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RESEARCH ARTICLE

UNDERSTANDING PARENT-ADOLESCENT COMMUNICATION (PAC) ABOUT DRUGS ABUSE THROUGH COMMUNITY-BASED PARTICIPATORY RESEARCH (CBPR) IN RUBAVU DISTRICT, RWANDA

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ABSTRACT

Drugs use and abuse among the adolescents affect the individual, family and community in Rwanda. However, the current arsenal of effective approaches to increase adherence to risk-reduction strategies and communication with Rwandan adolescents remains insufficient. Despite the potential protective role of parent-adolescent communication (PAC) program about sexual and drugs use behavior, much remains unknown about the process and contexts in which these communication encounters occur in Rwanda. Community-based participatory research (CBPR) is an approach to research and evaluation that is receiving increased attention in the field of health and environmental research. The present study explains the application of the approach to research and evaluation with parent-adolescent communication (PAC) program about drugs use in Rubavu District, Rwanda. The researcher primary purpose is to illustrate the key elements that contributed to effective collaboration among PAC facilitators, local researcher, parents and their children adolescents in the conduct of the study. In the present paper the focus is not research findings but on the research process. The researchers aim to illustrate the practices of CBPR, so they can be analysed, further developed, and effectively facilitate replication of the process by other researchers who are interested in applying the approach to culturally responsible PAC intervention in diversity of community context.

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INTRODUCTION

Community-based participatory research (CBPR) is an approach to research and evaluation that evolved in the last two decades in response to the growing consideration that researchers have ethical obligations to protect the communities under study from harm and promote their interests (Dickert and Sugarman, 2005; Gilbert, 2006). The approach has gained prominence in various discipline of research ranging from epidemiology, genetics, clinical trials, public health, psychiatry, biomedical and behavioral research, health education to environmental health (Resnik and Kennedy, 2010). The approach has been also employed in different settings and with multiple communities from studies on the environmental health and justice (such as poverty, air pollution), focusing not only to studies about low income and medically underserved populations (Fowles, 2007; Postma, 2008) but also on reducing risks for asthmatics or educating

subsistence fishermen about risks or toxics contamination (Corburn, 2002) and smoking cessation intervention (Andrews *et al.*, 2012). CBPR is not a methodology but a partnership approach to scientific inquiry that involves collaboration among community members, community partners and academic researchers throughout the research process (Israel *et al.*, 1998). CBPR strives for maximum contribution of each member in the study, including identifying problems to be addressed, design and delivery of interventions, evaluation of data, and dissemination of results (Resnik and Kennedy, 2010). This approach can help to improve protections for human subjects and communities, build trust between program partners, community members, and researchers throughout the research process (Weijer & Emanuel, 2000; O'fallon & Deary, 2002; Watkins *et al.*, 2009). CBPR approach can also improve the quality, validity, and relevance of research findings and may also empower community members to advocate for program and changes in policy that may be indicated as a result of the research (Israel *et al.*, 1998). Researchers identified two main principles of CBPR (principle of participation and principle of relevance) to empower community participants in their intervention that are culturally

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relevant to them (Frankish *et al.*, 2007). While the principle of relevance asserts that activities must be relevant to the needs and interests of the consumer group in order for consumers to attend those activities, the principle of participation asserts that individuals learn by doing, and as such, active 'hands on' activities are important to make learning more meaningful (Frankish *et al.*, 2007). Our PAC research evaluation project used these two important principles. The present researchers' purpose here is not to argue on this but rather to evaluate how CBPR can be achieved of which little are highlighted in various research and particularly, none to date that has examined the evidence of CBPR and parent adolescent communication (PAC) about drugs use in Rwanda. The researcher to aim to illustrate the practices of CBPR, so they can be analysed, further developed, and effectively facilitate replication of this process by other prevention researchers who are interested in applying this approach to culturally responsible PAC intervention in diversity of community context. Therefore, the paper article discusses how parent-adolescent communication (PAC) program aimed at preventing and decreasing adolescent sexual behaviors and related risk factors such drugs abuse was developed through CBPR. The unique social context of Imbuto Foundation provides a setting and unique cultural conditions for the development of this parent-adolescent communication training intervention and evaluation, as designed to meet the needs of Rwandan families and adolescents within the local communities.

