

SOCIO-CULTURAL BARRIERS AFFECTING WOMEN PARTICIPATION IN BEEKEEPING IN BARINGO SOUTH SUB-COUNTY, BARINGO COUNTY- KENYA

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Abstract: *Beekeeping is a socio-economic activity practiced by both women and men all around the world. It entails the rearing and management of bees for commercial production of honey and other beehive products. In Kenya, beekeeping is mostly a male's dominated venture but with advocacy programme smallholder women have ventured the field. Despite the efforts of county governments and nongovernmental organizations encouraging women participation in beekeeping there is low uptake of this venture, thus the gap between the norm and the practice. This study therefore investigated the selected socio-cultural factors affecting women participation in beekeeping in Baringo South Sub-county. The study sought to investigate how cultural norms and stereotypes affects women participation in beekeeping. Survey research design was used. The study population was 700 women who practiced beekeeping in the areas. From the study population, a study sample size of 128 women participants was selected using simple random sampling procedure. Data was collected using questionnaires for the respondents and interview schedules for the key informants who included the chairs of the women groups and the branch manager of an NGO. The instrument was piloted in Baringo North Sub-county in Kenya. Data was analyzed using both descriptive and inferential statistics. Majority of the respondents (82.8%) indicated that they had cultural beliefs and stereotypes that hindered them from practicing bee keeping. Most of the stereotypes revolved around beliefs that beekeeping is purely a male's role, no woman should own beehives because she will die. The study therefore recommends more awareness and campaigns to be done on the importance of including women in beekeeping. Policies on gender mainstreaming to be implemented in the area to enable to change the community's perceptions on stereotypes that hinder women from practicing beekeeping. This will enhance women participation in beekeeping in order to create employment and income.*

Keywords: *cultural norms, socio-cultural factors, women participation.*

1. INTRODUCTION

Beekeeping is an agricultural branch in which beekeepers take care of honey bee colonies in order to collect honey and other hive products such as bee wax, propolis, pollen, royal jelly among other products. Globally, bee farming is practiced in countries like Spain, Central India, and Middle East, Great Britain among others. Paintings in caves portrayed people gathering honey from honey combs in hollow trees and rocks (Birhanu, 2016). In Great Britain for example, bees were kept as early during Bronze Age since honey was used in bronze

casting, candles and in lighting lamps. In most of these places, the practice was majorly a male's role and women were less involved (Weber, 2013).

In Africa, beekeeping is practiced in many countries. For instance, North Africa, Algeria, Egypt, Libya, Morocco, Tunisia practice it. In East Africa, Kenya, Tanzania, Uganda are well known for beekeeping. In the North Eastern Africa, beekeeping is practiced in Djibouti, Ethiopia, Somalia and Sudan. In West Africa, beekeeping is mostly practiced in Benin, Burkina-Faso, Gambia, Ghana, Guinea, Guinea-Bissau, Ivory Coast, Liberia, Mali, Niger, Nigeria, Senegal, Siera-Leone and Togo. In most of these African Countries, men dominate in the field of beekeeping since women are less involved in the process (Raina, 2015).

In Kenya, beekeeping is practiced majorly in areas such as the Coastal region, Kitui County, Mwingi, and Baringo County. Bee keeping has been practiced traditionally for many years. Only twenty percent of the country's honey has been tapped. Eighty percent of the honey comes from the ASAL areas although non-ASAL areas also practice apiculture (Pact Kenya, 2010). ASAL areas is high in honey production because of the abundance in bee flora. At the Kenyan Coast, women clean apiary, water the bees and transported the hives to the apiary. Men offer security, repaired the hives, harvested and marketed the processed honey. Men carry out most of the work and women are assigned roles that go hand in hand with their gender roles. Most of the time, women interact with honey and other hive products during value addition process (Shacleton et al., 2011). This raises a question as to why it is not the initial processes like siting of apiaries and hive hoisting.

In Baringo County, bee keeping is a men's role. Women are not allowed to own or even count the number of bee hives. Cultural practices as well as social constraints have hinder them from practicing bee keeping (Ahikiriza, 2016). These constraints include time constrain, inability to climb up trees and harvest honey from traditional log hives as well as the nature of bees kept in the area. African bee, *Apis Millifera* is very aggressive and women because of bee phobia get discouraged (Chemurot, 2011, Qaiser, Ali, Taj, & Akmal, 2013). Other constraints include the fact that honey harvesting is carried out mostly at night when women are mostly carrying out household chores (Qaiser, Ali, & Taj, 2013). Some women in Kipsogon area have broken this barrier and are trying to demystify the norms that bar them from practicing apiculture. Other women still believe in the cultural norms and that is why they are not practicing it.

