**Journal of African Studies in Educational Management and Leadership**
**Vol: 10, December 2018,94-109**
**Scholarly, Peer Reviewed**

# Depression Coping Strategies among University Medical Students in Kenya

Chesire Irene J.; Adeli Scholastic M.; & Mbutitia Francisca N

## Abstract

High prevalence of depression and depression symptoms among medical students has been reported in various studies. Coping strategies for depressive symptoms, however, is a phenomenon in which few studies in low income countries have addressed. This study, therefore, aimed to establish depression coping strategies and use of mental health services (Counselling and medical) among Kenyan university medical students. Through stratified random sampling, 312 students from two public universities were proportionately recruited with a further subsample of 20 students proportionately and randomly selected from the main sample to take part in the qualitative phase of the study. This mixed method research study, adopting a descriptive cross-sectional survey design used Biographical Form and a Structured Interview Schedule for data collection. Descriptive statistics was used to analyse lifetime prevalence, use of counselling and medical services. Descriptive and qualitative analysis were used to examine depression coping strategies. Results revealed that a minority of the medical students reported using counselling (8.9%) and medical (40.8%) services to manage depression. Majority reported seeking help from their peers (90%) and using alcohol (80%) and sports (50%). The study concluded that the lifetime depression prevalence rate is high and students use both functional and dysfunctional coping strategies to manage depressive symptoms. Medical education and mental health stakeholders, therefore, need to psycho-educate students on depression and functional coping strategies and augment targeted interventions including; enhancing peer education programmes, and de-stigmatising mental health services to improve their well-being.

**Key words:** Coping strategies, Depression, Medical education, Medical students, Mental health services.

**Contact:** E-mail: Irene J. Chesire, Moi University, School of Health Sciences

## INTRODUCTION

Whereas university students, in general, have various factors, academic and social that contribute to depression, the medical students have additional challenges including the abuse and juvenile delinquency which have a serious effect on academic performance among others.

Publisher: Kenya Association of Educational and Management (KAEAM)

| **ISSN 2078-7650** Online# 2018 , http://www.kaeam.or.ke

pressures of the clinical environment that contribute to high levels of depression (Moir,Yielder, Sanson & Chen, 2018). Medical school is widely known as time of psychological distress for students and studies have suggested that students' mental health worsens during the medical school period and remain so from the beginning to even after training (Dyrbye, Thomas & Shanafelt, 2005; Givens and Tjia, 2002; Tjia, Givens, & Shea, 2005). In comparison, medical students have been found to experience more depression than the general population and their age matched-peers (Baldassin, Alves, Guerra de Andrade & Martins, 2008; Dyrbye et al., 2006; Rosenthal & Okie, 2005).

High prevalence of depression and depression symptoms among medical students has been reported in various studies. Globally the depression rates for university students in various studies range between 14% and 39% (Schofield, O'Halloran, McLean, Forrester-Knauss, & Paxton, 2016; Singh, Lal, & Shekhar, 2010). The large variation probably, being a result of different instruments and methodology used. A meta-analysis in 2016 showed that one third of medical students globally were affected by depression (Puthran, Zhang, Tam & Ho, 2016). A study by Chesire, Kodero and Mulambula (2013) on depression in university medical students in Kenya found a prevalence of 27.2%. This was similar to that found in a systematic review that found the prevalence of depression or depressive symptoms among medical students to be 27.2% (Rotenstein et al., 2016). Othieno et al. (2014) in a study of depression among the general university students concluded that interventions for those at risk including identification and treatment be put in place at higher institutions of learning in Kenya as well increasing studies on risks and ways of reducing depression in this population.

With the studies on depression globally and locally showing high prevalence, medical students represent a high-risk group for mental disorders (Schofield, et al., 2016; Rotenstein, et al. 2016). Therefore there was need for further understanding of the phenomenon from different facets; understanding the medical students' coping strategies for depression and depressive symptoms in low income country is one of them. This is line with WHOs (2013) mental health action plan objective of evidence based intervention for treatment, prevention, promotion and research. And as it has been pointed out, "It helps to know about stress adaption and has important implication for public policy, e.g., how to best treat depressive students who failed in exams" (Somaiya, Kolpakwar, Faye, & Kamath, 2015, p. 19).

