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Socio-cultural impacts on women's participation in water decision making and conflict resolution processes in Rwanda and Kenya

Zipporah Nyokabi Mureithi [1,*], Margaret Ngeci Githiri [1] and Ernest Uwayezu [2]

[1] *Department of Natural Resources, Faculty of Environment and Resources Development, Egerton University, P.O. BOX 536-20115, Egerton, Kenya.*
[2] *College of Science and Technology, School of Architecture and Built Environment, University of Rwanda, P.O BOX: 3900 Kigali-Rwanda.*

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Abstract

Women's position in the society gives them crucial knowledge for water decision making and management of related conflicts. However, their contribution to governance of water resources is constrained by systemic inequalities and normative beliefs on their roles and responsibilities. This study examined the impacts of socio-cultural factors on women's participation in water decision making and conflict resolution process in Rwanda and Kenya. The focus was Tuyiteho Mukunguli Water User Association in Rwanda (TMWUA) and Nyando Water Resource Users Association (NWRUA) in Kenya. The study adopted a cross-sectional research design and targeted 250 women form TMWUA and 140 women from NWRUA with an aim of highlighting the different socio-cultural contexts in local water governance. Proportionate stratified sampling was used and primary data were collected using structured questionnaires and key informant interviews. Descriptive statistics and Chi-Square Tests were applied for quantitative data analysis. This study revealed that there were still some deeply ingrained socio cultural factors hindering women's effective participation, with 26.9% of the women from TMWUA and 17.1% from NWUA who strongly agree that existing cultural barriers influence their engagements in decision making and conflict resolution processes. The study recommends that there is a need for promoting culturally appropriate ways to involve women in water management and working with traditional governance structures and advocating for women positions in these structures. This can enhance the sustainability of water conflict resolution outcomes.

Keywords: Water; Women; Socio-Cultural; Conflicts; Participation; Governance

1. Introduction

Women play an important role in the varied sectors water resource use but are highly marginalized in management, planning and decision making processes at the various levels of water resource governance. They are highly constrained by existing androcentric systems, systemic inequalities and normative beliefs on their roles and responsibilities. This leads to the exclusion of women in water decision making processes [1]. The degree of involvement and participation of women in water governance differs across regions and is influenced by social, cultural, religious and political factors [2]. In Bangladesh, women from all classes face different forms of exclusions in water management institutions [3]. In India, traditional cultural systems governing access and distribution of water fail to recognize the role of women [4]. For women in Liberia, their active participation in water governance and leadership is overshadowed by the high occurrence of gender-based violence (GBV) [5]. Women's access to water resources and involvement in water governance in Tanzania is influenced by systemic and gender-based inequalities [6]

There is a general agreement that resources should be managed at the lowest decision making level [7]. The position of women in the society gives them crucial knowledge for decision making and conflict management. However, cultural

* Corresponding author: Zipporah Nyokabi Mureithi.

perceptions, traditional gender norms, societal expectations often assigned to water management responsibilities exclude women from decision making structures. Women are forbidden from engaging in activities outside the home due to patriarchal and religious beliefs. They seldom participate in meetings on water management. Gender division of roles and responsibilities is a barrier for women and girls to access academic opportunities. Lack of education for women and girls results into a lack of gender inclusivity in water governance thus hindering their access to water and sanitation services [8]. Backward cultural norms have nonetheless prohibited women from owning property, thus limiting their economic empowerment. They experience inherent problems with regards to land access, inheritance, unequal property division, and challenging formalization processes [9]. Additionally, taboos associated with menstrual periods lead to the exclusion of women in decision making and water governance processes [10].

Women from Rwanda and Kenya share similar experiences in male-dominated water governance schemes. Progress in women's involvement in water management has been inconsistent with institutions stills predominantly male dominated perpetuating existing inequalities and unequal power relations [11]. For women in water governance, they are under-represented in water management and decision making processes [12]. Men control formal functions in peace building and decision making process leaving women excluded. For women and girls in Rwanda, traditional norms and practices restrict their capacity to participate in governance [13]. On the other hand, in Kajiado County in Kenya, women cannot actively engage in water projects as their husbands restrict them from attending meetings [8]. Water projects in Kenya collapse as they do not take into account the role women play in domestic, communal and productive roles and this minimizes their ability of being active participants in local water management and governance[14]. Failure of these projects implies that socio-cultural water-gender inter-linkages have not been put into consideration.

There is a dearth of information on how communities and people have established structures, associations, resources, norms and traditions to handle issues associated with water [15]. There was need to assess the influence of these existing traditional structures and socio-cultural practices on women's participation in water resource governance. Based on this premise, this research study sought to examine the impacts of socio-cultural factors on women's decision making processes in Rwanda and Kenya. Information on retrogressive socio-cultural factors that predispose women and girls to vulnerability will help in the formulation of mechanisms that increase women's participation in water decision making and conflict resolution processes.

