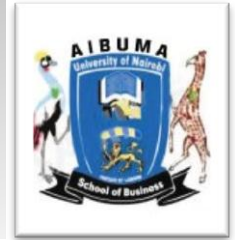




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PRE-POST TESTS ANALYSIS OF USING ART THERAPY AS TREATMENT FOR DEPRESSION: CASE OF LANG'ATA WOMEN'S PRISON NAIROBI – KENYA

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Abstract

The purpose of this paper was to establish the effectiveness of art therapy as a treatment for depression at Langata Women Prison (LWP) in Nairobi. The paper was anchored on Bandura's social learning theory and cognitive behavioral theory and the paper's unit of analysis constituted imprisoned women at LWP. The Becks Depression Inventory (BDI-II) assessment 21-item self-report scale, both in English and Swahili was given to a sample size of 217 women prisoners' in-order to identify the presence and severity levels of depression. Out of the 217 respondents, 104 were those in prison and 113 in remand. However, the research was only done with those in remand (ordinary and capital offenders) as those in the prison had on-going programs that would be disrupted if they were to be engaged in the research. The BDI-II (pre-test) questionnaires were distributed to determine the levels of depression. A sample of 113 from the remands was selected based on their levels of depression and 55 responded. The treatment group met for six sessions once a week for two hours. After six weeks group was subjected again to BDI-II (post-test). Results indicated that most of the incarcerated women suffered from severe depression; there were more remands who were found to have depression; there were more cases of severe depression cases in both remand and prison and less inmates in prison with mild depression. However, there was a marked difference of moderate levels of depression between remands and prisoners, with those in remand having a higher level of moderate depression. From the analysis, there was a significant reduction of depression after administering art therapy (post-test) versus before art therapy (pre-test) treatment. The findings support the findings of various studies that have been done in other countries. Based on the results from this paper, at the time of arrest, mental assessment should be done and those that require further assessment need to be referred to a psychiatrist as well as support from a psychologist; special attention should be given to mothers; and for those who end up in prison, periodic screening should be undertaken together with counselling and alternative therapy. In addition, the legal system should escalate court matters to avoid prolonged stay in remand and enhance public awareness on mental health. This research focussed on incarcerated women at LWP and therefore the results should be generalized with caution to other prisons in Kenya. Another limitation was that some respondents tended to minimize and at the same time exaggerate symptoms and the self-administered data collection questionnaires depended on self-report, without medical records or corroborative history. For further research a similar intervention could be replicated in other women and men prisons, as well as compare depression amongst women and men prisoners.

Key Words: *art therapy, Bandura's social learning theory, Becks Depression Inventory II, cognitive behavioral theory, depression, incarcerated women*

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Introduction

Prison populations continue to soar in much of the world and well over 11 million people are held in penal institutions throughout the world (Walmsley, 2018). Even though men, for a long time, have constituted a larger proportion of the prison population worldwide, the number of women in prisons has continued to rise. Since the year 2000, for instance, the male prison population has increased by 18 percent whereas that of women has increased by 50 percent (Walmsley, 2016). This increase in female prisoners has been recorded in the United States of America, China, Russia, Thailand, Brazil, and Vietnam. In Sub-Saharan Africa, the number of women prisoners range from one to four percent of the total prison population, (Walmsley, 2016) and since 2000, there has been a notable 22 percent increase of women prisoners in Sub-Saharan African prisons. The Ugandan Bureau of Statistics report (2017) indicates that there was an increase in women in prison from 2,196 in 2016 to 2,579 in 2017. The Kenya National Bureau of Statistics' Economic Survey Report (2018) indicates that in 2012 there were 5,809 women prisoners. This figure almost doubled to 10,644 in 2016, but reduced to 8,004 in 2017.

Despite the general trend towards the rise in the number of persons being imprisoned, the focus appears to have been placed more on containing prisoners within prison walls rather than focusing on rehabilitating them (Johnson, 2008). Indeed, even though prisons are perceived to exist globally with the intent of punishing, rehabilitating and reforming prisoners (Johnson, 2008), whatever effort that has been invested in rehabilitation has been fashioned for and directed at men, who have for a long time constituted the larger number of the prison population worldwide (Greifinger, 2007). Such effort

has involved teaching prisoners skills such as carpentry, welding and motor repair (Greifinger, 2007).

In Kenya, the focus on women's rehabilitation has been on basic literacy skills and the teaching of crafts as required by the United Nations standard minimum rules (1955 & 2010) of treatment of prisoners. Generally, the rehabilitative services in prisons aim at accomplishing several goals such as providing basic education to ensure a minimum level of literacy, meaningful educational activities that challenge prisoners' antisocial behavior and inherently offer life skills (Bangkok Rules 2010). These rehabilitative efforts may actually fall short of meeting their mark since extant studies have indicated that an estimated three quarters of the incarcerated women in the USA have comorbid diagnosis for mental health issues such as depression and substance abuse (James & Glaze 2006; Wu, Schairer, Dellor, & Grella, 2010.)