Coping strategies are psychological and behavioural mechanisms that an individual use to manage or minimize distress or trauma. They refer to the specific efforts, both behavioural and psychological, that people employ to master, tolerate, reduce, or minimize stressful events (Jahan, Siddiqui, Mitwally, Al Zubidi & Al Zubidi, 2016; Taylor 1998). Coping strategies are broadly categorized as both problem-focused and emotion-focused; both of which can be adaptive or maladaptive in nature. In problem focused coping, the individual is actively working to alleviate the distress by changing the situation. While in emotion focused coping the individual regulates thoughts or gets involved in actions to lessen the emotional impact of the stressful event (Somaiya, et al., 2015). Depending on the types of strategies used, coping is a vital factor of psychological well-being (Jahan et al., 2016; Somaiya, et al., 2015).

In many studies, various instruments, for example, the COPE, Styles of coping and Ways of Coping Scales have been used to assess coping strategies. These instruments have been found to be appropriate measures of coping strategies (Taylor, 1998), and provide quantitative data to work on. However such instruments can be restrictive in that not all angles of the individual's perspective on a phenomenon are captured. Hence this study aimed to get an in-depth perspective of the ways in which students managed depression and going further to get reasons as to their actions without the limitations of such instruments.

Generally, universities are aware of the difficulties that students have in their college environment, such as vulnerability to mental health problems like stress, anxiety and depression. As such many put in place services that are supportive to students' well-being. For example, in recognition of the significance of medical students' mental health, a university in Oman put up a centre run by professionals in psychiatry and behavioural sciences (Jahan et al., 2016). WHO (2011) reiterated the importance and need for these mental health services and pointed to the barriers to effective health care as including the

lack of services, lack of trained providers, and the social stigma associated with depression. In Kenya, the Commission for Higher Education recommends that a programme of student support, including counselling, must be offered by institution of higher education as a major requirement for accreditation and consequent registration (Njoka, 2008). Thus, two of the main students' support services in Kenyan universities are counselling and medical services.

There are indications that both psychotherapeutic and medical interventions are effective in the treatment of depression. Schotte et al. (2006) pointed this out and further emphasized that a combination of the two have even better outcomes in the treatment of depression, and especially in severe depression. Thus, both the counselling and medical services availed in the university campuses are for students' use and serve as services for intervention and treatment of depression and other mental health problems. In Kenyan university settings any student is free to utilize the services offered by their counselling and medical services.

In summary, the extant literature has a paucity of research on depression among university medical students especially in the low resource countries like Kenya; and the few studies available have been on depression prevalence and associated factors but not explicitly on coping strategies employed by medical students to manage depression. Furthermore, available studies on depression coping strategies have mainly been quantitative as opposed to qualitative studies. Sen (2004) also recommended further research on the outcomes of help seeking by students when depressed - whether it actually led to obtaining help. The aim of this study, therefore, was to establish depression coping strategies among medical students in Kenyan universities. The study sought to answer the following questions: (i) Do medical students use counselling and medical services to manage depression or depressive symptoms? (iii) How do medical students cope with depression at the university?

## RESEARCH APPROACH

### Design and Participants

This study was nested in a larger study on depression in university medical students which adopted a cross-sectional survey design and employed quantitative and qualitative research method. The study was conducted in two public universities in Kenya offering medical courses. The two universities admit students for these courses nationally. The initial sample of 336 undergraduate medical students was selected through stratified sampling; with proportional sample across the universities, year of

study, and gender to ensure adequate representation for generalizability. Within each stratum simple random sampling was used to select an equal proportion of the participants. After screening the questionnaires the actual sample comprised of 312 (93%) participants; 158 females and 154 males.

According to Strauss and Corbin (1998), and Creswell (1998) the researcher must decide on the number of interviews to aim for. Hence the researcher decided on, and randomly selected 6% (20) of the total sample size of the study respondents to participate in the qualitative phase of the study in order to get a rich narrative on the medical students' strategies of coping with depression. The participants for the sub-sample were randomly recruited on returning the questionnaires and requested to also participate in the face to face interview.

**Instruments and Procedures**

The data for the present study was collected using two instruments; a biographical form and a structured interview schedule. The Biographical Form solicited among others, information including gender and binary question on whether when depressed they used the counselling and medical services available in the university (yes/no).