Training on apiculture helps women to address some of these challenges such as the one on bee phobia. They are encouraged to wear protective suits to protect themselves from the bee stings when harvesting honey during the day time when bees are more aggressive (Raina, Kioko, Gordon & Nyandika, 2009). The introduction of modern bee hives has helped to address the challenge women face on climbing trees. These modern bee hives such as the modern Langstroth hive that is hoisted near the ground has eased the work of honey harvesting for the women. Climbing trees is culturally unacceptable for women in Baringo County.

An overview of women involvement and gender roles in beekeeping Previous studies have shown that beekeeping has often been considered a male-dominated enterprise in Uganda, Kenya and Zambia (Mujuni, Natukunda & Kugonza, 2012; Vlek, Denich, Martius, Van de Giesen & Gichora, 2003; Shackleton et al, 2011). Further research indicates that women are increasingly taking up beekeeping as an income generating activity in Nyando and Mwingi, Kenya (Macoloo, Recha, Radeny & Kinyangi, 2013; Raina, Kioko, Gordon & Nyandika, 2009). However, they often encounter social and cultural constraints that hinder them from performing apiary cultural practices (Shire, Asabi & Mergers, 2016).

In Zambia, women were more involved at the honey processing stage of the value chain where they converted harvested honey to a local beer called 'mbote' while men harvested honey, kept records and took minutes during group meetings (Shackleton et al., 2011). At the Kenyan coast, the role of women in beekeeping was

cleaning the apiary, watering bees and transporting of hives to the apiary while men offered security, repaired the hives, harvested and marketed honey (PactKenya, 2010). Pakistan, involvement of women in beekeeping as an income generating activity has been due to involvement of development agencies through trainings that boost their skills in the management of apiculture (Qaiser, Ali, & Taj, 2013). Some of the apiary activities carried out by women in Pakistan include feeding bees with supplements, extraction of honey from combs and packaging. Men on the other hand, replaced bee colonies, breed queens, harvested and marketed processed honey (Mburu et al., 2015).

Most of the studies have neither stratified apiary cultural practices nor characterized them by gender. Studies by Macoloo, Recha, Radeny and Kinyangi (2013) in the Lower Nyando, for example appreciated that more women are participating in beekeeping as an income activity with the aim of improving their livelihoods. Additionally, Birhanu (2016) argued that beekeeping can enhance the position and income of a woman in a society. The current study stratifies apiary cultural activities by gender to clearly highlight activities carried by each of them.

This study sought to investigate on the influence that cultural norms and stereotypes have on beekeeping. Cultural norms which are the shared expectations and rules that guide behaviours of people within a social group influence the way roles are assigned to men and women when it comes to beekeeping. Beekeeping as a form of farming has been taken as a males' role (Mujuni, Natukunda & Kugonza, 2012; Shackleton, 2011). Women face challenges such as not being allowed to practice beekeeping since some cultures expect it to be purely males' field. Women cannot construct, repair or even count the number of beehives in a farm. Norms also bar women from climbing up trees or removing clothes so that they can harvest honey. Honey harvesting is also done at night when women are busy carrying out nurturing roles.

Cultural stereotypes have made women to believe that beekeeping should be purely a males' field and that women who attempt to practice beekeeping become a curse to their families and the community at large. Because of these stereotypes, women have left the field to be practiced by men who use the cultural stereotypes to keep women away (Ahikiriza, 2016). These stereotypes have made women believe that they will die if they practice beekeeping and due to the fear of death, they prefer practicing other farming methods rather than beekeeping.

2. LITERATURE REVIEW

2.1 An Overview of Beekeeping in Africa.

In Africa, honey bees were kept in Egypt from antiquity. The earliest evidence for hive keeping comes from the old kingdom of Egypt. Pre-historical paintings were found in different caves showing people gathering honey from honey combs (Teweldemedhn, & Alem, 2016). This acted as an evidence to prove that beekeeping was a practice during ancient times. Other areas where beekeeping was practiced in Africa included South Africa, Kenya, Uganda, Tanzania, Algeria, Tunisia, Nigeria, Niger only to mention a few.

Africa is blessed with numerous types of wild honey bees. They exist everywhere man lives from the equatorial evergreen rain forest to the desert Oasis (Chemurot, 2011). Bees are more numerous in drier savannah than in the wetter forest areas. Beekeeping in hives is mostly practiced in Egypt, Kenya and Tanzania (Weber, 2013). Bees are usually more productive in warmer areas because most of their energy will be used in honey production, nectar hunting and water searching. In colder areas, some of the energy will be used for heat production to warm their bodies and thus reducing their productivity (Muli, Kilonzo & Ngang'a, 2015). Bees are usually more active during warm seasons than in cold ones.

