

INFLUENCE OF OVERCROWDING ON CHANGE IN SEXUAL BEHAVIOUR OF INMATES IN PRISONS OF UGANDA

Damiano Kato, Miph Musoke and Robina Mirembe

Abstract

Incarceration results in a loss of many freedoms and liberty. The article examined the influence of Overcrowding on Change in Sexual Behaviour of Inmates in Prisons of Uganda. The study population included 368 inmates from 03 prisons of Uganda. The study used a mixed-methods approach. A descriptive, cross-sectional and analytical design was used. Qualitative and quantitative data was collected using a self-administered questionnaire which was administered to medic and warders, FGDs with selected inmates, in-depth interviews with prison staff and administrators. Data was analysed qualitatively and quantitatively. Social learning theory guided the study. Stratified and simple random sampling technique was employed. Cronbach alpha was used to estimate reliability and alpha of 0.7. The findings revealed that overcrowding is a social phenomenon occurring when inmates' demand for space in prison exceeds carrying capacity which was evidenced by bivariate Pearson Correlation and coefficient, r (0.466) indicating a moderate but positive relationship. Sexual behaviour was also correlated with coefficient, r (0.436) indicating a moderate and deprivation of sex was evidenced by correlation coefficient, r (0.303) indicating a small. From focus discussion and in-depth interviews 62% respondents commented that "familiarity leads to friendships that at times become close and intimacy results". It was concluded that incarceration environment directly affect sexual behaviour of inmates in prisons of Uganda and was recommended that prisoners should be given less punishment, avail conjugal visits since more prisoners are more prone to learn from the incarceration environment.

Introduction

Throughout the past four decades, rising crime rates and sentencing policy changes have led to mark shifts in correctional populations, particularly an exponential increase in the incarceration rate. The number of prisoners in federal and state facilities increased by 430% = (43% annually) between 1978 and 2009 (Carson, 2014). In 2007, UNAID reported sexual contact between men in custody to vary from a high of 73% in Brazil to between 6% and 12% in UK. Although prison building has become a major

industry, the expensive endeavour of building new facilities has been unable to stem the growth of overcrowding in American prisons (Vaughn, 1993).

Overcrowding occurs when the rate at which people are incarcerated exceeds the rate at which other prisoners are released or die thereby freeing up prison space. Sexual abuse and sexual behaviour of inmates in prisons has a direct relationship with overcrowding in prison (Carson and Golinelli, 2014). Overcrowding and sexual behaviour are interrelated in yielding poor health conditions such as HCV, HIV and TB among prisoners.

Prisoners go to jail to be punished for offending society and not to get infectious diseases. Health care equivalent to that found outside prison must be provided to these individuals.

The number of prisoners in federal and state facilities increased by 430% = (43% annually) between 1978 and 2009 (Carson, 2014). Although prison building has become a major industry, the expensive endeavour of building new facilities has been unable to stem the growth of overcrowding in American prisons (Vaughn, 1993). As discussed in the National Research Council's report on the causes and consequences of mass incarceration, beginning in 1973, incarceration was required for less serious offenses, time served increased for violent offenses and for habitual offenders, and drug crimes were more harshly punished (Travis *et al.*, 2014).

According to Ristroph, (2016), high incarceration rates are generally associated with crime rates globally. The United States of America and Canada actually have the highest overall crime rates in the world. That largely has to do with reports of theft and other crimes in major cities. The country in Central America has the highest murder rate in the world, with more than 90 homicides per 100,000 people, compared to the average of 6.2 percent, according to the United Nations Office on Drugs and Crimes (Woodredge, 2009).

Inmate behaviour has been studied using different theories as deprivation theory, importation, situational, criminology and social learning theories. The study was guided by the Social Learning Theory which postulates that human behaviour is in continuous reciprocal interaction between cognitive, behaviour through learning and copying (Bandura, (1997).

Incarceration environment sometimes called prison environment means the state of being confined in prison; imprisonment and the public would not be served by her incarceration. Shock incarceration, often referred to as shock is a boot-camp, military style prison that focuses on giving the offenders independence and structure as well as promoting responsibility in a learning environment Ristroph, (2016). Prison environment is confined, cramped, and really dangerous.

The incarcerated inmates in Ugandan prisons face years of confinement in often cramped and dirty quarters, with insufficient food allocations, inadequate hygiene, and little or no clothing or other amenities. (Uganda Prisons Service Strategic Investment Plan II 2010/11-2015/16).

In Uganda, resource scarcity at several levels of the government authorities like justice system results in prison overcrowding. These practices have led to the increase in pre-trial detainees and remand prisoners who comprise the vast majority of many youths increasing in the prison populations (Achieng, 2008). In addition to disease, Luzira, Kigo and Kasangati prisoners also suffer disproportionately from abnormal deaths (Kibuka, 2001).

