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EFFECTIVENESS OF ART THERAPY AS TREATMENT FOR DEPRESSION: A COMPARISON BETWEEN EXPERIMENTAL AND CONTROL GROUPS ON THE COGNITIVE, SOMATIC AND AFFECTIVE SYMPTOMS OF DEPRESSION AMONG INCARCERATED WOMEN AT LANGATA WOMEN PRISON NAIROBI - KENYA

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Abstract

This paper sought to establish the effectiveness of art therapy as a treatment for depression at Langata Women's Prison (LWP) in Nairobi in order to identify the psychological intervention measures to be used to alleviate and treat depression. The paper hypothesized that prisoners who undergo art therapy as treatment would experience a reduction of depressive symptoms. The 21-item Becks Depression Inventory (BDI-II) assessment self-report scale was given to 217 women prisoners to identify the prevalence and severity levels of depression. Of these, 104 were in prison and 113 in remand and since 17 responses were invalid, the sample reduced to 94 sentenced and 106 remands, respectively. Due to prison exigencies, a sample of 57 was further drawn out of the 106 remands based on their levels of depression. These 57 were then divided into 29 and 28 as experimental and control groups, respectively. Out of the 29 remands in the experimental group, 22 filled the post the BDI-II, whereas 11 remands, among the control group filled the post BDI- II assessment self-report scale. After six weeks both the experimental and control groups were again subjected to the BDI-II assessment self-report scale (post-test). Most of the incarcerated women were found to have severe depression with those in remand registering much higher levels of severe depression. There was a significant reduction of depression after administering art therapy to the experimental group, but no significant difference in the control group which was not subjected to art therapy. From the experimental group, the results indicated that after treatment, the respondents' cognitive, somatic and affective symptoms of depression reduced. On the other hand, with respect to the control group the results indicated minimal changes in cognitive symptoms; negligible changes in somatic symptoms; and little change occurred in the affective symptoms. The paper recommends adoption of art therapy as one of the approaches towards reduction of depression among incarcerated women at LWP. Further, the Kenya Prison Services (KPS) needs to improve psychiatric services within the prison and screen inmates periodically for

depression by trained professionals. Further studies could be replicated in other women's prisons, men s prisons as well as borstal institutions. Such studies in future should include both remands and the sentenced for comparative purposes.

Key Words: *art therapy; expressive art; Bandura's social learning theory; Becks Depression Inventory II; cognitive behavioral theory; depression; incarcerated women; cognitive, somatic and affective symptoms*

Introduction

The World Health Organization (WHO, 2017) documented that depression is a leading cause of death and disability and a major contributor to the overall worldwide burden of disease. It has been found to interfere with an individual's life and affect their daily living and activities in the home, school and work situation. Depression may lead to suicide and it is estimated that about 800,000 people die due to suicide every year. Suicide is the second leading cause of death in 15 to 29-year-olds who are a very productive age group. It is estimated globally that more than 264 million suffer from depression. It has been found that in all income groups, people living with depression are often misdiagnosed and may not receive treatment at all or are given the wrong treatment. According to WHO (2020) low and middle-income countries may also not get treatment due to the stigma associated with mental health treatment as well as the fact that they have few personnel trained in mental health.

Worldwide, prisoners are more likely to develop depression compared to the general population (Zweben, 2011; Wu, Schairer, Dellor & Grella, 2010; James & Glaze 2006; Mageehon, 2003). Suicide, personality disorders and self-harm behavior is also found in prison populations. These conditions affect more women than men (Opitz-Welke & Konrad, 2012; Marzano, Ciclitira & Adler, 2012; Marzano, Hawton & Fazel, 2011; Fazel & Baillargeon, 2011). Different types of treatment have been known to be used in prison. These include Dialectical Behavioral Therapy (DBT), which is an empirically used treatment for suicidal persons. It consists of diverse skills in therapy (Linehan et al., 2015) and skills (Koons, 2008). Interpersonal Psychotherapy (IPT) has also been used. It is an empirically supported short term treatment for depression and has been suggested as a possible first line treatment for depression by WHO, 2017. Cognitive behavior therapy and guided imagery have also been successfully used as interventions for decreasing depression.

Despite the fact that depression levels in prison populations are high particularly among female inmates (Zweben, 2011), it is indeed challenging to offer mental health treatment to this population who would not dare share that they are mentally unwell or show any signs of weakness (Gussak, 2007) possibly to avoid being picked on or victimized by stronger prisoners or prison staff. However, there has been an increasing appreciation of art therapy as evidenced by several studies in prison settings as an effective tool for dealing with a range of issues such as mental health concerns, decreased recidivism, less disciplinary reports and anger management (Hongo & Valenti, 2015; Anderson, 2015; Brewster, 2014; Gardner, Hager & Hillman, 2014; Breiner, Tuomisto, Bouyea, Gussak & Aufderheide, 2012; Erickson &Young 2010; Gussak, 2009; Fetz, 2004; Merriam, 1998; Levy, 1978). The history of art therapy in prison settings dates back to 1977, indicative of its recent application in forensic settings (Brewster, 2014; Nostrant, 2016).

Art therapists work with different age groups, from children to the elderly, as individuals and groups. Art therapists work with clients who may have varied challenges, disabilities or diagnoses. These include behavioral or

mental health problems, emotional, neurological conditions, learning or physical disabilities, physical illnesses and life-limiting conditions British Association of Art Therapists Association (BAAT, 2017). The initial article regarding art therapy in prisons, reported group art therapy sessions with 10 female inmates aged between 20 and 32 years who expressed aggressive behavior (Levy, 1978). The session interventions were specifically designed to encompass a therapeutic process and address group dynamics. The results of the study indicated transformation and healing. Similarly, later studies have indicated great reduction in depression (Gussak, 2004, 2006), increased locus of control (Gussak, 2009), anger management (Biriener et al., 2012) particularly in male prisons. Despite the increase in art therapy studies in forensic settings, limited exploration has been done with regard to the application of art therapy in female prison settings as a treatment for depression, yet the rate of female incarceration has been steadily increasing.