In Africa, beekeeping is a male dominated field. This is evident in countries such as Uganda, Kenya and Zambia (Shackleton et al., 2011). Men reserve the right of making most decisions at the household and the community level in most African countries. Women therefore have less ownership over assets and decision making thus resulting to them not making decisions on issues of beekeeping (Stagey, Gebreegziabher & Musfin, 2017). Women thus encounter many obstacles as they try to practice bee farming in most African countries. These obstacles include cultural norms and belief that prevent them from setting apiaries or owning hives. Other obstacles include inadequate knowledge on beekeeping, bee-sting phobia as well as the multiple roles they have to play in their households (Qaiser, Ali, & Taj, 2013).

Different countries have different ways of utilizing hive products. For instance, some countries use honey as medicine while others use it to make traditional brew. Others use it as a sweetener by applying it on bread or in porridge and other drinks like tea (Chemurot, 2011). In Zambia for example, honey is used to manufacture traditional brew (*mbote*) while in Kenya, it is mostly used for sweetening purposes as well as for medicinal value.

Governments from different countries have been trying to address this issue of women not involving themselves in beekeeping but up to this era, women are still few in the field. Education and training has been done but women still are not adopting beekeeping as expected. Africa has fewer women in beekeeping as compare to the western world. This study therefore seeks to investigate more on the reasons why these women are reluctant in adopting beekeeping.

2.2 Beekeeping and Women Participation in Kenya

In Kenya, women perform majority of the agricultural activities such as food production, storage, processing and marketing (Oduol et al., 2015). Even though they play a major role in these activities, they end up receiving a fraction of the income generated (Republic of Kenya, 2010). One of the main objectives of the government of Kenya is to reduce poverty through the stimulation of economic growth. Many Kenyans still depend on small scale subsistence farming with households struggling to make a living (Monitoring Africa Food and Agricultural Commodities, 2013). Beekeeping is one of the strategies the government is using to empower residence of areas with high potential in bee farming.

Despite these efforts, beekeeping is slowly picking up although many women are not involving themselves in it (FAO, 2016). According to the republic of Kenya (2013), various factors can be used to explain this slow growth. These include natural factors like degradation of bee habitats due to increased population, technical factors such as poor hive quality, human factors such as inadequate practices and contextual factors such as inadequate access to market (Muli, Kilinzo, & Ngang'a, 2015). Another factor is lack of replacement for the beekeepers opting out of bee farming due to the continued lack of apprenticeship where fathers passed their knowledge to their sons (Republic of Kenya, 2010).

In Kenya, beekeeping is not an attractive option for women because of cultural issues, inadequate skills on beekeeping, gender stereotypes as well as the multiple roles that take much of their time leaving no time for them to practice beekeeping (Ahikiriza, 2016). Cultural beliefs, norms and stereotypes discourage women from taking this profitable enterprise. For instance, according to many cultures, women will die if they own hives, hoist them, construct or destroy them or will make all bees abscond if they count the number of hives in the farms. Because women are the gate-keepers of culture, they believe in that and leave the farming practice for men (Raina, Gordon, Kioko & Nyandika, 2009). They only cheap in marketing and value addition time. Limited access to formal education and training for women and young people is also another set-back to women's adoption of beekeeping (Birhanu, 2016). Many women especially in the rural areas are illiterate and

do not have a lot of formal education especially on beekeeping. Most extension officers who carry out training and capacity building on bee farming are men. This means that women have been locked out of these trainings and do not have role models to emulate. Because of time constrain, women fail to attend seminars and trainings since they are usually held at the times when women are busy carrying out productive, reproductive and community development roles (Affognon, Kingori, Omondi, Muriithi, Makau & Raina, 2015).

Beekeeping has been promoted by various governmental and non-governmental organizations in Kenya's rural areas. The aim has been to reduce food insecurity, unemployment and improve people's wellbeing (Raina, Gordon, Kioko & Nyandika, 2009). Examples of such organizations include: Kenya Forest Service (KFS), United Nations Development Program (UNDP), International Centre of Insect Physiology and Ecology (ICIPE) as well as Hand In Hand (HIH) organization in Baringo County. The above organizations have further introduced modern bee hives like the Langstroth hive, farmers' trainings, honey value chain development among others (Kioko, 2010). Even after the above trainings, women still are not much involved in the farming. This research seeks to investigate the reasons behind why women are less involved in beekeeping.

On realization of the importance and potential of beekeeping in Kenya, the Kenyan government has introduced modern beekeeping where technology such as modern hives, honey extractors, honey pressers, smokers, veils and gloves are used (Qaiser, Ali, & Taj, 2013). Bee training programs have been launched in order to assist farmers and extension technicians. The most preferred hives are the box hives (Muli, Kilonzo & Nganga, 2015). This is a good way of alleviating poverty especially in rural areas since honey is a very profitable commodity. The government has also constructed honey factories where farmers can take their honey for value addition after harvesting.