Statement of The Problem

Sexual health of inmates remains a priority in low and middle income countries. However, little is known about prisoners' sexual behaviour and sexual health (Simooya 2010). While scholarly work examining sexual behaviours of inmates is beginning to emerge, very little work to date explores the relationships between the incarceration environments and sexual activities of inmates. (Vagghn, 1993) The study therefore seeks to fill this significant gap. The study focused on two elements of the incarceration environment: prison overcrowding and prison sub-cultures (Marcum 2014). Overcrowding on sexual activities of inmates in Uganda through rising crime rates and sentencing policy changes have led to marked shifts in correctional populations, particularly an exponential increase in the incarceration rate. Therefore the need to carry out this study to establish the relationship between influences of overcrowding on sexual behaviour of inmates in Uganda.

Purpose of the Study

The primary purpose of the study based on data from three prisons in Uganda, the purpose of the study was threefold to examine relationship between incarceration environment and inmates' sexual behaviour and sexual victimization and the effects of sexual deprivation for inmates.

Objective of the Study

The study objective was to assess the influence of overcrowding on change in sexual behaviour of inmates in Uganda.

Literature Review

The literature was conceptualized with focus to explore whether overcrowding influenced sexual behaviour, sexual abuse on sexual behaviour of inmates. Protective laws, policies and programmes that is adequately resourced, monitored and enforced to improve the health and safety of prisoners as well as the community. Failure to provide prisoners with the same health care options available to the general population violates human rights and international standards. Harm Reduction Coalition (Michael, 1993).

Alexandra (1992) looks at victims of sexual assault under incarceration as being susceptible to HIV and other health and mental health consequences as a consequence of a sexual victimization inside prison; while Welch (2004) carried out a study revolving around forced sex and the concomitant fear of sexual victimization have nontrivial physical, emotional, and psychological implications..

Clearly Walker & Brodsky (1976) and Altice (2016) in their respective studies allude to behavioural change; however sexual behavioural change as a dependent variable or parameter is not considered as a consequence of incarceration, hence the need to conduct a study to bridge this gap.

A report by Schill & Marcus (1998) on an evaluation by CDC of behaviour changes among homosexual or bisexual incarcerated men involving anal sex with non-steady partners without use of a condom. It is the view of the researcher that this study into sexual behaviour fell short of considering whether this change in sexual behaviour continues even after the period of

incarceration ends. This is an aspect this study hoped to address conclusively.

The above authors in their studies sought to establish the relationship between incarceration environment and sexual behaviour of inmates. However, these were generalities and lacked specifics. This study sought to assess the effect of overcrowding, effect of sexual abuse, and effect of deprivation of sex and how they relate to sexual behaviour of inmates in the Ugandan prisons.

CONCEPTUAL FRAMEWORK

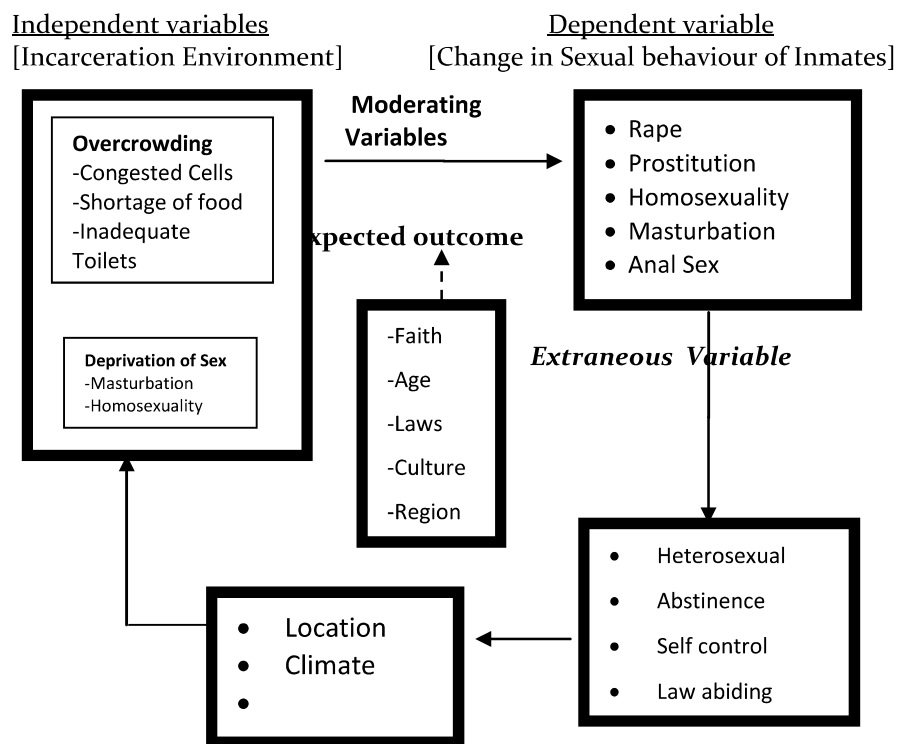


Figure 1.1: Shows the relationship between Incarceration Environment and Sexual behaviour of Inmates in prisons of Uganda.

Source: Adopted and Modified from Schalk and Dijk (2005).