Drugs Use and Related Harm Among Adolescents

In Rwanda, a study conducted by the Ministry of Youth and ICT in collaboration with Kigali Health Institute (KHI) in 2011, revealed that 52.5% of Rwandan youth aged between 14 and 35 years had consumed or abusing alcohol, tobacco and cannabis at least once in their lifetime. In a nationally representative sample survey, overall the past-30 days prevalence (whether the youth has used the drug within last month), 8.5% were current cigarette smokers, 34% had consumed at least one alcoholic beverage within the previous month and 2.7% had used cannabis within the previous 30 days, 0.2% for glue and 0.1% for medicine like diazepam (Kanyoni, Gishoma and Ndahindwa, 2011). Commenting on this report, the Minister of Youth Jean Philbert Nsengiyumva stated that 'drugs abuse is in needed a serious problem that deserves policy attention which wouldn't based on mere anecdotic evidence' (Nsengiyumva, 2012). It is further estimated that one young man or woman out of every 13 is alcohol dependent (Kanyoni, Gishoma&Ndahindwa, 2011). In Ndera Neuropsychiatric Hospital, patients with alcohol and drugs induced mental illness ranged from 440(2.8) in 2009, 994 (7.6) in 2010, 989(7.7) in 2011, and 1099(8%) in 2012(Rwandan Biomedical Center, n.d).

The anti-drug policy in Rwanda encompasses the following areas: preventive education and policy, treatment and rehabilitation, legislation and law enforcement. There may be persistent believe that the campaign for drugs eradication launched by the Ministry of Youth and ICT in response to the demand by Her Excellency the First Lady Jeannette Kagame in December 2011, the Neighbour's eye' programme was designed to push campaign to the village level throughout the country is sufficient. In his article, 'winning the fight against drugs abuse

among the youth, the Minister of Youth and ICT Jean Philbert Nsengiyumva said that to win the battle against alcohol, tobacco and illicit drug use among youth Rwandans, it needs much more than policy, government backed programmes and law enforcement. The success will depend on mind-set change towards the traditional and cultural value of these substances and urged parents, educators and communities to play a leading role by protecting children against exposure of these substances at a tender age (Nsengiyumva, 2012).

Effective Prevention Interventions with Rwandan Adolescent Populations

In the development of adolescent risk health behaviors interventions, family has been described as having a pivotal role in the ethiology of adolescent risk health behaviors such as alcohol and other drugs abuse (Vimpani and Spooner, 2003). However, parental or family influence, does not occur in a vacuum as there are multiple determinants of alcohol and drug use and abuse such as intra-personal factors, peer influence, and wider community and environmental factors such as media influences, advertising, availability and environmental deprivation needed to consider in any broad analysis of aetiology and equally of prevention and intervention strategies (Velleman *et al.*, 2005). Imbuto foundation in collaboration with multiple partners felt a need for promoting the family involvement in children and young people health particularly risk behavior prevention and interventions aimed at helping the family/parents prevent adolescent risk health behaviors among adolescents. In addition, they found interest in integrating parent-adolescent communication (PAC) programme as a means to effectively prevent or reduce adolescent' risk health behavior particularly prevention of HIV/AIDS. PAC's are programmes that have been rigorously tested in various studies, and have proved to effectively address not only sex-related behaviors and alcohol and drugs abuse but also other risk behaviors, and psychosocial adjustment such as the development of depression and anxiety and engagement in antisocial activities (Barnes and Olson, 1985), the development of the adolescent's moral reasoning, academic achievement and self-esteem (Holstein, 1972; Hartos and Power, 2000), mental health (Collins, Newman and Mckenry, 1995), depression (Brage and Meredith, 1994), delinquency (Clark and Shields, 1997) both causes for drugs abuse (Faroe, 2012).

