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RESEARCH ARTICLE

EFFICACY OF MINDFULNESS-BASED COGNITIVE BEHAVIOUR THERAPY- SELF-HELP IN MANAGING DEPRESSION IN OLDER CLERGY IN NAIROBI COUNTY, KENYA

Ruth Omungo, Michael Kihara Ph.D. and Timothy Wachira, PhD

PO Box 60875, 00200, Nairobi, Kenya

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ABSTRACT

This study aimed at establishing the efficacy of mindfulness-based cognitive therapy-self-help (MBCT-SH) in managing depression among older clergy. The study was a response to the serious but under-investigated problem of depression among older clergy, whose experiences of ageing and vocational challenges combine to render them susceptible to depression, which can be debilitating. Interventions are needed to tackle this serious and widespread mental health condition. Interventions, such as mindfulness-based cognitive behaviour therapy, have proved effective in reducing mild or moderate depression and in stemming depressive relapses. However, in Kenya, the efficacy of this intervention had not been assessed, more so with older clergy in focus. This paper employed the MBCT-SH to fill this knowledge gap. The study used a quasi-experimental research design. The respondents (n=160) were a convenience sample, drawn from four mainline protestant denominations: the African Inland Church of Kenya (n=20), Anglican Church of Kenya (n=44), Methodist Church of Kenya (n=32), and the Presbyterian Church of East Africa (n=51). The respondents were assigned to either an experimental or a control group. Those in the experimental group were exposed to MBCT-SH intervention for ten weeks while those in the control group received no treatment for the same period. The Becker Depression Inventory was used to estimate the levels of depression at the baseline, middle line, and end line. Generalised linear modelling was used, with repeated measures, to assess whether the depression levels would become less intense with the intervention of the MBCT-SH. Descriptive results showed that about 52% of participants had either mild or moderate depressive symptoms. Between the baseline and midline, the depression levels fell by 8%, and they fell by a comparable level between the baseline and end line. A significant difference was observed between the depression levels at baseline and midline ($p=0.02$) but not between the midline and end line ($p=0.92$). Regarding the control group, the BDI levels increased by 80% ($M=7.6$ at baseline and $M=13.6$ at the endline). For the treatment group, the BDI levels fell by 43% ($M=12.5$ at baseline and $M=7.1$ at the endline). Together, the findings give tentative evidence of the effectiveness of the MBCT-SH in controlling depressive symptoms among older clergy.

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INTRODUCTION

The notion of mindfulness is a concept from Eastern meditative traditions, especially Buddhism, to the field of medicine. The concept was introduced as a useful aspect in the practice of mental health by Kabat-Zinn, who founded the Stress Reduction Clinic and the Centre for Mindfulness in medicine. Kabat-Zinn (1997) defined mindfulness as the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment.

Mindfulness-based cognitive therapy (MBCT) is a modern therapeutic approach to the assessment, treatment, and prevention of psychological problems. It highlights acceptance and mindfulness as vital in psychological treatment. It was meant to stem depressive relapse in affected individuals. The practice of mindfulness can be combined with cognitive-behavioral therapy (CBT) to make use of their separate but interconnected benefits. The CBT techniques can help people in counteracting distorted or unhelpful thoughts (Shea, 2018). The mindfulness techniques, on the other hand, are useful for learning to be at peace with the world, even when unwanted emotions threaten to overwhelm. Combined, mindfulness and CBT techniques provide a framework for one to manage one's emotions so that one is not defined by them so that they do not spiral into distorted thinking and mental illness.

*Corresponding author: Ruth Omungo,
PO Box 60875, 00200, Nairobi, Kenya.