With specific reference to Kenya, the current rehabilitative efforts barely address mental health issues. Prison studies done in Kenya by Agasa (2015), Wekesa (2012) and Muteti (2008) have focused on rehabilitation and not on mental health with special regard to women. Agasa (2015) found that out of 58 respondents, 24 female and 34 male, only 16 were screened for chronic illnesses such as diabetes, high blood pressure and Human Immunodeficiency Virus (HIV) and none were screened for mental health issues despite the fact that 87 percent of female prisoners versus 73 percent of male prisoners exhibited symptoms of mental stress. An earlier study by Muteti (2008) did point out that Kenya Prison Service (KPS) needed professional mental health workers following observations made by the Ministry of Home Affairs in 1998. This call was reiterated by Wekesa (2012) who also ascertained that there was no systemic counselling program in KPS or

adequately trained personnel. This gap then suggests that the mental health issues that may be preexisting or/and develop during imprisonment may not be attended to, thereby, possibly exacerbating mental health issues such as depression, which is common in women prisons (Zweben, 2011).

Problem Statement

The above-mentioned studies appear to point to the fact that a sizeable number of prisoners suffered psychologically and recommended that KPS needs to hire additional professional mental health workers such as psychologists, counselors and psychiatrists to attend to a large population of prisoners who were found to be overwhelmingly depressed. Besides, there are currently no studies done in the country on how emotional and psychological issues are being effectively dealt with within KPS system with special regard to women. In Kenya, generally the rehabilitative services in prisons aim at accomplishing several goals such as providing basic education to ensure a minimum level of literacy, meaningful educational activities that challenge prisoners' antisocial behavior and inherently offer life skills (Bangkok Rules, 2010). Very little, if anything at all, is documented in the area of how emotional and psychological issues, especially depression, are dealt with in KPS with special regard to women.

That was an increase of 546 prisoners from 2015 to 2017. The Kenya National Bureau of Statistics' Economic Survey Report (2018) indicates that in 2012 there were 5,809 women prisoners. This figure almost doubled to 10,644 in 2016, but reduced to 8,004 in 2017

Objective

The objective of this paper was to assess the effectiveness of art therapy as a treatment for depression among incarcerated women at LWP.

Literature Review

Studies show that prisoners have a high prevalence of mental disorders for example self-harming behavior and suicide attempts; completed suicides are the foremost cause of death in prison (Opitz-Welke & Konrad, 2012). Death by suicide in prison is greater compared to the general population (Konrad 2007). Earlier projections by World Health Organization (WHO) estimated that globally, the total number of people with depression was estimated to surpass 300 million in 2015. Similarly, almost the same number of persons has varied anxiety disorders and experiences both conditions simultaneously (WHO, 2017). Depression is ranked by WHO (2017) as the single largest contributor to global disability. Yusuf and Adeoye (2011) observed that there is a pervasiveness of depression and unanimously consider it a global problem. The WHO report of 2017 indicates that depression is more common among females (5.1 percent) than males (3.6 percent). Among the incarcerated population, female prisoners have been found to be more susceptible to suicide ideation, suicide attempts and self-harm behavior (Marzano, Hawton, Rivlin, & Fazel (2011); Marzano, Ciclitira, & Adler (2012)). Psychotic disorders, major depression and personality disorders have been found to be more common in incarcerated women than male prisoners (Fazel & Baillargeon, 2011).

The benefits of art therapy with regard to the prison environment are numerous as cited in exploratory studies of art programs in prison settings, which have indicated there is a direct relationship of reduced violence and improvement in the

compliance of prison rules. Gussak's (2004) pilot study 'Art Therapy with Prison Inmates' was done in a male prison within a medium to maximum security facility where the art forms involved visual arts and drawing. The objective of the study was to evaluate improvement of problem-solving skills, changes in mood, socialization with inmates and cooperation with facility rules and prison staff as well as changes in the prisoner's attitude and behavior. The results indicated that there was a reduction of depressive symptoms and improvement in all other areas except problem solving skills. In a follow up study with male prison inmates at a medium to maximum security facility, Gussak (2006) set out to identify if there would be changes in the prisoners' socialization, interactions, mood, attitude, behavior and amenability to prison jurisdiction. Results were mixed with those from Formal Elements Art Therapy Scale (FEATS) did not show improvement in mood, whereas those captured by Becks Depression Inventory-Short Form (BDI – II) indicated noticeable change in mood. There were no changes in problem solving skills or socialization.