Theoretical and Parent-Adolescent Communication (PAC) About Drugs Use

Prior to discussing the use of CBPR to develop the PAC it will be useful to review the theoretical framework that guided this process. The development of this new supplemental PAC about drugs use was guided by Ecodevelopmental theory as it supports the strategy of improving family function as a means of preventing adolescents' alcohol abuse and other drugs (Szapocznik and Coatsworth, 1999; Castro, Shaibi, and Boehm-Smith, 2009). Although parents have been considered an underutilized resource for educating their children adolescents about risk behaviors, Ecodevelopmental Theory also posits that as parents play a primary role in the socialization of their children they can exert a strong impact in preventing adolescent risk behaviors. In this study, the framework is derived from Ecodevelopmental Theory as it

investigates risk and protective factors in Rwandan youths' drug use as well as counting for the role of family and parent – adolescent influences as they are exposed to family issues, deviant peers and mass media. However, there two broad parental factors associated with risk for alcohol and drugs abuse among adolescent that need to be examined in this study.

The first relates to socioeconomic disadvantage where, despite some motivation to protect their children from drugs use, parents or caregivers (hereafter referred to as 'parents') in Rwanda may lack access to adequate resources and support to reduce drugs use and related harm among the adolescents such as training on parenting skills and lack of time for their children. The second factor, and the focus of this paper, relates to parents' concern about the building of trust and communication about drugs use (Hurt *et al.*, 2013).

Imbuto Foundation launching PAC Program

PAC programme is one of the programmes implemented by Imbutoto Foundation and designed to target Rwandan families and has been also used in school settings. In the 10th anniversary of Imbuto Foundation, Tony Blair's wife, Cherie Blair who was among guest speaker said 'We are convinced that the best way to overcome the obstacles facing girl is to influence the home and school environments. We felt that this approach would contribute to solving other problems' (Gahiji, 2015). For this reason, it was identified as an ideal program on which to base our study on the parent-adolescent communication about drugs use. The PAC about drugs use focuses on enhancing parental involvement in their children activities, while strengthening family functioning by increasing their relationships and communication about risk behaviors. As per Imbuto Foundation philosophy, Mrs Jeannette Kagame 'A seed well planted, watered, nurtured and given all necessary support, successfully grows into a healthy plant-one that reaches high and stands all.' (Gahiji, 2015). This program is guided by Ecocultural Theory (Szapocznik and Coatsworth, 1999) as it illustrated the importance of understanding an adolescent's development within the contexts of their social environment, for an ecologically sound understanding of children adolescent behavior problems. To promote the health of the children and keep them safe in their development stages a proposed intervention needs to increase protective factors and reduce risk factors, while also improving the link between the children adolescent's world such as family/parents, peers, school, and mass media (Hawkins, Catalano and Miller, 1992). An evaluation of Imbuto Foundation project of Parent adolescent communication PAC using CBPR is vital to its effectiveness in intervention for increasing parental involvement and decreasing adolescent risk behaviors. The parent-adolescent communication about drugs is one of the components of research of PAC programmes conducted in one site of Rubavu district, Rwanda.

Establishing a CBPR in the PAC Program Context

The overall framework of the PAC research and evaluation project both facilitated and presented challenges to CBPR. Representing an expansion of the Imbuto Foundation project, PAC is designed to promoting HIV prevention among youth aged between 15 to 24 years. This sensitization of communication between parents and their children adolescents about sensitive topics in Rwanda was launched in 2011

(Musoni, 2011) in which the Imbuto Foundation PAC program in Rubavu district, served as 1 of 12 districts started this program. Selection as a research site in evaluation of PAC about drugs use and recruitment of local research in PAC program contributed to the success of the study. The call for participation in the PAC Research and Evaluation Projects was initiative of Imbuto Foundation in collaboration with partners such as RYFC (Rubavu Youth Friendly Centre) rather than the researchers. The decision to conduct training and evaluation of the project and to whom to work with as local research partners rested with Imbuto Foundation in collaboration with RYFC.

