

DEMYSTIFYING NEGATIVISM OF *Cartha edulis* (MIRAA) AND FOCUSING ON ITS RELIGIOUS, SOCIO-ECONOMIC AND EDUCATIONAL SIGNIFICANCE: A CASE OF MERU NORTH REGION IN MERU COUNTY, KENYA

Bururia, D.N. and Nyaga, J.N.

Department of Arts and Humanities, Chuka University, P. O. Box 109-60400, Chuka

Correspondence: dbururia@chuka.ac.ke, nyagabururia@yahoo.com

ABSTRACT

There have been conflicting views regarding *Cartha edulis* (*miraa*) effects. *Miraa* is a plant that when consumed affects human psychological and physiological functioning and, therefore, falls under the category of abusive drugs. The National Campaign against Drug Abuse Authority and other scholars have confirmed these effects. Whereas there are numerous negatives emanating from *miraa* farming, trade and consumption, there are also immense religious, social and economic benefits derived and associated with it. This study assessed the impact of *miraa* on religious, socio-economic and educational spheres of the society in Meru North. It was motivated by conflicting views of *miraa* farmers and traders, who also happen to be churches members located within the study area, and the alleged trade income used for social and economic developments. The study used *ex-post facto* design and targeted accessible population of elders, farmers, traders, church members and pastors. A sample size of 34 persons was interviewed using questionnaires and observation schedules for elders, farmers, traders, church members and pastors. There are both positive and negative contributions brought about by *miraa* farming and trade. Although the negatives outweigh the positives in terms of both short and long-term intangible damages to individuals, family and society, there are strong social, religious and economic attachments to *miraa*. *Miraa* has assumed political dimension as the community elects leaders based on expected protection of the trade by them. Exclusive focus on negatives has overshadowed potential financial, social, educational, religious, cultural and medicinal values. *Miraa* creates a contextual foundation for communication based on diverse perceptions. However, the negative implications of *miraa*, which greatly affect consumers, marriage, schools and churches, cannot be ignored. One wonders if it can serve a better purpose and value if handled properly among the community where it is grown.

Key words: Demystification, Economic impact, Religious, Socio-cultural

INTRODUCTION

Trade in *miraa* commodity has been in existence for a very long time. It is hard to say exactly when the trade started and became a commercial enterprise. It is even more difficult to find documented literature that can highlight the discovery and origin of this plant. However, oral literature has it that *miraa* was discovered as a useful substance by shepherds, while out with their flocks in grazing fields of Igembe. As is customary of many shepherds to taste the plants, which their flocks seem to like, *miraa*, a tree that seemed to be liked much by goats and sheep, was not exceptional. It was eaten and found to taste good. The taste of the substance triggered the interest of the shepherds and they gradually started chewing the twigs obtained from *miraa* trees. This caught the attention of many other people as the substance came to be a good stimulant (Hjort, 1974).

Initially, *miraa* was not traded but was a highly valued tree among the Ameru people especially those living in Meru North. It had great cultural value as far as the traditional marriage and male circumcision rites are concerned. During marriages, a prospective bridegroom would take a bundle of *miraa* called *ncoolo* in Kimeru language, to the prospective bride

who in turn would give to her mother to give to the father. This served as a marriage proposal and engagement. In preparation for circumcision, *miraa* was valued because the candidate due for initiation would give the bundle to the man of his choice who would serve as his guardian father during the seclusion period. However, it was old men and shepherds and not young people who generally chewed *miraa* originally. Gradually, chewing of the twigs attracted the attention of young people and few women. Initially, old men could plant a few trees of *miraa* for the purposes mentioned above and so no trade was done. However, as the number of chewers increased, the demand to plant more and more trees became inevitable to meet both the emerging consumption and exchange.

Mwaniki (1986) and Carrier (2003) report that *miraa* trees originally grew wild in forests. However, it is in Nyambene hills in Meru County that commercially oriented *miraa* have been grown for several decades. Nyambene mountain range lies to the northeast of Mount Kenya and includes Igembe and Tigania sub-communities. According to Kabeca (1986), *miraa* trade in Kenya could have started in the 1960s when people in Nyambene traded with the neighbouring

Somaliland. Although other crops like tea and coffee were planted alongside *miraa*, the latter's returns per area were high (UNDCP, 1999; Kabecha, 1986).

