

Use of Complementary and Alternative Medicine among Cancer Patients in Meru County, Kenya.

Kiraki Monicah W¹, Gabriel Mbugua², Robert Kei Mburugu³

¹*Chuka University, P.O. Box 109 - 60400, Chuka, Kenya.*

^{2,3}*Meru University of Science and Technology, P.O Box, 972-60200. Meru, Kenya*

Correspondence email: kmkaminih86@gmail.com

Abstract

Cancer is among the leading causes of death globally. Despite advancing technology in conventional methods of cancer diagnosis and treatment, access to services remains a big challenge especially in the developing countries. Out of desperation, patients may be tempted to use Complementary and Alternative Medicine (CAM) to improve their health outcomes. However, there is minimal data in Kenya and specifically Meru County on use of CAM among cancer patients. The study aimed to assess the level of use, sources and perceived effects of CAM among cancer patients in Meru County. A descriptive cross-sectional study design was adopted in this study. Data was obtained from 117 participants through a researcher administered questionnaire. Data was cleaned, coded and keyed manually into the statistical package of social sciences (SPSS) version. Data was then summarized using means, percentages, frequency tables and measures of dispersion. The results showed that almost half of the respondents (47.9%) were using CAM mainly to cure cancer (78.6%). There was no association between use of CAM and the socio-demographic factors ($p>0.05$). The common CAM methods used included; spiritual therapy (37.5%), vitamins and supplements (26.5%) and local/traditional herbs (19.6%). Friends (55.4%) and family members (53.6%) provided the major sources of information on CAM. Pastors and local chemists were the most common sources of CAMs used. Improved health ($n=30$, 53.6%) and ability to cope with the disease ($n=16$, 28.6%) were the most frequent perceived benefits reported by CAM-users. None of the CAM-users reported any adverse/side effects experienced after use of CAM. Conclusively, results depicted a significant percentage of cancer patients in Meru County use CAM; mainly spiritual therapy and vitamins and mineral supplements. Health care provider should pay close attention to use of CAM while taking history from cancer patients and advice accordingly. Meru county government should regulate all CAM products that are accessible to the public and ensure the providers are well trained and registered.

Key Words: *Complementary and alternative medicine use, cancer patients, perceived effects, cancer medicine, Cancer in Meru County*

IJPP 7(1):24-33

Introduction

Cancer is the third leading cause of death worldwide (WHO, 2018). In Kenya, there were 47,887 new cancer cases and 32,987 cancer deaths in 2018, with the most prevalent cases being the cancers of breast, cervix, and esophagus, prostate and colorectal (Bray *et al.*, 2018). In the developing countries there is a disproportionately low level of cancer care services from screening to management. Kenya is facing the burden of cancer and other NCDs in addition to that of communicable diseases. Multiple studies have documented the use of Complementary and Alternative Medicine by cancer patients in some parts of the world (Al-Qudimat, Rozmus and Farhan 2010, Anita *et al.*, 2015, Bahall, 2017 and Chrystal *et al.*, 2003) and Kenya as well (Ong’udi, Mutai and Weru, 2018). The use of CAM has been associated with several unwanted effects which might have complicated the management of cancer (Ben-Arye *et al.*, 2016, Bilqi *et al.*, 2010, Bossaer and Odle 2012 and Greenlee *et al.*, 2016). There is paucity of data on the use, sources and effects of CAM by cancer patients in Meru County despite its increased advertisement and the availability of traditional and local herbs in the local market.

Methods

A descriptive cross-sectional study was conducted among 117 cancer patients attending hospice care services at the

Meru County Referral Hospital. Patients who were registered at the hospice and met the inclusion criteria were enrolled for the study. A researcher administered questionnaire with both closed and open-ended questions was used to obtain data on socio-demographic characteristics, clinical characteristics and use of CAM. Trained research assistants with medical background and who knew the local language collected the data.

Data was cleaned, coded and keyed manually into the statistical package of social sciences (SPSS) version 22 for analysis.