The conceptual framework figure 2.1 was adopted from the views of Schalk and Dijk (2005) and tried to explain the relationship that exists between the dependent, independent and intervening variables. When all that is analysis together, create an effect on sexual behaviour of inmates in many correctional facilities (Diamond, 2008). The researcher bears in mind that all the variables mentioned, it is essentially the dependent variable (sexual behaviour of inmates) that is of the gist of this study.

Figure 2.1: Showed that five components of independent variable overcrowding, violence, sexual abuse of victimization and deprivation of sex are utilized in an attempt to extricate the relationship between overcrowding and sexual behaviour of inmates. Furthermore, these five components form the basis for formulating the questionnaire and interview guide. From the framework, the researcher considers that sexual behaviour of inmates can be affected by the independent variables.

Prison sexuality

Even though sexual behaviour during incarceration is generally considered misconduct (Wilkinson 2003), research suggests that prisoners are sexually active during imprisonment (Fleisher and Krienert 2009; Hensley 2001; Hensley and Tewksbury 2002). Prison sexuality is shaped by multiple levels of social life that are determined by mainstream culture and amplified by the characteristic subculture of correctional confinement. Moreover, various environmental, biological, psychological, and sociological factors influence sexuality in society, and these factors are further complicated by the experience of incarceration (Hensley, Tewksbury, and Koscheski, 2001; Tewksbury and West, 2000).

Conversely, incarcerates who return to free society may exhibit sexual behaviours that are largely shaped by their prior incarceration experiences. The exportation of these prison identities and practices to the general public may influence societal norms about sexuality (for example including masturbation and homosexuality; Lacombe, 2008; Smith, 2006).

Although much of the recent literature on prison sexual behaviour focuses on sexual assault (Blackburn, Mullings, and Marquart 2008; Fowler *et al.* 2010; Beck, Rantala, and Rexroat 2014; Morash *et al.* 2012; Wolff, Blitz, and Shi 2007), which may give the impression that the majority of the sexual

activity in correctional settings is coercive, this has been disputed (Fleisher and Krienert 2009).

Implications of Prison Sexuality

Sexual activity in prison is problematic for numerous reasons. First prisoners who engage in sexual activities may be at risk of contracting HIV. Second, because it is considered institutional misconduct, prison-based sexual behaviour is punishable, regardless of whether it is consensual or non-consensual, and can result in a variety of sanctions. In addition to the potential spread of infectious diseases (Wolfe et al. 2011) and institutional penalties, sexual behaviour in this environment is associated with additional negative outcomes such as violence and stigmatization (Trammell 2011; Hensley et al. 2003).

In correctional settings, sexual behaviour is often seen as a commodity that can be purchased or used to secure certain services or protection from violence (Warren et al. 2010), and the establishment of a prison sexual hierarchy ensures that vulnerable segments of the prison population are coerced into sexually submissive roles (Hensley et al. 2003; Kelly-Hanku et al. 2015).

Crowded Prisons

Gaes and McGuire (1985) confirmed that prison overcrowding is a social phenomenon occurring when the demand for space in prisons within a jurisdiction exceeds the capacity for prisoners in the place. Prison overcrowding can occur when the rate at which people are incarcerated exceeds the rate at which other prisoners are released or die, thereby freeing up prison space.

Although many negative effects of overcrowding have been identified, it does not affect all prisons uniformly and it has been reported that larger institutions with younger inmates tend to be more affected by crowding. The study only considers age and ignores other parameters like cultural background creating a gap this study plans to bridge.

Methodology

The study adopted a mixed methods approach, combining four sources of data: self-administered questionnaires, focus group discussions (FGDs), semi-structured interviews with key informants, and structured observation. The use of a mixed methods approach was intended to provide a more complex understanding of a phenomenon that would otherwise not have been accessible by using one approach alone (Creswell and Plano Clark, 2011; Morse and Niehaus, 2009).

Mixed methods research is an approach to inquiry involving collecting both quantitative and qualitative data, integrating the two forms of data. The standard philosophical underpinning of mixed methods research is pragmatism (Morgan, 2007; Tashakkori and Teddlie, 2003). Therefore, they link the choice of approach directly to the purpose of and the nature of the research questions posed (Creswell 2003).

Study Population

Inmates from the 3 prisons were eligible for participation if they met the following inclusion criteria: 1) were at least 18 years of age; 2) had been incarcerated for at least 6 months and; 3) provided written informed consent. This was because the prisons are metropolitan in nature, big government prisons and contain biggest population of inmates.

Table 3.1 Distribution of sample size

The study was conducted from three government prisons with the following population: Luzira (6078), Kigo (1913) and Kasangati (1011). Corresponding to a sample of 368 inmates obtained from a total population of 9002.

Study Sample

The study sample involved inmates from Luzira, Kigo and Kasangati Prisons in Uganda. This was because the researcher wanted to get a better representation, unbiased and relevant information.

Sampling Design

Probabilistic sampling design was used in this study. Probabilistic sampling design was used to ensure that all inmates from study Prisons were given equal chances to be selected as respondents to the study and encompassed simple random sampling.