2. Material and methods

2.1. Study areas

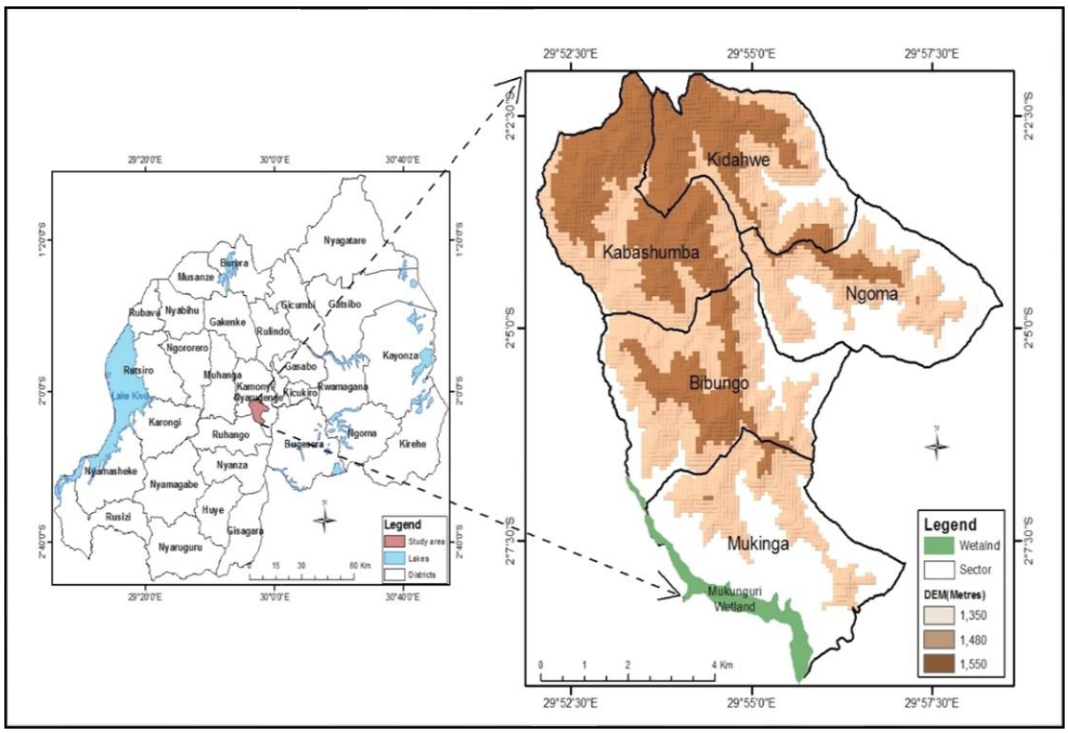

Figure 1 Map of Mukunguli Wetland in Rwanda

This research was undertaken in Rwanda and Kenya. The specific study area in Rwanda was Mukunguli Wetland while in Kenya it was Nyando Wetland. Mukunguli Wetland in Rwanda lies between 2° 8' 13" S - 29° 55' 15" E and has an elevation of 1,355 - 1,830m [16]. Mukunguli River supplies Mukunguli Wetland with water which then flows to Akanyaru River. Nyando Wetland in found in Kisumu County in Kenya and lies between 0°11'- 0°19'S to 34°47'- 34°57' E [17]. It has an altitude of 1700m above sea level in the highlands and an elevation of 1135 m in the lowlands [18]Nyando Wetland gets its water from Nyando River and eventually drains into Lake Victoria.

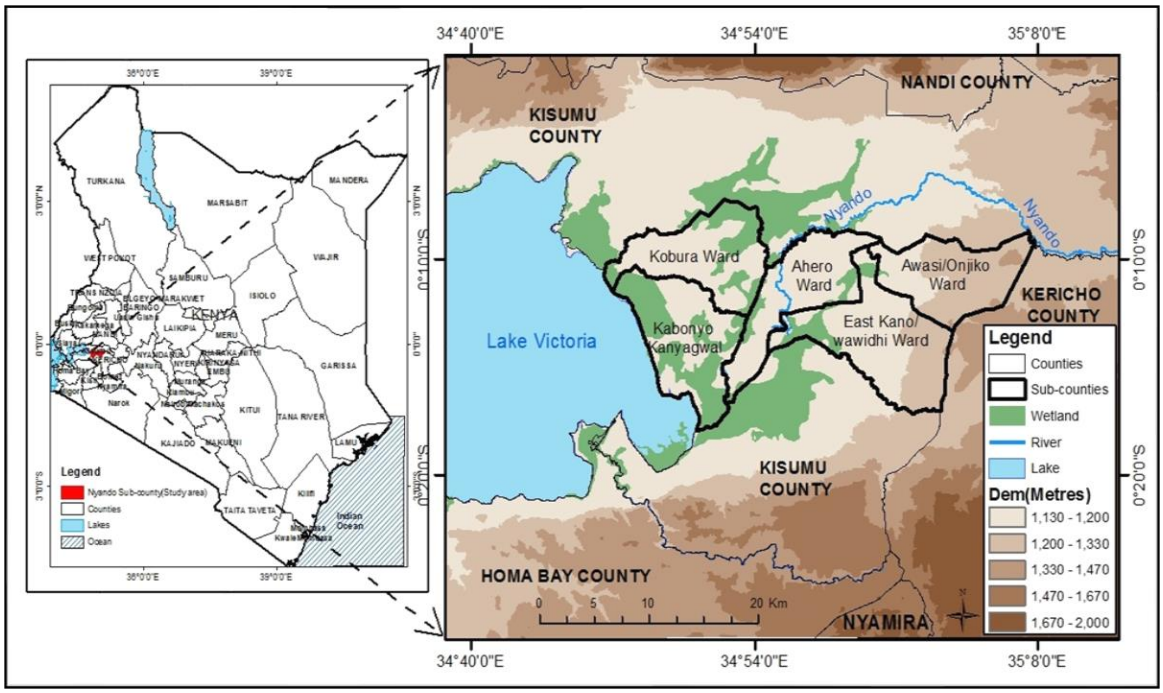

Figure 2 Map of Nyando Wetland in Kenya

2.2. Research design

For this research study, a cross-sectional research design was used to examine the extent to which socio-cultural factors influence women's participation in making decision on water resource use and resolving related conflicts in Rwanda and Kenya. This research design allows for comparisons of data at a single point in time [19]. This research design helped in the analysis of variations and characteristics of the socio-cultural factors and how they influence the participation of women in water resource conflict resolution.

2.3. Target population

The target group for this research was women who were active members of community-based water governance schemes, in this case, Water Resource Users Associations (WRUAs). In Rwanda, the women were drawn from Tuyiteho Mukunguli WUA (TMWUA) while in Kenya they were from Nyando WRUA (NWRUA). Purposive sampling was used to select eight key informants who included respondents from each WRUA and from government agencies dealing with water and agriculture in both countries.

2.4. Sampling procedure and Sampling size

Proportionate stratified sampling method was used for this study as the sampling units varied in size. The sampling units were TMWUA with a membership of 2198 members and NWRUA with 200 registered members. Based on membership distribution, 250 women were selected from TMWUA and 140 women from NWRUA.

2.5. Data collection methods

2.5.1. Questionnaires

Structured questionnaires were used for this study. All questions were phrased in the same manner and were administered to women who we are above 18 years old. A 5-point Likert Scale was used to measure the extent to which the women agreed or disagreed with the questions asked.

2.5.2. Key informant interviews

Key Informant Schedule was used to collect data from people who were knowledgeable about the women, water and conflict management. The key informants provided information about the main hindrances that women face while exercising their decision power and the mechanisms for overcoming the socio-cultural constraints. Both official and unofficial methods were used to engage stakeholders

2.6. Data analysis

Descriptive statistics was used to generate frequency distributions, percentages and measures of central tendencies. Inferential statistics such as Chi-Square Test was used to test the relationship between the independent and dependent variables at 5% level of significance. Results obtained were presented in the form of frequency distribution tables and graphs.

3. Results and Discussion

3.1. Age of respondents

The distribution of age of the respondents is shown in Table 1. Most members from TMWUA accounted for 28.7% and were aged between 51-60 years. Most of the younger population had moved to urban centers in search of greener pastures leaving behind the elderly. This findings are in line with those of Hitayezu [20] who established that majority of those moving towards cities in Rwanda are young people seeking employment opportunities. On the other hand, the highest number of respondents from NWRUA were aged between 18-30 years and accounted for 28.8% while the least were those aged between 51-60 years with a representation of 10.6%. The younger population was higher because NWRUA has been conducting advocacy campaigns and membership drives focusing on the young people.

