

40th WEDC International Conference, Loughborough, UK, 2017

**LOCAL ACTION WITH INTERNATIONAL COOPERATION TO IMPROVE AND
SUSTAIN WATER, SANITATION AND HYGIENE SERVICES**

**Performance of community health clubs in transforming
sanitation and hygiene conditions**

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PAPER 2798

A case - control study was conducted in Rwanda on the performance of the Community Health Club (CHC) approach in transforming household sanitation and hygiene conditions. We selected two villages from a rural setting (Rusizi) and two villages from peri urban setting (Kicukiro). In both settings, we had one intervention village (case) with CHC approach as exposure, and one control village with no CHC approach exposure. We conducted household surveys in 798 households (95%) with spot observations. Focus group discussions and interviews with village members, local leaders, sanitation professionals and opinion leaders were conducted too in both settings 3 years after CHC implementation (2015). The baseline data on sanitation and hygiene collected from local offices (2012) helped to assess the contribution of the approach. The results show that CHC approach implementation is associated with households' sanitation and hygiene practices improvement 3 years after the intervention in Kicukiro and Rusizi districts

The need for effective sanitation and hygiene promotion approach

While great efforts and investments to improve water sanitation and Hygiene (WASH) practices especially in sub-Saharan Africa (SSA) are being made at different levels, there is a need for promoting approaches that can facilitate sustainable behaviour change and practice at household level (WaterAid, 2011). Our attention is put on rural and peri urban settings which are not often well served compared to urban settings especially in Rwanda (Rwanda Ministry of Infrastructure, 2010). WHO (2004) advocates for households to adopt good sanitation and hygiene practices and local political representatives to support locally developed solutions with resources mobilisation through community based schemes for sustainability. Community Health Club (CHC) as pioneered by Africa AHEAD (Rwanda Ministry of Health, 2010) consists of a community based organisation and strategy to empower communities through dialogue sessions and monitoring of recommended practices for households at village level. A CHC comprises up to 100 households in the village and representatives attend a weekly dialogue session of 1 to 2 hours for six months (Rwanda Ministry of Health, 2010). CHC is normally free to all within a certain area, and open to all ages, and educational levels. Both men and women are encouraged to attend regularly, so as to problem-solve and take action on public health issues such as management of local water and sanitation, becoming the key development structure in the village. The purpose of this study is to investigate on the performance of the CHC approach in transforming sanitation and hygiene behaviour of households from rural and peri-urban settings in Rwanda.

Methodology

We selected villages in both rural and peri urban settings in which CHC approach was implemented in its all steps and awards given for best practice. From the lists provided by the local health departments, we randomly selected one village with CHC experience (case) and a neighboring control village in the same district with no CHC experience. Both case and control have similar characteristics in terms of water and sanitation conditions and interventions in 2012. Kanyetabi and Kakinyaga communities were selected as a case and a control in Kicukiro while Nyambeho and Kareba villages were selected as a case and a control in

Rusizi respectively. We assessed the status of sanitation and hygiene conditions and documented what happened in the targeted villages between 2012 and 2015 in terms of sanitation and hygiene interventions. Household surveys, interviews, focus group discussions and spot observations were used to collect quantitative and qualitative data. In total, 798 households (95%) were selected randomly from the list of households provided by the head of each targeted village/community. In Kicukiro, the case group consisted of 302 and the control 271 households, while in Rusizi the case group consisted of 105 and the control 120 households. In addition, we conducted interviews with the heads of the 2 targeted villages, 4 sanitation professionals selected purposively for their active participation in sanitation from each of Kicukiro and Rusizi district. 2 focus group discussions were also conducted in each village and the participants of the focus group discussions were selected from people who responded to the invitation of the heads of village and accepted to participate. One focus group discussion was conducted with opinion leaders including Community Health Workers and the other with village members only. The documentation focused on sanitation and hygiene conditions and barriers to improving these conditions as well as other WASH interventions that took place in the targeted villages the period 2012-2015. The data was cleaned and analyzed using SPSS, OpnEpi and ATLAS ti.