Baringo South Sub-County is an arid and Semi-arid land where conventional agriculture does not thrive. Residence of that area depend on charcoal burning and goat keeping to meet their livelihoods and introduction of modern beekeeping can be a great benefit to them (Republic of Kenya, 2013). Women sell firewood along the roads in order to earn a living and provide for their families. Others depend on relief food from government and organizations like the Kenya Red Cross to meet their basic needs and those of their families. If both men and practice beekeeping, their livelihoods will change drastically since beekeeping is a highly profitable enterprise.

In Baringo South Sub-County, research indicated that the residence still use traditional log hives (Raina, 2015). Other hives used in the area include bark hives that has been peeled from the truck of a tree (Carrol & Kinsella, 2013). Honey harvesting is done at night and it involves stripping necked before climbing the trees (Gemechis, 2015). This explained why most women are not taking part especially in the harvesting. Moreover, women are busy carrying out the nurturing roles at night while men are free and can go to the bushes to harvest honey. The government and Hand In Hand Organization is carrying out sensitization on modern beekeeping to try and ensure that women also get involved in beekeeping at all stages.

In Baringo South Sub-County, beekeeping is practiced by mostly men. Women are less involved in it especially at the initial stages. However, research indicates that little research has been carried out on beekeeping and very little in-depth qualitative information has been collected. This study therefore aimed at filling a gap by finding out the reasons for women not involving themselves in beekeeping especially at the initial stages of the activity.

2.3 Cultural Norms and Stereotypes on Bee Farming

Bee farming has always been taken to be a male's role (Mujuni, Natukunda & Kugonza, 2012; Vlek et al., 2003; Shackleton, 2011). This is because women faced many challenges which prevented them from taking the practice well. These challenges included the phobia of bee stings, multiple roles that took most of their time and the fact that honey harvesting was done at night when women were busy taking care of children and families (Qaiser, Ali, & Taj, 2013). Therefore, in most times when honey was being harvested, women were not there and could not know the amount of honey harvested at a particular time. They only waited for the honey at home and accept what their husbands gave to them without questioning.

In most African cultures, women were not allowed to climb up trees and yet most hives were hoisted high up in trees (Muli & Frezier, 2011). In most places especially in Baringo South Sub- county people still use the traditional log hives which required that they be hoisted on top of trees. Women are prevented by culture from doing that and that means they have to look for men to do that on their behalf. This prevents them from total control of their bee keeping practice (Mujuni, Natukunda & Kugonza, 2012; Shackleton, 2011). The introduction of modern hives such as the Langstroth hives and the Top bar hives have tried to solve the issue of tree climbing since they are hoisted one meter above the ground where women can easily reach. Despite the introduction of the modern hives, women still cannot afford to buy them due to the feminization of poverty. Most women are poor and cannot raise the capital needed to buy the modern hives. They end up using the traditional log hives which has many disadvantages.

Because of cultural norms and beliefs, majority of the women in Baringo South Sub-County live in the rural areas of course with their husbands and the children. Few have had basic education due to cultural practices favoring boys. Even fewer had the opportunity to exposures to the world outside their homesteads and villages. Because of the tradition that men original task should be performed by men. This limits women active participation during siting hives, apiary, Management, Honey harvest, Honey and Bees wax processing (Jaco, 2013). Let alone the sales of the hives products. Only few serious and exposed members of the Groups or women Association participate actively. These attitudes has made them lag behind in matters bee keeping since they leave the whole work to men.

Among the Kalenjins of Kenya for example, it is a taboo for women to count the number of bee hives in the farm. It is believed that if they count them, all the bees will abscond and the farmer will not harvest any honey (Chemurot, 2011). Therefore, among the Kalenjins who believe in that taboo, a woman will not know the number of hives thus cannot approximate on the amount of honey harvested during a harvest. She should only wait for her husband to bring her honey after harvesting and should not question on the amount (Alemayeh, Yilma, Yohannes, Mulisa & Habtamu, 2016).

Some cultural norms prevents women from constructing, repairing or hanging of bee hives (Kugonza, Kamatara, Nyabakabya & Kikonyogo, 2009). All those roles are given to males even if women carpenters are available. Among the Kalenjins, it is a taboo for a woman to construct a bee hive (Mulisa & Fekadu, 2017). She should seek for assistance from a man. In absence of men, she should not attempt to do the work for she will be cursing herself and her family too. She cannot destroy a bee hive too because culture dictates that if she does so she will die. Women have therefore been limited by cultural norms and believe to the extent of not practicing the bee farming despite the advantages it has and the high profits too.