Table 1 Age of respondents

Age Group	TMWUA (%)	NWRUA (%)
18-30	14.8	28.8
31-40	24.9	20.5
41-50	20.6	25.0
51-60	28.7	10.6
60 and above	10.5	15.2

3.1.1. Relationship between age and involvement in water committees

Table 2 Chi-Square Tests showing the relationship between age and involvement in water committees

	Value		df		Asymptotic Significance (2-sided)	
	TMWUA	NWRUA	TMWUA	NWRUA	TMWUA	NWRUA
Pearson Chi-Square	13.738[a]	13.152[a]	12	12	.318	.358
Likelihood Ratio	14.762	15.979	12	12	.255	.192

N of Valid Cases	250	148				

Findings from Table 2 show the Chi-Square Tests showing the relationship between age and involvement in water committees. In TMWUA, the p-value 0.318 is greater than alpha value 0.05 while in NWRUA, the p-value 0.358 is greater than 0.05. This implies that age did not influence women's involvement in water committee groups. In contrast Omweri [21] established that there exist relationship between age and involvement in water management committees.

3.2. Marital status of respondents

In both countries majority of the respondents were married with TMWUA at 63.2% and NWRUA at 64.4% (Figure 3). This means that for both countries women were anticipated to get married because of cultural and societal expectations. This finding echoes that of Musyima [22] who found out that marriage is an indicator of social stability in the community. Widowed respondents in TMWUA accounted for 16.3% while in NWRUA it was at 31.1%. Single respondents in TMWUA were 18.7% while in NWRUA it was 3.8%. For this study it was crucial to determine how the marital status of women influenced leadership and decision making for local water management.

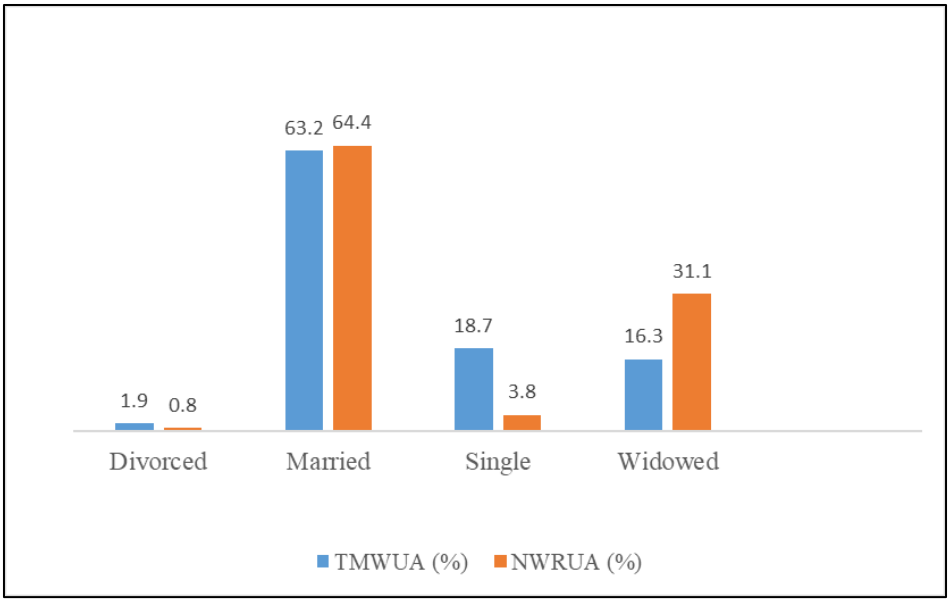

Figure 3 Marital status of respondents

3.2.1. Relationship between marital status and inclusion in WRUA discussions

Results in Table 3 show Chi-Square Tests showing the relationship between marital status and inclusion in WRUA discussions in TMWUA and NWRUA. For TMWUA, the p-value 0.825 is greater than alpha value 0.05. This shows the marital status of the women did not in any way influence their participation in WRUA discussions. Women had equal chances of being engaged regardless of their marital status in TMWUA. In contrast, a study by Boss [23] reveals that woman's access to social, legal and political power is based on her relationship with her husband. As opposed to TMWUA, women's marital status in NWRUA did influence their participation in leadership spaces. This is because the p-value 0.000 is less than alpha 0.05.

Table 3 Chi-Square Tests showing the relationship between marital status and inclusion in WRUA discussions

	Value		**df**		**Asymptotic Significance (2-sided)**	
	TMWUA	NWRUA	TMWUA	NWRUA	TMWUA	NWRUA
Pearson Chi-Square	.902	24.949[a]	3	3	.825	.000
Likelihood Ratio	1.167	10.535	3	3	.761	.015
Linear-by-Linear Association	.006	4.482	1	1	.937	.034
N of Valid Cases	247	142				

This means that married women in Kenya have higher chances of engaging in WRUA discussions as compared as compared to those who are single or divorced. These findings are consistent with those of Omweri [21] who established that at community and structural levels, married women had higher chances of engaging in community water management than those who were not.

3.3. Employment status of respondents

Majority of the female respondents from both WRUAs indicated that they were self-employed as displayed in Figure 4. The rate of self-employment in TMWUA was 75.12% while that of NWRUA was 84.09%. The women were small scale farmers who relied on the water resources to meet their productive and domestic needs. The women had strong interest and commitment to WRUA activities. These results echo those of Musyima [22]who established that WRUA members were interested in water management issues as it is a key factor for their productive activities.

For both WRUAs there was significant unemployment rates with TMWUA at 19.14% and NWRUA 13.63%. This is mainly because of household chores, inadequate employment opportunities and harsh business environments which influence the employment levels. Findings reflect those by Tull [24]who ascertains that women's domestic and reproductive roles decreases their chances of employment. Only a small percentage of respondents were in formal employment (employed). In TMWUA, 5.74% were in formal employment whereas in NWRUA it was at 2.27%. The low employment rates in both countries is because of the unfavorable labour market conditions. Those in employment were able to afford a decent lifestyle and afford basic commodities to sustain their life.