The number of the world's prisoners currently stands at 11 million (Walmsley, 2016). 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 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 has been recorded in countries in all continents with the highest number of female prisoners recorded in USA at 205,400 followed by China 103,766, Russia 53,304, Thailand 44,751, Brazil 37,380 and Vietnam 20,553. On the other hand, India was reported to have a population of 18,188 women prisoners with Mexico having a reported number of 13,400. In the UK, female prisoners constitute 5 percent of the total UK prison population (Berman, 2013).

Africa has not been left behind with regard to this increase in prison numbers. In South Africa, for instance, the total population of prisoners was reported to be 161,067 in 2015, of which 5,296 were women (Artz & Rotmann, 2015). In Sub Saharan Africa, the number of women prisoner's ranges from one to four percent of the total prison population (Walmsley, 2016). Since 2000, there has been a notable 22 percent increase of women prisoners in Sub-Saharan African prisons (Allen, 2016). The Ugandan Bureau of Statistics Report ((UBSR) 2015) indicates there were 2,033 incarcerated women in Ugandan prisons. In UBSR (2017), there was an increase in the number of women in prison from 2,196 in 2016 to 2,579 in 2017, an increase of 26.9 percent from the year 2015 to 2017. The Kenya National Bureau of Statistics (KNBS) Economic Survey Report (2017) 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.

With specific reference to Kenya, the current rehabilitative efforts barely touch on mental health issues. Prison studies done in Kenya (Agasa, 2015; Kamoyo, Barchok, Mburugu & Nyaga, 2015; Muigai, 2014; Chepkemoi, 2011) have not focused on mental health interventions with special regard to women. Agasa's (2015) study indicates that out of 58 respondents, 24 female and 34 male prisoners, only 16 were screened for chronic

illnesses such as diabetes, High Blood Pressure (HBP) and Human Immunodeficiency Virus (HIV). However, not for mental health issues despite the fact that his study revealed that 87 percent of female prisoners versus 73 percent of male prisoners exhibited symptoms of mental stress.

Further, an earlier study by Muteti (2008) did point out that the 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 Mutabari and Wanjohi (2017) who also ascertained that there is need for professional counselling training to be offered to KPS staff to ensure 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's prisons (Zweben, 2011).

Statement of the Problem

The above-mentioned studies (Agasa, 2015; Kamoyo, Barchok, Mburugu & Nyaga 2015; Muigai 2014; Chepkemoi, 2011) appear to point to the fact that a sizeable number of prisoners suffered psychologically and recommended that KPS needed to hire additional professional mental health workers. These would include psychologists, counsellors and psychiatrists to attend to a large population of prisoners who were found to be overwhelmingly depressed. Besides these studies, most prison studies currently done in the country have focused on rehabilitation (Miriti and Kimani, 2017) and prison systems (Mutabari and Wanjohi, 2017; Nyaura and Ngugi, 2014) but not on how emotional and psychological issues are being effectively dealt with within KPS with special regard to women. This study was, therefore, an effort in this direction.

As noted earlier, prison populations the world over have been on the rise. For instance, the male prison population has increased by 18 percent whereas that of women has increased by 50 percent (Walmsey, 2016). This increase has been recorded globally (Allen 2016; Berman, 2013; Artz & Rotmann, 2015). Findings of studies indicate the high probability that many incarcerated women globally meet criteria for mental health diagnosis at the time of their arrest (Zweben, 2011; Wu, Schairer, Dellor & Grella 2010; James & Glaze, 2006; Mageehon, 2003). This is coupled with the knowledge that rehabilitative efforts in prison systems were initially designed to cater for men, who for a long time constituted the larger proportion of those imprisoned (Greifinger, 2007). It is therefore, safe to argue that women's rehabilitation efforts globally, but even more specifically in Kenya, have fallen short of their intended purposes.

Clearly, there is a need for a mental health care system that would work in the prison system, where prisoners fear victimization if they appear weak by so much as seeking counselling (Gussak, 1997a, 2012). This is where art therapy could be of benefit to prisoners. Art therapy has been used in prisons as a substitute to verbal therapy with positive results such as promoting creativity and providing useful diversion and emotional balance (Gussak, 1997a, 2012).

In Kenya, there is documentation that reveals that, generally, the rehabilitative services in prisons aim at accomplishing several goals such as providing basic education to enhance literacy levels, offer life skills activities to facilitate change towards changing behavior that is anti-social to acceptable levels within societal norms (Bangkok Rules, 2010). However, there is limited documentation in the area of how emotional and psychological issues (especially depression) are dealt with in KPS with special regard to women. This study, therefore, seeks to fill this gap.

Objective of the Paper

This paper sought to compare experimental and control groups on cognitive, somatic and affective symptoms at LWP Nairobi – Kenya in order to identify the psychological intervention measures to be used to alleviate and treat depression.

Literature Review

This paper was anchored on two theoretical approaches; Bandura's Social Learning Theory (SLT) and Cognitive Behavioral Theory (CBT). The SLT has four basic principles attention (pay attention to modelled behavior), retention (remember details of behavior to repeat), reproduction (opportunity to be available to reproduce), and motivation. To learn about people, there is need to be focused on the task, when a person finds a new way of doing things or experiences something different, they tend to shift their attention on to the task more, and that social contexts facilitate these perceptions. Another process of learning is through retention by internalizing information, being able to recall and have the ability to act on the information acquired when a similar experience occurs. This touches on areas such as motor rehearsal, cognitive organization, symbolic rehearsal and coding (Bandura, 1961, 1963, 1977).