The second instrument was the Structured Interview Schedule (SIS). The guide developed along the objective of the study had open-ended questions to initiate, and for flexibility of response. The questions covered areas on how the students cope with depression, and their use of mental health services (counselling and medical) to manage depression.

**DATA ANALYSIS**

The descriptive statistics particularly the frequencies and percentages were used to analyse the quantitative data. The qualitative data was extracted from the interview proceedings which were audio recorded using the SIS as a guide. The interviews were transcribed manually and coded to identify pattern and themes. These themes and categories that emerged were summarized into themes along the study objectives of students' depression coping strategies and their utilization of mental health services. Thereafter the results were analysed, interpreted and discussed both quantitatively (using frequencies and percentages of coping strategies by students) and qualitatively (using narrative form). Of note is that the occurrences on the use of the mental services were then compared to the quantitative data for similarities, differences and explanations. The findings based on the objectives of the study included verbatim quotations from the participants in order to "bring the reader into reality of the situation studied" (Coolican, 1999, p. 386).

**Ethical Considerations**

The Institutional Research and Ethics Committees of Moi University and Moi Teaching and Referral Hospital approved the study. The participants gave their informed consent and were also assured of anonymity. The questionnaires were issued and retrieved within a week (Biographical Forms) by the research team members and the interviews were carried out by the principal investigator. The audio recordings of the interviews were done with the respondents' permission and with no name of participant recorded in the proceedings.

**RESULTS**

A sample of 312 students responded to the biographical form, 158 of which were female and 154, male. The first question was whether students used counselling and medical services to manage depression. Table 1 shows the students' response on the use of counselling and medical services to manage depression. Out of 312 respondents, 79.2% ($n$ = 247) and 62.8% ($n$ = 196) responded to the question as to whether they used the counselling and medical services to cope with depression respectively. As shown in Table 1, only 8.9% of the respondents used counselling and 40.8% used medical services. There were a very small percentage of students (11.7%) who used both the counselling and medical services when depressed.

**Table 1**

**Frequencies and Percentages of Students' Use of Counselling and Medical Services**

| | Services | | | | | |
|---|---|---|---|---|---|---|
| | Counselling | | Medical | | Both Services | |
| Usage | *f* | % | *f* | % | *f* | % |
| Yes | 22 | 8.9 | 80 | 40.8 | 21 | 11.7 |
| No | 225 | 91.1 | 116 | 59.2 | 159 | 88.3 |
| Total | 247 | 100 | 196 | 100 | 180 | 100 |

The qualitative data results were similar to those quantitative; the frequency of those respondents who said they used the counselling services was low (15%) while those who said they used medical services were about a third, 30%. This data is captured in the following example of responses from various interviewees:

> *I do not use counselling; most students are not aware of counselling services offered in campus…. Students fear using medical services for depression because they may be sent home "to rest" when they think they should have continued (with their studies) wasting a year at home* (Respondent 2).

> *I do not use the counselling services (to manage depression) and other students don't use them either. …Am not aware of the point at which to seek help from the medical services (for depression)* (Respondent 3).

> *I am not used to counselling. …People don't talk about depression* (Respondent 1).
> *Students don't use counselling services; they had rather get help from their seniors* (Respondent 8).

Further still, another participant (Respondent 7) on the question on the use of mental health services said that,

> *I had a problem and saw the counsellor but did not expose all (my problems) for fear (of being exposed). No, I do not use medical services and is not well used (by Students). … They ask you what the cause of your depression is and that is what I don't want. Students prefer private medical services for fear of exposure. … Medical students don't use the (mental health) services; they feel it is a stigma and fear their problems may be exposed and be sent home* (Respondent 7).

The second question to be answered was: How do medical students cope with depression? The qualitative data made up of concepts and themes from the interviewees' experiences, was analysed and interpreted using both descriptive statistics, and qualitatively in the narrative form. In the analyses of the qualitative data, four concepts related to coping with depression emerged. These concepts are broadly classified as; social support, psychological, educational/therapeutic themes. The source of the category names is in vivo codes; "The catchy terms that draw our attention" (Strauss & Corbin, 1998, p. 115) from the response of the interviewees. The quantitative analyses: frequencies and percentages of the respondents based on the emerging themes and categories are given in Table 2.