The basic approach of Imbuto Foundation PAC program on integration, research and evaluation and to enroll facilitators and local communities was key to realization of CBPR. The current study of the PAC program initiative to address drugs use and abuse among the adolescents had commitment not simply to being researched but to partake actively in self-study and critical thinking about program development. This process promoted and engaged partnership with facilitators, communities and researchers in the research process. Imbuto Foundation in collaboration with RYFC also helped the study process by employing a strengths-based approach to enrolled families (Parents and their children adolescents aged between 15 to 24 years) under investigation, focusing on family strengths rather than weakness, and emphasizes building partnerships between families, facilitators and local researchers. Program services (PAC training) are community based and help both parents and children achieve their own goals. Facilitators (including the researcher) were hired from RYFC. Because of this orientation, parents and their children involved in PAC program were empowered to become active partners in this research, while the whole team became engaged in this research their reciprocal transfer of expertise; sharing of decision-making power; and mutual ownership of the processes and products of research as indicated in CBPR principles (Resnik and Kennedy, 2010).

Implementation of CBPR

In the research of PAC about alcohol and drugs abuse, we used simplest model of CBPR where researchers worked closely with PAC program representatives (Imbuto Foundation) who hired community liaison as a research staff, and developed focus groups and educational training with families (fathers, mothers and their adolescents) at local communities. These principles are in line of CBPR (Reskin and Kennedy, 2010) using simplest model (Watkins *et al.*, 2009). The foregoing describes some foundational principles that helped support CBPR. The realization however, required consistent attention to how collaboration principles are applicable in the research evaluation of the programme. The origin of PAC about drugs use was the perceived need expressed by some parents and their children adolescents in research PAC evaluation for an intervention that would help parents to better communicate with and guide their children at risk or abusing drugs. Based on this need, the first step in the development of the parent-adolescent communication about drugs use involved evidence that began with an evaluation of existed parent-adolescent communication(PAC) developed by Imbuto Foundation. In this present case, community members, facilitators and researcher started examining what already have been done

after PAC training, and what was effective in prevention of adolescent risk health behaviors including drugs use among families' beneficiaries of PAC programme in Rubavu district. Then we started to examine together on the aspects of PAC programme that the community could adopt or adapt in order to meet their local needs. In this regard, partners in the PAC evaluation identified positive effect of PAC in substance abuse preventions that exhibited evidence of effectiveness when implemented within a Rwandan community. In addition to the needs from parents particularly fathers, discussions with parents and their children adolescents served to answer the question of 'why' the family/parent intervention was needed and provided direction regarding the specific strategies needed to be employed. Based on the preliminary findings with regard to community needs, and under an equitable partnership, the researcher and PAC supervisor proposed an initial course of action regarding what needed to be done (further training in drugs and parenting skills) as guided by the theoretical foundations of PAC intervention.

Through interview and discussions, the parents and adolescents advised the 'how' and this was employed to propose a framework for parents in which to family members (fathers and children) make behavioural changes, increase their knowledge, in how to effectively communicate use with and engage their children in dialogue about risk behaviours including drugs use. As mentioned earlier, mutual collaboration among representatives of Imbuto foundation, facilitators (including local researcher), and parents and their children adolescents benefited from PAC program began before the evaluation of PAC program. Doing so was important for building trust and developing a sense of engagement and ownership among all partners. It also assisted the researcher who was integrated in the research of PAC evaluation as local researcher understand questions asked, and methods used to answer them, would be matching with program and community needs and not program designer or researcher interest. Before the Imbuto Foundation representatives brief the facilitators (including local researcher) on how to conduct the PAC research and Evaluation project, the researcher held a discussion with program team, facilitators and community. This discussion tried to discern how they understood their local PAC program model in particular about adolescent risk behaviors including alcohol and drugs abuse and to identify the main questions to be addressed in the PAC program. From the beginning, there was agreement that the study should be based on the PAC workshop training theory, that is, a model of communication that the parents and their children adolescents were expected to apply in their family after few month of training about the programme and how it was planned to realize PAC objectives.