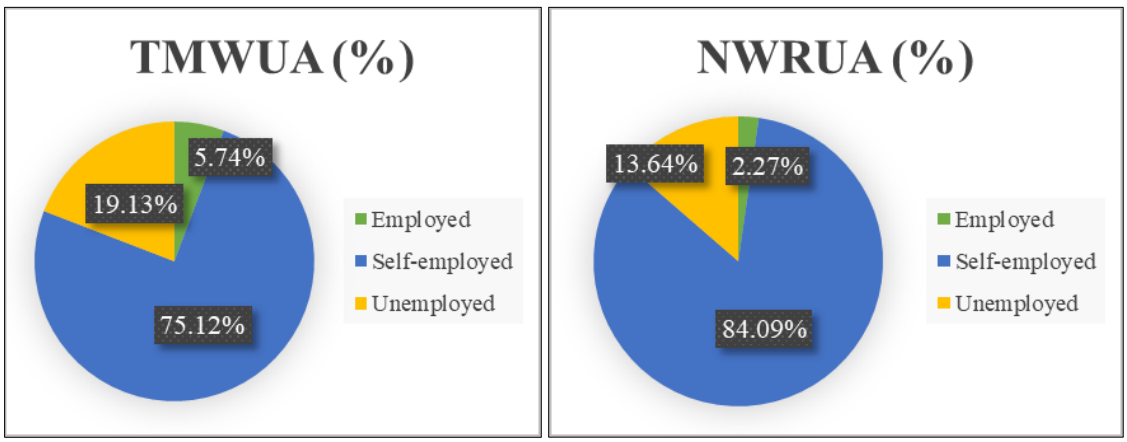

Figure 4 Employment status of respondents

3.4. Education level of respondents

In this study, the level of education was an important element that influenced women in leadership and decision making processes. In both WRUAs most of the women indicated that they had completed their education up to primary level as shown Figure 5. This was represented by 67% from TMWUA and 62.9% from NWRUA. Those who had completed their secondary education in NWRUA were higher at 31.1% while in TMWUA it was at 17.7%. The differences is mainly because of the commitment the Government of Kenya has made in the investment of girl child education. This is also reflected in the tertiary level where Kenya is at 3% and Rwanda 1.4% indicating that the female respondents had advanced knowledge and skills. These findings reflect those of Sankale [25] and Beatrice [26]who found out that the promotion girl child education, free primary education, reduced academic subsidies and increased bursaries and scholarships have increased enrolment rates of the girl child in Kenya. It was interesting to note that 29% of the women from TMWUA did not have any formal education while in NWRUA it was at 3%. Their lack of education influenced how they understand and apply water governance. This statement is supported by Yerian [27] who found out that lack of formal education serves as a barrier in which water governance is applied.

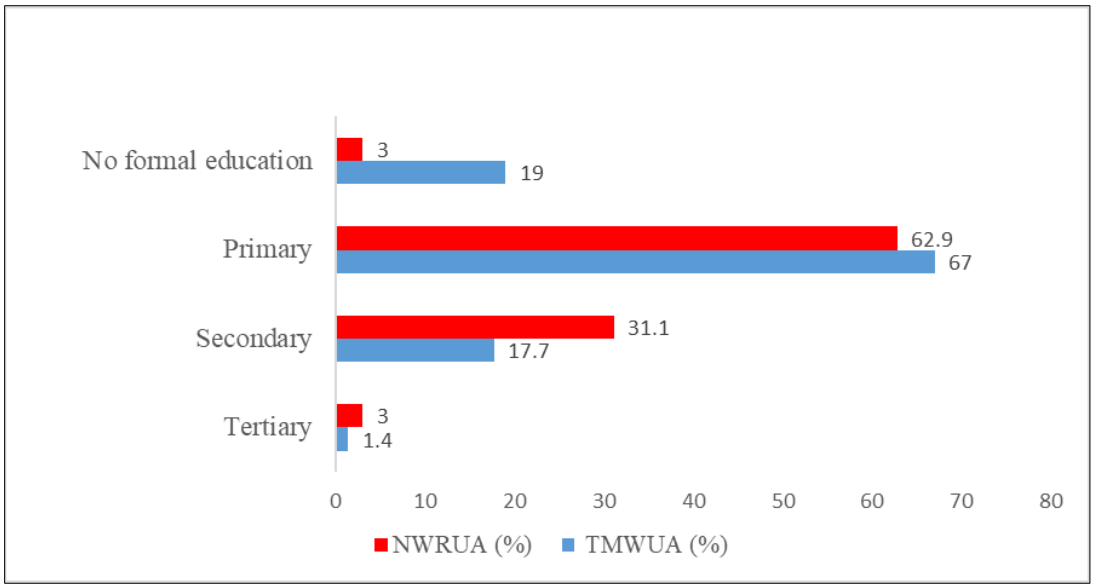

Figure 5 Education level of respondents

3.4.1. Relationship between education level and inclusion in decision making

Results from Table 4 show Chi- Square Tests showing relationship between education level and inclusion in decision making in TMWUA and NWRUA. For both TMWUA and NWRUA, education did not significantly influence the women's involvement in decision making processes. This is because for TMWUA the p-value is greater than alpha value 0.05 while for NWRUA p-value is greater than 0.05. This implies that women are equally involved in decision making processes. On the contrary, Ngirwa [28] established that education did influence women's participation in water inclusion in decision making processes.

Table 4 Chi- Square Tests showing relationship between education level and inclusion in decision making

	Value		**df**		**Asymptotic Significance (2-sided)**	
	TMWUA	NWRUA	TMWUA	NWRUA	TMWUA	NWRUA
Pearson Chi-Square	1.681[a]	3.899[a]	6	6	.947	.690
Likelihood Ratio	2.355	4.939	6	6	.884	.552
Linear-by-Linear Association	.002	1.108	1	1	.964	.293
N of Valid Cases	247	142				

3.5. Impacts of socio-cultural factors on women's participation in decision making and conflict resolution processes

3.5.1. Socio-cultural impacts in TMWUA

Figure 6 shows the impacts of socio-cultural factors on women in decision making in TMWUA. Women from TMWUA (80.7%) affirmed that their views were respected and taken into account. The women said that both men and women had equal opportunities of airing out their views without being discriminated. However, some (5.5%) felt that their views were never appreciated. When asked whether firm and aggressive women faced any judgment, 39.9% of the women in TMWUA strongly disagreed with the statement saying that the women did not face any form of discrimination from the community. The use of customary and informal systems to resolve disputes has proven to be effective methods of strengthening women's participation in conflict resolution processes in TMWUA. Traditional systems such as *Umuganda* in Rwanda has been very influential in solving water conflicts with 68.1% strongly agreeing to this. This results concur with those of Ajayi [29] who establish that these traditional systems focus on restoring harmony.

According to Thuranira [30]traditional justice systems for dispute resolution include the *Njuri ncheke*, *Jadong'we* in Kenya and *Gacece Courts* in Rwanda.

In TMWUA, the women strongly disagreed (55.5%) that culture hindered their participation. However, some women strongly agreed (26.9%) that there were cultural beliefs that hindered them. A study by Sanusi [6] shows that women's participation is hindered by cultural and traditional beliefs. When asked the men respected the women in leadership, 55.9% of the women in TMWUA acknowledged that men indeed respected women in office. On the contrary, 26.4% of the women strongly disagreed that women were respected. These results reflect the observations made by Mandara [31], who found out that the creation and existence of women's formal decision making processes is impeded by existing androcentric structures.