The MBCT has proved effective in treating different forms of depression. Several studies have found that mindfulness training reduces stress, anxiety and depressive symptoms, besides increasing vitality and resilience. Empirical research into the usefulness of MBCT includes a 2012 UK study that documented MBCT as more effective than maintenance pharmacotherapy in reducing residual depressive symptoms and in improving quality of life (Turner, 2012). Nonetheless, recent studies suggest the mechanisms of success at reducing depressive symptoms cannot be referred to as the MBCT alone. For instance, a recent study explored the usefulness or power of MBCT in supporting relapse prevention. The positive outcomes observed in preventing relapses seem to be partly due to cases where subjects had used pharmacological means to recover from depression. Even so, in an open-label pilot study of MBCT's efficacy in reducing depressive symptoms in patients with treatment-resistant depression and ≥ 3 depressive episodes, 61% of patients achieved a post-MBCT Beck Depression Inventory-II (BDI-II) score < 14 , which represents normal or near-normal mood (mean BDI-II scores decreased from 24.3 to 13.9; effect size 1.04).

Further, mindfulness training has the potential to alter baseline activity of the amygdala hence serving a preventive role to a depressive mood. Results of a Spanish based study involving randomly selected 40 HIV positive participants who received MBCT show that about 80% of participants, who had symptoms of depression at the start of the study, saw their depression fall significantly. By the 20th week of the study, only 20% of participants who had received MBCT had symptoms of depression. On the other hand, rates and intensity of depression remained relatively high among the control group participants who did not receive MBCT (Gonzalez-Garcia, 2014). In the UK, the use of MBCT has produced highly positive results (Mark, 2012), with MBCT observed as effective at reducing excessive worry and anxiety symptoms. Consequently, it is currently included in the United Kingdom's National Institute for Clinical Excellence (NICE) for clinical treatment of depression and the prevention of recurrent depression (Turner, 2012). Recent studies that have examined the effect of have treated depressive relapse, and not just depressive symptoms, as an outcome variable.

MBCT is slowly taking root in Africa, with South Africa taking the lead. In 2007, the country established the Mindfulness Institute of South Africa (MISA) to expand the professional practice, research and teaching in the contemporary uses of mindfulness meditation. Among the studies on MBCT done within the South African population is a study done to determine the effectiveness of MBCT in the treatment of Bipolar Disorder (BD). The findings showed that MBCT improves attentional readiness, and attenuated activation of non-relevant information processing during attentional processes, therefore, improving symptoms of BD (Howells, 2014). Another study found that MBCT improves mindfulness and emotion regulation and reduces anxiety in people with bipolar disorder (Ives, 2013). Thus, the MBCT seems effective in helping undo the effects of psychological problems, such as depression. It was selected, on this premise, for use in the present study. Although the MBCT is effective in several settings, little analytical work has been done in Kenya to assess its usefulness. The underlying problem in the present study was finding an effective intervention to the problem of depression among older clergy in selected protestant denominations in Kenya.

In a sample of 132 respondents, about 52 percent of older clergy were found to have either mild or moderate depression. Not much analytical work has been done on older clergy in Kenya, and even the level of depression among this social category was not well understood. Likewise, there was a knowledge gap in the area of therapeutic intervention. Accordingly, the present study employed the MBCT to fill the existing knowledge gap by assessing its effectiveness in treating depression among older clergy. This study utilized the self-help version of MBCT. This was done because older clergy avoid seeking help for mental health problems for fear of stigma (Proeschold-Bell, 2013). The MBCT-SH version is intended to be self-administered using a self-explained manual. It can, therefore, be used for self-intervention in total privacy.

METHODOLOGY

A quasi research design was used. It allowed the comparing of depression levels among respondents in experimental and control groups. The level of depression was assessed using the Beck's Depression Index. Assessments were completed at baseline, eight weeks later, and at a 10-week follow-up as is customary under MBCT interventions (Hinterman, Burns, Hopwood, & Rogers, 2012). Participants whose level of depression was within the 11-16 range upwards (indicative of mild depression) were allocated to the experimental group which received MBCT-SH for ten weeks. Those with readings below 11 were assigned to the control group, which did not receive any intervention for the same period. A convenience sample of 160 retired clergy was selected. The mental needs of older people have received little scholarly attention, even though older clergy are a sizeable population in church leadership and an extremely useful occupational group (Proeschold-Bell et al., 2013; Walther, 2012).