Large-scale trading was started by few locals after realizing the increasing demand of the twigs. The transaction was first to the fellow locals and eventually to the outsiders such as people of the Somali origin and Arabs. Kangeta market, which was already serving as a centre for barter trade among the people of Meru North, Meru Central and the Agikuyu, who traded in sheep, goats and cattle became the first focal point. People of Somali origin also visited the market for business. This means that there was a ready market to which the twigs were introduced. Today, *miraa* which is also known as *khat* and *mairungu* is grown in high altitudes in East Africa and Yemen. In Kenya, the plant is grown in Meru, especially in Ntonyiri and Igembe regions in Meru North. These areas produce the largest quantity, as well as the best quality of *miraa* worldwide. Most of the population living in these regions of the country major in growing and trading in this *miraa*, which does well compared to most other cash crops due to inadequate natural waters and rainfall. The over 350,000 people living in these areas are, therefore, to a large extent dependent on the *miraa* for their basic needs.

The commodity is sold locally in the local trading centres within the growing areas to prominent businessmen, who in turn transport the substance to major markets where some is even exported to foreign markets. Since there is no airstrip near the growing area, road transport is used. Because the *miraa* is highly perishable, the vehicles transporting it are driven at very high speed, risking the lives of those in the respective vehicles and also other road users. International destinations of *miraa* include Ethiopia, Djibouti and Somalia. *Miraa* has been a controversial substance occasionally subjected to legal restrictions. It is currently illegal in Eretria, Tanzania, the US, Canada, New Zealand and until recently in June 2014, Europe.

The people of Meru North refer to *miraa* as the *green gold* of Nyambene. The trade has created many jobs not only for local people but also others who have migrated to the area due to its potential business. By extension, the trade also earns the country revenue. The income from *miraa* trade is used basically for construction of schools, churches and other community projects. This trade is the major economic contributor to the development of the region (Goldsmith, 1998). The growing importance of *miraa* has been faced with a lot of heated local and

national debates on its safety as a consumption product. Those opposed to its human use argue that it is a health hazard and its socio-economic value should be substituted with other products.

Despite the aforementioned benefits accruing from *miraa* trade, the activity is faced by a number of complexities. Family conflicts are not uncommon because traders are forced to leave their families to collect money from business partners. Being away for long periods of time leads some men to engage in prostitution and drug abuse as the men have a lot of money. This argument agrees with a study on endangered individual worth as a result of social and cultural transformation (Nyabwari *et al.*, 2014). *miraa* farmers are quite impatient and intolerant with those who steal from their Sambas. Normally those caught stealing *miraa* are either beaten mercilessly or are slashed with machetes, or handed over to the police. Maua Methodist Hospital receives many patients with injuries associated with *miraa* controversies (Mutuma, 2011). School dropout is another negative consequence of *Miraa* trade. Young school going children prefer venturing into the trade to going to school because of the presumed easy money. As a result, illiteracy rate is very high in the growing area (Muthaa *et al.*, 2013). Because of the amount of money associated with the trade, and the entry of people of Somali origin into the trade, illegal firearms are common. These complexities affect the individual farmers, families, schools, churches and the entire society (Muyuri *et al.*, 2014).

STATEMENT OF THE PROBLEM

Miraa farming and trade, which features as the single most successful business in Meru North has attracted the attention of both the well to do and the illiterates in the society. It attracts people from far and wide who venture into the business despite the diverse negative impacts it has on the individual, family, church and community. This research assessed the religious, socio-economic and educational significance of *miraa* farming and trade in the region.

OBJECTIVES OF THE STUDY

This research was guided by the following objectives:

- To highlight both negative and positive implications of *miraa* on the family, school, church and larger community.
- To evaluate the view of the Church on the *miraa* trade and the extent of the church's involvement with *miraa* as a resource.
- To examine the impact of *miraa* on education, enrolment and retention of learners.
- To make appropriate recommendations.

