Full Length Research Paper

Scheduling village heads in enhancing conflict resolution and peace building in a rural community

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This study assessed the effectiveness of village heads in Simatelele Ward, Binga District in resolving conflicts in Zingozo village. The study was from April 2012 to June 2013. Four village heads were sampled using a simple random sampling technique and four types of conflicts common to all the four selected village heads were taken. A mathematical model was developed to assign village heads to cases they can resolve and improve their effectiveness. The four types were divorce cases, conflict of interest, witchcraft and domestic violence. The principle behind was to assign each village head to a single case to resolve so that the overall effectiveness of the village heads at community level is maximized. Ten observations were made per village head per case. The results indicated that, on average, if the village heads resolve the conflicts the same way they are currently doing, they will be 69% effective. The collaborative approach as suggested by the research indicated that the effectiveness of the village heads in resolving conflicts will increase by 14% translating to approximately 9 cases out of 10 being resolved. It concludes that the collaborative approach improves the effectiveness of village heads in resolving conflicts hence its recommendation.

Key words: Scheduling, village heads, peace, rural community.

INTRODUCTION

Communities today as in the past are characterized as having misunderstandings amongst their inhabitants. These conflicts could be between individuals or households. Occurrence of conflicts within communities has escalated alongside unprecedented strategies in resolving conflicts. As outlined by Brock-Utne (2001) in the paper, *Indigenous conflict resolution in Africa,* Africa profiles the highest statistics of violent conflicts in the world. For years the treatment of conflicts in Africa involving national armies revolved around conventional mechanisms that have excluded the traditional approaches, which according to Ofuho (1999), are now in greater demand in the contemporary world.

A conflict, according to Bush and Folger (1994), exists because of a real or apparent incompatibility of parties' needs or interests. Once a conflict exists, there are many strategies used in resolving it which include competing, avoiding, accommodating, compromising and collaborating.

Traditional conflict resolution strategies as spelt out by Ajayi and Buhari (2014) in their study of patterns or mechanism for conflict resolution in traditional African societies with particular reference to Yoruba and Igbo societies in Nigeria and Pondo tribe in South Africa, concluded that traditional conflict resolution techniques such as mediation, adjudication, reconciliation and negotiation as well as cross examination employed by Africans in the past, offer great prospects for peaceful co-existence and harmonious relationships in post-conflict periods than the modern method of litigation settlements in law courts.

These strategies at times fail to bring out the intended outcomes as found by Bukari (2013) in the article, *Exploring Indigenous Approaches to Conflict Resolution: The Case of the Bawku Conflict in Ghana.* Many of the solutions to these conflicts often fail to adopt home-based mechanisms (indigenous) in resolving them since most of our conflicts have traditional underpinnings. Many resolution measures have been used and continued to be used in bringing lasting peace to Bawku, but the area is yet to have lasting peace. This is an indication that strategies used need to be examined for their effectiveness in resolving conflicts.

In Simatelele, these conflicts are resolved by village heads and if they fail to resolve the conflicts, the chief resolves the conflict. If the conflict fails to be resolved by the chief, the legal courts then come into play. If a conflict is taken to legal courts, the impact on the parties involved is tantamount to having the involved parties not sharing other essentials in future. They become enemies for the rest of their life.

On the other hand, if a conflict is resolved by the community courts, there is a high chance that there will be real reconciliation between the two parties. Choudree (1999) argues that traditional processes are relatively informal and thus, less intimidating. Those who use them are also more at ease in a familiar environment. The role of chiefs, elders, family heads, and others is not only to resolve conflicts but also to anticipate and stop/or intercept conflicts. Group relationships and rights are as important as individual ones, as emphasis is on restoring relationships and reconciling groups.

Osei-Hwedie and Rankopo (2012) in the book, *Indigenous Conflict Resolution in Africa: The Case of Ghana and Botswana*, explain that traditional conflict resolution processes are part of a well-structured, time-proven, social system geared towards reconciliation, maintenance and improvement of social relationships. The chance of reconciliation is too high as compared to conflicts which are resolved by legal courts. Conflicts resolved at community courts are viewed as light mis-understandings between parties, but if a conflict gets to the chief and legal courts, even though it could be viewed as a slight misunderstanding between two parties, it will then be no longer viewed as a slight misunderstanding

but an immense misdemeanor. Community courts or mediation programs alleviate some of the strain on courts while creating neighbourhood partnerships to prevent further disputes.