In another study by Gussak (2007) examined the effectiveness of art therapy in reducing depression in prison populations. The study focus was to assess the changes in mood and locus of control in the participants and combined data from the pilot study 2004 and 2006. The results of this study revealed a substantial reduction in depressive symptoms of the participants of the study. In a subsequent study, Gussak (2009a) compared the effects of art therapy on both male and female inmates in two medium to maximum security facilities where the program involved visual art therapy. The study focus was to evaluate the locus of control and changes in mood among the participants. The study also sought to find out the differences in outcomes between the different genders. The result was

improved locus control and mood for both female and male participants. However, the mood improvement was noted to be higher among the women. In the same year Gussak, (2009b) conducted a further study, which was carried out in two medium to maximum security prisons. Qualitative and quantitative data was obtained from both the control and experimental group that involved pre-test/post-test assessments using Adult Nowicki Strickland (ANS) locus of control scale, BDI-II and FEATS. The results showed that ANS and BDI II supported the premise that art therapy was effective in reducing depression; results from FEATS did not provide supportive data.

In Kenya, Muigai (2014) undertook a study in LWP, Nairobi, Kenya, on the prevalence of alcohol use disorders and depression among recent inmates (1 to 12 months). The Alcohol Use Disorders Identification Tool (AUDIT), 10 item was used to identify the level of alcohol use, alcohol related problems and dependence whereas BDI-II test was used to ascertain the level of depression. The results of the study indicated that there was a strong relationship between alcohol use and depression and the study recommended screening inmates for alcohol disorders and depression on admission to prison, offering a program within the prison service to manage these two areas and facilitating psycho-education on both the disorders.

Kamoyo, Nyaga, Barchok, Mburugu & Chuka (2015) examined the effects of imprisonment on depression among female inmates in selected prisons in Kenya. They found that imprisonment had a moderate effect on depression among female inmates in selected prisons in Kenya. The findings showed that there were substantial effects of incarceration on depression amongst women prisoners and these findings are consistent with previous studies about the presence of depression in

prison populations (Gunter, Chibnall, Antoniak, Philibert, & Hollenbeck (2011) particularly among women, in prison (Boothby & Durham, (1999); Ahmad & Mazlan (2014). The recommendations included the need for the prison service to offer psychiatry services to ensure accurate assessment, diagnosis and treatment of depression among incarcerated women, recruit professional counselors and reevaluate the psychological, social and physical prison environment to reduce depression.

Miriti and Kimani (2017) did an analysis of prisons rehabilitation programs on behaviour reformation of offenders at Kisumu’s main prison. The findings of the study indicated that educational training courses made positive impact on prisoners’ rehabilitation agenda in reforming behavior and socio-psychological training programs had a minimal impact on reforming the behavior of prisoners. Recommendations for improving behavior reformation of prisoners included training programs in the area of education, vocational skills, and religious programs.

Methodology

The research design used in the paper was experimental research design. At the time of this research, the population of LWP was about 500 women prisoners and this constituted the paper’s units of analysis. For this paper the population was 500, the sample size was determined as 217 using Krejcie and Morgan (1970) table for determining sample size for research activities (see Appendix I). The BDI-II 21-item self-report scale statements in English was given to 217 randomly selected women prisoners in-order to obtain their degree of agreement with a statement or set of statements, which were then used to identify the presence and levels of depression. The BDI-II tool was translated into Kiswahili and the rates symptoms of depression in terms of severity range are as shown in Table 1 below.

Table 1 Psychological Evaluation and Intervention Levels

Levels	Status of Depression
0 to 13	Minimal depression
14 to 19	Mild depression
20 to 28	Moderate depression
29 to 63	Severe depression

Out of the 217 respondents, 104 were those in prison and 113 in remand and their age ranged from 19 to 65 years. The BDI-II questionnaire was distributed among the prisoners and remands and they were informed that the exercise was voluntary. To participate they were, however required to give consent by signing the form by initializing or signing but no names were to be written - this was to ensure confidentiality as well as protect

their identity. The prison administration was categorical that the research could only be done with those in remand (ordinary and capital offenders) as those in the prison had on-going programs that would be disrupted if they were to be engaged in the research. Out of 113 remands, 55 or about 49 percent responded and under the prison circumstances, this was a good response rate. After analyzing the responses to BDI II, all respondents

with severe depression and suicidal ideation were referred to the counselor officer in charge of the remands for further management.

All questionnaires were analyzed in-order to identify the different levels of depression so that both treatment and control groups would be determined guided by various levels of depression using Table 1 above. The sample was drawn of 60 respondents who had mild and moderate depression and the treatment and the control members were randomly selected (odd number for treatment group and even number for the control group). However, due to various reasons, for example some remands had court cases, 55 (28 treatment and 27 control group members) out of 60 remands were selected.