The occupation of the clergy has unique psychological strains. Existing studies suggest clergy are liable to depression, which together other related mental conditions can force clergy to quit the pastoral. The number of pastors diagnosed with clinical depression was double the national average (Smietana, 2014). Older clergy run the double risk of undergoing the psychological challenges of ageing coupled with the stresses and difficulties associated with their pastoral occupations. The respondents had provided pastoral care in four select protestant denominations: the Africa Inland Church (AIC), the Anglican Church of Kenya (ACK), the Presbyterian Church of East Africa (PCEA), and the Methodist Church of Kenya (MCK). The four denominations are among the oldest in Kenya; as such, they have institutionalised organizational structures for dealing with clergy as a human resource, including support structures for pastors of varying quality as well as structured and graduated remuneration and formal pensions, to cite but a few.

Given their long years of service, these churches were presumed to have ample numbers of older clergy who were either contemplating retirement or in retirement. Eligible clergy were at least sixty years old. Ethical clearance for conducting this study was obtained from Daystar University Ethics Review Board (DU-ERB). A government permit to enable data collection was granted by the National Commission for Science, Technology and Innovation (NACOSTI). Participation in this research was purely voluntary. The researcher explained the research aims and the process of this study to the participants signing and informed

consent form. Participants in the intervention group were informed about the need for consistency in reading and doing the assignments for each week, as well as the need to complete their readings and practice their mindfulness as required by MBCT-SH. The researcher explained to all participants that should one experience any discomfort or trauma related to the study (though none was foreseen), they would be attended to for free by the researchers. The researcher took several measures to ensure the confidentiality and privacy of the participants. Numbers were assigned to the participants such that their names did not appear anywhere in the study records. All the records of the participants, including the intake form, the informed consent, and the instrument answer sheets were safely stored.

RESULTS

The majority of older clergy had symptoms of depression of varying degrees. Those who exhibited minimal depression were 43.2% and those who had moderate depression were 27.3%. About 24% of participants had mild depression, and those with severe depression were 5.3%. About 50 percent of the participants had levels of depression. Studies done in Europe indicated that the prevalence of late-life depression was 53% (Horackova et al, 2019). According to existing studies, pastors are susceptible to depression, and this observation is in line with literature that holds that people helpers, including clergy, will report high levels of stress. Existing studies suggest too that clergy age is a significant determinant of mental aberrations, such as depression. Rather, the challenges of life that are associated with aging predispose older clergy to high levels of stress, burnout, and depression. Using cross-tabulation, demographic variables that were posited as contributing to the levels of depression among older clergy were observed. Gender ($p = 0.19$), marital status ($p = .5$), marital status, education levels $p = (.183)$ were found not to be significant factors of depression. However, the frequency with which clergy received financial benefits had a significant effect on the prevalence of depression ($p = 0.022$). Among clergy who received financial benefits each month (76.9%) had minimal depression and 23% of them had mild depression. None of the pastors who receive monthly benefits had moderate or severe depression. For clergy who received financial benefits periodically, but not monthly, 40% of them had minimal depression, 40% of them had moderate depression, and 20% of them had severe depression. For those who received benefits after several irregular months, 50% of them had minimal depression and 25% of them had mild depression and moderate depression. Thus, only 23 % of clergy who received monthly financial benefits had mild or moderate depression and the corresponding figure was about 40% for those who received benefits periodically and 75% for those who received funds irregularly were eligible for treatment using the MBCT.