The problem is that many cases which are supposed to be resolved by community courts end up being resolved by legal courts which actually exacerbate the situation of incompatibility of the parties' interests. On the other hand, if the conflict resolution was at community level, the antagonistic parties can easily undergo reconciliation. Rukuni et al. (2015) explore the roles played by the traditional leadership in conflict resolution and peace building in the rural communities in Zimbabwe. The study concluded that, generally, people in rural communities acknowledge the important roles played by traditional leaders in conflict resolution.

Nandalal and Simonovic (2003) looked at increase of conflicts due to industrial development and economic growth. They developed a causal loop diagram so as to understand conflict dynamics and feedback nature. Prah (2004) also explains how the absence of cadastral maps showing boundaries of land parcels to some scientific accuracy has been the single most important contributing factor to the numerous land disputes leading to serious conflicts on land issues in the country and particularly in the rural communities where there is predominance of settler farmers.

Chimaraoke (2002) also gives a tale of two Nigerian communities. In these communities, a participatory tech-nique has been used for sustainable conflict resolution. The author argues that the dynamics of participatory conflict resolution have largely focused on cases of local resistance to governmental programmes while in real life, conflict situations arise daily between local groups in communities. He uses participatory procedures to resolve a clash between two local communities in Abia State, Nigeria.

Azebre et al. (2012) explore conflict resolution mecha-nisms in Ghana and the Northern regions in particular which have witnessed the worse forms of intra/inter-ethnic violence. The research found that the applications of local traditional knowledge and procedures in conflict resolution have been very minimal as many prefer the modern law court system. Nonetheless, it confirms that indigenous mechanisms are still relevant and should be mainstreamed in all processes of conflict management.

A predictive model was developed in the production sector for resolving inter-functional conflicts. Xie et al. (1998) developed a predictive model relating innovation success to the level of inter-functional conflict and conflict resolution methods. The model suggests a concave relationship between performance and the level of inter-functional conflict among research and development, marketing and manufacturing.

Ackermann (2003: 343) observes that much of the discussion over enhancing the effectiveness of conflict

prevention centers on how to design preventive action plans and strategies that accomplish the stated objectives and desired preventive outcome.

Furthermore, Leung (1998) argues that although some recent research examines cultural effects on conflict resolution, the focus is on the *choice* rather than the *effectiveness* of different conflict resolution methods.

The question is, how effective are the village heads in resolving these conflicts using the strategies outlined in literature? Can their effectiveness, success in producing desired or intended results of resolving conflicts amicably, be modelled and can they be allocated to some cases to resolve to increase number of households at harmony in a community?

It is in this context that this research evolved. The limited approaches that currently exist for determining the success of conflict prevention activities focus generally on whether the intent of the activity was met; however they do not provide a comprehensive model to assess the success of activities. It is noted within the literature that developing a comprehensive model for determining success has received very little focus thus far; suggesting goal of this paper of coming up with a model that allocates village heads to cases that they can significantly resolve thereby increasing number of households at harmony in a community.

Objective

The paper attempts to allocate village heads to cases to resolve so as to increase effectiveness of village heads and consequently, number of households at peace.

Ethical considerations

The researcher sought permission from the village heads and the chief to conduct the research and also he explained why he intended carrying out such a research. The benefits of the research were explained to the village heads and the Chief who after explanations agreed to contribute as much information as possible to the success of this research

Study area

Simatelele is an isolated ward in Matabeleland North, Binga, Zimbabwe. It lies on the South eastern shore of Lake Kariba. It came into being when the BaTonga people's homeland was flooded by the reservoir (Kariba Dam). Simatelele ward has three villages namely Zingozo, Chileya and Siamuloba. The baTonga people were resettled on these dry lands where virtually nothing could be grown in 1957.