The SLT has been used in research to explain a varied range of criminal behaviors such as, murder, aggravated assault, robbery and arson, which is fundamentally related to one's interactions, mental state and environment (Akers & Sellers, 2004). Social learning theory has been used extensively to explain aggression (Bandura, 1973) and psychological disorders, principally in the perspective of behavior modification (Bandura, 1969). Many training programs use the theoretical basis for the technique of behavior modelling and the concept of self-efficacy, which may influence behavior, motivation and psychological states (Bandura, 1986, 1977, 1997).

The CBT is not a single theory and a fundamental feature is the notion that "cognitive activity" and "behavior" are essentially different. The cognitive aspect is directed at the thoughts and images of a client, whereas the behavioral part is the overt aspect, which is often influenced by the environment (Dobson & Dozois, 2001). When art is used with CBT, it is able to give form and meaning to participants' thoughts and feelings. The CBT primarily focuses on cognitive restructuring, teaching coping skills, offering psycho-education and the identifying and development of support systems (Aufderheide, 2011). Breiner et al. (2011) established that art therapy could be used with a cognitive-behavioural model to develop an anger management program that can be used with prison populations.

When CBT and art are combined the client is helped to create a visual form in two dimensions and progress to three dimensional forms. This process may be repeated severally, and the aim of the process is to help a client reorganize dysfunctional thinking, through graphic and mental images (Roth, 2001). The therapist aims towards working on distress reprieve and symptom reduction, by aiming at creating awareness about changing one's emotional response (Mennin, Ellard, Fresco & Gross, 2013).

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 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) study hypothesized that inmates receiving art therapy services would show improvement in their mood, socialization, and problem-solving abilities. , FEATS was used, and the Beck Depression-II (BDI-II; Beck, Rial, & Rickets, 1974; Beck & Steer, 1993) The data analysis for BDI-II scores from pre-test to post-test was calculated using independent sample t-test to find differences between the experimental and control groups. The results showed that the depressive symptoms in the experimental group had significantly decreased from pre-test to post-test and exhibited marked improvement in their mood

and socialization. There was minimal change in the control group.

In a subsequent study, Gussak (2009) 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. 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 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 pre- to post-test scores BDI-II and ANS were calculated and analyzed using independent sample t-tests to find differences between the women's and men's experimental groups. Comparison of PPAT pre-test–post-test drawings were assessed using FEATS. The results of BDI-II and ANS supported the hypotheses, that art therapy was effective in reducing depression, whereas results from FEATS did not provide supportive data. There was improvement in the locus control for both the female and male inmates participants. However, mood improvement was noted to be higher among women.

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 the BDI 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. The results showed that a majority of female inmates in Kenyan prisons were depressed, experienced suicidal ideation and spent most of their time sleeping. The findings showed that there were substantial effects as a result of incarceration. These findings are consistent with previous studies about the presence of depression in prison populations (Zweben, 2011; Fazel & Baillargeon, 2011; Wu, Schairer, Dellor & Grella 2010; James & Glaze, 2006; Mageehon, 2003). Agasa (2015), looked into the evaluation of the social, economic, psychological, physical and health effects of imprisonment on male and female inmates in Industrial Area Remand Prison (IARP) and Langata Women Prison (LWP). The results indicated that their incarceration affected their source of income, all the prisoners who were serving long prison terms suffered more psychological distress than those serving short terms. The incidence of psychological stress was higher among the women prisoners. The research indicated that both the female respondents and male respondents experienced some experienced physical assault and poor health due to imprisonment.

Recommendations to the prison service were recruitment of professional counsellors, hiring additional medical staff and allowing more interaction between the prisoners and members of their families to minimize their levels of anxiety and reduce the psychological effects of imprisonment.

Research Methodology

Ogula (2005) defines a research design as a strategy, arrangement and plan of investigation to get answers to research questions. This paper was quasi-experimental and it adopted mixed research methods and combined quantitative as well as qualitative approaches. The quantitative approach component entailed the use of the BDI-II (Beck et al., 1996). The BDI-II is a tool that was developed for the assessment of depressive symptoms that corresponds to Diagnostic and Statistical Manual of Mental Disorders 5 (DSM-5) criteria for major depressive disorder. It has a four response options per question that ranges from absence of that symptom (0) to severe or persistent manifestation of that symptom (4) in the past two weeks. The respondent is expected to choose only one answer that best expresses their symptoms. Total score is categorized as minimal depression (0 to 13), this may suggest that some of the symptoms that cause depression may be present but do not meet the full criteria for the diagnosis. Mild depression (14 to 19) denotes that the symptoms may cause some form of distress, however, can be managed and may slightly affect social functioning. Moderate depression (20 to 28) signifies that the number of symptoms and intensity may range from mild to severe and have noticeable effects on social functioning and job related functioning. In severe (major) depression (29 to 63), the symptoms are numerous and cause severe distress, are difficult to manage and largely interfere with social and work-related functioning. A score of 14 or above suggest that one would require psychological evaluation and intervention. The BDI-II is also user friendly and rates well with clinician related tools such as the Patient Health Questionnaire 9 (PHQ-9) - a self-administered depression module that can establish provisional depressive disorder diagnoses as well as rate depressive symptom severity.