The treatment group was taken through six art therapy sessions and it was agreed that the issues discussed should be confidential and not shared with others not in the group and to respect each other's opinion. The respondents worked in four groups and had access to white paper, paints, crayons, pencils and colored pencils and it was demonstrated to them how to mix the paints in-order to get different textures and colors. The results of the art therapy sessions were a combination of the art done during the sessions and the discussions around the product of the respondents.

Session one "name embellishment" was an exercise to help the respondents choose a pseudo name during sessions and label their art work, where labeling was optional. This helped the respondents experience the tools for expression and some used colors, crayons and others chose to use paint. As the respondents shared their experiences at the end of the session, it gave group members the opportunity to introduce themselves and say something positive about themselves and possibly the role they saw themselves

in the future. Session two was "self-portrait" and the purpose of the sessions was a continuation of session one. During the discussion, respondents were asked to express how they show themselves in the present and the future.

Session three was guided imagery, whose objective was for the participants to identify their worst fears, thought and feelings related to imprisonment and find safe ways to deal with difficult, traumatic, painful situations in a safe way. Session four that was on road drawing in-order to let the respondents look at part of their childhood from 10 years in batches of five years, that is 10, 15, and 20 and so on, to their current age, noting the good times, ups and downs and their current situation. This exercise was to facilitate respondents to look at their current situation and possibly think about how it happened and how they can plan better after their release. Sessions five's intervention was "traffic lights" and the activity for the participants was to use traffic light colors as a metaphor to, identify the possible reasons that landed them in jail illustrated by the red light; solidify the changes they envisioned in the previous exercise illustrated by the amber/yellow lights; and finally the green lights to state the promise they plan to keep to remain out of prison after their release. Session six was an intervention and the objective was to explore the journey of treatment and have an opportunity to engage in shared group art-work as an exit exercise by discussing respondents key strengths, how they have felt at the end of the sessions, insights and focus on one strength and its ability to make a difference in their outlook to their life and circumstances. Lastly, the respondents completed post-test assessments of BDI-II and an exit questionnaire about the art therapy sessions they were involved in. The control group also completed post-test assessment of BDI-II in a separate session.

Both quantitative and qualitative data was used for data analysis, where qualitative approach focused on “telling the story” through the art activities, observations, one-on-one interviews, discussion groups and photographs of the art work. In addition, questionnaires were used to collect quantitative data, such as BDI II assessment. In-order to analyze the data, both graphical and paired t-test analyses was done. The t-test approach was utilized so as to determine whether art therapy is an effective treatment for depression at LWP, that is, if undergoing art therapy significantly different from not undergoing art therapy, and if a difference exists, then it would suggest that depression improved due to art therapy.

An Analysis of Variance (AOV) and specifically dependent paired t-test were done in-order to compare two population means (before and after art therapy treatment). In this case, the paper sought to find out if the pre-post differences in scores have a mean that is significantly different from zero and if the mean is significantly different, it would suggest that depression reduced over time due to art therapy. The null hypothesis was that art therapy before (pre-test) BDI-II intervention does not reduce depression versus alternative hypothesis that art therapy reduces depression. Formally, the correlated paired sample t-test was used to compare pre-test (before art therapy intervention) and post-test (after art therapy intervention) and the null hypothesis was defined as:

$H_0: \mu_{\text{pre-test}} - \mu_{\text{post-test}} = 0$, that is the true mean difference is equal to zero

Assuming un-equal variances; dependent variable was continuous (interval/ratio); observations were independent of one

another; dependent variable was approximately normally distributed; and the dependent variable did not have any outliers, the t-dependent statistic can be, respectively stated and calculated as:

t-statistic = {observed difference between pre-test and post-test sample means (\bar{d})} – {expected difference between pre-test and post-test population means (μ_d - if null hypothesis is true)}/{estimate of the standard error of the difference between pre-test and post-test sample means $\{[(s^2_{d1})/n_1 + (s^2_{d2})/n_2]\}$ or