Zingozo Village, in Simatelele ward, is a communal area located approximately 27 kilometres from Binga growth point. The locally used language in Zingozo village is Tonga. People in Zingozo village experience conflicts of all sorts. There are twenty-one village heads in the whole ward of Simatelele and each village head has approximately, average, twenty-five households under him.

Conflicts in the area are resolved by village heads before they are further presented before the chief or higher legal courts if they fail to be resolved by village heads. If the village heads manage to resolve the conflicts, the cases are no longer carried forward but reconciliation takes place and the past is forgotten. The village heads under study are all under Chief Siachilaba. In a community setup, villagers have extended families. The moment there is a conflict between two households, on average, there will be eight households involved.

MATERIALS AND METHODS

After a closer look at the characteristics of the village heads, a simple random sampling was used in selecting them. This method was used, as village heads were almost homogeneous in most qualities that include education, gender, belief, age and etc.

The researcher attended some of the communal courts and at times recordings of cases resolved in the absence of the researcher were collected from village heads' secretaries, from April 2012 to June 2013.

The village heads under study had a chance to have all the four cases dealt with at their rural community courts. The case is said to have been successfully resolved when the following was done or was agreed upon. This is summarized in Table 1.

If the accuser or the accused suggests that the case was to be transferred to another village head, or to higher courts, the case was treated as not successfully resolved. In this case, there is no peace between the two parties and hence the case is said to be pending till it is resolved at a later stage. If one of the accused or accuser is related to the village head, one part might not be comfortable and hence would prefer the case being dealt with a nonaligned village head.

Ten cases in each category were taken for each village head. If the case ended at that particular village head, that is, it was not taken any further; the conclusion was that the village head was successful in resolving the case. The number of cases resolved by village heads is summarized in Table 2.

Of the ten cases in each category, if the village head was successful in resolving three, in that category, the village head is 30% successful while we wish a 100% success in the same category. The question is, how best can we improve the effectiveness of village heads in transforming conflicts by resolving cases amicably?

On the count of information collected from the dairies and minutes of the village heads' secretaries, the following data in Table 3 were collected.

The cases under study were those common to all village heads. A mathematical model was used to analyze the effectiveness of village heads in a rural community, Simatelele. The model helped to quantify how effective the village heads were in resolving conflicts that arose in their areas.

Furthermore, the model allocated village heads to cases where

Table 1. Resolution indicators.

Case	Resolution indicators
Divorce	Judgment was given or the family members were rejoined and case ends at community level.
Conflict of interest	The case is discussed at community level and the chief and legal courts were not involved as arbitrators.
Witchcraft	The case is resolved at that particular village head and there is no involvement of the chief, police and legal courts in resolving the case.
Domestic violence	The perpetrator agrees that he/she will not commit a similar case in future and the case is not taken to the chief or the police to be resolved but ends at community level.

Table 2. Number of cases observed per village head per case.

Village head	Areas of conflict			
	Divorce	Interest	Witchcraft	Domestic violence
Zingozo	10 cases observed	10 cases observed	10 cases observed	10 cases observed
Siapayumu	10 cases observed	10 cases observed	10 cases observed	10 cases observed
Chalyotola	10 cases observed	10 cases observed	10 cases observed	10 cases observed
Cumande	10 cases observed	10 cases observed	10 cases observed	10 cases observed

Table 3. Effectiveness of village heads in particular cases.

Village head	Areas of conflict (%)			
	Divorce	Interest	Witchcraft	Domestic violence
Zingozo	60	70	80	70
Siapayumu	90	40	50	80
Chalyotola	80	80	40	70
Cumande	80	70	60	80

their performance is best; they resolved more cases of that type than any other types. If the village head is good in resolving divorce cases, the model should allocate the village head to those cases.

There were four village heads under study and commonly experienced conflicts included the followings:

1)   Divorce cases,
2)   Conflict of interest- location of a utility in a community, e.g secondary school, water taps, etc.
3)   Witchcraft cases– this is highly pronounced in the community in these days of "Gawula, Sikamutanda, Sikapeli", the witch hunters.
4)   Domestic violence- fighting between husband and wife that can be physical or verbal in nature.