Another cultural norm that hinders women from taking part in beekeeping is the norm that prevent women from access and control over property. Access to resources and property is highly gendered in many parts of the world including Kenya. Women and girls suffer from inequitable land rights and experience restricted

access resources and inheritance (Carrol & Kinsella, 2009). This prevents women from making decisions on what to use the land for or how to carry out farming including bee farming. They cannot make any decision on the number of hives to put in the farm or even whether to practice beekeeping or not. Women lack of land ownership rights inhibits them from access to credit that she can use as capital to start beekeeping. This is because land is often used as a collateral to borrow loans and credit. The little that women earn from selling honey is used to buy food for the entire family. Results on evaluation of financial services show that males contribute less to the household well-being and food security (Stagey, Gebreeziabher & Mesfin, 2017).

3. RESEARCH DESIGN

This study adopted a survey research design. Survey research design was the best for this study because it has several advantages which include the following: survey research was cost effective and enabled the researcher to collect information from a large population using relatively little amount of money compared to other research designs. This study was conducted in Baringo South Sub-County in the following areas: Marigat Ward. The study population was 700 women who practiced beekeeping in Baringo South Sub-County. From the study population, a study sample of 128 women participants was selected using a simple random sampling procedure.

4. RESULTS AND DISCUSSIONS

4.1 Cultural Norms and Stereotypes on Women Participation in Beekeeping

Respondents were requested to indicate if they had any cultural beliefs and stereotypes that hindered them from practicing bee keeping and the results summarized in Table 1.

Table 1: Existence of cultural beliefs and stereotypes against bee keeping practice by women

| Existence of cultural stereotype | Frequency | Percent |
|----------------------------------|-----------|---------|
| Exist | 106 | 82.8 |
| Does not exist | 22 | 17.2 |
| Total | 128 | 100.0 |

From the study results, (82.8%) of the respondents indicated that they had cultural beliefs and stereotypes that hindered them from practicing bee keeping. About (17.2%) reported that they are not affected by cultural beliefs and stereotypes in their bee keeping practice. Responses from key informants indicated that, *“several cultural stereotypes hindered them from fully exploiting beekeeping which included: women should not construct, repair or destroy a bee hive, women should not sit on bee hives, they should not climb up trees to hoist log hives, they should not harvest honey from the traditional log hives and the fact that women should not own a bee hive under their names.”* Despite the cultural beliefs, beekeeping is being ventured by women in the study area as it is an economic activity. A respondent in key interview schedule reported that, *“most of these stereotypes favour men and elevate them from women. Women are told not to own bee hives so that they don’t gain from beekeeping. Herself, she owned seven log hives and she was not dead yet. The only thing she could not do was to climb up a tree. She couldn’t do that because she admitted she too heavy but could have done if she was a bit lighter. She further went on to say that she also owned Langstroth hives of which at the end of it all, she harvests and sells her own hone. She thus affirms that there is nothing like death associated with women owning bee hives.”*

According to Riana et al., (2009), there existed cultural beliefs and stereotypes that hindered women from practicing beekeeping. The researchers found out that women are the gate-keepers of different cultures and are the one who ensure that cultural beliefs are passed from one generation to another. Some cultural beliefs and

stereotypes prevent women from practicing beekeeping. Therefore, the findings of this research are in agreement with other researchers work. However, following the enlightenment from education and various seminars and training received by the women, such stereotypes are slowly fading away and more women are adopting beekeeping when compared to the past century. The findings are consistent with Mocoloo et al., (2013) findings that women in the 21st century are taking part in beekeeping for the purposes of income generation and improvement of their livelihoods. This has been experienced in the Lower Nyando and Baringo County.

In seeking to determine the extent of belief in cultural stereotypes on bee keeping, this study requested respondents’ opinion on a set of statements that depicted negative cultural stereotypes and the results summarized in Table 2.