**Table 2**

**Social Support, Psychological and Educational/Therapeutic Themes on Students' Depression Coping Strategies**

| **Social Support Themes** | *f* of Mentions | % of Interviewees |
|---|---|---|
| Support from family (parents and/or siblings) | 5 | 25 |
| Support from Peers/friends | 18 | 90 |
| Alcohol | 16 | 80 |
| Drugs | 3 | 15 |
| Sex | 5 | 25 |
| Participating in sports | 10 | 50 |
| Involvement in clubs and societies | 3 | 15 |
| Involvement in religious groups/activities | 6 | 30 |
| Listening to music and/or dancing | 8 | 40 |
| Watching movies and/or soccer | 3 | 15 |
| **Psychological Themes** | | |
| Keeping to self | 9 | 45 |
| Sleep | 3 | 15 |
| **Educational and Therapeutic Themes** | | |
| Medical services (by doctors/psychiatrists) | 6 | 30 |
| Counselling | 3 | 15 |
| Guidance from Lecturers/mentors | 3 | 15 |

Social support theme appeared to dominate response on how the respondents cope with depression as seen in Table 2. Respondents reported that they got social support from peers, parents and getting involved in sports, music and/or dance, religious groups and activities. Under this broad theme also was indulgence in sex and alcohol consumption.

To cope with depression, 90% of the respondents reported seeking the support of peers. One respondent saying that, "*I involve my peers/friends to help me*" and, "*... I had rather talk to peers than counsellors who are theoretical."* Majority (80%) used alcohol, and as one stated, "*I do drinking … and a good number of students drink*" and another respondent said, *"They (students) go to town to drink themselves silly*" when depressed. Some of the respondents reported the use of drugs (15%) and sex (25%). About 40% watched movies.

Psychological themes emerged when respondents indicated that they kept to themselves (45%), and spend time sleeping (15%). One of the respondents (7) said that *"I keep a journal. …close up/withdraw. …Some students stay indoors and keep to themselves …"* Respondent 12 commented thus, *"…When depressed some students keep to themselves…" "I also indulge in sex and sleep a lot"* Was what Respondent 9 said.

In educational/therapeutic themes categories such as respondents' seeking help from counselling and medical services as well as their lecturers emerged. Students who mentioned using medical services when depressed were only 30%. One of the respondents (7) said that they did not use the services because *"There might be no confidentiality … students fear that their problems will reach the lecturers … I fear to be seen by fellow students visiting the counselling office."* One participant (Respondent 4) said that they did not use the service because "*There are inadequate medical services for mental health; for example, there are no psychological services within the University clinic."* Another respondent (7) said that "*(Depression) is a stigma, and students fear their problems may be exposed"* if they sought medical services. *"There is a stigma surrounding counselling and they (students) believe it is for students with social problem … Counselling is underutilized"* observed Respondent 18.

**DISCUSSION**

The objective of this study was to establish the coping strategies that medical students used when depressed, and their use of mental health services (counselling and medical). The study did not dwell on the prevalence of depression in the medical students as the findings had been reported elsewhere. This study provided in-depth information on depression coping strategies among medical students in one of the low resource countries, Kenya. On the aspect of use of counselling services when depressed, the findings were that most medical students did not use the services; only 8.9% reported use of this service. Majority of the medical students did not seek help from counselling services when depressed. This was an unexpected finding considering that the sample was made up of medical students who ideally could have been expected to embrace counselling and medical services as an intervention measures.

Like the present study Givens and Tjia (2002) in a study at University of California School of Medicine found that of the depressed students, only 22% were using mental health counselling services. Similarly to the present study, Sen (2004) carried out a research whose primary aim was to test whether there was a significant difference between genders in school enrolled adolescents of different races in the USA, in the likelihood of

seeking help when depressed. Sen's results were that the majority of adolescents with depressed mood did not seek help from anyone and that males were less likely to ask for help than females. Contrary to the present study findings however, study Tjia, Givens, and Shea (2005) in a study at the University of Pennsylvania medical school also found that of the students who were depressed only a few (26%) reported use of counselling Thase and Lang (2006) reported there was an increase of between 40 to 50% in the number of college students who sought treatment and counselling services for depression. The contradicting findings may suggest that health seeking behaviours of students was affected by various factors that need investigating.