The model is as follows:

$$V_{ij} = \begin{cases} 1, & \text{if } village-head \ i \ is \ assigned \ to \ resolve \ conflict \ j. \\ 0, & \text{if } village-head \ i \ is \ not \ assigned \ to \ resolve \ conflict \ j. \end{cases}$$

$$V_{ij} = \{Z_{1j}, S_{1j}, Ch_{1j}, C_{1j}\}$$

Where Z_{1j} =Zingozo to resolve type j cases, which means

Z_{11} =Zingozo to resolve divorce cases.

Z_{12} =Zingozo to resolve conflict of interest cases.

Z_{13} =Zingozo to resolve witchcraft cases.

Z_{14} =Zingozo to resolve domestic violence cases.

Other cases are defined in a similar manner,

S_{1j} =Siapayumu to resolve type j cases.

Ch_{1j} = Chalyotola to resolve type j cases.

C_{1j} = Cumande to resolve type j cases.

J is divorce *(1)*, Interest *(2)*, Witchcraft *(3)* or Domestic violence *(4)*. J= *1, 2, 3, 4.*
 Objective = Maximise Effectiveness of Village heads in resolving conflicts at community level

Maximized effectiveness

$$= 0.6Z_{11} + 0.7Z_{12} + 0.8Z_{13} + 0.7Z_{14} + 0.9S_{11} + 0.4S_{12} + 0.5S_{13} + 0.8S_{14} + 0.8Ch_{11} + 0.8Ch_{12} +$$

$$0.4Ch_{13} + 0.7Ch_{14} + 0.8C_{11} + 0.7C_{12} + 0.6C_{13} + 0.8C_{14}.$$

$$Z_{11} + Z_{12} + Z_{13} + Z_{14} = 1,$$
$$S_{11} + S_{12} + S_{13} + S_{14} = 1,$$
$$Ch_{11} + Ch_{12} + Ch_{13} + Ch_{14} = 1,$$
$$C_{11} + C_{12} + C_{13} + C_{14} = 1,$$

Subject to:
$$Z_{11} + S_{11} + Ch_{11} + C_{11} = 1,$$
$$Z_{12} + S_{12} + Ch_{12} + C_{12} = 1,$$
$$Z_{13} + S_{13} + Ch_{13} + C_{13} = 1,$$
$$Z_{14} + S_{14} + Ch_{14} + C_{14} = 1,$$

$$\forall \ Z_{1j}, S_{1j}, Ch_{1j}, C_{1j} \geq 0.$$

$Z_{11} + Z_{12} + Z_{13} + Z_{14} = 1,$ means that, Zingozo can be assigned to deal with only one case. He has the potential to deal with divorce cases, interest, witchcraft and domestic violence but the model will allocate him to resolve only one type of case where he has shown to be more efficient in resolving than other cases. Amongst these cases, he should only be allocated to one type of these cases. On the other hand, $Z_{11} + S_{11} + Ch_{11} + C_{11} = 1,$ means that, each case should be dealt by only one village head. If the case is domestic violence, no two village heads should be assigned to this same case. In short, each village head should be assigned to one case and each case should be dealt by only one village head.

This model should then assign the village heads to the cases that they should resolve so that the collective effectiveness of the village heads is maximized and hence more peace prevails amongst community members. This will give surety that there are more cases resolved meaning that there are more people at peace with others hence resulting in the development of the community.

RESULTS AND DISCUSSION

The results indicate that working as individuals, that is, a village head dealing with all cases irrespective of the type of the case, does not increase effectiveness of village heads. If looked at individual level of village heads, for instance, Zingozo is on average 70% effective. He will manage to resolve 7 out of 10 cases successfully if he is to deal with any case that comes to his jurisdiction. Siapayuma is on average 65% effective.

Chalyotola and Cumande are on average 67.5 and 72.5% effective, respectively. This was at village head level when village heads are being treated as individuals. At community level, the effectiveness of village heads is currently 68.75 percent. This can be rounded upwards to be 69 percent effective.