Table 2: Respondents’ opinion on cultural stereotypes on bee keeping

| Statements | SA | A | U | D | SD | Total | Mean | Stdev |
|---|--------------|--------------|--------------|--------------|--------------|--------------|-------|-------|
| 1. Beekeeping is purely a male’s role | 18 (14.1) | 34 (26.6) | 6 (4.7) | 20 (15.6) | 50 (39.1) | 128 (100) | 2.609 | 1.553 |
| 2. No woman should own beehives because she will die | 8 (6.3) | 44 (34.4) | 4 (3.1) | 5 (3.9) | 67 (52.3) | 128 (100) | 2.383 | 1.538 |
| 3. No woman should count the number of beehives because all the bees will abscond | 7 (5.5) | 42 (32.8) | 14 (10.9) | 12 (9.4) | 53 (41.4) | 128 (100) | 2.516 | 1.442 |
| 4. Women should not climb up tree to hoist beehives since a calamity will be fold the entire community. | 14 (10.9) | 39 (30.5) | 23 (18) | 14 (10.9) | 38 (29.7) | 128 (100) | 2.820 | 1.422 |
| 5. Bee stings kill women only | 4 (3.1) | 22 (17.2) | 6 (4.7) | 9 (7) | 87 (68) | 128 (100) | 1.805 | 1.292 |
| 6. If a woman constructs or destroys a beehive, she will die. | 7 (5.5) | 37 (28.9) | 9 (7) | 9 (7) | 66 (51.6) | 128 (100) | 2.297 | 1.471 |
| 7. A woman should not make any decisions concerning beekeeping. Only men should make them. | 16 (12.5) | 51 (39.8) | 5 (3.9) | 8 (6.3) | 48 (37.5) | 128 (100) | 2.836 | 1.566 |

Key: SA - Strongly Agree, A – Agreed, U – Undecided, D – Disagree, SD - Strongly Disagree

From the study results, Majority of the respondents with a mean of (2.8) agreed and strongly agreed with the statement that a woman should not make any decisions concerning beekeeping (only men should make them). This can be attributed to the culture that has made most women to believe that the man is the sole decision maker of the family. From the key interview schedule, a respondent reported that, “most of the women in her village have left most decision-making roles to their husbands who are the heads of the family and whatever the decision the man makes, the woman was obliged to follow it without questioning it.” On the contrary, some respondents strongly disagreed and disagreed with the statement, respectively. Some women made decisions concerning beekeeping since some of them headed their families. Some women were either widows, divorced or even separated from their husbands and were left with the decision-making power on many issues including beekeeping.

The findings of this study indicates that majority of the respondents (39.1%) strongly disagreed with the statement that beekeeping is purely a male’s role. This was one of the most disagreed stereotype with a mean of 2.6. This was because most of the ladies especially those who were younger had attended school where some of the cultural beliefs were demystified. These findings contradicts the findings of Mujuni, Natukunda

and Kugonza (2012) who found out in their research that the respondents they collected data from believed that beekeeping was a male's role. (26.6%) of the women agreed that beekeeping was a male's role and this can be attributed to the fact that most of the roles in beekeeping in the initial stages are done by men for instance construction of bee hives, hoisting of the hives, application of baits to attract the bees, repairing of broken hives and harvesting of honey. This has made many women to believe that beekeeping is a male's activity. From one of the key informants from Simotwe Women Group, *“culture has made beekeeping to appear as if it is a male activity and yet it is not. The Tugen culture discourages women from practicing beekeeping and has assigned all the major roles to men. Women come in during the final stages of honey processing and marketing.”*

Abebe, Puskur and Karippai (2008) and Akudugu, Guo and Dadzie (2012) found out in their studies that many communities have abandoned various cultural norms and stereotypes that were retrogressive and that which barred women from taking part in beekeeping which is in agreement with the findings of this study. This difference exists because of cultural diversities whereby, different cultures have different cultural beliefs and taboos that ensure maintenance of those beliefs. Therefore, this study agrees to the findings that beekeeping is not a male's role and can also be practiced by women.

Majority of the respondents with a mean of (2.5) strongly disagreed with the statement that no woman should count the number of beehives because all the bees will abscond. This can be attributed to the fact that most respondents having basic education which has opened up their knowledge on cultural norms and stereotypes.

Majority of the respondents, (2.4) mean, strongly disagreed with the statement that no woman should own beehives because she will die. Those who strongly disagreed had attended formal education and training centers where they had been sensitized on misconceptions surrounding beekeeping. Those who were undecided still had a strong believe in the Tugen cultural beliefs and practices. From the interview schedule, a respondent stated that, *“no woman can die out of ownership of a bee hive. Those are just beliefs that should be demystified to encourage women to own bee hives. Most women in Koriema Women group own bee hives and are not dead yet. Women should be encouraged to own more bee hives and earn income out of beekeeping.”*

Many respondents, (2.2) mean, disagreed with the statement that if a woman constructs or destroys a beehive, she will die. According to Kugonza et al., (2009), women should not construct, repair or hoist bee hives. Mulisa and Fedaku (2017) supports the same statement of barring women from constructing or repairing bee hives. The researcher in this research found out that women do not support that stereotype and some of them already do the hoisting and repairing of their own hives. Therefore, the findings of this research do not concur with some researcher's work. This could be out of the enlightenment the respondents got from attending trainings, capacity-building workshop as well as other educational institutions.