RESEARCH HYPOTHESES

H01: There is a lot of money made through *miraa* farming and trade which makes people dependent and dedicated to *miraa* at the expense of other economic activities.

H02: In spite of the enormous negativism associated with *miraa* farming and trade, its contribution to the general socio-economic and religious perspectives in the growing areas is significant.

H03: *miraa* chewing is a passive, tolerated, psychoactive activity with potential to alter the psychological and physiological functioning of the human body.

JUSTIFICATION OF THE STUDY

This study was believed to have national importance because of the awareness on both the positive and negative impacts of *miraa* farming and trade it would create. It would also add to the existing documented literature and academic debate on *miraa*. There are many individuals and institutions that directly or indirectly depend on *miraa* farming and trade. Institutions in the region have admitted many students whose main source of funding is *miraa*, since they are situated in the heart of *miraa* growing region. Families, schools and churches within the growing region depend on *miraa*'s economic and social-cultural contributions.

AREA AND SCOPE OF THE STUDY

The research was limited to Igembe and Ntonyiri Divisions in Meru North, and four Locations, namely Kawiru, Athiru Ruujine, Antubetwe Kiongo, and Luciuti. Kawiru is located on the lower part of Ntonyiri and borders Athiru Ruujine to the west, Antubetwe Kiongo to the north, Meru National park to the east and Kiengu in Igembe to the south. The region is approximately 13 kilometres from Maua town. This area is relatively warm with the lower part classified as semi-arid due to the low rainfall received per year. There are no natural rivers and water bodies for domestic and animal use. The population according to the 2009 census is 35,000 people with the early middle age and school going age children forming the greatest percentage. Agriculture forms the main economic activity in the area with *miraa* production taking the lead. Other crops include millet, sorghum, pigeon peas, maize and beans. Livestock keeping is also practiced.

The research focused on *miraa* twigs, also known as *khat*, *maiirungu*, *catha*, *quat*, Abyssinian tea, African tea, and salad. It is a shrub with a slender trunk, which has a smooth thin bark. Its leaves are lancet-shaped, about 5-10 cm long and about 3-6 cm wide. The young leaves are crimson brown or reddish green

in colour but change to yellow green as they age. In areas with frost the shrub may attain a height of about 1.5 m, but in areas with more rainfall it may grow to be about 6 m. However, for the purpose of easy plucking the shrub is usually trimmed so that it remains at 1.5 and 2.5 m height. The edible parts of the plant are the young shoots and leaves although the bark can also be used. However, to protect the shrub from drying up the barks are not removed. The young shoots and leaves contain a chemical known as cathinone that stimulates the chewers mentally.

LIMITATIONS AND ASSUMPTION

The research encountered several limitations. Although today both local and foreign scholars are documenting research findings on *miraa*, similar research on the subject is not conclusive. The fact that majority of respondents were illiterate necessitated engagement of their children to write the information they had on the questionnaire. It was assumed that respondents provided truthful and honest responses to the items in the questionnaire.

METHODOLOGY

The study used the *ex-post facto design*, which was appropriate because the impact of *miraa* on religion, education and socio-economic fabrics of society were being investigated after they had already taken place. Also it was suitable because the factors that impact on the trade were independent variables, which could not be manipulated by the researchers. The researchers attempted to establish the possible cause and effect relationship between dependent and independent variables in an existing situation.

This study was conducted in Meru North of Eastern Kenya. The major activity in the area is farming, especially of *miraa* plant (*Cartha edulis*), whose twigs are chewed and act as brain stimulants. Other activities are animal production, trade and to some extent tourism. The target and accessible population included elders, farmers, traders, and church members and pastors. A sample size of 34 persons was sampled for the interview. The data for this research was collected using questionnaires, and an observation schedule. There were five sets of questionnaires for elders, farmers, traders, church members and pastors.

Questionnaires were selected on the strength that they are more commonly used in quantitative research as their standardized, highly structured format was compatible with the study design. Questionnaires are appropriate since they help collect information that is not directly observable as they inquire about feelings, motivation, attitudes and experiences. During visits

to the selected areas, the researchers made observations on the situation in the sampled locations and paid particular attention to the religious and socio-economic activities. The purpose of making personal observation was to obtain additional and collaborative data which enhanced the data gathered through questionnaires. Personal observation enabled the researchers to take note of social-economic activities in the neighbourhoods.