Socio-demographic characteristics, clinical characteristics and use of CAM was analysed using descriptive statistical techniques and were summarized using means, percentages and frequency tables. The associations between socio-demographic characteristics and the use of CAM was done using Chi-square tests. The study was approved by the relevant institutions: the Meru University of Science and Technology Institutional Review and Ethics Committee (MIRERC), the Director of Health Services of Meru County and the Meru Hospice Research Ethics Review Committee.

Results

There were more female (n=63, 53.8%) than male (n=54, 46.2%) participants. The most frequent site of primary cancer was that of the gastrointestinal system (n= 31, 26.5%).

Table 1: Clinical characteristics of respondents.

Characteristic	Frequency (n=117)	Percentage
Site of primary cancer		
Head and neck	21	17.9
Respiratory	6	5.1

GIT	31	26.5
Breast	16	13.7
Cervix	15	12.8
Prostate	6	5.1
Urinary	3	2.6
Hematologic	1	.9
Bone	2	1.7
Skin	2	1.7
Gynecological	2	1.7
Colorectal	10	8.5
Anaplastic carcinoma	2	1.7
Duration of illness		
Less than 12 months	41	35.0
13-24 months	40	34.2
25 - 36 months	12	10.3
37-48 months	10	8.5
More than 48 months	14	12.0
Stage of cancer at time of diagnosis		
Stage I	5	4.3
Stage II	53	45.3
Stage III	45	38.5
Stage IV	14	12.0
Family history of Cancer		
Yes	32	27.4
No	85	72.6
Standard treatment received		
Chemotherapy	11	9.4
Radiotherapy	4	3.4
Surgery only	24	20.5
Chemotherapy and radiotherapy	13	11.1
Chemotherapy and surgery	9	7.7
Radiotherapy and surgery	7	6.0
Surgery, chemotherapy and radiotherapy	12	10.3
Hormone therapy	1	.9
Palliative care only	36	30.8
Mode of payment for conventional treatment		
NHIF	82	70.1%
Out-of-pocket	52	44.4%
Harambee	25	21.4%
Private insurance	6	5.1%
Family Members	67	57.3%

Almost half of the respondents (n=56, 47.9%) were using CAM (Figure 1).

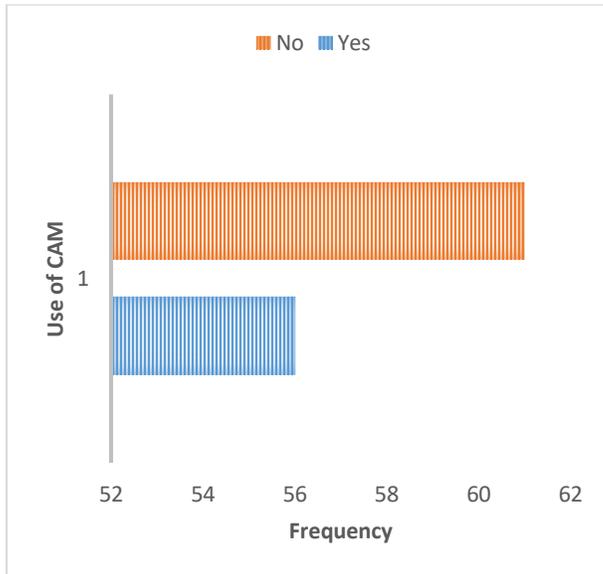


Figure 1: Use of CAM

There was no association between use of CAM and the socio demographic

characteristics of the participants ($p > 0.05$), (Table 2).

Table 2: Influence of socio demographic characteristics on use of CAM

Variable	Use of CAM		Chi-square results
	YES	NO	
Age 16-30	4	5	$\chi^2=1.564$
31-45	6	8	df=4
46-60	24	20	p=0.815
61-75	15	17	
Above 75	7	11	
Gender Male	24	30	$\chi^2=5.096$
Female	32	31	df=1
			p=0.493

There is no significant relationship between use of CAM and age, gender, level of education, total household income, marital status, religion and location of residence.