Sampling procedure

The inmates in the sampling frame were assigned numbers according to the roster which was obtained from the prison administrator. The numbers were written on small pieces of papers which were folded, put in a box and mixed thoroughly. One by one were randomly picked from the box and the numbers were recorded for consideration as samples. This was done to avoid bias and also to give chance to each and every inmate to be picked.

However, this procedure had shortcomings as the uneducated inmates were selected and it took some more time to get the inmates because some inmates who could be randomly selected would be engaged for some duty or taken to court or at sick bay. In such an occurrence the procedure would be repeated so as to get the required number.

Sample frame and sample size

Table 1: Showing the sample frame of respondents

Prison	Prison Population			Sample		
	Male	Female	Total	Total	Male	Female
Kigo	1021	678	1699	69	42	28
Kasangati	273	152	425	17	11	6
Luziira	5347	1531	6878	281	219	63
TOTAL	6641	2361	9002	368	271	97
				%	73.6	26.4

Primary data (2017)

Data Collection

The process by which the researcher collected the necessary data needed to answer the research problem.

Data collection sources.

Primary Data

Primary data was obtained directly from the respondents in the field through the use of questionnaires, interview guides, and observation.

Secondary Data

Secondary data on the other hand was obtained from documentary review especially from Human Resource department at Ministry of Internal

Affairs HQRS. Thesis from Nkumba University, other public and private libraries with literature relevant to the research topic was analysed as secondary sources of data to supplement primary data from the survey and interviews (Amin, 2005).

Data Collection Methods and Instruments

Qualitative data collection

Qualitative research methods were used in order to gain a deeper understanding of the participants' perceptions and experiences of in-prisons sexual behaviours.

In-depth Interviews

The researcher considered 16 in-depth, semi-structured face-to-face interviews were conducted, using open-ended questions and participants were given the opportunity to freely elaborate upon their answers. The questions were focused around topics pertaining to incarceration environment, sexuality, sexual activity, social interactions, and overall health status. The interviews were conducted in private spaces by the thesis author or principal researcher. Before the interviews began, the principal researcher explained the purpose, that participation was fully voluntary, that their information would be kept confidential, and that the participants could refuse to answer a question or interrupt the interview at any time. Furthermore, permission to record the interview was also sought. The interviews took approximately one hour, and no remuneration was given for participation. After eight interviews, there was a common understanding among the co-authors that saturation had been reached as no new information continued to emerge.

Focus group Discussions

The discussion was carried out by the principal researcher and a note taker using focus group discussion guide in local languages. Tape recordings were done with the consent of the respondents and the prison authority.

Quantitative data collection

A Pre-tested anonymous and confidential self-report questionnaire was administered to 400 incarcerated males and females housed in 3 prisons in Uganda. Prisoners within these institutions were approached by a research assistant and asked to participate in a research study. Male prisoners were

invited to participate by research assistants stationed in common areas such as the reception halls and intake waiting room, study room or library and compound; female participants were recruited from their cellblocks.

Prisoners were generally responsive and this was evidenced from the majority responses from men and women that were approached agreed to participate. Due to such a high response participation, the sample was representative enough of the prison population within the facilities.

Methods

Questionnaires as a method was employed as a way of extracting responses that are expected to enrich the study. This data was raw in nature and questionnaires method was preferred because it was easy to guide the study within the defined parameters.

Interviews

Interviews as a method were employed by the researcher. This method had the advantage of containing open ended questions that could solicit wider views without losing the required details as long as the skill of the interviewer helped guide the responses without digressing.

Data collection Instruments

Questionnaire

Self Administered Questionnaires (SDA'S) were administered to 368 respondents for the express purpose of getting primary data. They were a tool of choice as they made it possible to ask specific questions that were focused with no danger of being diverted outside the area of study. The questionnaires were rather popular because the respondents were able to fill them at their own convenience and were appropriate for this sample. They also provided the respondents with privacy to freely express their feelings on the subject matter since respondents were not required to write their names on them.

Interview guide

The researcher prepared and used a semi-structured interview guide to conduct interviews with the following categories of people from prison: medics, wardens, administrators and selected prison Commissioners. Interviews were chosen because they made it easy to fully understand

someone's impression or experiences, or learn more about their answers as compared to questionnaires. According to Mugenda and Mugenda (2003), interviews are good in that they provide detailed information unlike questionnaires.

Data collection procedure

The researcher obtained an introductory letter from the University Administration which he presented to the Commissioner General, Uganda Prisons' service who authorized the researcher to interface with respondents in the prisons. The researcher had also got permission and authority letter from Uganda National Council for Science and Technology (UNCST) to allow him go for research in prisons.

Data quality control

The researcher implemented the required methods and procedures to ensure that data was collected, managed, and utilized with accuracy and precision. Data was reviewed regularly to detect missing data or information and any typographic errors.

