs should Respond immediately when called.	1	2	3	4	5
E9	I should be able to receive prompt service without an appointment.	1	2	3	4	5
E10	I expect to be Given adequate information about health condition.	1	2	3	4	5
E11	HPs should be friendly and polite/courteous.	1	2	3	4	5
Assurance						
E12	HPs should maintain patient confidentiality.			3	4	5
E13	The services provided should be done right the first time.	1	2	3	4	5
E14	HPs should inspire trust and confidence	1	2	3	4	5
E15	I expect to feel safe in my interaction with HPs	1	2	3	4	5
Empathy						
E16	HPs should have my best interest at heart.	1	2	3	4	5
E17	HPs should give me personal attention.	1	2	3	4	5
E18	HPs should never be too busy to respond to requests	1	2	3	4	5

SECTION D: PERCEPTIONS						
Tangibility		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
P1.	The HPs are disciplined and neat	1	2	3	4	5
P2.	The facilities are visually appealing and comfortable.	1	2	3	4	5
P3	There are modern and up to date equipment.	1	2	3	4	5
P4	There are good Toilet Facilities.	1	2	3	4	5
Reliability						
P5	Health services were provided at the time promised.	1	2	3	4	5
P6	There was availability of sufficient HPs.	1	2	3	4	5
P7	HPs are willing to listen carefully and help patients.	1	2	3	4	5
Responsiveness						
P8	HPs respond immediately when called.	1	2	3	4	5
P9	I receive prompt service without an appointment.	1	2	3	4	5
P10	I am given adequate information about health condition.	1	2	3	4	5
P11	HPs are friendly and polite/ courteous.	1	2	3	4	5
Assurance						
P12	HPs maintain patient confidentiality.	1	2	3	4	5
P13	The services provided were done right the first time.	1	2	3	4	5
P14	HPs inspire trust and confidence	1	2	3	4	5
P15	I feel safe in my interaction with health providers.	1	2	3	4	5
Empathy						
P16	HPs have my best interest at heart.	1	2	3	4	5
P17	HPs give me personal attention.	1	2	3	4	5
P18	HPs are never too busy to respond to requests	1	2	3	4	5