Validity and Reliability

The researchers confirmed that the instruments were valid and reliable by ensuring that the content, predictive, concurrent and construct validity were accurate. In addition, reliability of the instruments were tested through the Spearman's Rank Order Correlation Coefficient (r) and a correlation of 0.869 for elders, 0.834 for farmers, 0.792 for traders, 0.782 for church members and 0.781 for pastors were obtained. The researchers gathered both quantitative and qualitative data analyzed using the Statistical Package for Social Sciences (SPSS) version 18. Descriptive statistics were used in analyzing the data.

RESULTS

The response on how *miraa* came into use and for what reasons it was used varied with some respondents reporting that it was discovered by shepherds to be a useful substance. Table 1 gives the summary of the reasons why it was used.

Older people and specifically men chewed *miraa* in the evening or while on journey. On whether *miraa* has any cultural values, all the respondents agreed in the affirmative. Cultural values included opening marriage dialogue, circumcision, becoming an elder, and settling disputes. On the contribution of *miraa* trade to the family, church and community, all

respondents agreed that it contributes positively. The contribution included: 16.6% paying school fees, 15.3% buying food and other basic needs for the family, 16.4% buying plots and improving them, 12.1% contribution towards community development programmes, 18.2% meeting personal needs and 5.1% home improvement.

The research findings indicated that *miraa* farming and trade improved the living standards of the family based on the average monthly returns. Compared to other crops grown in the area, *miraa* fetched more income compared to maize, beans, mangoes, papayas and avocados (Table 2). On the negative impact of *miraa* trade, majority of the respondents agreed that in spite of the positive impact of the trade, it affects individuals, family, church and community.

Table 3 shows a consolidated summary of the negative effects of *miraa* farming and trade on the community. These findings concurred with similar results from a study commissioned by NACADA in an urban setting and entitled: *the Role of parents in control of alcohol and drug abuse among their children in Nairobi in 2010*, which found that 70% of parents in Nairobi knew that substances of abuse are available in their neighbourhoods. The NACADA study cited 88.1% alcohol as the most common, followed by 83% cigarettes, 77% marijuana and 66.2% *miraa*. This was an indication that there were considerable negative impacts on the wellbeing of people in such neighbourhoods.

Nearly 99% of the respondents agreed that *miraa* contributes positively to religion. Table 4 summaries and indicates that the influence of *miraa* on the community was significant socially, economically and culturally.

Table 1: Reasons for Using *miraa*

Reason	Frequency	Percentage (%)
To keep one busy and attentive at night while guarding flock and family	6	17.64
Reduce temptation of eating children food	6	17.64
Stimulate thinking while settling disputes	10	29.41
Pass time while waiting for food	5	14.70
Give courage while on a journey	7	20.59

Table 2: Returns from *miraa* per acre

Acreage	Year of planting	Amount of money per month	Place of selling
5.0 acres	1980	Ksh. 40,000	Farm gate
0.5 acres	1980	Ksh. 10,000-20,000	Nairobi or Mombasa
2.5 acres	1973	Ksh. 7,000-20,000	Laare, Muringene or Kawiru
2.0 acres	1988	Ksh. 30,000-50,000	Farm gate
2.0 acres	1986	Ksh. 20,000	Kawiru and other local markets
2.0 acres	1989	Ksh. 50,000-80,000	Nairobi and export

Table 3: Negative impacts on miraa

Negative impact on families	Negative impact on schools	Negative impact on churches
Creates laxity/idleness. Promotes primitive activities like consumption of local brews, domestic quarrels and marital unfaithfulness	High school dropout since most of the children feel they can make money by plucking <i>miraa</i> and become rich quickly	Churches have been left without youths, who engage in drinking and prostitution
Promoted drinking of beer and prostitution	School dropout cases is very high in the area	Churches are left without youths because most of them have plunged into drinking beer and prostitution
Poverty is created in families, which have leased their <i>miraa</i> plantations. Conflicts are also encountered due misappropriation of funds	Due to money from plucking <i>miraa</i> , most children drop out of school and end up spoiling even more	There is much absenteeism which drag church growth
There are family quarrels because the men have the say over the money gotten from <i>miraa</i>	There are many incidences of early and unplanned marriages which perpetuates the cycle of poverty	Most youths are illiterate and cannot contribute many ideas. Poor families also result to poor churches because the family is the smallest unit of any church