Validity of research instruments

Validity is the extent to which the instrument truly measures what it is intended to measure (Amin, 2003; 2004). The researcher used the expert judgment of his supervisor who acted as an expert to verify the validity of the instrument to the objectives. The expert rated each item as either relevant or not relevant. Validity was then determined using the formula as recommended by (Amin, 2005). However, the researcher also computed the Content Validity Index (CVI) for each item in the instrument as rated by two or more experts in order to determine how valid the study instrument was. For a sample of 54 instruments tested, the CVI was computed as follows:

CVI = Number of items rated relevant by expert

Total number of items in the instrument

$$CVI = \frac{50}{54} \times 100$$

$$CVI = 0.926$$

As recommended by Amin (2005), for the instrument to be valid, the C.V.I should be at least 0.7. Therefore, the tools were valid at $0.926 = 0.93$.

Reliability Statistics

The Researcher used SPSS version 16 to conduct reliability test. Reliability is determined through the interpretation of Cronbach's alpha(α), which is a reliability coefficient that indicates how well the items in a set are positively correlated to one another (Sekaran and Bougie, 2010).

Table 3: Rule of Thumb for Cronbach's Alpha (α) Coefficient Value

Alpha (α) Coefficient Range	Strength of Association
<0.60	Poor
0.60 to <0.70	Moderate
0.70 to <0.80	Good
0.80 to <0.90	Very Good
0.90	Excellent

Adapted from: Zikmund, Babin, Carr Griffin, M. (2010).

Deprivation of Sex as a variable scored poorly during the reliability test while all other independent variables are in good reliability since Cronbach's Alpha (α) exceeds 0.70. The dependent variable, Sexual Behavior of Inmates is yielding excellent reliability result with Cronbachs Alpha (α) of 0.881. In conclusion, most variables fall under good reliability score ranges. The rule of thumb indicated that Cronbachs Alpha (α) of coefficient 0.7 to < 0.8 is good and 0.8 to < 0.9 is very good. After obtaining satisfactory results of reliability test, the researcher distributed 368 sets of questionnaires.

Table 2: Summary of Reliability Statistics

No	Constructs	Cronbach's alpha	Number of Items	Number of respondents
1	Overcrowding	0.729	8	368
2	Sexual Abuse	0.660	7	368
3	Deprivation of Sex	0.525	6	368
4	Sexual Behaviour of Inmates	0.881	29	368
	Average	0.699		

Source: Primary data, (2017)

Data Processing and Analysis

This subsection detailed how the data was processed logically and scientifically and then subsequently analysed.

Data processing

After collection, data was compiled, sorted, reviewed, edited and coded. The editing was meant to remove any corrupted or erroneous data provided by the different respondents and the coding helped in quickening the process of data input.

Data analysis and presentation

Both qualitative and quantitative data was analysed in order to arrive at results for presentation.

Quantitative data analysis:

Statistical procedures like mean, Standard Deviation (SD) were utilized, in order to establish relationships in Regression and Correlation models between variables.

Qualitative data analysis

Qualitative data analysis involved fixing codes to interview data and field notes from observations.

Limitations of the Study and Counteraction Measures

Gathering accurate data from inmates regarding any form of behaviour or lifestyle characteristic was difficult.

The second issue obtaining honest answers from the inmates. Inmates were hesitant in answering questions about offending behaviours for fear of punishment or retaliation.

Sexual behaviour in this environment was highly stigmatized and due to fear of repercussions among inmates or correctional officers, sexually active prisoners may have been discouraged or afraid to report any sexual activity.

Ethical Considerations

Permission was sought to conduct research. The researcher sought consent from the respondents and promised confidentiality about the research to be conducted.

The current state of the variable in the study country/region

The legal sector in Uganda comprises of various institutions concerned with the provision of legal services, the administration of Justice and the enforcement of legal instruments or orders (Nacci, 1982) (Sabbath, 1992).

The main institutions as established by the Uganda Constitution of 1995 include the Ministry of Justice and Constitutional Affairs, the Judiciary, the Parliament, the Uganda Police Force, the Uganda Law Reform Commission, the Uganda Human Rights Commission (Turker, 1992).

During colonial times, the principal penal facility was Luzira Prison near Kampala, although jails were common in larger towns. Prisoners in Luzira were separated according to categories such as long-term convicts, recidivists, women, children, Asians, and Europeans (Uganda Prisons

When the President of the Republic of Uganda seized power, he promised to improve the country's prison system, but this proved to be a difficult task, in part because so many people were arrested. In late 1986, the Uganda Human Rights Activists (UHRA) charged that the authorities had imprisoned as many as 10,000 people at the Murchison Bay Prison in western Uganda, a facility with an 800-inmate capacity. Moreover, the UHRA and Amnesty International claimed that prisoners lived in abominable conditions, which caused a number of deaths from disease (Uganda Prisons Service Strategic Investment Plan, 2011).

In 1987 the President of the Republic of Uganda allowed the ICRC to survey conditions in Uganda's civil prisons. Although some reports suggested that prison conditions improved as a result, there had in fact been little change. In late 1990, for example, Chief Justice of the time condemned overcrowding in Masaka Central Prison. According to his investigation, the prison contained 456 inmates rather than the authorized 120 people. Similar conditions existed in most of Uganda's other prisons (Ackrill, 1981).