Highest level of Education:				$\chi^2=5.096$
None		14	16	df=3
	Primary	21	33	p=0.165
	Secondary	15	9	
	Tertiary	6	3	
Total household income				$\chi^2=1.426$
Below 10,000		27	34	df=2
10,000-50,000		26	22	P=0.490
Above 50,000		3	5	
Marital status:				$\chi^2=0.702$
	Single	5	6	df=3
	Married	33	36	P=0.873
	Separated/Divorced	7	5	
	Widowed	11	14	
Religion:	Christian	55	59	$\chi^2 =0.260$
	Muslim	1	2	df=1
				P=0.610
Location of residence:				$\chi^2=0.000$
Rural		45	49	df=1
Urban		11	12	p=0.997

The main reasons cited for using CAM included; hope of cure for the disease (78.6%), improving immunity (44.6%), relieving cancer symptoms (44.6%), and managing cancer pain (23.2%). Non-use of CAM was associated with lack of awareness of methods (n=21), fear of complicating the disease (n=8),

unwillingness to use the method (n=13) and satisfaction with the conventional treatment (n=8). The frequently used CAMs were the spiritual therapy (n=21), vitamins and minerals (n=15), local/traditional herbs (n=11), Chinese herbs (n=7) and support groups (n=2), (Figure 2).

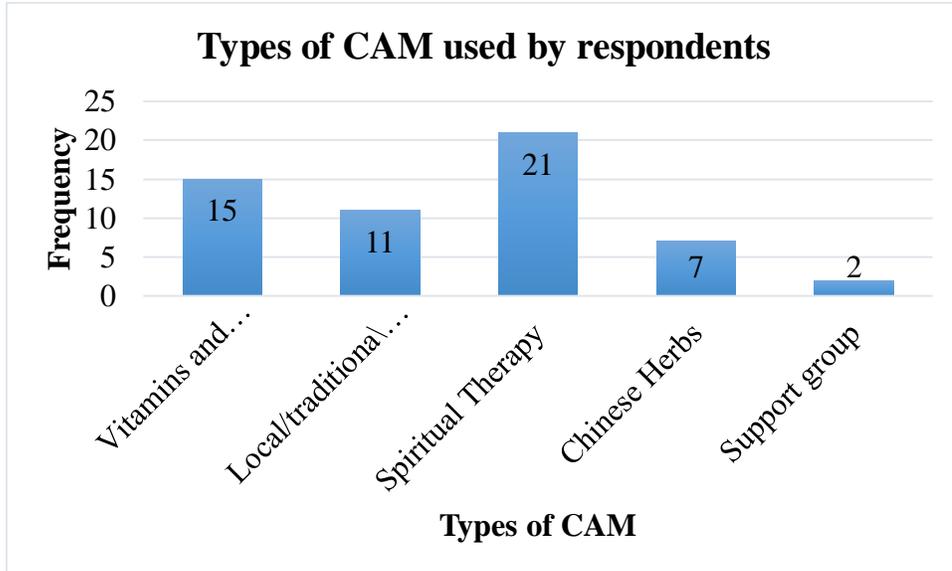


Figure 2: Type of CAM used by respondents

Majority of the CAM users (85.7%) had disclosed to the health care provider about the use. Friends (55.4%) and family members (53.2%) were the major sources of information on CAM. However, church elders/pastors (32.1%), herbalists (26.8%) and local chemists (26.8%) were

the most common sources of CAM, (Figure 3).