The BDI-II was administered to the prisoners and remands in the pre-test to (determine the prevalence of depression) and only to the remands (control and experiment groups) in the post-test (to determine their levels of depression after the treatment). After collecting the pre-test BDI-II responses from both the sentenced and the remands, the officer in charge of LWP indicated that the art therapy treatment should only be done with remands to avoid interrupting the already set routines among the sentenced. The sentenced are required to be enrolled in a program within the prison to learn a skill, for example, cake baking and how to play a musical instrument. The sentenced were, therefore, excluded from the (quasi) experimental part of this paper after the pre-test BDI II was done. A questionnaire capturing the demographics of the remands was also administered alongside the BDI-II instrument. The qualitative component entailed one-on-one interviews with mental health officers. The art therapy sessions ended with both a quantitative and qualitative

exit questionnaire, which served to assess and enhance the paper's validity.

The first thing in the research design was the site selection, which was LWP. In order to collect data and information, the BDI-II assessment tool and prepared questionnaires were used. Thereafter, convenience sampling was used to select both remands and sentenced; purposeful sampling was used to select remands; and random sampling was used to select remands to form both experiment and control groups. The next step was data and information collection using a prepared questionnaire. The last three stages were data analysis and interpretation; the findings; and conclusion and recommendations.

At the time of the paper, the population of LWP was 500 comprising of remands and sentenced. Using Krejcie and Morgan's (1970) table for determining sample size for research activities, 217 remands and sentenced were conveniently sampled, from which 113 and 104 were remands and sentenced, respectively, but 17 of the responses were invalid, because of being filled incorrectly, where some respondents ticked more than one answer in the same question or left several areas blank. Therefore, responses, from 94 sentenced and 106 remands were used for the analysis. The sampled remands and sentenced were taken through the BDI-II assessment tool in-order to determine the prevalence and severity levels of depression among incarcerated women at LWP. For further analysis, that is to assess the effectiveness of art therapy as treatment for depression at LWP, the sentenced were dropped and subsequent analysis was done on the remands.

In-order get data and information, 106 remands were purposefully sampled to 60 respondents and were further divided into experiment and control groups each of size 30 and this was informed by previous studies, such as Erickson and Young (2010) and Yalom and Leszcz (2005). Out of the 30 respondents in the experimental group, 29 remands remained as subjects in the paper because one remand was released from prison. With reference to the control group 28 respondents remained because one was taken to court and one was released from prison. In essence, at the onset of the quasi-experiment, they were 29 respondents in the experimental group and 28 in the control group, totaling to 57 respondents in all. Out of the 29 remands in the experimental group, 22 filled the post BDI-II instrument because four were released from prison and three were taken to court. With respect to the control group, 11 remands filled the post BDI- II since three were released, five were taken to court, and three were assigned other duties and six were unavailable. The BDI-II assessment tool was used to collect quantitative data and graphs and descriptive statistics were used to present data in the form of figures based on the objective of the paper.

Results and Discussion

The objective of this paper was to compare experimental and control groups on cognitive, somatic and affective symptoms at LWP in order to identify the psychological intervention measures to be used to alleviate and treat depression. In order to address this objective, pre and post- test measures of depression comparison between experimental and control groups on

cognitive, somatic and affective symptoms of depression, among the remands was done.

Cognitive, Somatic and Affective Symptoms of Depression of Experimental Group

The questions in the BDI-II had a four-response option per question that ranged from absence of a symptom (0) to options 1 to 3, which indicated presence of symptoms with 3 being the most severe. Using the BDI-II instrument, Buckley, Parker & Heggie (2001) created a three-factor model which grouped the responses into cognitive, somatic and affective areas. The cognitive items focus mainly on thoughts, while the somatic area focuses on bodily symptoms and affective items deals with mood and this model was adopted presenting the BDI-II findings.

The cognitive items in the BDI-II consisted of questions 1, 2, 3, 5, 6, 7, 8, 9, and 14 and focused on sadness, pessimism, past failure, guilt feelings, punishment feelings, self-dislike, self-criticism, suicidal thoughts, and worthlessness, respectively. A comparison of responses to options of the cognitive symptoms of depression of the pre-test and post-test treatment group results are summarized in the Figure 1 below and as shown, there was a marked difference between pre-test and post-test experimental group with respect to option 0 which represented a reduction in symptoms as indicated by the figures of 51 responses (29.3 percent) at the pre-test and 123 responses (70. 7 percent) at the post-test. In addition, the data in Figure 1 below at pre-test shows that for option 1, there were 65 responses (60.2 percent) but after treatment it decreased to 43 (39.8 percent). For option 2, there was a decrease from 41 (67.2 percent) to 20 (32.8 percent) who selected this option. In option 3, there was also a decrease from 41 responses (69.5 percent) to 18 responses (30.5 percent). All these point to the fact that after treatment, the respondents' cognitive symptoms of depression reduced.