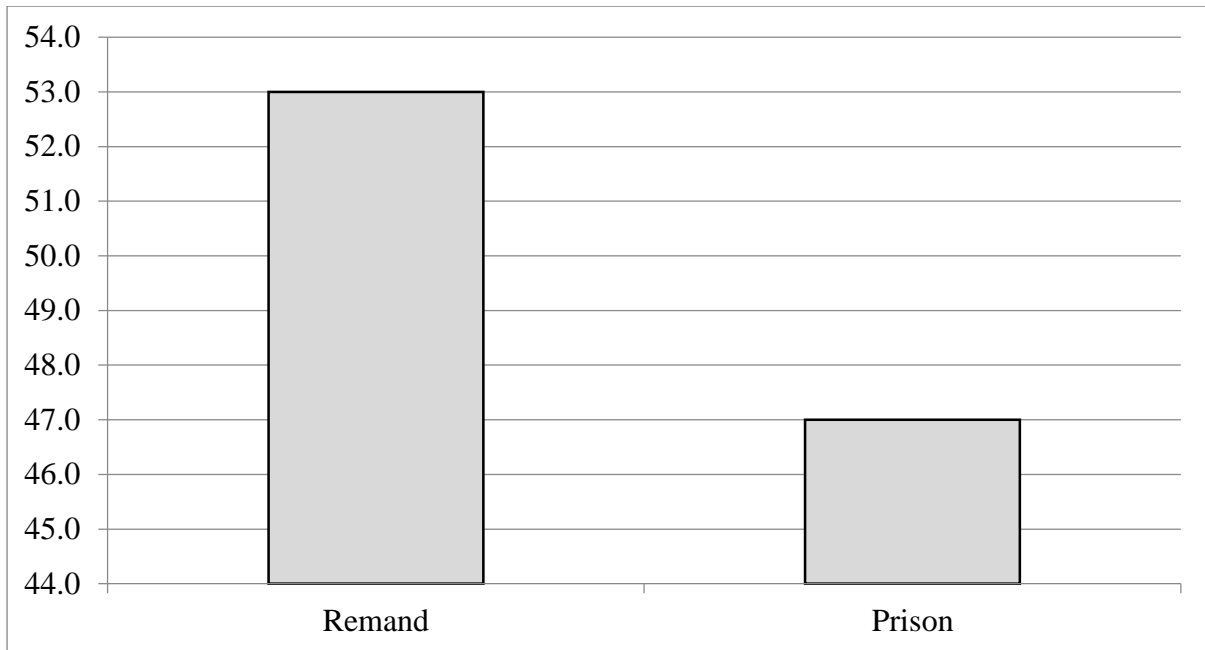
t-statistic = $\{(\bar{d}_{\text{pre-test}} - \bar{d}_{\text{post-test}}) - (\mu_{\text{pre-test}} - \mu_{\text{post-test}})\} / \{[(s^2_{\text{pre-test}}/n_{\text{pre-test}}) + (s^2_{\text{post-test}}/n_{\text{post-test}})]^{1/2}\}$

The alpha (α) value was taken as 0.05 and degrees of freedom were taken as $n_1 + n_2 - 2$.

Results and Discussion

The BDI-II was given to the sample size of 217 women prisoners’ in-order to identify the presence and severity levels of depression. Out of the 217 respondents, 17 responses were spoilt leaving 106 (53 percent) and 94 (47 percent) responses from those in remand and prison, respectively as shown in Figure 1 below. This indicated that there were more remands under depression because their cases had not been determined.

Figure 1 Number Respondents in Remand and Prison (Percent)



The ages of those interviewed ranged from 19 to 65 years and BDI II was used to determine the levels of intensity of depression among incarcerated women at LWP and the results are shown in Figure 2 below. From Figure 2 below, 14.5 percent, 10.5 percent, 32 percent and 43

percent of the incarcerated women had minimal, mild, moderate and severe levels of depression, respectively – indicating that most of the incarcerated women had severe depression.

Figure 2 Overall Assessment of the Intensity of Depression (Percent)

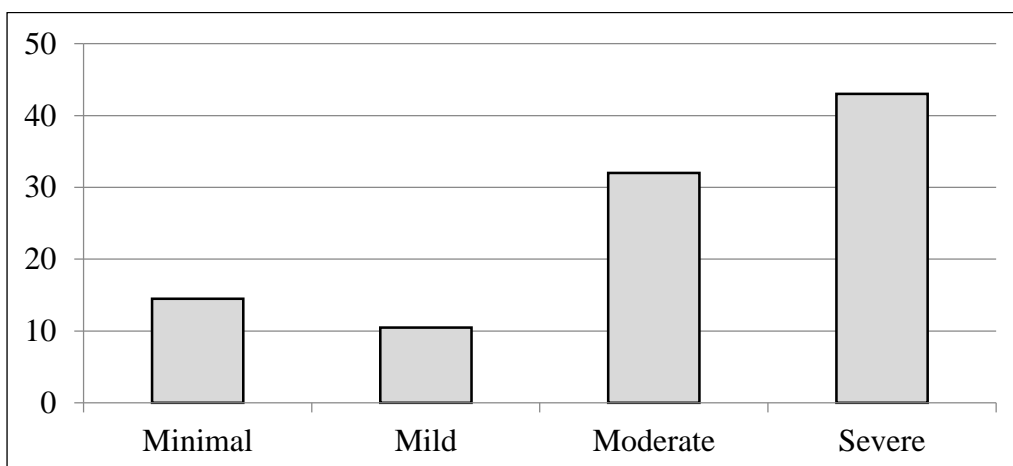


Table 2 and Figure 3 below further categorized those in remand and those in prison into the various levels of depression. As Table 2 and Figure 3

shows, there were more severe depression cases in both remand (24 percent) and prison (19 percent) but less cases under mild depression with respect to remands

(4.5 percent) and prisoners (6 percent), which further indicates that the difference was minimal. However, there was a marked difference (19 percent versus 13 percent) of moderate levels of depression between remands and prisoners, with those in remand having a higher level of moderate depression. Further analysis

indicated that those who were suicidal (severe) were 48 (24 percent) in remand and 38 (19 percent) in prison - this is in line with the statistics of WHO 2018 that indicate that the highest incident of depression is found in remand.