This is the current effectiveness of the village heads in the community of Simatelele. There is room to improve this effectiveness so that more people will be at peace with others. The approach used in this study suggests that, instead of village heads dealing with all cases coming before them, irrespective of whether it is divorce, interest, witchcraft or any other case, village heads should concentrate on certain cases in which they are very effective and refer some other cases to other village heads who are very proficient in those cases so that the overall effectiveness of the village heads is maximised.

This approach has indicated that Zingozo should deal with witchcraft cases in which the village head is 80% effective. Siapayuma is supposed to take divorce cases in which the village head is 90% effective. Chalyotola and Cumande should respectively take the interest conflicts and domestic violence cases in which they are both 80% effective. Table 4 summarises these results and indicates the cases to be dealt with by each of the village heads.

The interpretation of these results is as follows. If the village head has a 0 in a particular cell, it means the village head should not deal with that case. If an individual under him commits such a case, that individual should be referred to another village head who will deal with the case.

If a 1 appears in the cell under a certain area of conflict, it means the village head should deal with that case. He might get cases of that nature from other village heads as he will be dealing with such cases in the community (Table 5).

The analysis shows that if the village heads are to perform conflict resolutions in the community in this suggested way, the overall effectiveness of the village heads will be 82.5%. This is higher than any of the above effectiveness of the village heads. The overall effectiveness of the village heads is equal to

$$\frac{3.3}{4} \times 100 = 82.5\% \approx 83\%$$

The comparison of the overall effectiveness of the village heads as compared to the overall effectiveness that might result if the suggested method or conflict resolution strategy is followed is summarised in Figure 1.

The overall effectiveness of the village heads has

Table 4. Summary of the cases to be dealt with by each of the village heads.

Variable	Value	Reduced cost
Z11	0.000000	0.2000000
Z12	0.000000	0.1000000
Z13	1.000000	0.000000
Z14	0.000000	0.1000000
S11	1.000000	0.000000
S12	0.000000	0.5000000
S13	0.000000	0.4000000
S14	0.000000	0.1000000
CH11	0.000000	0.000000
CH12	1.000000	0.000000
CH13	0.000000	0.4000000
CH14	0.000000	0.1000000
C11	0.000000	0.000000
C12	0.000000	0.1000000
C13	0.000000	0.2000000
C14	1.000000	0.000000

Global optimal solution found. Objective value, 3.300000; total solver iterations, 5.

Table 5. Scheduling village heads.