Figure 1 Cognitive Symptoms - Pre-Test and Post-Test - Experimental Group

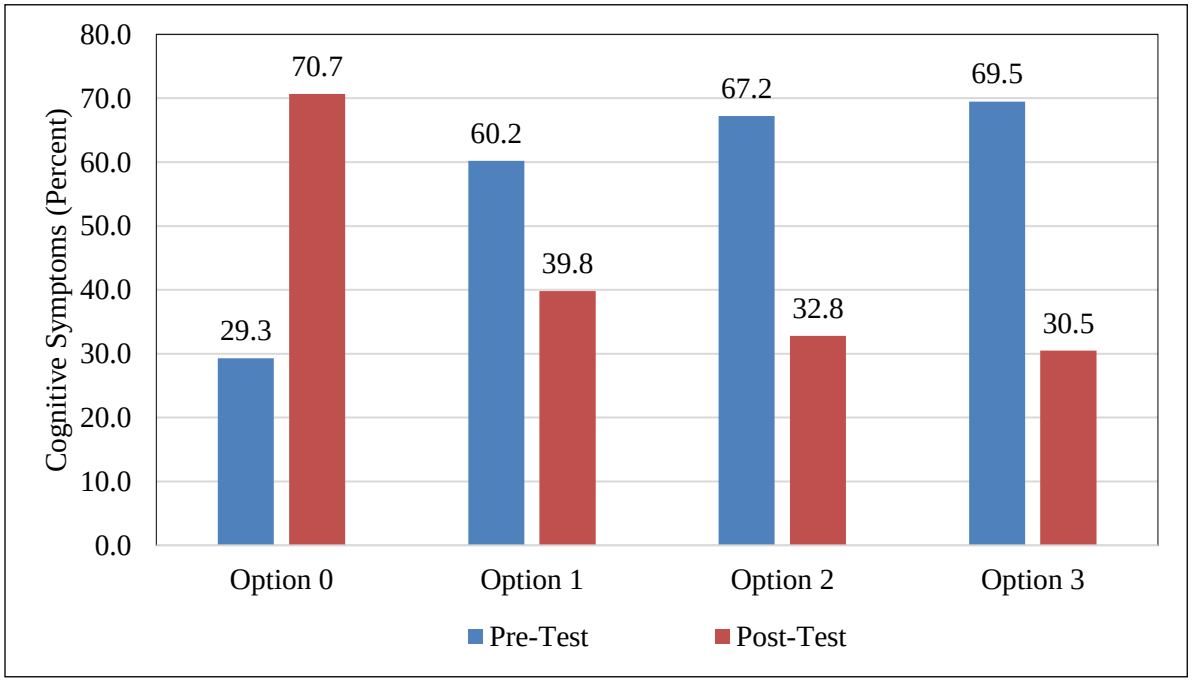

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Figure 2 below shows respondents' selection in the options of somatic symptoms between the pre-test and post-test results. Somatic items in the BDI-II consisted of questions 11, 15, 16, 17, 18, 19, 20 and 21 and focused on irritability, loss of energy, changes in sleeping pattern, changes in level of energy, changes in appetite, weight loss, health and libido range, respectively.

Figure 2 Somatic Symptoms - Pre-Test and Post-Test - Experimental Group

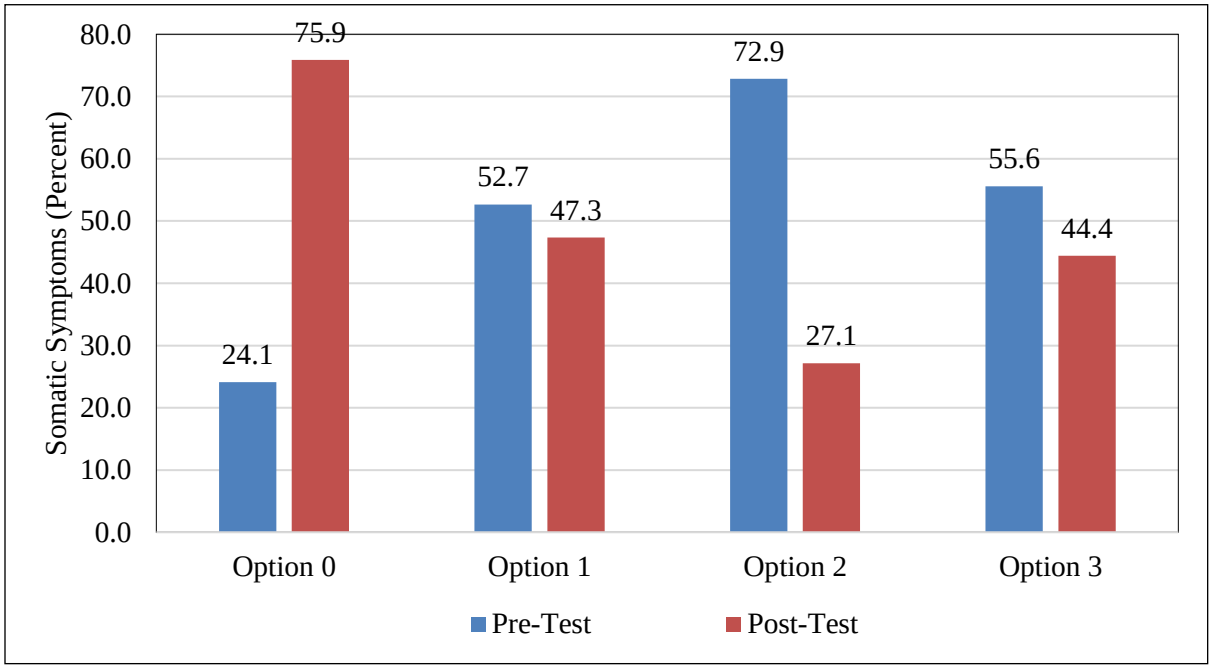
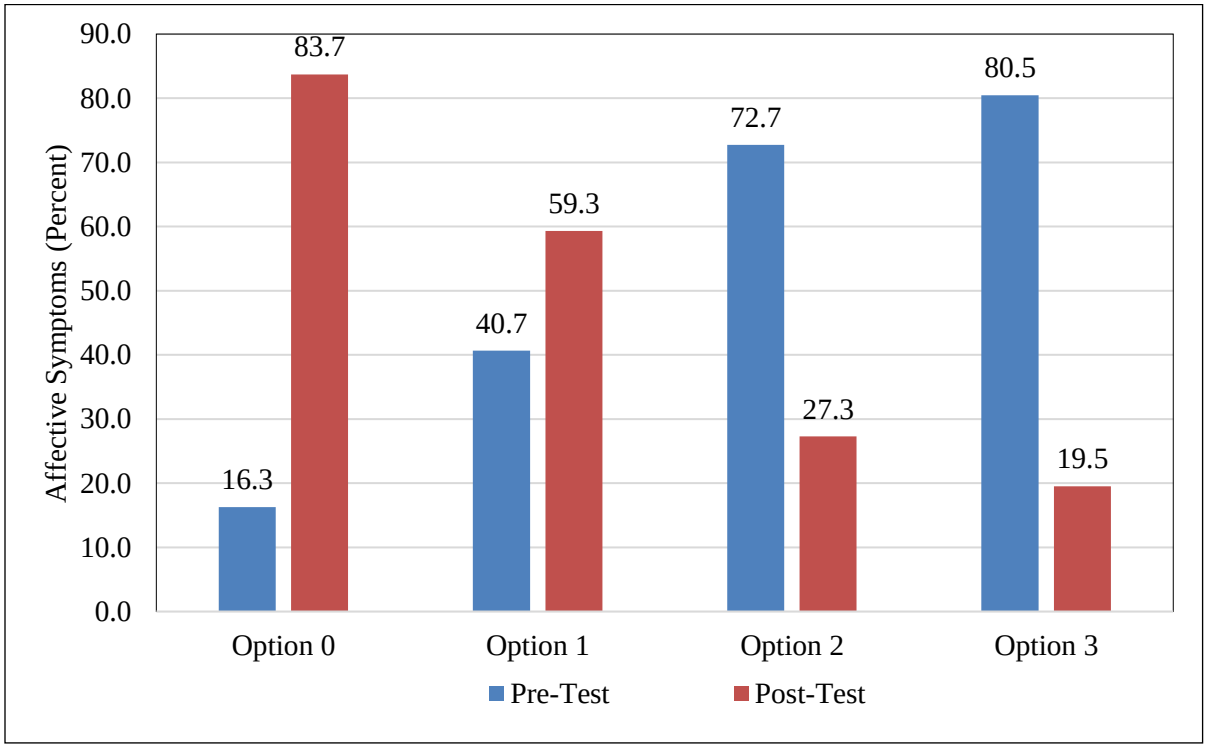