Community-Based Research Facilitators

During PAC program evaluation, PAC facilitators are nurses and trainers including the researcher from Rubavu Youth Friendly Centre, and were daily working with community resident in the promotion of their health particularly youths. Employing community-based facilitators and local researcher was a decision made by Imbuto Foundation in collaboration with Rubavu Youth Friendly centre representatives at the site that both reflected and strengthened CBPR principles. At the beginning of the first focus group discussions with fathers,

mothers, and their children separately, PAC supervisor and researcher were conducting the interview with fathers, and two nurses of RYFC conducted the interviews with mothers and adolescents. These facilitators helped to develop and maintain positive relationships among the research team, local PAC site, and research participants. The fact that these facilitators are acquainted with the community and the study under investigation as part of their role in RYFC strengthened the commitment of the program facilitator and families to the research process. This commitment, combined with the community collaboration and knowledge and skills in training and conduct interview of research facilitators, proved foundation in our going attempts to engage research participant in communication about sensitive topics. However, this community expertise would not have been fully used without the contribution of Imbuto foundation in collaboration with RYFC to conduct PAC education training. Communication workshop about adolescent risk behaviors including drugs use and abuse were held, in which some culture problems preventing parents discussing with their children were reduced. Integrating community-based facilitator into an unfamiliar sensitive research behavior, and provide adequate support to achieve the objective of the study, was sometimes challenging, particularly due to the PAC interviewing required a high degree of flexibility and independent functioning in the field, while also being emotionally difficult for interviewers working with families experiencing economic and social distress or individuals use and abuse drugs. Our community based interviewers were, in fact familial with signs of distress because they work with these community in voluntary counseling and Testing (VCT) and work with drugs abuse in helping them how free from this behavior at the site. Thus, families in this study trusted them enough to share information about person situations. In addition it indicates how CBPR approach improved the richness and quality of information we obtained through interview process.

Recruitment of parents and their children adolescents

As part of parent-adolescent communication research (PAC), the community participants in this study were recruited by Imbuto Foundation in collaboration with Imbuto Foundation and not the researcher. Therefore, all participants in this study have participated in both PAC workshop and research of PAC program evaluation. Although the relevant theory was a key to the PAC about drugs, the PAC program and content of workshops and evaluation was drafted by the program developers and not the researchers. Thus, the researcher with other facilitators received feedback from PAC developers and we proceeded to conduct focus group with community members. The evaluation of PAC about drugs use in Rubavu district involved 20 families including 17 fathers, 20 mothers and their 20 children adolescents aged between 15 to 24 years was conducted in one of several sites of national research of PAC evaluation. In both PAC workshop and PAC evaluation parents and their children actively participated in discussions, and expected to practice learned skills with rest of families at home. These two sessions were accomplished in a culturally sensitive manner and in an environment of inclusiveness that promoted participants' dignity and respect while maintaining cultural values and norms. The participating community is located near two large metropolitan cities (Gisenyi in Rwanda

and Goma in Democratic republic of Congo). The community partners in this study consist of parents and guardians (grandparents, aunts, and youth head of family). These two cities are perceived by partners in the study to have highest prevalence of drugs and trafficking. Within this phase, another step was to identify the key elements of PAC program, and discuss them on what PAC program involvement had meant to them, what had changed in the family life, individual health and why, facilitators and barriers to communication and what issues they felt the PAC program team needed to explore further (suggestion to overcome barriers). However, during PAC program evaluation, among families' beneficiaries from PAC programme, in this study the researcher in collaboration with Imbuto Foundation representative and RYFC facilitators 20 families participated in the research of PAC evaluation about drugs use. Participants in this study were compensated each 3000 Rwandan Francs by Imbuto Foundation for their time.

In Rubavu District PAC research, the present work was accomplished through the following vehicles: (a) the community is a unit of identity; (b) CBPR recognizes that there are strengths and resources within the community; (c) CBPR is centered in an equitable partnership between all parties involved in the research; (d) CBPR allows for capacity and knowledge building among all partners; (e) CBPR focuses on interventions that will benefit all partners; (f) CBPR focuses on social and health problems and uses an ecological perspective; (g) CBPR uses an iterative process; (h) CBPR involves partners in the dissemination process; and, (i) CBPR commits to sustainability (Israel *et al.*, 2003).