Majority of the respondents with a mean of (1.8) strongly disagreed with the statement that bee stings kill women only. Most women had been stung by bees and did not die out of the sting. From the interview schedule, a respondent outlined that, *“bee stings can kill everyone including men especially if one is stung by many bees but if it is only one or two bee stings that cannot cause death, not even to women. That belief was to scare women away and discourage them from practicing beekeeping.”* Therefore they did not believe in the stereotype. Another respondent in the interview schedule reported that, *“she used to fear bee stings when she started venturing into beekeeping but she later came to realize that bees do not sting unless they are disturbed.”*

A few respondents with a mean of (1.4) agreed with the statement that women should not climb up trees to hoist beehives since a calamity will be fold the entire community. This is because women believe that their dressing code can expose them to children and other men who are not their husbands. Some women fear falling

down from trees and that is the reason why most of them still believe in this stereotype. A respondent from the key interview schedules reported that, “*most married women in the study area do not wear trousers as trousers are associated with women with ‘bad’ behaviours like prostitution. Therefore, the dressing code (skirts and dresses) limits most women from climbing up trees because of privacy issues.*”

According to Muli and Frezier (2011), it is a taboo for women to climb up trees. Carrol and Kinsella (2013) found out in their research that women in most beekeeping communities were not allowed to climb up trees for safety purposes. Chemurot (2011) also agrees to this statement that women should not climb up trees. Therefore, the findings of this research concur with other researches carried out in the past on the prevention of women from climbing up of trees.

Kaiser et al., (2013) argues that most women are discouraged from beekeeping because of bee phobia. Raina et.al (2009) as well as Chemurot (2011) supports the same argument that *Apis mellifera*, which is breed in Baringo is a very aggressive type of a bee and is known to cause a lot of harm to people. Bees get aggressive only when they are disturbed. Women in Baringo South Sub-County agree to the fact that the bee is aggressive but these women have devised a way of solving this problem. They have bought protective clothing to protect themselves from the bee stings and can harvest their honey by themselves.

Based on respondents responses on the set of statements included in Table 3, this study was able to generate a likert scale that ranged from 0 – 5 which was an indication of the extent of respondents believe in cultural stereotypes.

The results are summarized in Table 3.

Table 3: Respondents rating on their extent of believe in cultural stereotypes

| Scale | Label | Frequency | Percentage |
|---------|-----------|-----------|------------|
| 0-1.0 | Very Low | 1 | 0.8% |
| 1.1-2.0 | Low | 18 | 14.1% |
| 2.1-3.0 | Moderate | 47 | 36.7% |
| 3.1-4.0 | High | 45 | 35.2% |
| 4.1-5.0 | Very High | 17 | 13.3% |
| Total | | 128 | 100.0% |

N = 128; Minimum = 1.57; Maximum = 5; Mean = 3.631; Std. Deviation = 0.809

The study results indicated that about (36.7%) fall in the scale between 2.1 – 3.0 (which is an indication of moderate believe in cultural stereotypes). About 35.2% of the respondents who had a high believe in cultural stereotypes (scale of 3.1 – 4.0) as represented by 35.2% of the total responses. Respondents falling on a scale of 4.1 – 5.0 (representing very high believe in cultural stereotypes) comprised about 13.3%. Respondents falling on a scale of 0 – 1.0 (representing very low believe in cultural stereotypes) and 1.1 – 2.0 (representing low believe in cultural stereotypes) comprised about 0.8% and 13.3%, respectively.

An average respondent in this study had a rating of 3.631 on a 0 – 5 Likert scale on believe in cultural stereotypes.

4.2 Coping Mechanisms with Cultural Stereotypes

This study sought respondents’ response on a set of statements on coping mechanisms on cultural stereotypes. The results are summarized in Table 4.

Table 4: Coping mechanisms with cultural stereotypes

| Statements | SA | A | U | D | SD | Total | Mean | Stdev |
|---|--------------|--------------|--------------|--------------|------------|--------------|-------|-------|
| Attending trainings on beekeeping | 60 (46.9) | 63 (49.2) | 2 (1.6) | 1 (0.8) | 2 (1.6) | 128 (100) | 4.391 | 0.712 |
| Benefits obtained from beekeeping | 39 (30.5) | 73 (57) | 5 (3.9) | 8 (6.3) | 3 (2.3) | 128 (100) | 4.070 | 0.898 |
| Climatic conditions of the area | 20 (15.6) | 71 (55.5) | 14 (10.9) | 19 (14.8) | 4 (3.1) | 128 (100) | 3.656 | 1.015 |
| Less capital investment | 24 (18.8) | 60 (46.9) | 6 (4.7) | 34 (26.6) | 4 (3.1) | 128 (100) | 3.516 | 1.164 |
| Seasonality of production | 17 (13.3) | 75 (58.6) | 12 (9.4) | 18 (14.1) | 6 (4.7) | 128 (100) | 3.617 | 1.036 |
| Few gender roles involved in production | 23 (18) | 53 (41.4) | 12 (9.4) | 36 (28.1) | 4 (3.1) | 128 (100) | 3.430 | 1.168 |