Table 2 Overall Depression Rates Between Remands and Prisoner

Levels of Depression	Remands		Prison	
	Frequency	Percent	Frequency	Percent
Minimal	11	5.5	18	9.0
Mild	9	4.5	12	6.0
Moderate	38	19.0	26	13.0
Severe	48	24.0	38	19.0
Total	106	53.0	94	47.0

The paper sought to test whether there was significant difference before and after art therapy treatment. However, before the dependent two-sample t-test could be done, data was displayed in spider diagram as shown in Figure 4 below. From Figure 4, there was, on average a marked difference between pre-test and post-test

because the before art therapy (pre-test), BDI-II scores were higher relative to after art therapy (post-test) BDI-II scores, which suggested that there could be significant difference before and after art therapy treatment.

Figure 3 Overall Depression Rates Between Remands and Prisoner (Percent)

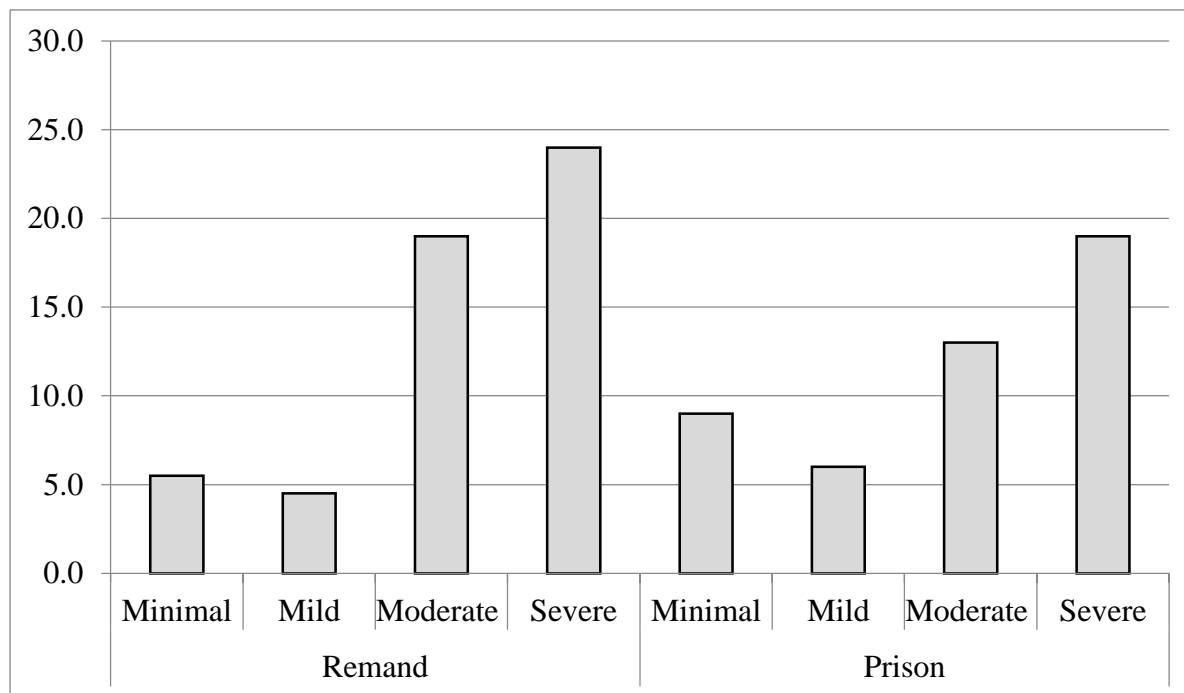
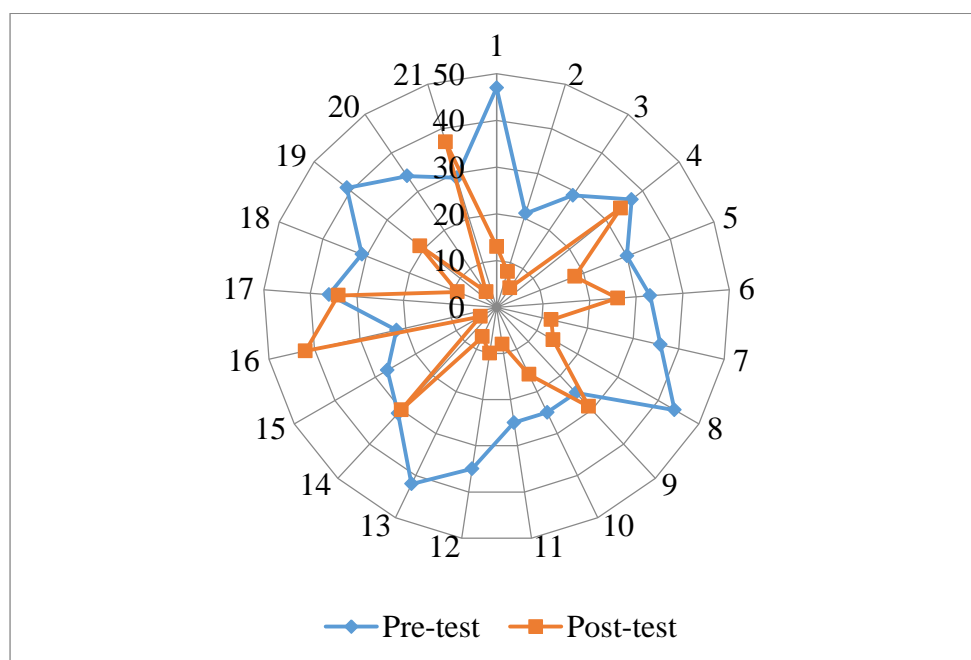