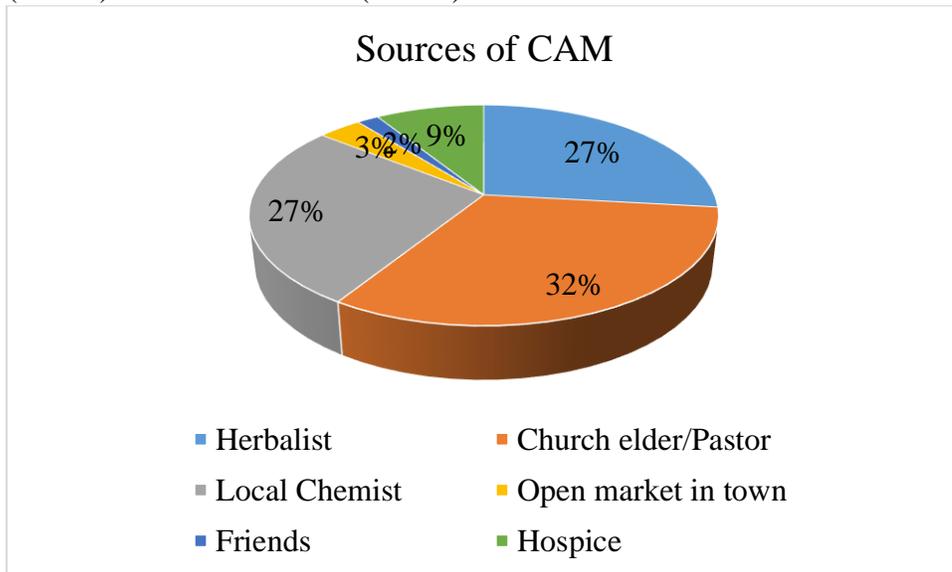


Figure 3: Sources of CAM used by respondents

Improved health (53.6%) and ability to cope with disease (28.8%) were some of the benefits realized by CAM users (Figure 4)

None of the users reported any adverse effects experience due to use of CAM.

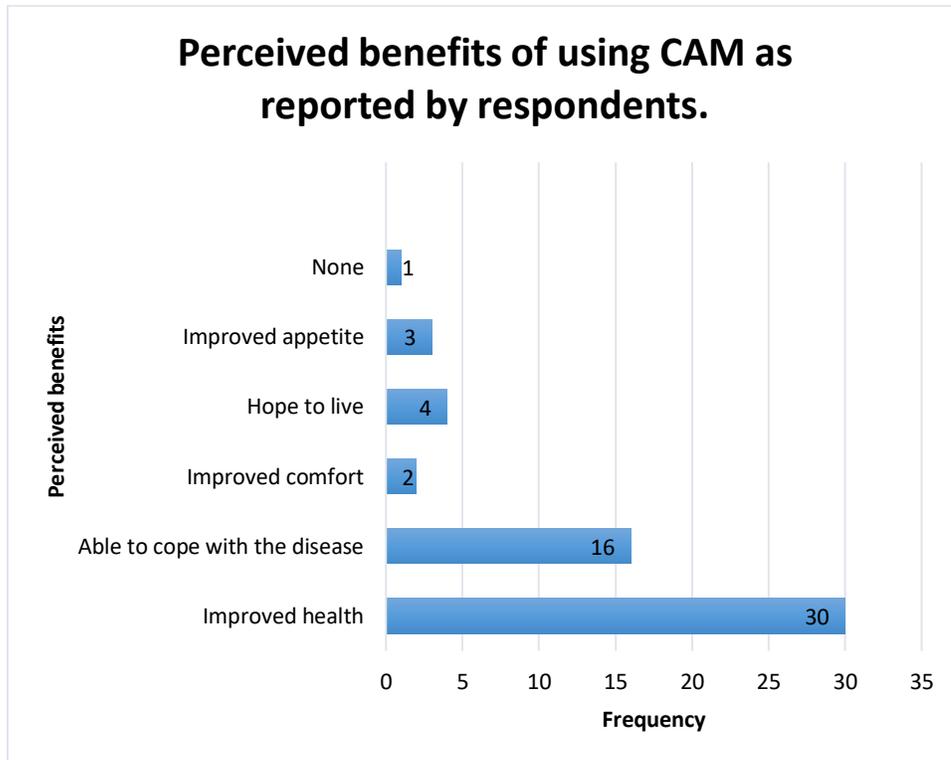


Figure 4: Perceived benefits of using CAM.