Repeated measures ANOVA, under the general linear model, was used to establish if there were significant differences in depression levels between the control and treatment groups. Depression levels were estimated at three points, at the baseline, mid-line, and end lines. These three key tests were conducted using the general linear model: 1) repeated measure of control and treatment, 2) repeated measure on books read on BDI, and 3) repeated measure of mindfulness on BDI. A diagnostic test was done, to assess whether the test of sphericity had been violated or not as indicated in table 4.1. Mauchly's test of sphericity would be significant if ($p < .05$).

The multivariate test was used to determine the effectiveness of the treatment methods used by comparing the treatment and control groups on each of the three-level of data collected. Mauchly's test of sphericity showed that the assumption of sphericity had been violated, $\chi^2 (2) = 23.85$, $P < 0.001$. This necessitated the use of Greenhouse-Geisser correction. Reported are the results of the multivariate analysis, which aimed to ascertain whether the means scores, based on BDI, were different at the baseline, midline, and end line stages. A multivariate test was used to determine the effectiveness of the treatment methods used by comparing the treatment and control groups on each of the three levels of data collected. The three-level of data sets are the 'assessments' and the control and treatment are the 'groups. The findings suggest there was a significant difference in depression across the three levels of trials, baseline, midline, and end line, $F (2, 128) = 3.084$, $p < .049$). The effectiveness of the MBCT interventions work has been demonstrated in other studies (Pots, et al., 2014).

The difference in the depression level estimated on the multivariate test of BDI can be supported by the decrease in mean across the three levels of trials. The mean score for the baseline was 14.337, and the average score for the midline was 13.03. The mean score for the end line was 13.07. This suggests there was a fall in BDI scores between the baseline and the midline as well as the baseline and end line. The fall in depression levels between the baseline and midline scores was 9%, and the reduction between the end line and baseline was 8.8 percent. However, the mean score for level 3 seems to be like the one for the midline, suggesting the differences may not be significant. Further analysis was needed. to determine the difference in the mean value of the treatment and control team. This was achieved by doing a test of the within-subject contrast of the BDI. The results are reported below. The interaction between the treatment and control group too was significant $F (2, 128) = 92.914$, $p < 0.001$ This means, the observations made on the three phases of depression was different based on the treatment and control groups.

As indicated in table 4.4, there was a statistically significant difference between the mean scores for level 1 ($M = 14.3$) and level 2 ($M = 13.03$), that is, the baseline and the midline, $F (1, 129) = 5.577$, $p = .02$. This means the intervention, or the MBCT therapy, produced positive effects. The BDI variable, the contrast of the level 1 and level 2, compares the depression level obtained at the level 1 (baseline) where $M = 14.337$ with the level of depression obtained at level 2 (midline) where $M = 13.037$ average across the two levels of depression. However, the contrast of the level 2 and level 3, compares the depression level obtained at the level 2 (midline) where $M = 13.037$ with the level of depression obtained at level 3 (end line) where $M = 13.076$ average across the two-level of depression. This was not significant $F (1, 129) = 0.010$, $p = .0919$. This indicates there was no difference in the mean value of the depression at level 2 (midline) and level 3 (end line). The BDI*control-treat contrast tests the difference in the mean value of BDI based on the two groups: the treatment and control. The first contrast of the level 1 (baseline) and level 2 (midline), was significant $F (1, 129) = 144.033$, $p < 0.001$. This shows that the depression level differed significantly between the treatment and control group across the two levels of depression (level 1 Vs level 2). However, the contrast of the level 2 (midline) and level 3 (end line) was not significant $F (1, 129) = 3.349$, $p > .05$. This shows that there was no significant difference in the depression level