It is interesting to note that the majority of the respondents in the present study gave the reasons for not using the mental health services to be lack of confidentiality, the fear of stigmatization and lack of information. For example Respondent 10, said that *"Anything (on) mental (health) is confidential, there is fear of stigma … people will want to dig into your life to know what is causing it."* While Respondent 11, said that, *"Students rarely use counselling services. They are afraid of lack of confidentiality; they lack trust … …the fear of stigmatization."* And Respondent 20, commented that, *"… There is minimal use of counselling (by students) … They think that there might be no confidentiality … others fear that their problems will reach the lecturers … others fear to be seen by their colleagues (fellow students) visiting the counselling office."* A research carried out by Kiyiapi (2007) also found that several university students in Kenya did not use the counselling services availed to them in their campuses. The findings indicated that students had no knowledge of the existence of these services and for those who knew, they lack the confidence to use the service for fear of lack of confidentiality. For the few who utilized the counselling services, some indicated satisfaction and others dissatisfaction.

Similarly, Givens and Tjia (2002) found that most frequently cited barriers to using these services include lack of confidentiality (37%), stigma associated with using mental health services (30%), and fear of documentation on academic record (24%). It is to be pointed out that the study did not set out to study these aspects but they emerged in the qualitative data. Nevertheless, they may be important factors to be investigated when looking at the barriers to seeking mental health services by the medical students. However, according to Thase and Lang (2006) also found that men, despite the fact that they get depressed like women were less likely to seek counselling because they uncomfortable talking about their feelings, or too embarrassed and ashamed to admit their depression problem.

About two fifth of the respondents (40.8%) used the medical services to manage depression. This was a low rate of use of the service and may explain the under treatment of depression in medical students that was reported by Givens and Tjia et al. (2005) in a study at a US medical school. The present finding was, however, higher than what was

reported in a Nigerian medical Schiil study where they found that only 1% sought medical services. The students did not think that the medical services offered targeted mental health. As Respondent 11 commented, "*The medical personnel (in the university clinics) take care of only the physical and not the mental health.*" Respondent 9 said that *"I don't use medical services for depression … Medical services (offered to them) was not tailored for mental health services."* The low propensity of students to seeking these services was likely to be due to lack of proper orientation, information and sensitization concerning these services. As Respondent 12 said, *"…Organize forums to sensitize the students to know of depression and dangers.… Tell them of the availability of counselling services."*

The finding that only 11.7% of the students used both counselling and medical services is similar to a study by Givens and Tjia et al. (2005) that found the rate of students using both services in Pennsylvania medical school in the USA, was 12%.

There were various ways adopted by the respondents to cope with depression. A majority (90%) of the respondents indicated that they cope with depression by getting support from their peers/friends. The respondents reported that their friends were in a better position to understand them. The current study finding probably confirms the importance of peers among medical students. As one of the respondents reiterated, "*Talking to friends and peers about my issues has really helped me*" (Respondent, 10). Respondent 12 said that, *"… (I) talk to trusted friends and peers"* Yet another respondent (17) said that, *"I use friends and visit my parents over the weekend to rest."* Participants further pointed out that peers gave them support by listening. As Respondent 14 put it, "… *(Students) get help from friends who listen and just being there for them."* Social support has been considered an environmental factor that influences the risk for dysfunction and disease (Kendler 1997). A study by Chesire, et al. (2013) found that there was an inverse relationship between social support and depression among medical students. Chesire et al. found that medical students who had had low social support equally reported high level of depression and vice versa. Moir et al. (2018) reported that medical students sought their peers support in preference to faculty or professional mental health services. They further pointed out that studies had shown that peer support programmes improved medical students mental health and health seeking behaviours.

Regionally, contrary to the present finding, Nwobi, Ekwueme and Ezeoke (2009) in a study among medical students in Nigeria found that on 25% talked to friends/ classmates when depressed. However, similar to the present study, studies in Asia have reported that medical students approached peers for help. For example, Sherina and Kaneson (2003) in a study on depression among medical students in Malaysia and Shaikh et al. (2004) in Pakistani Medical School study also reported medical students' having or using

friends/peers as coping mechanisms. Sherina and Kaneson (2003) also found that students who had poor relationship with parents, siblings or course mates were more depressed than students with good relationship with the significant others.