Figure 2 above show a distinct difference between the pre-test and post-test results for the experimental group, with respect to option 0, which shows an absence of symptoms. When there is an uptake in this option, it is an indicator that there is a reduction in symptoms. At pre-test 21 respondents (24.1 percent) chose this option but after the post-test there was a reduced response to the option at 66 (75. 9 percent). This pointed to the fact that after art therapy, more respondents' somatic symptoms seem to have eased. Responses in options 1 to 3, indicated the presence of symptoms with option 3 being the most severe. The data in Figure 2 at pre-test under option 1 showed that there were differences with regard to the uptake at 69 (52.7 percent), while at post-test this reduced to 62 (47.3 percent). In option 2, 51 (72.9 percent) of the respondents chose this option and this reduced to 19 responses (27.1 percent) after the post-test. Under option 3, for pre-test 35 (55.6 percent) chose this option and the post-test results showed that there was a decrease in response to 28 (44.4 percent). The results indicated that after treatment, the respondents' somatic symptoms for depression subsided, however

there was marked differences, especially in options 0 and 2.

The affective items in the BDI-II consisted of questions 4, 10, 12, and 13 and these questions focused on loss of pleasure, crying, loss of energy and indecisiveness, in that order. A comparison of the responses to the options of affective symptoms of depression (loss of pleasure, crying, loss of energy and indecisiveness) between the pre-test and post-test treatment group results are summarized in Figure 3 below. Figure 3 shows that there were marked differences between pre-test and post-test results in the treatment group with regard to option 0 - a decrease in symptoms after treatment. Seven (16.3 percent) chose option 0 at the pre-test and 36 responded (83.7 percent) at the post-test. Under option 1, 24 (72.7) respondents picked this choice at pre-test, however, after treatment and the administration of the post-test, the number increased to 35 (59.3 percent) responses showing that the symptoms decreased. Under option 2, 24 (72.7) respondents selected this option at pre-test and after the post-test was administered, 9 (27.3 percent) respondents selected the option showing a decrease in uptake and a clear indication of a reduction of symptoms. For option 3, at pre-test 33 (80.5 percent) respondents chose this option and after the post-test, only 8 (19.5 percent) responded to this option. The difference in all areas after treatment showed that the respondents' affective symptoms for depression decreased.