Table 4.2. Results of Multivariate Analysis

Effect		Value	F	Hypothesis df	Error df	Sig.
BDI	Pillai's Trace	.046	3.084 ^b	2.000	128.000	.049
	Wilks' Lambda	.954	3.084 ^b	2.000	128.000	.049
	Hotelling's Trace	.048	3.084 ^b	2.000	128.000	.049
	Roy's Largest Root	.048	3.084 ^b	2.000	128.000	.049
BDI * control_treat	Pillai's Trace	.592	92.914 ^b	2.000	128.000	.000
	Wilks' Lambda	.408	92.914 ^b	2.000	128.000	.000
	Hotelling's Trace	1.452	92.914 ^b	2.000	128.000	.000
	Roy's Largest Root	1.452	92.914 ^b	2.000	128.000	.000
a. Design: Intercept + control_treat						
Within Subjects Design: BDI						
b. Exact statistic						

Table 4.3. Trial Mean Estimates of BDI

BDI	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	14.337	.471	13.405	15.268
2	13.037	.534	11.980	14.095
3	13.076	.497	12.092	14.060

Table 4.4. Tests of Within-Subjects Contrasts of BDI Mean Scores

Source	BDI	Type III Sum of Squares	df	Mean Square	F	Sig.
BDI	Level 1 vs. Level 2	220.567	1	220.567	5.577	.020
	Level 2 vs. Level 3	.198	1	.198	.010	.919
BDI * control_treat	Level 1 vs. Level 2	5696.598	1	5696.598	144.033	.000
	Level 2 vs. Level 3	64.045	1	64.045	3.349	.070
Error(BDI)	Level 1 vs. Level 2	5102.028	129	39.551		
	Level 2 vs. Level 3	2467.191	129	19.126		

Table 4.5 Control or treatment * trial of BDI Mean Scores

Control or treatment	BDI	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Control	1	7.609	.648	6.327	8.891
	2	12.913	.735	11.458	14.368
	3	13.652	.684	12.298	15.006
Treatment	1	21.065	.684	19.712	22.417
	2	13.161	.776	11.626	14.696
	3	12.500	.722	11.072	13.928

between the treatment and control group across the two levels of depression (level 2 Vs level 3). On the contrast between level 1 and level 2, for the control group, the depression level increased by 70%, when the baseline and midline were compared ($M=12.913 - M=7.609 = 5.305$). Between level 2 and level 3, the depression scores grew by 5 percent. And the BDI scores for the control group, between level 1 and level 3, increased by almost 80%, from ($M=13.65 - M=7.6 = 6$). For the treatment group, the depression scores at level 1 $M=21.0$ fell by 38 % to average $M=13$, at level 2. The decline in average BDI scores, between levels 3 and 2, was about 1 percent. However, the reduction in BDI scores between levels 1 and 3 was 43%. From table 4.5, it is clear the level of depression in the control group was increasing during the period of study while on the treatment group, the level of depression was reducing. This suggests the MBCT intervention was effective. Studies done elsewhere have found similar outcomes. Patients with baseline depression ($BDI > 7$) ($n = 4$) saw their BDI decreased by 33.3% (± 38.2). Other studies involving six randomized controlled trials ($n = 593$) indicate that MBCT led to a 44% reduction in depressive relapse risk (Piet, 2011). In personal testimonies, most of the respondents affirmed that MBCT is a good intervention for depression and anxiety. Among the perceived healing characteristics, they pointed out included alternative methods of dealing with anxiety, poor sleep, pain, and depression.

They also reported insight into being able to relax and regain control over symptoms. Below are examples of what they said:

"my body has relaxed and not tensed as before..."
"...after reading this book and practicing I feel light and very healthy."
"...generally, I feel more relaxed than in the past...the exercises are also very helpful..."
"I definitely feel less stressed...."
"...it worked on my anxiety brought some calmness into my life...."
"...It helped me to reduce stress and depression through rediscovering happiness..."

Further, the UK participants reported that the intervention was an educational and transformational process. Similarly, in the current study, participants reported having benefitted with knowledge.

"...a very good content. The best thing is that now I can sleep better..."
"...understood the great benefit there is in breathing as a way of relieving stress..."
"I now understand depression in a way I have never understood before"

The MBCT made the respondents report feeling healthier following the implementation of the MBCT.