Presentation & Interpretation of Findings

This part presents summary findings obtained using the questionnaire administered to respondents in inmates in Uganda. To understand the effect of overcrowding on sexual behaviour of inmates in prisons of Uganda the respondents were introduced to different items to have their say.

This finding is fairly in agreement with Vaughn & Michael (1993) which defines prison overcrowding as a social phenomenon occurring when the demand for space in prison in a jurisdiction exceeds the capacity for prisoners in the place.

On the statement "Prison overcrowding can occur when the rate of at which people are incarcerated exceeds the rate at which other prisoners are released or die thereby freeing up prison space". 10.1% strongly disagreed, 11.4% disagreed, 9.0% were unsure, 48.6% strongly agreed and 20.9% agreed respectively. This statistic indicates strong agreement that prison overcrowding can occur when the rate of at which people are incarcerated exceeds the rate at which other prisoners are released or die thereby freeing up prison space. This is reflected in the mean attained which stands at 3.87 (which is above three revealing agreement with the statement) as well as a standard deviation which stands at 1.387 which is above 1 (Standard deviation above 1 reveal varied responses). This finding is partly in agreement to findings in a study by Eckland-Olson, et al., (1983) which emphasize that prison overcrowding can occur when the rate of at which people are incarcerated exceeds the rate at which other prisoners are released or die thereby freeing up prison space.

This finding is in strong agreement to findings in a study by Dankwa & Victor (2008) which reiterate that prison overcrowding would reduce if courts were sentencing criminal offenders to other programs like rehabilitation centres and community service.

On the statement "Prison overcrowding has led to increased occurrence of sex between inmates". 22.3% strongly disagreed, 16.3% disagreed, 16.8% were unsure, 28.5% strongly agreed and 16.0% agreed respectively. This statistic indicates agreement that prison overcrowding has led to increased occurrence of sex between inmates. This is reflected in the mean attained which stands at 3.12 (which is slightly above three revealing slight agreement) as well as a standard deviation which stands at 1.532 which is well above 1. This finding is partly in agreement to findings in a study by Alexandra (1992) which concluded that prison overcrowding has led to increased occurrence of sex between inmates.

On the statement "Prison overcrowding has led prisoners to change their sexual orientation". 21.2% strongly disagreed, 12.2% disagreed, 19.0% were unsure, 29.9% strongly agreed and 17.7% agreed respectively. This statistic indicates slight agreement that prison overcrowding has led prisoners to change their sexual orientation. This finding is in agreement to findings in a study by Wormith (1985) which underlines how prison overcrowding has led prisoners to change their sexual orientation.

On the statement “Prison overcrowding may encourage inmates that are “listening” to other inmates having sex into engaging in sex themselves. 22.6% strongly disagreed, 17.1% disagreed, 15.2% were unsure, 26.6% strongly agreed and 18.5% agreed respectively. This statistic indicates agreement that prison overcrowding may encourage inmates that are listening to other inmates having sex into engaging in sex themselves.

This is reflected in the mean attained which stands at 3.10 (which is slightly above three revealing slight agreement) as well as a standard deviation which stands at 1.523 which is well above 1. This finding is in part agreement to findings in a study by Carson & Daniela (2014) which concluded that prison overcrowding may encourage inmates that are “listening” to other inmates having sex into engaging in sex themselves.

On the statement Prison overcrowding has led to increased physical contact which in turn drives deprived inmates to engage in sex. 17.1% strongly disagreed, 15.5% disagreed, 17.9% were unsure, 27.4% strongly agreed and 22.0% agreed respectively. This statistic indicates slight agreement that prison overcrowding has led to increased physical contact which in turn drives deprived inmates to engage in sex. This is reflected in the mean attained which stands at 3.27 (which is above three revealing agreement with the statement) as well as a standard deviation which stands at 1.445 which is above 1. This finding is partly in agreement to findings in a study by Zamble & Porporino (1988) which underlines how prison overcrowding has led to increased physical contact which in turn drives deprived inmates to engage in sex.

On the statement “Prison overcrowding which affords no privacy leads to prisoners learning other sexual practices they were unaware of before their incarceration”. 14.7% strongly disagreed, 10.1% disagreed, 13.9% were unsure, 41.3% strongly agreed and 20.1% agreed respectively. This statistic indicates strong agreement that prison overcrowding which affords no privacy leads to prisoners learning other sexual practices they were unaware of before their incarceration. This is reflected in the mean attained which stands at 3.63 (which is above three revealing agreement) as well as a standard deviation which stands at 1.465 which is above 1. This finding is in part agreement to findings in a study by Arrigo & Milovanovic (2009) which concluded that

prison overcrowding which affords no privacy leads to prisoners learning other sexual practices they were unaware of before their incarceration.