Phase 2: Focus Groups and Evaluation of PAC about drugs Use

The data collection for the present process of CBPR utilized a focus discussion methodology and face-to-face interviews with families participants in PAC program conducted by PAC representative (supervisor from Imbuto Foundation, local researcher and facilitators from Rubavu Youth Friendly Center (stakeholder involvement), as a means to assure the cultural appropriateness of the involvement of community based experts, build trust between, program partners, community members, and researchers throughout the research process (Weijer&Emanuel, 2000;O'fallon&Dearry, 2002;Watkins *et al.*, 2009) and improve the quality, validity, and relevance of research findings in order to empower community members to advocate for PAC program and changes in policy that may be indicated as a result of the research (Israel *et al.*, 1998). The stakeholders (local researcher, facilitators and parents and their children participants in PAC programmes) are aware of and are concerned about the involvement of adolescents in alcohol and drugs abuse and related risk harm such as the likelihood of drugs abuser to be infected with HIV/AIDS of initially PAC program is aimed to address within Rwandan communities throughout the country. In relation to research PAC about drugs use, stakeholders in national PAC evaluation (designed and developed by Imbuto Foundation) stakeholders became active members of the research team with the purpose of conducting participatory research capable of generating results that address the needs of community and potential to develop program that are useful to the community (Israel *et al.*, 1998). In relation to these activities, access to the research of PAC evaluation as local researcher working in RYFC as volunteer

staff and involved in the PAC about drugs abuse with PAC program representative at Rubavu district site, the study was conscious of the requirements of Ministry of Youth and ICT with regards to conducting research in Rwandan communities. Hence, the insured that the Imbuto Foundation and RYFC already have legally binding collaboration with both the government of Rwanda, and had permission to conduct research PAC evaluation in the communities.

The Focus Group Discussions

The PAC evaluation at the site of RYFC in Rubavu district used traditional social science known as focus group methodology (Morgan, 1988) with parents and their children adolescents participants in PAC program (education training and evaluation of the program) not only assure the highest levels of comfort and participation but also interaction amongst participants in a friendly and social environment may enable a more comprehensive picture about health program to emerge. The education training session with these families by Imbuto Foundation in collaboration with RYFC took place few months before research PAC evaluation. These two sessions took place at Rubavu Youth Friendly Centre because the Center is located close to the families that were targeted and offers easier access to community members, particularly youths and offering a warm and comfortable atmosphere for adults in need of Voluntary Counseling and Testing (VCT). The meeting rooms where focus groups discussions took place had writing pads and pens for the participants. The PAC program developer and local research were both in attendance at 3 focus group discussions with fathers, mothers and their children, and the researcher and Program supervisor conducted ethnography focus groups discussions with the same families but mixing fathers, mothers and children to discuss the role of family in prevention of adolescent health risk behaviors including drugs abuse.

Both facilitators, PAC programme developer representative and local researchers discussed community partners reviewed theory of PAC programme training, and invited focus group parents and their children participants to participate in the research PAC evaluation about drugs abuse activities. The research questions that resulted from this collaboration process highlighted major problems that PAC program and community partners wanted to investigate:

It was through such group discussions that the researcher found the value of qualitative methods to attempt to answer our research questions. The richness and complexity of the discussion about PAC program mainly aimed at preventing sexual behaviors helped to understand the problem of communication and its effects in prevention about drugs abuse.

Data Collection

Although it is suggested that involving men and women in the same Focus group discussions could provide a high level of comprehensiveness, for evaluating how parents applied skills obtained in PAC training programme, this suggestion has been deemed unsuitable when evaluating the parenting practices including PAC (Sim, 1998). To prevent any problems that may arise from focus group discussions, fathers and mothers were separated and their children adolescents had their own groups

forming total of three focus groups. Discussions with fathers were undertaken by PAC program supervisor who is female and the first author who is male. The second focus group discussions with mothers were undertaken with a nurse working in RYFC who is women and mother. The third focus group discussions with adolescents aged between 15 to 4 years were undertaken with a male youth also working in RYFC. Demographic information was collected before participating in PAC training workshop by Imbuto Foundation. At the end of each interview and discussion, a verbal summary was written and shared with the help of participants.