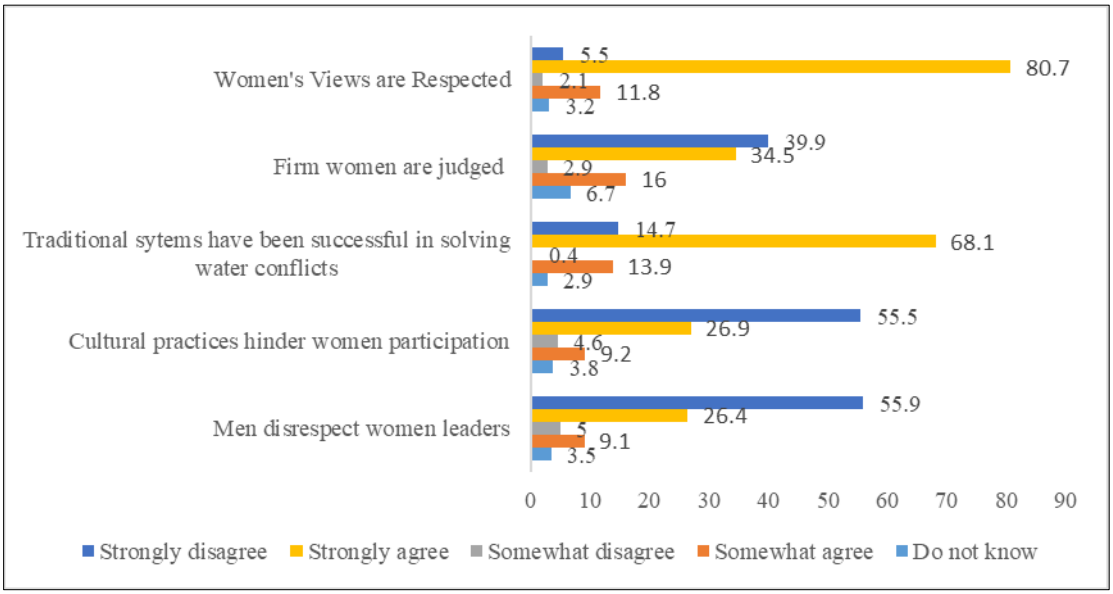

Figure 6 Impacts of socio-cultural factors on women's participation in decision making and conflict resolution processes in TMWUA

3.5.2. Socio-cultural impacts in NWRUA

Figure 7 presents the influence of socio-cultural factors on women's participation in decision making in NWRUA. In NWRUA, the women acknowledged that their views were respected and appreciated during community water meetings representing this at 77.9%. In NWRUA however some women strongly disagreed (3.6%) with this indicating that most of their decisions were not take into consideration and that men always made the final decisions. This finding reflects that of Nkumbuku [32] who opines that deeply engrained ideologies support male in decision making duties. Women in NWRUA (42.9%) strongly agreed that bold and firm women faced harsh criticisms during community water discussions. This is mainly because of societal expectations of women to be quiet and laid back. The result reflects observations made by Makomelo [33] who revealed that regardless of a female's intelligence, resourcefulness, creativity, or even vocalization, the male counterpart is still considered superior to the female child.

This study also sought to determine whether traditional systems influenced women participation in making decision on water resources use and resolving related conflicts. In NWRUA, 24.3% strongly agreed that the use of traditional systems such as through the *Jadong'we* water conflicts had successfully been solved. *Jadong'we* is a traditional decision making body of the Luo Tribe. Community based dispute resolution structures help to minimize the water conflict risks. Similar studies by Akiwumi [34] show that women in Sierra Leone have been given authority to oversee village-based water projects through female governance structures known as *Sande*. Muigua [35]observed that among the Kenyan people, elderly women act as third parties in conflict resolution processes.

Some women strongly disagreed (35.7%) that culture hindered their active participation while some of them strongly agreed (17.1%) existing cultural barriers influenced their engagements in decision making and conflict resolution processes. One frustrated respondent who felt that culture had an impact commented,

'As a widow I am forced by Jadong'we to marry my brother in law even though I do not want to. This is unfair' (Respondent 1, NWRUA, 2024).

This implies that at family level the rights and freedoms of women are curtailed as their rights are subjugated to the decisions of men. Study findings are in line with those of Owiyo [36] who established that the practice of wife inheritance affects the psychological wellbeing of the widows and leads to their marginalization as their economic, political and social rights are disregarded.

Another respondent said, *'As young woman, I cannot vie for leadership or get any leadership as I am unmarried. I am viewed as incomplete and weak' (Respondent 2, NWRUA, 2024).*

This means that that societal expectations regarding marriage still hold. Participation of women is influenced by cultural perceptions of inferiority, weaknesses and inabilities. Similar sentiments are shared by Nyamweya [37] who argues that negative perceptions that have been ingrained by traditional practices prevent women from actively participating in public spaces. The women also strongly disagreed (36.4%) that men disregard women leaders while 24.3% of the women strongly agreed that men did not respect women in leadership.

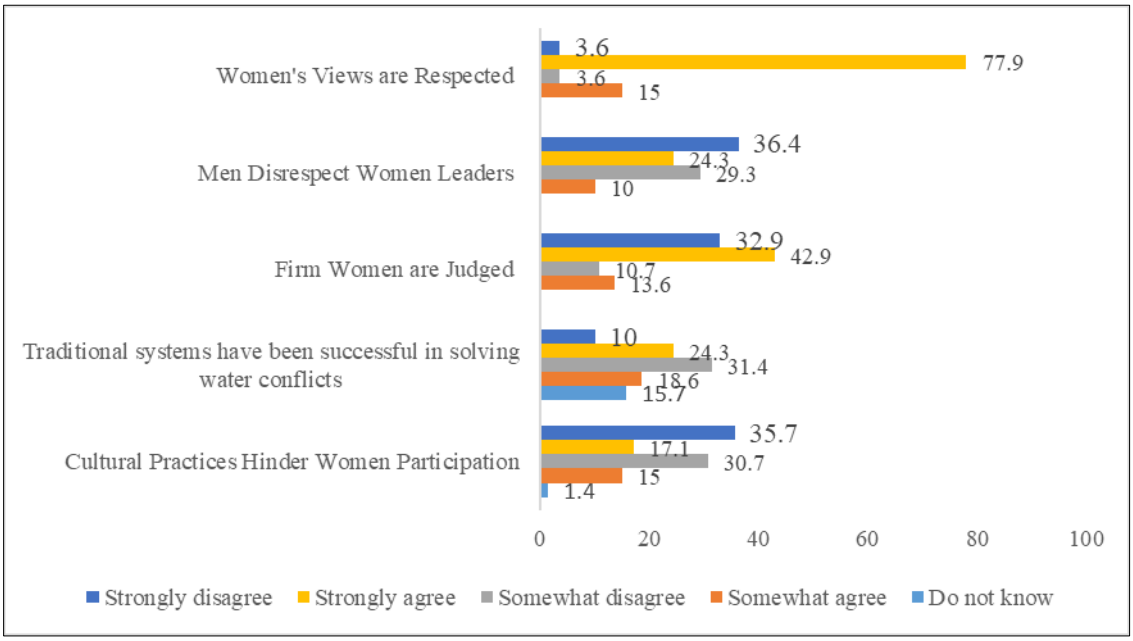

Figure 7 Impacts of socio-cultural factors on women's participation in decision making and conflict resolution processes in NWRUA