Ways of Solving the Overcrowding in Prison

One of the 112 respondents from focus discussion and in-depth interviews 63% commented on ways of solving the overcrowding in prison said:“...*The Authorities need to build new wards to accommodate the increase in numbers... these wards were built in the 1920s when inmates were far less....*”

From 112 respondents from focus discussion and in-depth interviews 68% commented on ways of solving the overcrowding in prison said:“...*speedy trials would go a long way on reducing overcrowding as those prisoners on remand cause overcrowding....*”

While 112 respondents from focus discussion and in-depth interviews 66% who explained on ways of solving the overcrowding in prison said:“...*Giving lighter sentences, easier access to bail and early release of reformed prisoners would alleviate the overcrowding and it's attendant problems....*”

Findings on the relationship between overcrowding and sexual behaviour of inmates in prisons of Uganda.

This section delivers a detailed description of the inferential statistics obtained from the field of study based on the specific objectives of the study. It goes on to present and answer the research questions. These findings were thus obtained on the relationship between incarceration environment and sexual behaviour of inmates in Uganda in terms of overcrowding, sexual abuse and deprivation of sex and how they relate to sexual behaviour of inmates in prison. Objective one of the study was to establish the effect of overcrowding on sexual behaviour of inmates in prisons of Uganda.

Correlation between overcrowding and sexual behaviour of inmates in prisons of Uganda.

In order to determine the effect of overcrowding on sexual behaviour of inmates in prisons of Uganda, the study computed Pearson product-moment Correlation (PPMC) between overcrowding and sexual behaviour of inmates in prisons of Uganda. The bivariate Pearson Correlation produced a sample correlation coefficient, r , which measured the strength and direction of linear relationships between pairs of continuous variables. Results can be seen in table 4.2 below:

Table:4 Correlations

		Overcrowding	Sexual Behaviour of Inmates
Overcrowding	Pearson Correlation	1	.466**
	Sig. (2-tailed)		.000
	N	368	368
Sexual Behaviour of Inmates	Pearson Correlation	.466**	1
	Sig. (2-tailed)	.000	
	N	368	368
**. Correlation is significant at the 0.01 level (2-tailed).			

Primary Data (2017)

Based on the results in table 5.2 above, the bivariate Pearson Correlation produced a sample correlation coefficient, r (0.466) indicating a moderate but positive relationship; however this relationship is also statistically significant. Since (0.466) r is positive, this implied that as the variable “Overcrowding” increases, the dependent variable “Sexual Behaviour of Inmates” also increases, and in moderate amounts of 46.6% at the 100% test levels.

However, the researcher felt the need to conduct an assessment of the exact degree and nature of the relationship between overcrowding and sexual behaviour of inmates of inmates in prisons of Uganda by modelling the relationship of these variables using simple linear regression.

Regression results on overcrowding and sexual behaviour of inmates in prisons of Uganda.

To estimate the magnitude and nature of relationship between overcrowding and sexual behaviour of inmates of inmates in prisons of Uganda, the study carried out a simple linear regression.

Table: 5 Simple regression results between overcrowding and sexual behaviour of inmates

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.466 ^a	.217	.215	.574837004953933
a. Predictors: (Constant), Overcrowding				

Primary Data (2017)

The adjusted R-Square has great explanatory power which measures the strength and direction of linear relationships between pairs of continuous variables (overcrowding and sexual behaviour of inmates). The adjusted R-Square value of 0.215 indicated that overcrowding contributed a small 21.5% (at the 100% test level) in accounting for sexual behaviour of inmates of inmates in prisons of Uganda. This consequently implies that the results were skewed and the majority of the respondents agreed that the remaining 78.5 % of the observed sexual behaviour of inmates in prisons of Uganda is accounted for by factors other than overcrowding.

Table 6: ANOVA^b

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	33.585	1	33.585	101.639	.000 ^a
Residual	120.940	366	.330		
Total	154.526	367			

a. Predictors: (Constant), Overcrowding

b. Dependent Variable: Sexual Behaviour of Inmates

Primary Data 2017

When the study conducted a simple linear regression, a *f*-value, and significance level of that *f*-value, was part of that output. The *f*-value of 0.101.639, was statistically significant was obtained (*p*- value of 0.000 > 0.05). This implies that overcrowding as a variable is significant and does account for the observed sexual behaviour of inmates' in prisons of Uganda.

Table 7:Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.458	.130		18.840	.000
Overcrowding	.358	.036	.466	10.082	.000

a. Dependent Variable: Sexual Behaviour of Inmates

Primary Data (2017)

After the evaluation of the *f*-value and Adjusted R², the researcher felt it important to evaluate the regression beta coefficients. Results were found to be a regression beta coefficient of 0.466, positive and its equivalent *t*-value was statistically significant. Moreover, the outcome variable “Sexual behaviour of Inmates” at the 100% test level increased by only 46.6% on the influence of overcrowding, which positive and moderate. This implies that overcrowding is significant in influencing of sexual behaviour of inmates in prisons of Uganda. It also has a moderate, but positive effect on sexual behaviour of inmates.

References

2010/2011, Uganda Prisons Service Strategic Plan II 2006-7. *Transforming Prisons into a correctional service*. Washington DC: May 2007, 2006/7.