Table 4: Positive impacts of miraa

Positive Impact on Families	Positive Impact on Schools	Positive Impact on churches
Education of children, building permanent family houses, helping put up business that sustain families	Schools have built permanent structures as well as meet other financial needs	Churches have built permanent sanctuaries, bought plots, musical instruments as well as meet other needs
Provided food, clothing and shelter for families, and access to medical facilities and fees for children	Helped in facilitating permanent buildings and learning equipment	Church financial needs have stabilized greatly
Standard of education have been raised up in families.	Has helped greatly in all school development activities	Pastors stipends and other financial commitments have been meet regularly
Has helped provide food, clothing, shelter and education	General development programmes have been achieved	Construction of income generating projects like social halls, commuter vehicle and private schools.

DISCUSSION

The results of this study centered on four areas, namely: the impact of *miraa* on the family, education, community and church. *Miraa* has been a great and probably the single most important source of income to most of the families in the area under study, but *miraa* business has also had negative repercussions on the families. Some of the challenges that became evident included conflicts among family members, spouses, separation, divorce, infidelity, sexually transmitted diseases, including HIV/AIDS, increased poverty and school dropouts.

There was increased misappropriation of family funds, conflicts, and quarrels. A total of 63.4% families had one kind of family conflict associated with *miraa*, 54.7% of *miraa* traders engaged in infidelity, or had mistresses in trading towns. This meant that whereas these families had a source of income, part of it was not used in gainful ways. A total of 80.8% of the families recorded average or below average in terms family welfare in spite of the

large amount of *miraa* money that passed through the family hands. The implication was stagnated families, coupled with separation and divorce. Often husbands spent the earned money with prostitutes or in bars and there were instances of wife battering, infidelity, which culminated in separation and divorce. About 98% of *miraa* money was controlled by men with women only waiting for handouts from their husbands or grown up sons who hardly cared for the family needs.

Sexually Transmitted Diseases including HIV/AIDS were on the increase. A total of 29.6% of children were orphaned due to HIV/AIDS. A lot of money was generated from the trade and this easy unplanned money tempted people to get involved in immoral acts. Although the trade earned families money, poverty was a common issue. Families leased out *miraa* farms to middlemen or committed most of family land to *miraa* plantations at the expense of other cash or food crops. About 78% of cultivatable

land was reserved for *miraa* farming, while only 22% went to other activities including homesteads.

The study attributed the high school dropouts to some parents who encouraged their children to take part in *miraa* plucking at the expense of going to school. Majority of the dropouts were boys who after circumcision became rebellious in school. Such boys demanded a share of parents' property or they dropped out to look for money from the lucrative *miraa* business. A total of 94.4% of the school dropouts were employed as casuals in *miraa* picking or did petty *miraa* trade. This situation was alarming considering the resources invested in education. This had perpetuated the illiteracy rate. Efforts to counteract this trend is normally not effective because farmers and businessmen entice especially boys to drop out since they are cheap source of labour and their light body weight does not cause breakage to the delicate *miraa* tree branches.

Whereas *miraa* had contributed to the growth of the church as far as materialism was concerned (90.7%), spiritual growth had deteriorated. This was evidenced by absenteeism from the church services, fellowships and low morality exemplified by poor Christians' living standards. Although *miraa* trade brought a lot of money, much of it was used in immoral activities, excessive drinking, and prostitution at the expense of useful community projects. As a result, household roles had been left to women. In addition, incidences of early marriages were on the rise due to the fact that young boys got a lot of money that ultimately made them believe that they were independent and hence could start their own families. On the other hand, young girls were lured by a lot of money and consequently entered unplanned early marriages.