Figure 4 Spider Plot Between Pre-Test and Post-Test Becks Depression Inventory II



In addition, the data was checked for extreme values and outliers as well as tested for normality using Box-Whiskers plot and Shapiro-Wilk test, respectively. Figure 5 below shows that there were no

outliers or extreme values as well as that BDI-II median score before art therapy was higher than after art therapy, at 31 and 14, respectively.

Figure 5 Box-Whiskers Plot Between Pre-Test and Post-Test Becks Depression Inventory II

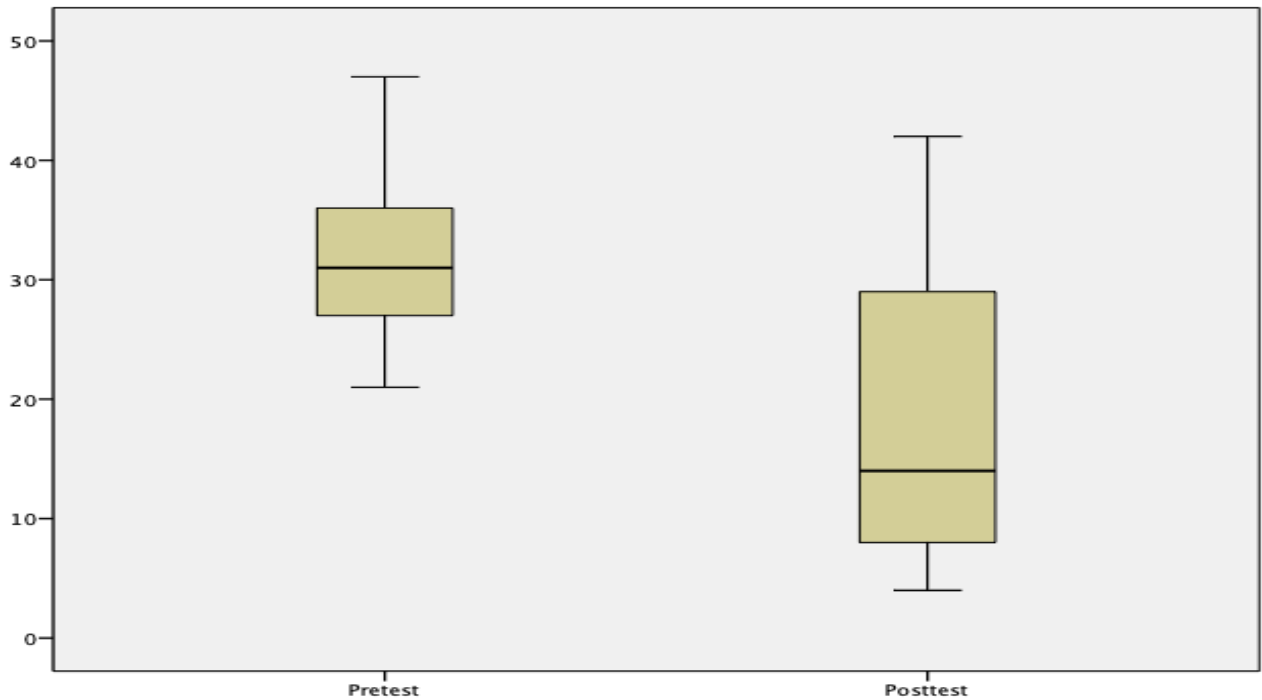


Table 3 below shows that the data was normally distributed since the p-values were greater than α value of 0.05 (p-values ≥ 0.05). Before (pre-test) the intervention (art therapy), BDI-II evaluation had indicated, on average severe depression but after (post-test) it indicated mild from a mean of 34 to 18. The null hypothesis was that art therapy does not reduce depression versus alternative hypothesis that art therapy reduces depression. From