DISCUSSION

Neither the scale and effects of depression among older clergy nor the treatment for depressive symptoms among this social category are well understood. At issue was whether the MBCT could reduce depressive symptoms among the participants. Equally important too was identifying the mechanism that brought about these changes. The proportion of participants suffering from mild or moderate depression was about 52%. This finding chimes with existing studies that suggest older people in general and people helpers run high risks of experiencing depressive symptoms that merit attention (Horackova et al, 2019; Simenta, 2014; Jacobson, et al., 2013; Jackson-Jordan, 2013). Given the scale of depression among older clergy, there is merit in exploring effective interventions to stem the probable problem of deterioration of depressive symptoms and possibilities of depressive relapses, both of which could be debilitating on the vocational effectiveness and overall health of older clergy.

The MBCT was effective in reducing depression symptoms among participants, with a significant effect observed when the mean levels of depression at the baseline and end-line were compared. No significant effects were observed between the mean scores of depressions at midline vis a vis endline. Even so, the levels of depression in the control group grew sharply over the intervention period but fell substantially in the treatment group. In effect, the MBCT seems effective in stemming the worsening of depressive symptoms. This finding is in line with theoretical views on mindfulness that assert that once the mind is out of its pure and claim state by difficult life experiences, it would remain jumbled unless deliberate efforts are made to restore it to its pure state (Kahl, Winter, & Schweiger, 2012). The MBCT was designed to assist people to deal with depression-related thoughts. The outcome comports with existing studies that have found the MBCT effective in reducing depression (Mark, 2012; Turner, 2012; Pots, et al., 2014; Gotink, et al., 2016; Mackenzie & Kocovski, 2016).

The evidence obtained in the present study suggests the average levels of depression scores increased by 80 percent for the control group. For the treatment group, the severity of depression fell by about 50%, which suggests the MBCT intervention works to reduce mild and moderate levels of depression. Not only do the findings suggest that the MBCT is effective, but also, they show that a worsening of depressive symptoms was likely to occur among the participants. And the mechanism by which the MBCT achieves its positive outcome has been identified. Evidence from qualitative interviews suggests the participants found the MBCT convenient and easy to use. According to them, the MBCT helped reduce stress and anxiety, and this is likely how it diminished their depressive symptoms. Existing studies done elsewhere have highlighted the value of the MBCT in educating its users on the factors or triggers of depression, among other things (Schoultz, 2016). Nonetheless, for many participants, the Buddhist origins of the MBCT was a major area of concern. For this reason, many participants found the MBCT unpalatable. This attitude likely points to a possible weakness of using the MBCT in larger scope to focus on a representative sample of Christian clergy.

Conclusion

The prevalence of depression among participants was high, with about 50% of them suffering from mild or moderate depression. The MBCT was effective in symptoms reduction among participants. For this reason, incipient evidence exists for the therapeutic effectiveness of the intervention. The wider implication of this favourable outcome is illustrated by evidence from the control group, which saw the average score for participants worsen by 80%. The effectiveness of the MBCT can thus be viewed too against the backdrop of its potential to arrest the deterioration of depressive symptoms, which would heighten the risk of either chronic depression and/or depressive relapses. Yet, the wider use of MBCT among Christian clergy seems problematic. Many participants objected to the Buddhist origins of the MBCT. With this mind, clergy who are vulnerable to depression, and who find the spiritual moorings of the MBCT unpalatable, can take self-care steps to nurture mindfulness in dealing with stressful or depressive thoughts.

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Appendix

Table 4.1. Mauchly's Test of Sphericity of BDI

Within Subjects Effect	Mauchly's W	Approx. Square	Chi-df	Sig.	Epsilon ^b		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
BDI	.830	23.851	2	.000	.855	.872	.500
Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.							
a. Design: Intercept + control treat							
Within Subjects Design: BDI							
b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.							