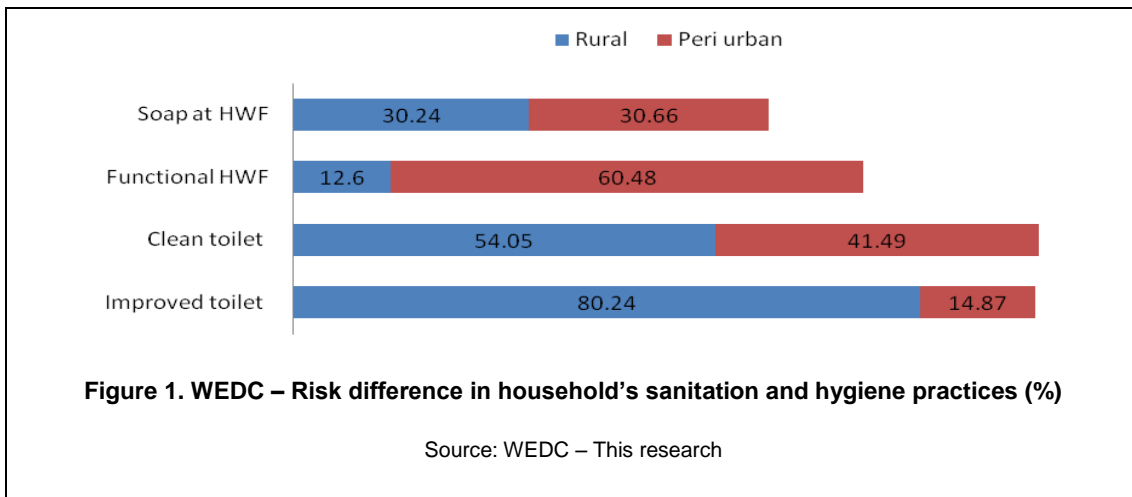
Results

Characteristics	Rusizi		Kicukiro	
	Nyambeho (case study village)	Kareba (control village)	Kanyetabi Case study village	Kakinyaga Control village
Population / households	500 inhabitants / 100 households	460 inhabitants / 100 households	1400 inhabitants / 280 households	inhabitants / 800 160households
Access to improved water source	25.9%	25.9%	90.5%	81.9%
Improved toilet	64.3%	66%	15%	20%
Clean toilet	64.3%	66%	15%	20%
HWF (Step and wash)	0%	0%	0%	0%
HWF with soap	0%	0%	0%	0%

Setting	Rural / Rusizi district		Urban / Kicukiro district	
Villages	Nyambeho (105)	Kareba (N=120)	Kanyetabi (N=302)	Kakinyaga (N= 271)
Sanitation practices	2015	2015	2015	2015
Improved toilet	95.2%	14.2%	89.4%	74.2%
Clean toilet	98.1%	45%	69.5%	28%
HWF*(step and wash)	91.4%	43.3%	74.2%	13.7%
Soap at HWF	92.4%	4.2%	38.4%	7.7%

* Functional Hand Washing Facility (HWF)