It was interesting to note from the study finding that only a few respondents (25%) said they got support from their family. One would have expected the students to look for support from family (i.e. parents and siblings) considering that in the African cultural setting the family ties is still strong. Probably the students do not consider their families to be in a position to understand what they go through in the medical school in terms of the workload and the rigour of the course. Alternatively, this may be explained by the fact that with modernization and the copying of the Western lifestyle the sociocultural and familial structures have broken down (Schotte, et al., 2006). As such, not much importance is given to the family values and consequently less support from it by the students. One study by Jahan et al. (2016) conducted on Oman medical college students found stress coping strategies in students included talking to family.

Majority of the medical students (80%) also used alcohol to cope with depression. Along with alcohol, there was a small number (15%) who said that they indulge in drug taking to alleviate depression whereas 25% indulged in sex. These three strategies apparently are maladaptive coping strategies. One would have probably expected that since the respondents were medical students, they would be more aware of the dangers of alcohol, sex and drug abuse, but apparently, this was not the case going by the findings. *"I apply several strategies to cope with depression: go to town for enjoyment, do drugs, and take alcohol and cigarettes"* Respondent 17 explained. To underscore this coping strategy, one of the interviewee (Respondent 18) reported that, "*They (students) go to town to drink themselves silly*" in order to cope with depression. Respondent 1 said, *"Some people (students) go to drink or to the club to cope"* while Respondent 3 said that, "*I go drinking with friends"* to cope with depression. Yet 3 said, *"I go for social functions like music and drinking"* and Respondent put it thus, *"I do drinking … and a good number of students drink."* It is of concern that these ways of coping may eventually put the students into further depression. Similar findings have been observed in other studies. Nwobi et al. (2009) in a similar study found lower rates in Nigerian medical students; they reported 11.5% of the students resorting to alcohol, 4.7% to smoking / use of stimulants. Thase and Lang (2006, p. 152) also reported that men were likely to, "mask their depressive feelings by drinking or doing drugs, womanizing, overeating, or overspending and getting into fights."

Participation in sports appears to be another important strategy used by the respondents to cope with depression. A half of those interviewed (50%) indicated that sports participation was one way of coping with depression. Closely related to this was the

indication by some (40%) respondents that listening to music and/or dancing helped in alleviating depression. *"I attend religious services and take part in sports … I listen to music" said Respondent 6. "I cope by eating, watching movies and taking part in sports"* reported Respondent 8. The aspect of sports participation as a coping mechanism appears to relate with a study by Chesire (2013), on the attitude of medical students towards sports participation. Chesire found that a large number of students had a positive attitude towards sports participation and concluded that participation in sports was a therapy for improving well-being of medical students.

The present study findings that sports participation and music were a depression coping strategy are in agreement with other studies. For example, Shaikh et al. (2004) found that among students in Pakistani Medical School, sports and music featured as among the major coping mechanism. Thase and Lang (2006) also reported that, studies on individual exercise as well as group sporting activity having been found to alleviate depression by significantly boosting mood.

Nearly a half (45%) of the interviewees indicated that they kept to themselves as a way of coping with their depression, and 15% spent time sleeping. One of the participants, Respondent 7 commented that they "…*Kept to themselves for fear of stigmatization by other students and lecturers*." And Respondent 4 said that *"There is a gap between students and lecturers."* Such reports may point to some of the factors associated with depression to be considered in future studies and the need to review the student-lecturer relationship so that mentee-mentor relationship is encouraged. An alternative explanation can be that these two strategies (keeping to self and sleeping) are indicated as some of the symptoms of depression and probably the students may not be aware of. These findings are similar to that of Sen's (2004) study in which the majority of adolescents with depressed mood indicated they did not seek help from anyone. In a study conducted by Jahan et al (2016) on Oman, medical students reported that good sleep relaxes them to control stress. It is to be noted that the latter study covered not only coping strategies for depression but also stress and anxiety.