Discussion

There is significant use of CAM by cancer patients in Meru County. Our findings agree with previous studies (Hunter *et al.*, 2014 and Mujar *et al.*, 2017), despite the level of use being lower than some countries like China (Teng *et al.*, 2014). This is probably due to differences in the health policies among countries on the integration of CAM and the conventional cancer therapies. The use of CAM however, was

not associated with demographic characteristics of respondents such as age, gender, level of education, place of residence, amount of household income and religion. This agreed with previous study (Teng *et al.*, 2014) but also disagreed with other studies where such factors had been found to influence the use of CAM (Chen *et al.*, 2008), Judson *et al.*, 2017, and Kim *et al.*, 2004). The reasons for or not using CAM in our study agreed with previous studies (Al-Qudimat, Rozmus and Farhan, 2010,

Kust *et al.*, 2018 and Pud *et al.*, 2005). Majority of CAM users were using spiritual therapy, vitamins and minerals and local/traditional herbs. This was consistent with earlier studies (Bahall, 2017), Chrystal *et al.*, 2003, Ong'udi, Mutai and Weru, 2018 and Judson *et al.*, 2017) where mind-body therapies and natural products were commonly being used probably because they thought they were safe. Friends and family members were the major sources of information on CAM though they were not the major suppliers. The sources of information on CAM and sources of CAM used by respondents in this study agreed with a study conducted in Nigeria (Ezeome and Anarado, 2007). Majority of the CAM users were obtaining their therapies from church elders which tallied with common type of CAM being used. Other sources included local chemists and herbalists. In our study, CAM users reported improvements of health, enhanced ability to cope with the disease, improved appetite and more hope to live. This was in accordance with previous studies (Pud *et al.*, 2005). We found no report of any adverse effects among the CAM users in our study. However, this finding is inconsistent with other studies (Teng *et al.*, 2010 and Kust *et al.*, 2016) where participants reported diarrhea, vomiting, nausea headaches and itching from CAM therapies they had used.

Conclusion

There is significant use of CAM by cancer patients in Meru County. The most common method of CAM is spiritual therapy with hope to cure the disease. The CAM therapies are used as a complementary to the conventional therapies. The sociodemographic factors of the patient do not influence the use of CAM. Church elders/pastors are the major source of CAM used by the patients. Majority of the CAM users experienced improved health after using CAM and no adverse effect had been observed. It is necessary to find out if there is any difference in the quality of life between CAM users and none users.

References

- Al-Qudimat, M. R., Rozmus, C. L., & Farhan, N. (2011). Family strategies for managing childhood cancer: using complementary and alternative medicine in Jordan. *Journal of advanced nursing*, 67(3), 591-597.
- Anita R., Rajanandh M.G., Vivenkanandan A., Sujita Y., Bhaskar Y, Keerthi C.K., and Sai M.V. (2015). Patterns of Complementary and Alternative Medicine Use in Cancer Patients: Prospective Analysis of Medical Oncology Unit. *Academic Journal of Cancer Research*. 8(2):40-42. doi 10.5829/idosi.ajcr.2015.8.2.94102
- Bahall, M. (2017). Prevalence, patterns, and perceived value of complementary and alternative medicine among cancer patients: a cross-sectional, descriptive study. *BMC complementary and alternative medicine*, 17(1), 345.
- Ben-Arye, E., Samuels, N., Goldstein, L.H., Mutafoğlu, K., Omran, S., Schiff, E., Charalambous H., and Silbermann, M. (2016). Potential risks associated with traditional medicine use in cancer care: A study of Middle Eastern oncology health care professionals. *Cancer*, 122(4): 598-610
- Bilqi, N., Bell K., Ananthakrishnan, A.N. and Atallah, E. (2010). Imatinib and Panax ginseng: a potential interaction resulting in liver toxicity. *Ann Pharmacotherapy*, 44(5), 926- 928 doi: 10.1345/aph.1M715
- Bossaer, J.B and Odle, B.L. (2012). Probable etoposide interaction with Echinacea. *Journal of Diet Supplements*, 9(2), 90-95. doi: 103109/19390211.2012.682643
- Bray, F., Ferlay, J., Soerjomataram, I., Siegel, R. L., Torre, L. A., & Jemal, A. (2018). Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA: a cancer journal for clinicians*, 68(6), 394-424.
- Chen, Z., Gu, K., Zheng, Y., Zheng, W., Lu, W., & Shu, X. O. (2008). The use of complementary and alternative medicine among Chinese women with breast cancer. *The Journal of Alternative and Complementary Medicine*, 14(8), 1049-1055.
- Chrystal, K., Allan, S., Forgeson, G. and Isaacs, R. (2003). The use of complementary and alternative medicine by cancer patients in New Zealand regional cancer treatment center. *The New Zealand Medical Journal*. 116(1168).
- Ezeome, E.R. and Anarado, A.N (2007). Use of complementary and alternative medicine by cancer patients at the University of Nigeria Teaching Hospital, Enugu, Nigeria. *Journal of the International Society for Complementary Medicine Research*, 7(28).
- Greenlee, H., Neuqut, A.I., Falci, L., Hillyer, G.C., Buono,