Table 4 below, the correlated paired sample t-test indicates that the p-value was 0.000, which was less than alpha (α) value of 0.005 ($0.000 < 0.05$). Since, the p-value was less than α -value, the null hypothesis was rejected that art therapy does not reduce depression and the alternative hypothesis that art therapy reduces depression was accepted, that is art therapy reduces depression.

Table 3 Shapiro-Wilk Test for Normality

	Shapiro-Wilk		
	Statistic	Degrees of Freedom	P-Value
Pre-test	0.971	21	0.745
Post-test	0.906	21	0.045

Table 4 Pre-Test and Post-Test Paired Sample Statistics

		Mean	Sample Size	Standard Deviation
Pair 1	Pre-test	32	21	7.19
	Post-test	18	21	12.03
		t-value	Degrees of Freedom	p-value
Pair 1	Pre-test - Post-test	4.43	20	0.000

Conclusion and Recommendations

Results indicated that most of the incarcerated women had severe depression; there were more remands under depression; there were more severe depression cases in both remand and prison but less cases under mild depression. However, there was a marked difference of moderate levels of depression between remands and prisoners, with those in remand having a higher level of moderate depression.

From the analysis, there was a significant reduction of depression after administering art therapy (post-test) versus before art therapy (pre-test) treatment among the remands and the findings of this paper support the findings of various studies that have been done in other countries. Based on the results from this paper and at the time of arrest, mental assessment should be done and those that require further assessment need to be referred to a psychiatrist as well as support from a psychologist; special attention should be given to mothers; and for those who end up in prison, periodic screening should be undertaken together with counselling and alternative therapy. In addition, legal system should escalate court matters to avoid prolonged stay in remand, besides enhancing public awareness on mental health.

Based on the results from this paper, a number of recommendations can be made with respect to art therapy as a treatment

for depression. At the time of arrest of any person, mental assessment should be done and those that require further assessment need to be referred to a psychiatrist and if required put on medication and support from a psychologist. Special attention should be given to mothers that commit crimes such as infanticide, and homicide because this could be related to postpartum depression or severe depression and should be put on treatment immediately. However, for those who end up in prison, periodic screening for depression should be undertaken, counselling offered, alternative therapy such as art therapy which has proved to be effective need to be adopted, put those who require medication on treatment, and find a way to measure if treatment is working or not and act accordingly.

In addition, the legal system should escalate court matters to avoid prolonged stay in remand, which causes those arrested to be at high risk of developing depressive symptoms and other mental disorders. Moreover, the legal system should take abuse, such as sexual, domestic, and physical violence against women and children seriously and provide safe houses/spaces for as well as offer counselling before trauma leads to depression. In-order to supplement the current psychological intervention measures used to alleviate and treat

depression, the prison service need to offer at minimum, basic training in counselling during staff training and create awareness of mental health as a priority through sensitization forums within the prison system, for example “world mental health day”. There is also need to adopt and implement a transition plan for prisoners with severe mental health issues where family, public health providers are included in this process, this may help reduce recidivism and improve better health management. Increase in public awareness on mental health will lead to stigma reduction because it would encourage uptake of medical care; and offer alternative support systems such as art therapy, and peer support groups.

On the limitations of the paper, the paper focussed on art therapy as a treatment for depression among incarcerated women at LWP. The results from this paper should, therefore be generalized with caution because other women prisons in different locations in Kenya could have peculiar characteristics, such rural versus urban settings. In addition, working with the remands had its own limitations as far as attendance was concerned. This was due to circumstances such as court attendance, being assigned chores by officers who were not aware of the program, and some remands were released on bail. As a result, some these remands did not participate in the study up to the end. Another limitation was privacy and confidentiality, which was limited because of the nature of the set-up. Most of the respondents, for example preferred to keep their work with the primary researcher after each session to avoid further discussion with cellmates and did not want their cellmates to know whether they were depressed or not.

Based on the results of this paper, the symptoms of depression significantly reduced from severe to mild depression when art therapy was administered as a

treatment. Hence, a similar intervention could be replicated in other women and men prisons, as well as compare depression amongst women and men. In addition, a similar paper can be done with prisoners other than just remands, and could also be replicated in correctional facilities such as borstal institutions.

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