Some students in the current study who practised their faith mentioned that going to church or being involved in church group functions helped them when stressed. Nwobi et al. (2009) in a study of Nigerian medical students found that students talked to the priest as a coping strategy for depression. Thase and Lang (2006) also observed that depressed patients with a stronger sense of faith were reported to respond better to treatment than those with little sense of faith. However, this study was contrary to their observation that, "it was faith and not church going that made the difference" (p. 160). An interviewee in the current study said that *"Others go to church and others involve themselves in religious activities … going to church alleviate their depression"* (Respondent, 18). This was probably an indication that getting involved in religious activities seems to help

the students to manage depression, and this need to be encouraged among this population,

## CONCLUSION AND RECOMMENDATION

This study found that Kenyan university medical students hardly sought help from counselling and medical services in the university as the rate was low. Students used both maladaptive and adaptive strategies to cope with depression. Maladaptive mainly being, alcohol, keeping to themselves, sex and drugs; whereas adaptive ones being peers/friends, sports, music/dancing, family, and very little of mental health services. The study has provided important data and information to. There is need for an integrated approach by medical education, counselling and medical personnel to psycho-educate students on depression and functional coping strategies such as sports. A further recommendation is the need to put in place intervention measures including de-stigmatising mental health services by making friendlier and easily accessible. There is also need for intense peer support and counselling education and programmes to equip the students to offer better service to their peers.

## REFERENCES

Baldassin, S., Alves, T. C. T. F., Guerra de Andrade, A., & Martins, L. A. N. (2008). The characteristics of depressive symptoms in medical students during medical education and training: a cross-sectional study. *BMC Medical Education Journal*, 8(60).

Bonin, L., & Moreland, C. S. (2008). ***Psychosocial treatment for adolescent depression.***

**Retrieved from,**

**http://www.uptodate.com/**patients/content/topic.do?topicKey=~CC DKov

uyh1bvkU

**Chesire, I. J. (2013).** *University medical students' attitude towards sports participation: The place of sports in counselling*. Saarbrucken, LAP Lambert Academic Publishing.

Chesire, I. J., Kodero, H. M. N. and Mulambula, S. M. (2013). Prevalence of Depression among Medical Students in Kenyan Universities. *Kenya Guidance, Counselling and Psychological Association Journal, 3*(1), 1-9.

Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing Among five traditions*. California: SAGE Publications.

**Coolican, H. (1999). *Research methods and statistics in psychology* (**2nd ed.). **London: Hodder & Stoughton.**

Dyrbye, L. N., Thomas, M. R., *&* Shanafelt, T. D. (2005). Medical Student Distress: Causes, Consequences, and Proposed Solutions. *Mayo Clin Proc. 80(12*),1613-1622 Mayo.

Dyrbye, L. N., Thomas, M. R., *&* Shanafelt, T. D. (2006). Systematic review of depression, anxiety, and other indicators of psychological distress among U.S. and Canadian medical students. *Academic Medicine: Journal of Association of American Medical Colleges, 81*(4), 354-373.

Givens, J. L. & Tjia, J. (2002). Depressed medical students' use of mental health services and barriers to use. *Academic Medicine: Journal of the Association of the American Medical Colleges.*

Jahan, J., Siddiqui, M.A., Mitwally, M., Al Zubidi, N.S.J. & Al Zubidi, H.S.J. (2016). Perception of stress, anxiety, depression and coping strategies among medical students at Oman Medical College. *Middle East Journal Of Family Medicine, 14(5),* 7: 16 -23.

Kendler, K. S. (1997). Social support: A genetic epidemiologic analysis. *American Journal of Psychiatry, 154*, 1398-1404.

Kiyiapi, L. (2007). *The psychosocial issues of orphaned youth by HIV-AIDS in Western Kenya.* Unpublished doctoral thesis, Australian Catholic University, Brisbane, Australia.

Moir, F., Yielder, J., Sanson, J. & Chen, Y. (2018). Depression in medical students: Current insights. *Advances in Medical Education and Practice 9*, 323–333.