3.6. Common water use conflicts

Figure 8 shows the major water use conflicts in TMWUA and NWRUA. The main water use conflict in both WRUAs was unequal water distribution with TMWUA at 52.6% and NWRUA at 34.98%. Climatic variability causes increased water scarcity and vulnerability which in turn leads to increased competition among water users. When it comes to wetlands, the variability in water supply reduces the surface area and the quality of goods and services provided creating tensions between different users Okotto-Okotto [38]. In TMWUA, illegal water withdrawals which caused reduced water availability accounted for 17.1% while infrastructure damage which caused disrupted water supply was at 15.8%. Meanwhile in NWRUA, infrastructural damage (20.7%) was higher mainly because there was sabotage, vandalism and theft of water pipes and water tanks. No one wanted to be responsible for the losses associated with the damage and the costs of repairs and replacements. The lack of a sense of ownership and responsibility by community from NWRUA has led to ongoing conflicts. This is contrary to a study by Theobald [39]who found out that in Rwanda whenever there is damage of water ways, the community works together with their leaders to restore the damaged infrastructure without for government support. Key informant from NWRUA suggested that there was need for fencing of community water projects and introduce charges for their use as this would protect the water projects while generating revenue.

In TMWUA, cleaning of water irrigation channels is a communal responsibility and some women (10%) felt that there was unequal division of labour when cleaning the water canals. A small proportion indicated that there were some

minor conflicts (3.5%) amongst members of TMWUA while some (0.5%) denied the existence of any water use conflicts. On the other hand in NWRUA, conflicts over illegal water withdrawals (14.87%) were mainly during the dry seasons where everyone used water pumps to get water and this led to water resource depletion. Conflicts among members of NWRUA was at 9.91% while significant number of the women (13.7%) said that they had not witnessed any water use conflicts. These findings reflect those by Atieno et al. [40] who revealed that some of the conflicts associated with water use include intra members' conflicts, water diversion, obstructing water sources and misusing water to cause shortages.

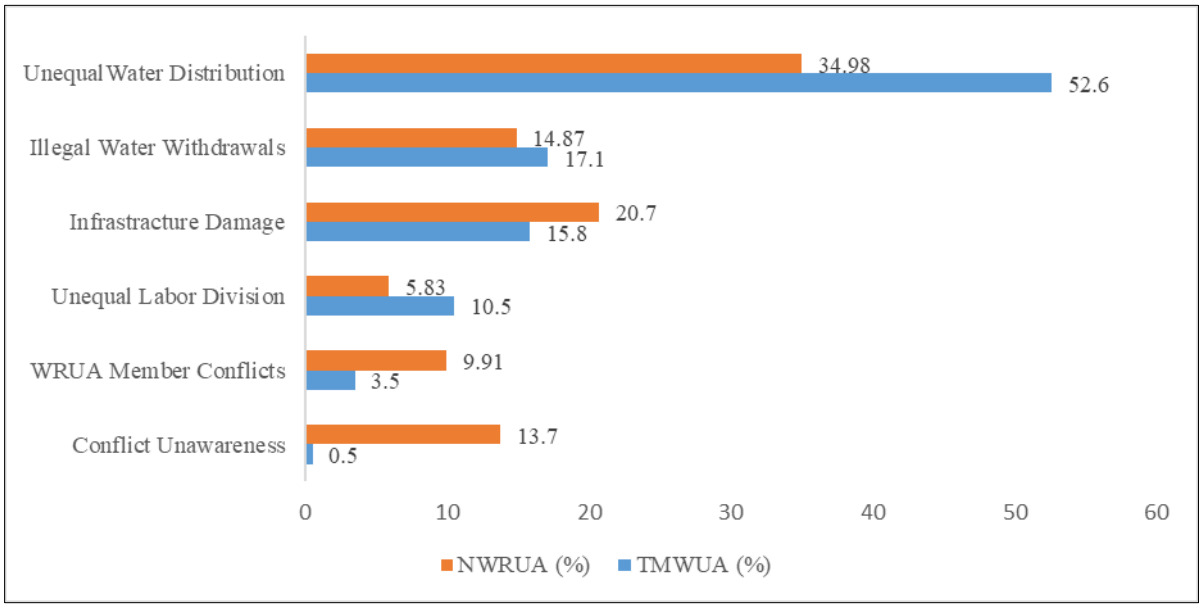

Figure 8 Water use conflicts in TMWUA and NWRUA

3.7. Methods of women participation in water conflict resolution

Figure 9 shows the various methods that women participate in water conflict resolution in TMWUA and NWRUA. The main strategy that the women used to solve water use conflicts that they were facing was through *Umuganda* (77.36%) in TMWUA and through *Mijikumi* (64.81%) in NWRUA. This finding echoes that of Kioko [41]who posits that *Nyumba Kumi* committees solve local level disputes through the application of local norms and values. *Mijikumi* (*Nyumba Kumi*) is a local policing initiative that is made up of ten individuals including the chief that primarily focuses of promoting social cohesion and security within the community [42]. Some respondents indicated that they opted to solve the water conflicts through negotiation and mediation with TMWUA at 3.9% and NWRUA 27.78%. This is because negotiation and mediation techniques were fast, effective and helped to minimize violent confrontations. In their study Valipour et al. [43]ascertain that a method of solving water conflicts is through negotiation-based conflict resolution as it helps maintain social harmony. Advocacy involved the women being peace ambassadors and vocal advocates. In TMWUA this was represented by 1.3% while in NWRUA it was at 3.7%. There was establishment of women led initiatives has helped minimize water conflicts. One respondent stated,

'In our group we are 25 women. We established the Ndori Water Project to help address the water conflicts we were experiencing. As peacekeepers this has helped to reduce water related conflicts and foster peace' (Respondent 3, NWRUA, 2024).