Figure 3 Affective Symptoms - Pre-Test and Post-Test - Experimental Group

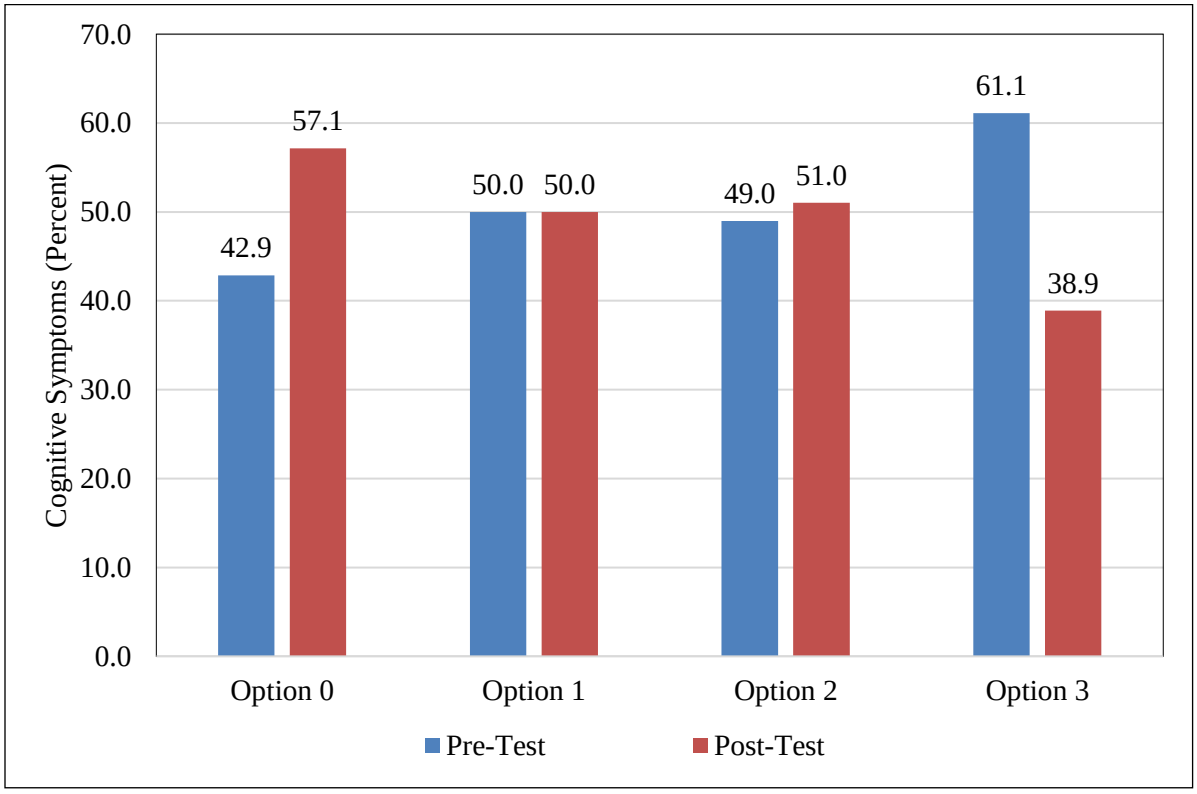


Cognitive, Somatic and Affective Symptoms of Depression of Control Group

Initially, the control group comprised 28, however, during the administration of the post-test, this number dropped to 11 respondents as explained earlier. The cognitive items in the BDI-II consisted of questions 1, 2, 3, 5, 6, 7, 8, 9, and 14 and these questions focused on sadness, pessimism, past failure, guilt feelings, punishment feelings, self-dislike, self-criticism, suicidal thoughts, and worthlessness, respectively.

A comparison of the responses to the options of the cognitive symptoms of depression of the pre-test and post-test results are summarized in the Figure 4 below. Figure 4 below shows slight differences between pre-test and post-test control group results. Variations in option 0 show there were 21 (42.9 percent) responses to this option at pre-test but at post-test, there was an increase to 28 (57.1 percent) responses suggesting a reduction of symptoms. For option 1, there was no change at all at pre-test and post-test there was an uptake of 31 (50 percent) responses respectively. For option 2 there were and 24 (49 percent) responses at pre-test and this increased to 25 (51 percent) at post-test. With reference to option 3 the response was at 23 (52.3 percent) at pre-test and this reduced to 21 (47.7 percent) responses at post-test. The results indicated minimal changes in cognitive symptoms.

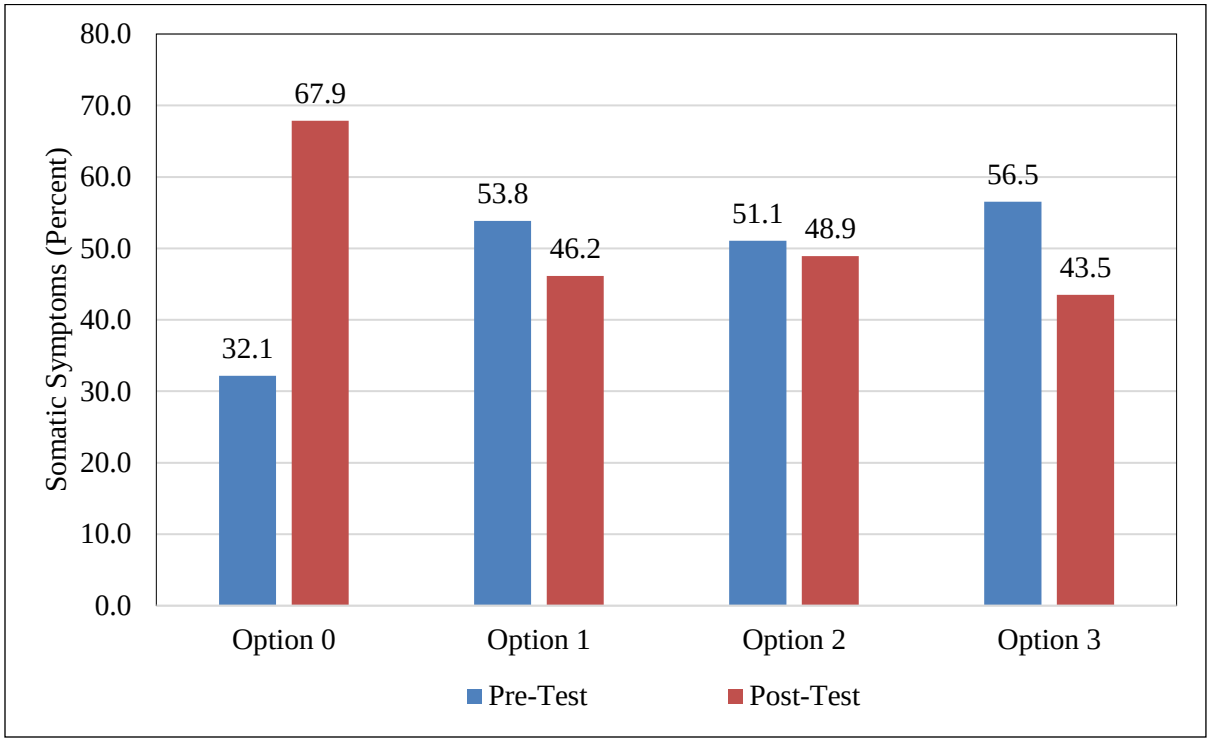
Figure 4 Cognitive Symptoms - Pre-Test and Post-Test - Control Group