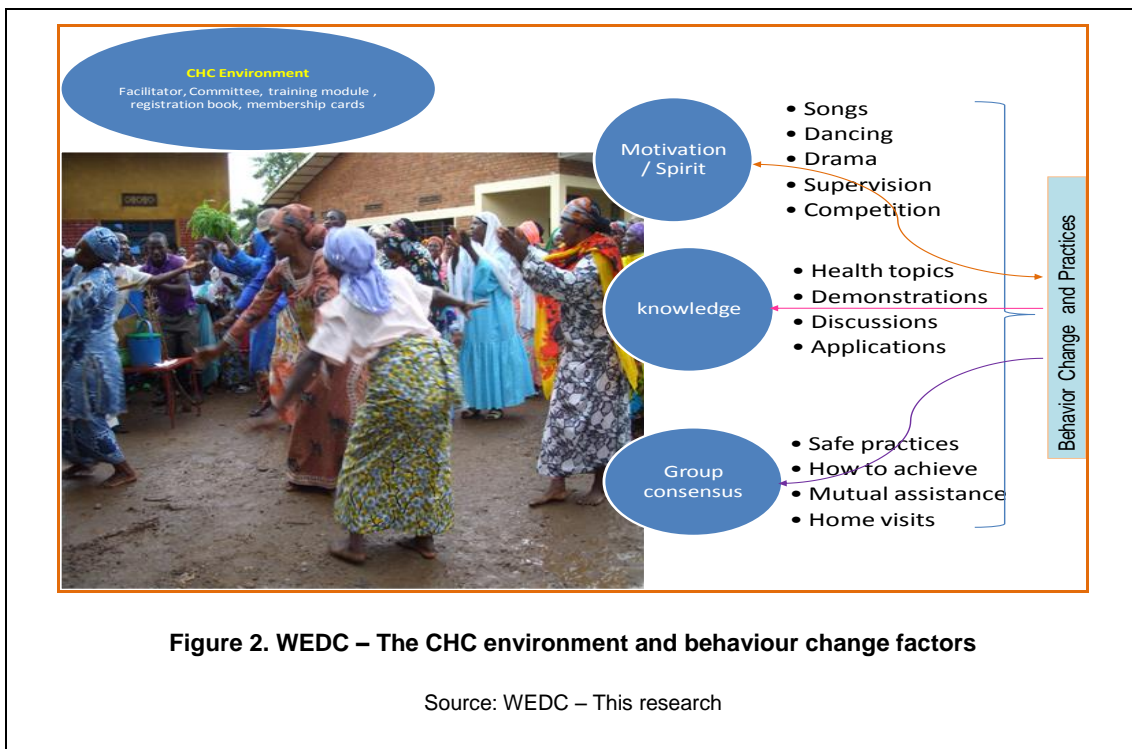
Practices	Rural ($p=0.000$)	Peri urban ($p=0.000$)
Improved toilet	RD=80.24 (95%CI:72.66, 87.81)	RD=14.87 (95%CI:8.624, 21.11)
Clean toilet	RD=54.05 (95%CI:44.96, 63.14)	RD=41.49 (95%CI:34.04, 48.94)
Functional HWF	RD=12.6 (95%CI:5.56, 19.64)	RD=60.48 (95%CI:54.06, 66.9)
Soap at HWF	RD=30.24 (95%CI:24.67, 35.8)	RD=30.66 (95%CI:24.32, 37)



The heads of the two case villages (Kanyetabi and Nyambeho) are members of CHC. They testify to have seen the difference between villages with and without CHC and that 90% of sanitation and hygiene improvement can be achieved through CHC implementation. Community members appreciate the strategies of the CHC approach as it raised spontaneously project initiatives and tangible achievements including but not limited to making roads, proper nutrition through balanced diet, mutual assistance, saving and loans and tontine strategies, Kitchen garden, water treatment, as well as being a role model in the community. The village members of Kakinyaga and Kareba villages not exposed to CHC activities wish to have CHCs and think their sanitation and hygiene practices would improve through CHCs. Community members of the exposed villages confirmed CHC implementation facilitated mutual assistance so that even vulnerable households can have sanitation and hygiene facilities. “We have been engaged more with CHC and we believe everything is possible” said the head of village of Nyambeho (Rusizi) and the president of the CHC committee in Kanyetabi (Kicukiro) separately. During the focus group discussions, the following was the statement in Rusizi: “we have been always sick but CHC has been a solution to prevent hygiene related disease.”

Discussion

The performance of CHCs in transforming households’ sanitation and hygiene behaviour and condition is quite good (table3 and figure 1). These findings show that the CHC approach has the potentials to improve and sustain sanitation and hygiene conditions in rural and peri urban contexts. Based on the information gathered from focus group discussions with CHWs and opinion leaders and CHC members from Nyambeho (rural setting) and Kanyetabi (peri-urban setting), the common response is that CHC approach has helped the households to improve their sanitation and hygiene conditions. It probably fits for contributing to SDGs 6 that focuses on ensuring availability and sustainable management of water and sanitation for all (Osborn, Cutter, and Ullah, 2015).