These results compare well with those King [44]who found that at the grassroots level in Rwanda women used their individual and collective groups to achieve bigger goals. Other methods that the women used when participating in conflict resolution processes included reporting to WRUA officials, creating women water groups and reporting to the police where the water conflicts were more complex. These findings are in line with those of Oduol and Kabira [45]who argued that women play an important role in water resource conflict resolution by organizing themselves into self-help groups, being custodians of the resource, and providing labour for water management.

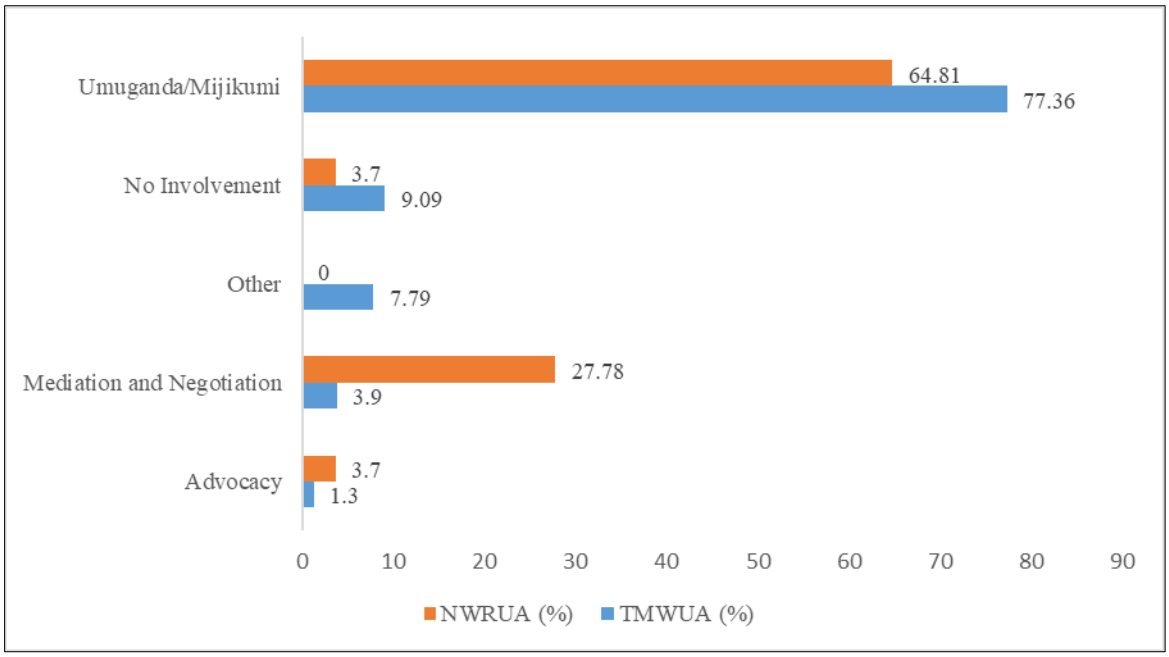

Figure 9 Methods of women participation in water conflict resolution in TMWUA and NWRUA

3.8. Comparative analysis of the success of women participation in conflict resolution

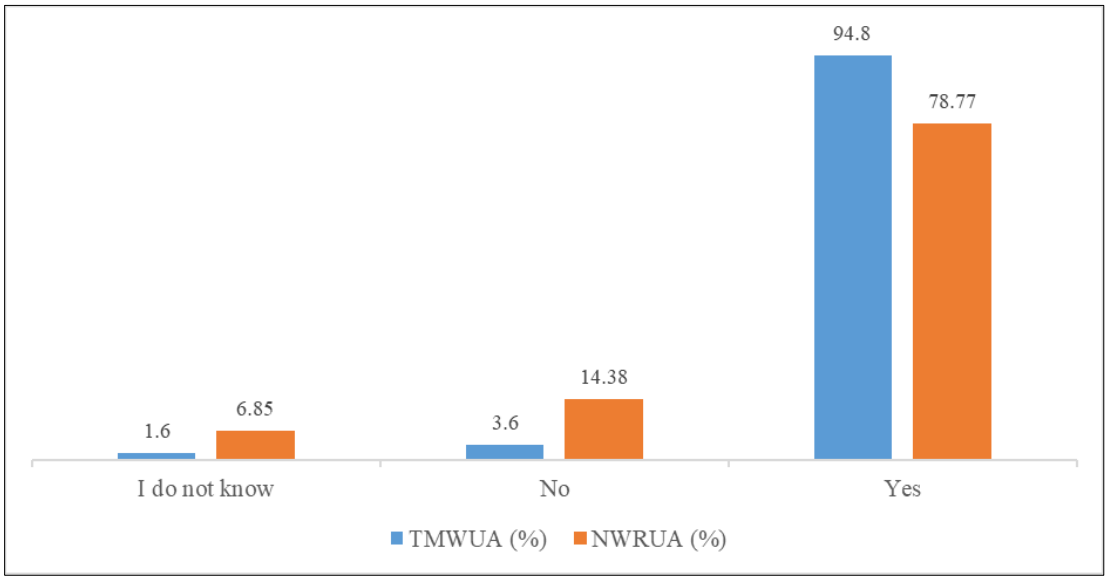

Figure 10 Comparative analysis of the success of women participation in conflict resolution between TMWUA and NWRUA

Figure 10 shows the success rate of women participation in water conflict resolution processes. In both WRUAs the rates were very high. In TMWUA the rate was higher at 94.80% while in NWRUA it was at 78.77%. The high success rates in both countries is because of the various strategies that both WRUAs have developed to help increase women effective participation such as increased women posts, having women led initiatives, mobilization and sensitization campaigns and having women negotiators. Mwangi [46]affirms that there has been an increase of women involved in peace processes. A small percentage (3.6%) in TMWUA said that the participation was not successful while in NWRUA it was at 14.38%. The difference between the two WRUAs is because Rwanda has developed strong mechanisms and frameworks for the protection of women. The enforcement of laws and policies across the levels of governments has created a safe and secure environment for women to actively engage in water conflict resolution processes. These results correspond with those of King [44] who found out that Rwanda is considered a model case of women's inclusion as it has established structures for women's involvement and has implemented progressive gender policies. Kenya has

also undertaken the same measures for women protection, however, the enforcement of these laws is relatively low or non-existent. The findings corroborate with those of Berry et al [47] who ascertain that Kenya has failed to fully implement its gender quota.