Village head	Areas of conflict			
	Divorce	Interest	Witchcraft	Domestic violence
Zingozo	0	0	1	0
Siapayumu	1	0	0	0
Chalyotola	0	1	0	0
Cumande	0	0	0	1
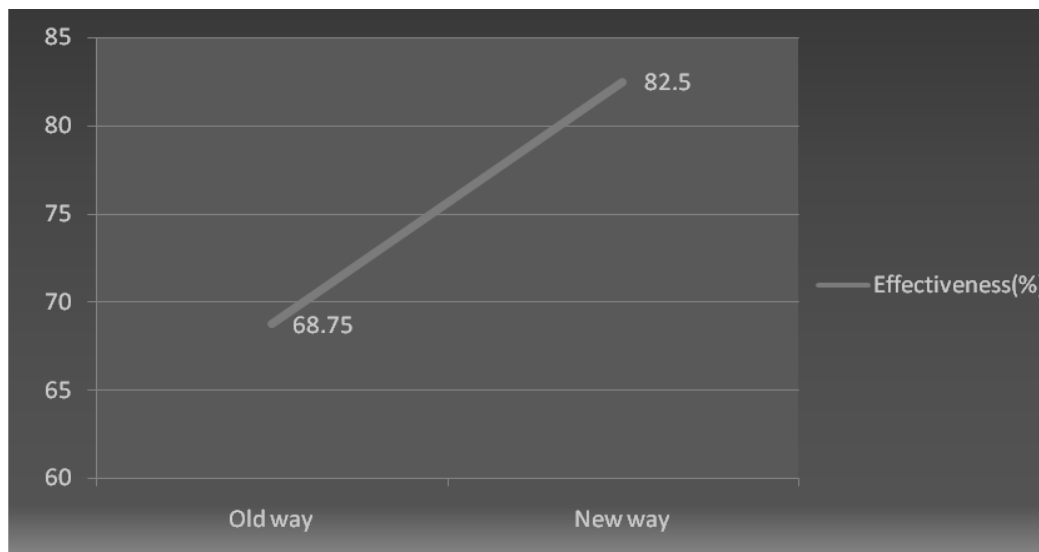
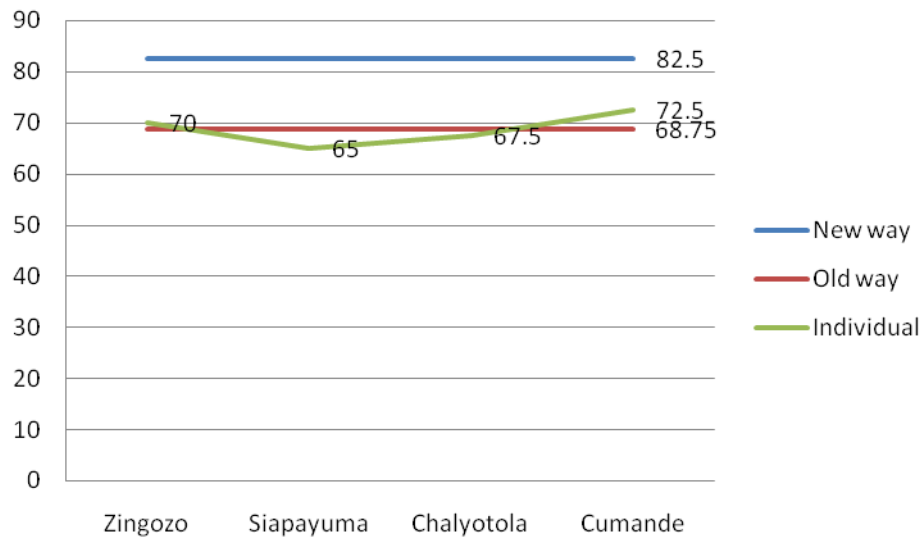**Figure 1.** Comparison of effectiveness (%).

Figure 2. Comparison of different effectiveness (%).

Table 6. Effective reduction of wrong allocation.

Village head	Areas of conflict (%)			
	Divorce	**Interest**	**Witchcraft**	**Domestic violence**
Zingozo	20	10	00	10
Siapayumu	00	50	40	10
Chalyotola	00	00	40	10
Cumande	00	10	20	00

increased from 69 to 83%. There are more cases which are resolved by the village heads as compared to what is currently happening. This study indicates that collaborative work from the village heads will increase their effectiveness and more cases will be resolved as compared to having the village heads working individually to resolve conflicts in the community.

The old way is when conflict resolution is done in the same way it is currently done. The new way is when we employ the new strategy of resolving conflict in the communities. This is a situation whereby a village head specializes in resolving certain types of conflicts and those cases the village head is not competent with are referred to another village head who is working on those types of conflicts.

We can finally compare the individual effectiveness of each village head, the overall effectiveness without application of the new strategy and effectiveness of the village heads with the application of the new strategy. The comparison is depicted in Figure 2.

The figure shows clearly the improvement that will result when the new suggested way of resolving conflict

is implemented. This new strategy is distinct above the two ways of resolving conflict in communities. The individual way has two areas where it is above the old way of resolving conflict and two areas where it is below the old way of resolving conflict.

The new strategy is distinctively above both the old way and the individual strategy of resolving conflict. The analysis hence indicates that the new way of resolving conflict in communities will help improve peace building at a faster rate amongst villagers.

Results show that if instead of allocating village head Zingozo to witchcraft cases but suppose is allocated to divorce, the effectiveness of the village head will be reduced by 20%. If the village heads are not allocated to cases where there is a 1 in the cell or the suggested allocation to cases, there is an associated penalty to that. This penalty will be in terms of the reduction in the effectiveness of the village head. This will have an effect on the overall effectiveness of the village heads at community level. This information is summarised in Table 6.

Table 6 shows that if village head Siapayuma is wrongly

assigned to dealing with interest cases, there will be a 50% reduction in his effectiveness. This means assigning these village heads to particular cases to deal with is a crucial role so that peace will be maximised by having many community residents at harmony.