The somatic items in the BDI-II consisted of questions 11, 15, 16, 17, 18, 19, 20 and 21. The questions focused on irritability, loss of energy, changes in sleeping pattern, changes

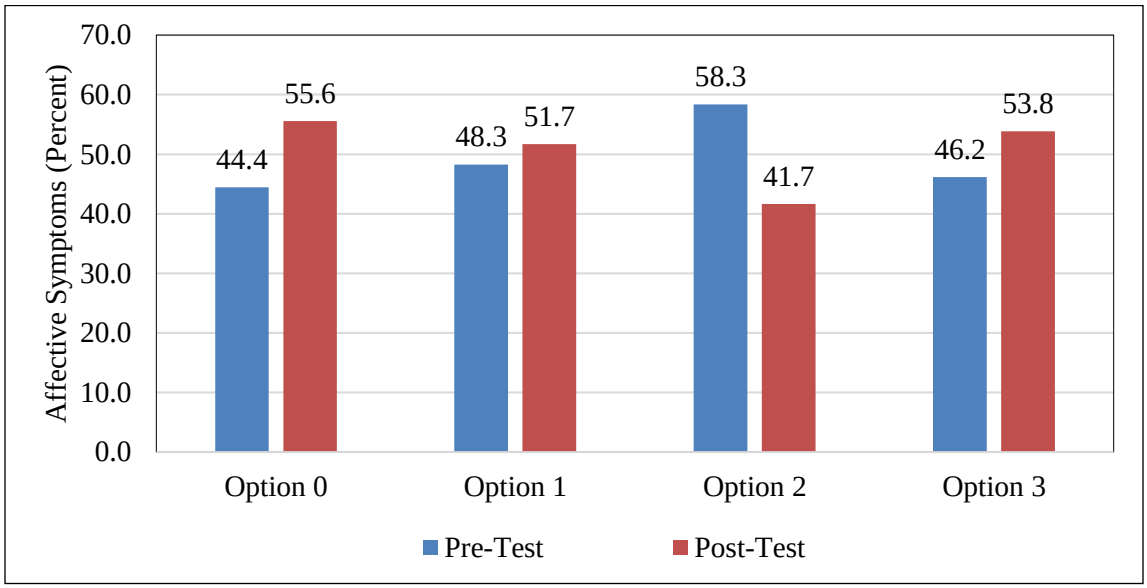
in level of energy, changes in appetite, weight loss, health and libido range, respectively. A comparison of the responses to the options of the somatic symptoms of depression of the pre-test and the post-test control group results are summarized as shown in Figure 5 below.

Figure 5 Somatic Symptoms - Pre-Test and Post-Test - Control Group



Affective items in the BDI-II consisted of questions 4, 10, 12, and 13. Questions four, 10, 12 and 13 looked at loss of pleasure, crying, loss of and indecisiveness, in that order. A comparison of the responses to the options of the affective symptoms of depression (loss of pleasure, crying, loss of energy and indecisiveness) of the pre-test and post-test control group results, are summarized in Figure 6 below.

Figure 6 Affective Symptoms - Pre-Test and Post-Test - Control Group



As Figure 6 above shows, there were slight changes in the affective symptoms that occurred between pre and post-tests, for example in option 0, at pre-test results showed that those who selected this option were 4 (44.4 percent) and at post-test, 5 (55.6 percent) picked this option. Option 1, 14 (48.3 percent) selected this option at pre-test - post-test results showed 15 (51.7 percent) picked this option. In option 2, 14 (51.7 percent) chose this option at pre-test and this number reduced at post-test whereby 10 (41.7 percent) responded to this option. In option 3, the uptake was 12 (46.2 percent) and the overall number of those who chose this option increased at post-test to 14 (53.8 percent). The results showed that little change occurred in the affective symptoms, of the control group.

Conclusion

A comparison of the results between the treatment and control groups was made in the three main areas, cognitive, somatic and affective domains of depression. The results from the BDI-II indicated that there were several differences between both groups. The cognitive area looks at thought processes and deals with issues like guilt feelings, self-criticism, sadness, suicidal thoughts, pessimism, past failure, punishment feelings, self-dislike and worthlessness. There were reductions in symptoms in some areas in the treatment group indicated by the choices the respondents picked. This, possibly suggesting an enhanced awareness about the consequences of their actions, for those who had committed a crime.

For the control group, some choices remained the same for both pre and post-test or increased or reduced slightly. With reference to suicidal thoughts, this increased in the control group in terms of the number of respondents who had thoughts of killing themselves although they would not carry them out. With reference to somatic symptoms of depression between the

treatment and control groups, it was observed that there were differences in both groups. Somatic symptoms of depression manifest in the body as distress, whereby an individual may experience physical symptoms such as body aches, insomnia, general weakness, irritability, changes in appetite and libido range. There was an improvement in all areas such as sleeping patterns, irritability, appetite, concern about health and energy levels for the treatment group. However, for the control group, there was no consistency in uptake suggesting very minimal changes, perhaps with the exception of question 15 option one, "It takes an extra effort to get started at doing something". Whereby, uptake was at 8 (73 percent) at pre-test and reduced to 3(27 percent) at post-test.

This paper recommends adoption of art therapy as one of the approaches towards reduction of depression among incarcerated women at LWP. Further, KPS need to improve psychiatric services within the prison and screen inmates periodically for depression by trained professionals. Further studies could be replicated in other women's prisons, men s prisons as well as borstal institutions. Such studies in future should include both remands and the sentenced for comparative purposes.

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