Generally, *miraa* owners had sensitive tempers when matters of *miraa* were at stake. They easily injured real or imagined intruders. As far as education was concerned, the study noted the dual effects of *miraa*. On the positive side, the trade was the main source of family income where majority of people utilized the same to pay school, college and university fees to the tune of 97.4%. In addition, educational physical facilities had been established using the same money. On the negative side, it was revealed that unlike other societies in Kenya, the area had very high dropouts among boys. Indeed education standards were low and male enrolment from primary school through secondary school level was highly affected.

Miraa trade picked up slowly from a localized activity to an international trade today. *Miraa* had been singled out as the only cash crop that sustained

people who live in Igembe and Ntonyiri areas due to lack of natural waters for domestic and agricultural activities. There was also insufficient rainfall for sustenance of other cash crops.

These findings concurred with a survey done by the Government drug watchdog, National Campaign against Drugs Abuse (2007), which found that in *khat* growing areas cases of boys dropping out of school were rampant. Boys chose to work in *khat* plantations or to sell the stimulant instead of going to school because in the farms they made money which by extension was used to lure girls out of school. Although *miraa* was identified as the sole cash crop with great social, economic and cultural contribution, it had nevertheless negatively affected the spiritual and social growth of the area of the study. This was due to mishandling of the commodity largely through failure to discover a way of making it serve better purposes like the alleged medicinal values, and also it has contributed to language decay (Kobia, 2014). *miraa* has got medicinal value which if developed, could make it more useful.

The present research created awareness on the positive and negative effects of *miraa* by looking into its contribution. *Miraa* fetched money that has helped families survive by enabling them buy water for domestic use, food and clothes, as well as access medical services. It has also created job opportunities for most people in the area in addition to helping many start other businesses. Education of many pupils in the area has also been made possible through *miraa* trade. *Miraa* has also been embraced by the church through acquisition of plots for building of sanctuaries, buying musical instruments and supporting the clergy. However, *miraa* was responsible for most family conflicts, including quarrels, excessive drinking, prostitution, separation, divorce, and contraction and spread of sexually transmitted diseases including HIV/AIDs. The study suggested various ways and means of curbing the problems associated with or emanating from *miraa* trade. Some of the suggested solutions included education of the youth, developing other business opportunities, provision of water and encouraging experts to study the *miraa* commodity further.

CONCLUSION

Positively, *miraa* has brought money that helps families in terms of food, medical, education, job creation and promotion of physical growth. On the other hand, *miraa* has negative impacts such as family conflicts and exposure to vices like prostitution, diseases and school drop out.

RECOMMENDATIONS

Based on the results and literature review, *miraa* leads to serious problems. Therefore, there is an urgent need to critically seek pre-occupation of the community and the churches within the growing region in the following recommendations:

Further comprehensive and intensive study should be done on *miraa* trade to promote its positive social, cultural and economic roles. The immense negative effects of *miraa*, which were beyond the scope of this research, should be fully quantified with a view to highlighting the same to the public domain, as well as addressing them through combined efforts of medical and psychological professionals.

Education is key to progress. The fact that most Government employees in the area are from other regions proves that education is not taken seriously in this region. Education has been neglected and hopes put on *miraa*. The community and churches in the area should join hands and put up boarding schools/polytechnics. Boarding in particular will separate children from the daily interaction with *miraa* dealers, who lure children to join them. The community and the church can offer bursaries to encourage school attendance.

Miraa is said to have medicinal value. However, these values cannot be of any positive use without the input of experts. Establishment of a research centre and experts in the region would be ideal to pinpoint the medicinal values of *miraa*. The government could help put up the centre in the *miraa* growing region.

Miraa has earned the people in the region a lot of money. However, the people end up saving very little or nothing due to many avoidable expenses. With proper arrangement, the community can install water in the area to serve domestic, agricultural and commercial purposes. Due to poverty caused by leasing *miraa* plants, the farmers should manage their own trees and form *miraa* associations to protect their rights and make savings to start other projects to alleviate the poverty and cease over-dependence on *miraa*. This could also help the farmers obtain loans and attain economic stability.