Amin. *Social Science Research Conception Methodology and Analysis*. Kampala : macmillan Publisher , 2005.

Arrigo, B.A. and Milovanovic, D.,. *Revolution in Penology;Rethinking the Society of Captive*. . USA: Rowman and Littlefield. p. 39. ISBN9780742563629, 2009.

Beck, A.J. and Johnson, C. *Sexual Vycictimisation Reported Reported* . United States : Former State prisoners 2008, 2012.

Carson, E. Ann. *Prisoners in 2014*. Washington DC: Bureau of Justice Statistics , 2015.

Eckland-Olson, S., Dennis, M., Barrick, and Lawrence E., C.,. "prison overcrowding and Disciplinary probkenms: An analysis of the Texas prison system." *Applied Behavioral Science* , 1983: 19:163-76.

- Fleisher, M. S., and Krienert, J.L. *The myth of rape in prisons: Sexual culture*. American : American prisons. Lanham, MD: Rowen and Littlefield. , 2009.
- Fleisher, M.S. *Warehousing Violence*. Newbury : Park: Sage, 1989.
- Fleisher, W., and Krienert, J. *The Culture of sexual violence (No. 216515)*. Washington: DC Department of Justice, National Institute of Justice, 2008.
- The Culture of Sexual Violence (216515)*. Washington DC: US : Department of Justice, National Institute of Justice, 2008.
- Kothori. *Research Methodology methods and Techniques*. New Delhi: National Institute of Justice, 2005.
- Krejcie, R.V. and Morgan, D.W. *Determining Sample size for research activities*. Washington DC: national Institute of Justice, 1970.
- McGuire, Gaes and. *measured Crowding by Dividing each facility's average daily population by tyhe rated capacity* . Washington DC: national Institute of Justice, 1985.
- Nacci P, and Kane T,. *Sex and sEXUAL aggression in Federal prisons*. . Washington DC: Washington Federal Bureau of Prison: 1982, 1982.
- Nacci, P. and Kane, T. "Inmate Sexual agreessions: some evolving propositions, empirical findings and mitigtig counter forces'," *Journal of offender Counting Service and Rehabilitation*, , 1984: 9,1-20.
- Nacci, P.L. "Sexual assault in prisons,," *American Journal of Corrections*, (American Journal of corrections,), 1978: 40, 30-1.
- Ristroph, A.,. *Prison, Detention, and correctional institutions*. USA: Detroit: Macmillan Reference USA 2007. 1196 - 1199, Gale Virtual Reference Library. web. 7 Oct. 2016., 2016.
- S., Alexandra. *Catherine Macknon taking rape into pornography*. . Lincoln Mall Lincoln, NE 68588-0630 USA: University of nebraska Press1111, 1992.
- Schill, R.A., and Marcus, D. "Incarceration and learned helplessness. ." *International Journal of Offender Theapy and Comparative Criminology*, , 1998: 42(3), 224-232.
- Singh S., Darroch JE., Bankole A. A, B and C in Uganda:. *the Roles of abstinence monogamy and condom use in HIV decline*. USA : Reproductive health matters, 2004, 12(23): 129-131, 2004.
- Sykes, G.M. *The society of captives: a study of a maximum security prison, princeton*. USA: Princeton University Press, princeton, 1958.

- Tewksbury, R. and Conner, D.P. *Who is having sex inside prison*. Washington DC: Deviant Behavior, 35,993-1003, 2014.
- Travis, Jeremy, Bruce W., and Steve R., *the growth of incarceration in the united state*. United States: Washington DC: Exploring causes and consequences. Washington DC: national Academics Press. , 2014.
- Vaughn, and Michael S., *Listening to the experts. A national Study of Correctional Administrator's responses to prison overcrowding*. . Washington DC: Criminal Justice Review 18:12-25, 1993.
- Victor, Dankwa O. and. *Overcrowding of African Prisons*. India : Published by Indiana University Press , 2008.
- Walker, M. and Brodsky, S. *Sexual Assault*, . Lexington, : MA:DC Health, 1976.
- Warren, J., Jackson, S., Brooker Loper, A., and Burnette, W.,. *Risk Markers for sexual redation and victimisation in prison*. . Washington DC:: U.S. Department of Justice, 2010.
- Welch, Michael. *A social History of Punishment and Corrections*. . Washington DC:: A Critical Approach, McGraw-Hill, ISBN 0-07-281723-2, 2004.
- A social History of Purnishment and Corrections*. . Washington DC:: Corrections: A critical Approach, McGraw-Hill, ISBN 0-07-281723-2, 2004.
- Woemith, J.S. *What do we know about longterm incarcerations? Report Preparaed by senior research officer, Research Division*, . Canada: Research Division, Ministry of the Solicitor General of Canada. Ottawa: Supply and Services Canada. , 1984.
- Zamble, E., and Porportiono, F.J. *Coping Behavior and adaptation in prison inmates* . New York: Springer-Verlag. : 12-44, 1988.