Key:

SA - Strongly Agree, A – Agreed, U – Undecided, D – Disagree, SD - Strongly Disagree

Majority of the respondents with a mean of (4.4) were noted to agree that attendance of trainings on bee keeping was a coping mechanism against cultural stereotype. This was because the respondents understood that in those trainings, people learnt new ways of practicing beekeeping as well as ways of improving the practice like issues on value addition. A respondent from an interview schedule reported that, *“the trainings according to most respondents were very helpful and had widened the scope of many beekeepers on better and more improved methods of beekeeping. Some women were slow in adopting new technologies in the past but in the recent past they are taking them seriously and are adopting them. The only challenge is the unavailability of the box hives which are not locally made and have to be bought from far off places. This slows their adoption rates and at times forces some women to use the traditional log hives.”*

Majority of the respondents with a mean of (4.1) agreed that benefits obtained from beekeeping attracted many women to venture into beekeeping. Honey is a very expensive commodity and could earn the women a good source of income if they ventured into it. The benefits from beekeeping lured many women into beekeeping. To many of them, it was a good way to supplement their income from subsistence farming and goat keeping. A respondent from the interview schedule stated that, *“it is difficult for many women to raise enough money to pay school fees. Therefore, many women have adopted beekeeping as an alternative source of income for themselves and their families too.”*

Majority of the respondents with a mean of (3.7) agreed that climatic conditions forced many women to venture into beekeeping. Baringo South Sub-County is an ASAL area where crop production is hard to be practiced. Rainfall is very short and scarce and the sun’s rays is very intense and can easily destroy the crops. Many women are left as their major source of income. A respondent from an interview schedule reported that, *“the climate in this area is too dry and discourages me from venturing into crop farming. The rains are too short and the scarce. The sun is too hot too.”*

Most of the respondents with a mean of (3.6) agreed that seasonality is another reason why women prefer beekeeping to other types of farming methods. Honey is harvested at least three times in a year unlike crop which are harvested only once a year. This has made many women prefer beekeeping to other farming methods. Majority of the respondents with a mean of (3.5) agreed that less capital investment was one of the reasons

that attracted women into beekeeping. Compared to other farming methods like crop production where irrigation is required, beekeeping requires less capital to start and also little investment on maintenance.

Majority of the respondents with a mean of (3.4) agreed that few gender roles involved in production is another factor that attracted women into practicing beekeeping. In an interview schedule, a respondent said that, “*she liked beekeeping because she could still work in the County Government and still practice beekeeping to generate more income for her family.*” Once a beehive has been hoisted, there are little gender roles to be carried out in terms of maintenance. The hive is only inspected once a month to check if it has been invested by predators such as ants or wasps.

Tesfaye, Begna and Eshetu (2017) found out in their study that seasonality of honey harvesting attracts many farmers to practicing beekeeping. Most of the respondents in this research agreed to the same statement thus showing that this finding is in agreement with other researches’ findings.

5. CONCLUSIONS

From the study results, the following conclusions have been drawn:

The high burden on women through cultural stereotype that worked against them reduced their participation in beekeeping. Greater believe in cultural stereotype by women lowered their participation in beekeeping. Culture norms have acted as a barrier to women’s participation in beekeeping because it sets restrictions on what women should do or not do as far as beekeeping is concerned. Cultural norms in many communities including the Kalenjins should never be broken by any one and those who make the mistake of breaking them are punished by community elders or even excommunicated if the mistake is too serious. Through taboos that emanate from cultural stereotypes, women have therefore been excluded in many beekeeping practices especially those being done at the initial stages for example construction of bee hives, siting of apiaries, hoisting of the hives and even honey harvesting roles. Cultural stereotypes should be demystified to enable women practice beekeeping in large numbers. This can be successfully done through education where the women in Baringo South are subjected through trainings that will enlighten them on issues of norms and the need to do away with negative stereotypes as far as beekeeping is concerned.

5.1 Recommendations

The study recommends that; Stakeholder who are interested in support intervention for beekeeping in the study area should ensure that cultural norms and stereotypes affecting women participation are put into consideration during implementation of interventions. Gender roles should not be assigned according to biological and cultural stereotyping in order to create time for women to participate in bee keeping. Greater load with gender roles reduces women participation in beekeeping. Promotion of time saving technologies for household chores (cleaning, washing, cooking, etc.) could go a long way in creating the much needed time necessary for women participation in beekeeping.

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