To curb the many conflicts and cases emanating from *miraa* trade and promote social welfare, there is need for the church to include in its curriculum a programme on Christian Education with the aim of inducting everyone in the community in proper way of handling *miraa*. The church can also play a proactive role in the economic development of the region by improving education as a whole.

Further study is recommended to determine: the extent of other substance and drug abuse besides *miraa* in Igembe and Ntonyiri regions; the impact of *miraa* farming on educational retention, repetition and completion at all levels; the impact of boys' drop out on girls' drop out; and the clinical medicinal values of *miraa* and possible side effects.

REFERENCES

- Beckeneg, S. 2006. What harm? Kenya and Uganda prospect on Khat: Journal of Affairs, 105.
- Beekhulis, A. 1999. Chewing *khat* together: From indigenous practice to international use, New York, Viking.
- Carrier, N. 2003. The Social life of *miraa*: Farming, trade and consumption of a plant stimulant in Kenya. Unpublished Ph.D. Thesis, University of St. Andrews.
- Carrier, N. 2005a. The need for speed: Contrasting time-frames in the social life of Kenyan *miraa*. *In: Africa* 754:539-558.
- Carrier, 2005b. The cultural importance of *miraa Khat* for Tigania and Igembe youth in Kenya. *Journal for Africa Cultural Studies*, 172:201-208.
- Gatere, A. 2007. No Schooling Please, We are Igembe Boys: Teacher' Image, A Quarterly Magazine by TSC, pp. 14:34-35.
- Gebissa, E. 2009. *Khat* in the Horn of Africa: Historical perspectives and current trends. Kettering University, Liberal Studies, United States.
- Gichunge, W. 2001. Why must you chew *miraa*? *Daily Nation*, 3rd April, 2001, p. 16.
- Goldsmith, P. 1998. The production and marketing of *miraa* in Kenya. R. Cohen (ed.). London: Lynne Rienner.
- Goldsmith, P. 1999. The political economy of *miraa*. *In: East African Alternatives*. April, 1999.
- Hjort, A. 1974. Trading *miraa*: From school leaver to shop owner. *In: Kenya Ethnos*, 39:27-43.
- Hjort, A. 1983. The health and socio-economic aspects of *khat* use. Paper presented in International Conference on *khat*: Antananarivo, Madagascar, January 17-21.
- Kimondo, C. 2007. Girls beat boys in attendance. *Teachers' Image*, 14:31.
- Kobia, J. and Miriti, G. 2014. Face-threatening acts employed in *miraa* business discourses by traders of Igembe and Somali origin. *International Journal of Education and Research*, 27.
- Muthaa, G.M., Muyuri, M.M., Bururia, D.N. and Mwenda, E.E. 2013. Drop out among male pupils in primary schools of Igembe District in Kenya: *Creative Education*, 4:180-184.

- Mutuma, M.M. 2011. Causes of dropout among male pupils in primary schools in Igembe District: Unpublished M.Ed. Thesis, Chuka University College, Chuka, Kenya.
- Muyuri, M.M., Bururia, D.N. and Muthaa, G.M. 2014. Socio-Economic and religious factors contributing to drop out among male pupils in primary schools of Igembe Sub-County in Kenya. *Journal of Educational Policy and Entrepreneurial Research*, 1:58-68.
- Mwaniki, H.S.K. 1985. The living history of Embu and Mbeere up to 1906. Nairobi.
- Mwaniki, H.S.K. 1986. Traditional functions of controversial *miraa* (*Cartha edulis*) among the Igembes of Meru. Seminar paper presented at Kenyatta University, Kenya.
- Mwingirwa, K. 2001. The dark side of chewing *miraa khat*, Nairobi, KIE.
- Nyabwari, B.G., Nderitu, S. and Bururia, D.N. 2014. Culture transformation: Endangered individuality worth. *International Journal of Education and Research*, 2:115-126
- NACADA. 2007. Drug Abuse. Nairobi, Government Printer, Nairobi.
- WHO. 2008. *Khat* chewing in Yemen: Turning over a new Leaf. *In: International Journal of Public Health*.