- D.,Mandelblatt, J.S., Roth, J.M....and Hershman, D.L. (2016). Association between complementary and alternative medicine use and breast cancer chemotherapy initiation: The breast cancer quality of care (BQUAL) study. *JAMA Oncology*; 2 (9): 1170-6
- Hunter, D., Oates, R., Gawthrop, J., Bishop, M., & Gill, S. (2014). Complementary and alternative medicine use and disclosure amongst Australian radiotherapy patients. *Supportive Care in Cancer*, 22(6), 1571-1578.
- Judson, P. L., Abdallah, R., Xiong, Y., Ebbert, J., & Lancaster, J. M. (2017). Complementary and alternative medicine use in individuals presenting for care at a comprehensive cancer center. *Integrative cancer therapies*, 16(1), 96-103
- Kim, M. J., Lee, S. D., Kim, D. R., Kong, Y. H., Sohn, W. S., Ki, S. S., ... & Nam, H. S. (2004). Use of complementary and alternative medicine among Korean cancer patients. *The Korean journal of internal medicine*, 19(4),
- Kust, D., Samija, I., Maric-Brozic, J., Svetec, B., Miletic, M., Mamic, G., ... & Frobe, A. (2016). Use of alternative and complementary medicine in patients with malignant diseases in high-volume cancer center and future aspects. *Acta clinica Croatica*, 55(4), 585-92
- Mujar, N. M. M., Dahlui, M., Emran, N. A., Hadi, I. A., Wai, Y. Y., Arulanantham, S., ... & Taib, N. A. M. (2017). Complementary and alternative medicine (CAM) use and delays in presentation and diagnosis of breast cancer patients in public hospitals in Malaysia. *PloS one*, 12(4), e0176394
- Ong'udi, M., Mutai, P., & Weru, I. (2018). Study of the use of complementary and alternative medicine by cancer patients at Kenyatta National Hospital, Nairobi, Kenya. *Journal of Oncology Pharmacy Practice*.
- Pud, D., Kaner, E., Morag, A., Ben-Ami, S., & Yaffe, A. (2005). Use of complementary and alternative medicine among cancer patients in Israel. *European Journal of Oncology Nursing*, 9(2), 124-130.
- Teng, L., Jin, K., He, K., Bian, C., Chen, W., Fu, K., ... & Jin, Z. (2010). Use of complementary and alternative medicine by cancer patients at Zhejiang University Teaching Hospital, Zhuji Hospital, China. *African Journal of Traditional, Complementary and Alternative Medicines*, 7(4), 322-30
- WHO (2018). Non-communicable diseases. <https://www.who.int/en/news-room/fact-sheets/detail/noncommunicable-diseases>.