3.9. Factors hindering women in successful water conflict resolution

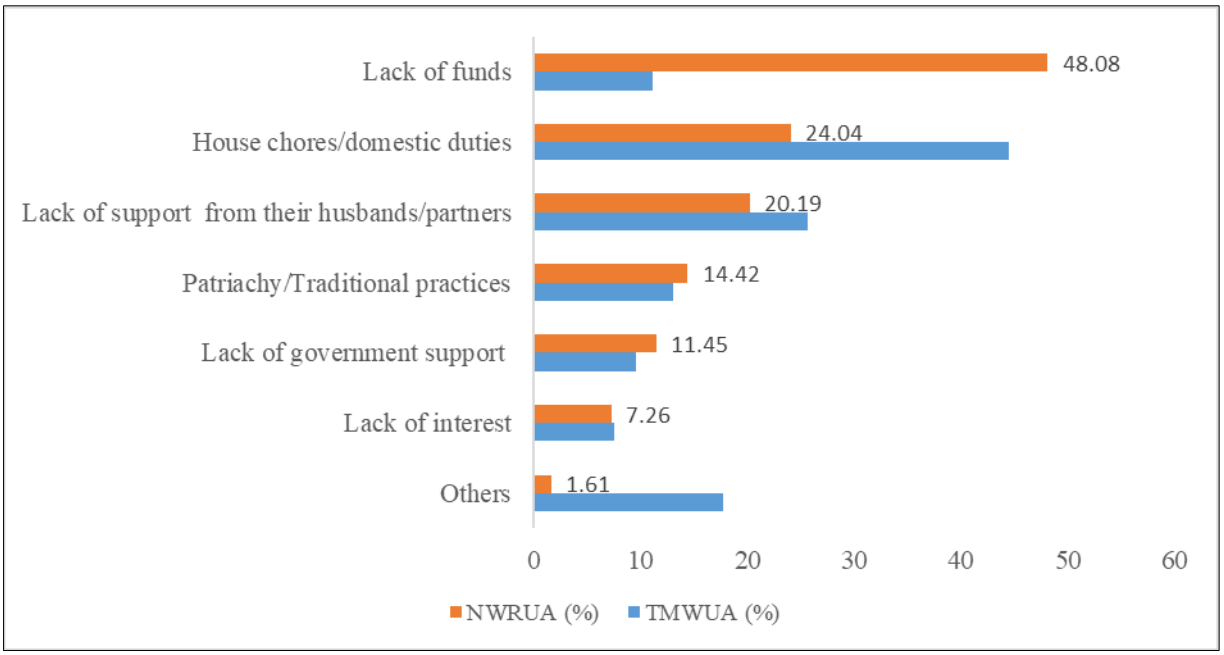

Figure 11 Factors hindering women in successful water conflict resolution in TMWUA and NWRUA

Figure 11 presents the major hindrances that women faced in water conflict resolution processes in both WRUAs. The main hindrance in TMWUA was house chores and domestic duties (44.51%) while in NWRUA it was significantly lower at 24.04%. This suggests that societal expectations regarding women's household duties still hold deep in Rwanda as compared to Kenya and this limits time the women allocate to participate in water conflict resolution processes. One respondent expressed their frustration,

'I am always busy with chores at the farm and at home. By the time I am done, the meetings are over and I am too tired to attend' (Respondent 3, TMWUA, 2024).

Wambu [48]ascertains that women frequently encounter significant opportunity costs for participation due to their domestic duties. Similarly, a study conducted by Gasirabo [49]established that while men were out of their households in the morning in search of work, women were left behind to carry out household duties including searching for water.

On the other hand, the main barrier the women to participate in water conflict resolution processes in NWRUA was lack of funds (48.08%) while in TMWUA it was at 11.11%. The women said that they there were limited funding opportunities and income generating activities that they could exploit in order to engage effectively in water activities. Financial constraints limit women's participation and hinder women's participation in communal initiatives due to family financial responsibilities. One respondent quoted,

'I get very little money from my business which I use for household expenses. I have none to spare. I would rather use the money for home purposes than participate in other activities' (Respondent 4, NWRUA, 2024).

The results are in line with the findings of Kamau [50]who found that that lack of financial resources impedes women's active participation in conflict resolution processes. Moderate proportions (25.6% in TMWUA and 20.19% in NWRUA) of the respondents said they lacked support from their husbands. This indicates that is a common barrier in both countries primarily as husbands are final decision makers within the households. The husbands considered the participation of their wives in community water activities as secondary or of no importance and thus hindering their participation. This study is supported by the study of Musa [51] who observed that women face resistance from their

husbands. Further, Wambu [48] ascertains that very few women participate in skills training because of social resistance from men.

The influence of traditional practices as a barrier was significantly low with TMWUA at 13.02% and NWRUA at 14.42%. Some women said that they were not allowed to speak before groups of men, they were judged when they aired their views and that most of the times men were the final decision makers in conflict resolution processes. Men continue to dominate in the economic, political and social structures of power. The results concur with Eaton et al. [52] who established that when it comes village-level meetings, the opinions of men especially elderly men, are deemed more valuable. When it came to government support, respondents from both countries indicated that they did not receive capacity development in terms of trainings to solve water conflicts and funding to support women groups. This was represented by 9.62% in TMWUA and 11.45% in NWRUA. This finding is line with that of Kevin [18] who found out that very few women receive training on peacebuilding.

4. Conclusion

Empirical evidence from this research reveals that in both Tuyiteho Mukunguli Water User Association in Rwanda (TMWUA) and Nyando Water Resource Users Association (NWRUA) in Kenya the participation of women in water decision making and conflict resolution processes is acknowledged. This progress is primarily due to the establishment of institutional and legal frameworks that have been put into place to advancing gender inclusivity in water governance. Rwanda presented a supportive environment for women's participation mainly because of its protection and strong enforcement mechanisms. On the contrary, Kenya's efforts to advance gender inclusivity have not resulted into meaningful changes in women's role in water decision making and conflict resolution processes. In both countries, community-based dispute resolution systems played an important role in providing platforms for women's participation in water decision making processes. However, *Umuganda* in Rwanda proved to be stronger as compared to *Mijikumi* in Kenya. Despite these positive gains, there were still some deeply ingrained socio-cultural factors that hinder women's effective participation. The gender implications of these socio-cultural practices is that there will be marginalization and underrepresentation further exacerbating gender inequalities. These disparities between the two countries underscores the importance of context specific approaches that promote culturally appropriate strategies for women involvement in decision making and conflict resolution processes. This includes working closely with traditional governance structures and advocating for women positions in these structures. This will enhance the sustainability of water conflict resolution outcomes.

Compliance with ethical standards

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Disclosure of conflict of interest

There is no conflict of interest declared by the authors regarding the publication of this paper.

Statement of ethical approval

For this research study Ethical Clearance was sought from Egerton University Ethics Committee. A research permit was obtained from National Commission for Science, Technology and Innovations (NACOSTI) before the commencement of the data collection in Kenya. In Rwanda, research permit was sought National Council for Science and Technology.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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