The focus group discussions and interviews also revealed a number of factors that help to manage big achievements. These factors include mutual assistance, joint initiatives, regular meetings / dialogue sessions, household visits performed by the community based facilitator and CHC committee, slogans, songs, dance, drama, demonstrations, group consensus, recommended practices and competition. Cohen (2014) confirms that community rules and organizational relationships have influence on peoples' behavior and practices. Even though the public health infrastructure is inadequate, at least the sanitation personnel implementing the approach confirm that learning by doing is integral part of the CHC approach implementation (Waterkeyn, 2006). The implementation of CHC approach has empowered communities and restored natural social network. This social network has been reported by Chavez (2013) to offer emotional, instrumental, informational and appraisal support for prevention, management and treatment of diseases. A social ecological perspective of health suggests that social and environmental factors, also identified from CHC implementation, play an important role in increasing safe practices (Addy et al., 2004), improve life style practices (Cohen, 2014; Addy et al., 2004, Hernandez & Blazer, 2006) with decreased morbidity (Wilkinson & Pickett, 2011). In the case of CHC approach, 3 main factors facilitate behavior change of CHC members:

- motivation and spirit of action that can be imparted to, according to community members from the exposed villages, the change process (dialogue sessions, drama, songs, dancing, competition, supportive supervision, home visits, etc) and the interaction with the facilitators, supported also by DiClemente (2007).
- Knowledge gained from health topics, discussions, demonstrations, and applications under the name of recommended practices as it has been described by Waterkeyn (2006) and Waterkeyn & Cairncross (2005).
- Group consensus which allows community members to adhere and agree on safe practices (Lewis, 2014), on the way to achieve recommended practices through self-support or mutual assistance with different strategies including saving and loans, income generation activities and projects, etc.

Similarly with other previous studies in Zimbabwe (Waterkeyn & Waterkeyn, 2013) and Nicaragua (Lewis, 2014), Community Health Club (CHC) Model implementation in Rusizi and Kicukiro restored and strengthened a diverse natural social networks, increased the availability of social support in natural networks reducing negative interactions and promoted self-care at village-level. The described social support is qualified to contributing to the safe practices for health safety (MOUSAVI & ANJOMSHOA, 2014).

Conclusion

CHC approach is dealing with families in an inclusive and equitable way with the consideration of vulnerable people at village level. CHC is one of the approaches that can contribute to the target 6.2 of the SDGs 6 to achieve access to adequate and equitable sanitation and hygiene in communities through its potential to reach all community members for joint action. Local leaders and community members claim to have seen the difference between villages with and without CHC and that 90% improvement of sanitation and hygiene conditions can be achieved irrespective of barriers. This research shows that the CHC approach implementation is associated with improvement in households' sanitation and hygiene practices 3 years after the intervention in Rusizi (rural setting) and Kicukiro (peri urban setting). The performance of CHCs in transforming households' sanitation conditions and hygiene behaviour is quite good with some little differences from rural setting and peri urban setting in terms of percentage. The implementation of the CHC approach proved good results with regards to improved sanitation and hygiene practices in both rural and peri urban settings. The improvement is supported by a natural social support network which is restored spontaneously and strengthened by CHC approach implementation. Further research is needed to assess its effectiveness compared to other similar approaches and its scalability in different eco socio economic conditions as per now governments and their development partners need informed approaches to transform policies into practice.

Acknowledgements

This research is funded by Vetenskapsrådet through grant number 2013-6364. The author/s would like to extend thanks to the Royal Institute of Technology, the University of Rwanda for all facilitations to the end of this activity research. In Rwanda, we are grateful for the support of Rwanda Ministry of Health, Ministry of Infrastructure, Water and Sanitation Corporation (WASAC), FPEAR, the Forum of Water and Sanitation Private Operators, Unicef, Africa AHEAD and SNV.

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