Other combinations for assigning the village heads to cases can be tried. There is no other combination that will give a better overall effectiveness of village heads than the collaborative approach. The collaborative approach gives an overall effectiveness of 83% and no better scheme for allocating these village heads can improve this effectiveness.

This is referred to as *bbelekela aantomwe*, collaborative work by the village heads in the sense that if a case arises and the village head knows that he is not very conversant with that case but his counterpart is very good in dealing with the case, he will refer the matter to his counterpart and have the case successfully resolved. He can also receive cases from his counterparts; for cases he is well versed with, and have the cases resolved successfully hence collaborative work amongst the village heads would have been successfully established.

CONCLUSION AND RECOMMENDATIONS

In Simatelele ward, the research has indicated that individual effort in resolving conflicts will not be as effective as the collaborative approach. If village heads are assigned to special cases that they can resolve, than acting on every case that they come across, will improve their effectiveness in resolving conflicts. There will be more cases resolved at community level than what is currently happening. Very few cases will get to the chief and possibly none getting to the legal courts and hence peace building will have been achieved in the community.

Village heads should work together so that they can improve their effectiveness at community level. This can also help the village heads to gain more skills as they will be in the same field of cases and can come up with new ways of resolving conflicts of the same type in future. This can also help in deciding who to send to certain workshops held by non-governmental organizations which will enrich the village heads and further improve their conflict resolution skills.

ACKNOWLEDGEMENTS

The author is grateful to the chief and village heads for providing the data and all the information about community courts. The author also extends his gratitude to village heads secretaries for the neat records they keep and the community at large to be willing to provide information with the aim of reducing conflict amongst community inhabitants. The author is also grateful to colleagues who proof read the paper and made it possible to have this manuscript written.

Conflict of Interest

The author has not declared any conflict of interests.

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Appendix

Maximum effectiveness model

Max = 0.6*z11+0.7*z12+0.8*Z13+0.7*z14+0.9*s11+0.4*s12+0.5*s13+0.8*s14+0.8*ch11+
    0.8*ch12+0.4*ch13+0.7*ch14+0.8*c11+0.7*c12+0.6*c13+0.8*c14;

Subject to:

z11+z12+z13+z14=1;
s11+s12+s13+s14=1;
ch11+ch12+ch13+ch14=1;
c11+c12+c13+c14=1;
z11+s11+ch11+c11=1;
z12+s12+ch12+c12=1;
z13+s13+ch13+c13=1;
z14+s14+ch14+c14=1;
z11>=0;
z12>=0;
z13>=0;
z14>=0;
s11>=0;
s12>=0;
s13>=0;
s14>=0;
ch11>=0;
ch12>=0;
ch13>=0;
ch14>=0;
c11>=0;
c12>=0;
c13>=0;
c14>=0

Solution of the model

Global optimal solution found.
Objective value: 3.300000
Total solver iterations: 5

Variable	Value	Reduced Cost
Z11	0.000000	0.2000000
Z12	0.000000	0.1000000
Z13	1.000000	0.000000
Z14	0.000000	0.1000000
S11	1.000000	0.000000
S12	0.000000	0.5000000
S13	0.000000	0.4000000
S14	0.000000	0.1000000
CH11	0.000000	0.000000
CH12	1.000000	0.000000
CH13	0.000000	0.4000000
CH14	0.000000	0.1000000
C11	0.000000	0.000000
C12	0.000000	0.1000000
C13	0.000000	0.2000000
C14	1.000000	0.000000

Row	Slack dual price	Surplus dual price
1	3.300000	1.000000
2	0.000000	0.8000000
3	0.000000	0.9000000
4	0.000000	0.8000000
5	0.000000	0.8000000
6	0.000000	0.000000
7	0.000000	0.000000
8	0.000000	0.000000
9	0.000000	0.000000
10	0.000000	0.000000
11	0.000000	0.000000
12	1.000000	0.000000
13	0.000000	0.000000
14	1.000000	0.000000
15	0.000000	0.000000
16	0.000000	0.000000