Njoka, J.N. (2008). Guidance and counselling in higher education and the role of peer counselling in promoting academic excellence. *Moi University 4th Annual International Conference Book of ABSTRACTS, 2008.*

Nwobi, E.A., Ekwueme, O.C & Ezeoke U.E. (2009). Mental depression and coping strategies among medical students of University of Nigeria, Enugu campus. *International Journal of Medicine and Health Development, 14(1)* Retrieved from https://www.ajol.info/index.php/jcm/article/view/44848

Othieno, C.J., Okothb, R.O., Peltzer, K., Pengpid, S., & Lucas O. Mallaf, L. O. (2014). Depression among university students in Kenya: Prevalence and sociodemographic correlates. *Journal of Affective Disorders, 165*, 120-125.

Puthran, R., Zhang, M.W., Tam, W.W., & Ho, R.C (2016). Prevalence of depression amongst medical students: a meta-analysis. *Medical Education, 50 (4),* 456–468. (PubMed)

Rotenstein, L.S., Ramos, M.A., Torre, M., Segal, J.B., Peluso, M.J., Guille, C., … Mata, D.A. (2016). Prevalence of Depression, Depressive Symptoms, and Suicidal Ideation Among Medical Students: A Systematic Review and Meta-Analysis. JAMA, 6 (316), 21:2214-2236. doi: 10.1001/jama.2016.17324.

Rosenthal, J. M. & Okie, S. (2005). White coat, mood indigo – depression in medical school. *The New England Journal of Medicine,* 353(11), 1085-1088.

Schofield, M. J., O'Halloran, P. McLean, S. A., Forrester-Knauss, C. & Paxton, S. J. (2016). Depressive Symptoms Among Australian University Students: Who Is at Risk? Australian Psychologist 51 (2016) 135–144

Schotte, C. K. W., Van Den Bossche, B., De Doncker, D., Claes, S. & Cosyns, P. (2006). A biopsychosocial model as a guide for psychoeducation and treatment of depression. *Depression and Anxiety Journal, 23*, 312-324.

Sen, B. (2004). Adolescent propensity for depressed mood and help seeking: Race and gender difference. *The Journal of Mental Health and Economics, 7* (3), 133-145.

Shaikh, B.T., Kahloon, A. Kazmi, M., Khalid, H., Nawaz, K. Nadia A., … Khan, S. (2004).Stress among medical students. *Education for Health, (17)* 3, 346–353.

Sherina, M. S., & Kaneson, N. (2003). The prevalence of depression among medical students. *Malaysian Journal of Psychiatry, 11*(1) 12-17.

Singh A, Lal A, Shekhar (2010). Prevalence of Depression Among Medical Students of a Private Medical College in India. *Online Journal of Health Allied Sciences.* 2010;9(4):8

Song, Y., Huang, Y., Liu, D., Kwan, J. S., Zhang, F., Sham, P, C., et al. (2008). Depression in college: Depressive symptoms and personality factors in Beijing and Honkong college freshmen. *Comprehensive Psychiatry Journal, 49*(5), 496-502.

Somaiya, M. Swapnil Kolpakwar, S. Faye, A. & Kamath, R. (2015). Study of Mechanisms of Coping, Resilience and Quality of Life in Medical Undergraduate *Indian Journal of Social Psychiatry, 31*, 19-28. Retrieved from http://www.indjsp.org

Strauss, A., & Corbin, J. (1998). *Basics of qualitative research* (2nd ed.). Thousand Oaks, California: SAGE Publication Inc.

Taylor, S (1998). Coping Strategies. Retrieved from https://macses.ucsf.edu/research/psychosocial/coping.php

Thase, M. E., & Lang, S. S. (2006). *Beating the blues.* New York: Oxford University Press.

Tjia, J., Givens, J. L., & Shea, J. A. (2005). Factors associated with undertreatment of medical student depression. *Journal of American College Health*, *53*(5), 219-224.

WHO (2011). *Depression*. Retrieved from, http://www.who/mental_health/ management/ depression/definition/en/WHO (2013). Mental Health Action Plan 2013–2020. Retrieved from https://www.who.int

**About the Authors**

**Irene Chesire PhD** is a Lecturer in the Department of Behavioural Sciences, School of Medicine. **Scholastic Adeli PhD** is a senior lecturer, Department of Sociology and Psychology, School of Arts and Social Sciences. **Francisca Mbutitia** PhD is a Senior Lecturer, in the Department of Educational Psychology, School of Education.