Data Analysis

The focus group discussions and individual interviews were reviewed separately by facilitators, PAC supervisor and the first author. According to Steward and Shamdasani (1990) a single content analysis is appropriate if the purpose of employing focus groups and interviews is for an in-depth exploration of a research topic which little is known. The data collection and analysis depend heavily on the researcher's background and interpretation of events (Yin, 1994). Grounded theory (Straus and Corbin, 1998) and comparative method were employed to analyze the qualitative data. Each facilitator in the support groups identified emerging themes and emerging themes were contrasted to existing concepts from the PAC theories learned in PAC material used in workshops. The data collection and analysis depend heavily on the researcher's background and interpretation of events (Yin, 1994). Each facilitators in this study read quotes from each member of each family (father, mother, and adolescent) to identify quotes that exemplified the emerging themes, listen to any comments that may contradict the themes, and to identify any comments that may contradict the themes. In addition findings were exposed to all participants for their final comments (respondent validation), so that the extent to which their contribution in this research are reflected in transcribed data can be checked.

Sharing and Interpreting Findings of the Study

A crucial aspect of CBPR involves sharing preliminary findings with community partners. In the case of our PAC evaluation and PAC about drugs use research, sharing occurred through discussions and questions during participant observations as well as sharing the general findings from each family. By sharing this information with program developer and facilitators, we learned that community in this study were observing similar developments and were concerned about drugs abuse and how to communicate effectively with adolescents about this risk behaviors. This dialogue between PAC program and Youth service providers and communities led to advocate for family skills training. More formal sharing of research results occurred as the first author discussed with parents and their children together on their perceptions about communication about alcohol and drugs use, risk and protective factors particularly parenting style. One example involves the qualitative interviews on families' readiness to protect their children despite their limit time and family stressors having fun by participating during a sketch illustrating it. At the end of research process, the researchers shared the findings with respondents. We then asked parents and adolescents to share with us their own ideas of family

particularly parents readiness and how they would change their ways of parenting style. The ensuring discussion reinforced many of the responses of the study participants, such as involvement in their children activities, and manner of disciplining by increasing communication and support children to overcome temptation and knowing their children peers. In particular they were concerned with their children behaviors and learn generation gap appreciated and valued individual differences among children. They began to contemplate parenting relationship style with the suggestion that PAC itself is not enough to salve adolescent problems and inform that the problems is not on adolescents only but also on parents.

The discussions held enhanced our understanding of how PAC parents and adolescents view the concept of family readiness on PAC about drugs and also alerted us to possible differences in parenting practices that may increase the likelihood of adolescent to drugs use (Melgosa, 2012), depending not only on their level of active engagement in programme but in manner in which they engage based on parenting style (demand and support). Sharing of the findings is easy with qualitative data that are analysed ongoing basis. As the data collection was going with analysis make it easier to share the findings with partners. Sharing of the study findings proved very beneficial to both sides of the research-program partnership and this qualified for CBPR principles. The key elements of this practice is that findings were not never simply reported but rather published programme developers and community partners contribution in study interpretation of the findings. Despite the fact that the process was initiative of PAC program developer, it led to a clearer picture of PAC about drugs on which our research was based, and more nuanced understanding of perspectives of experienced and skilled facilitators and families in parent-adolescent communication. This, in turn, strengthens our analysis on the data and our understanding of meaning and significance of key findings.

On the PAC program developer side, the sharing of findings led to discussions about programme practice in some families experiencing difficulties to apply PAC in their home settings particularly those with deviant adolescents. For example, with the findings, some families were promised to be visited in their homes by program developer's representatives. This led to new program component involving outreach to family members and partnerships for quality improvement in parent-adolescent communication (PAC) program. The result showed the positive attitude of families towards PAC programme in addressing adolescent adolescents' health risk behaviors particularly drugs abuse. Another lesson learned to be effective for parent-adolescent about drugs through CBPR included developing an in-depth understanding of the community culture and norms about alcohol and drugs, develop mutual respect and trust with community members and PAC programme participant, appreciating and praising participants' knowledge, expertise, and experiences shared throughout the study, developing a sense of ownership by incorporating their needs, ideas, suggestions, and opinions and empowering study participants to make decisions concerning the study approach (by integrating PAC in their homes) and wording, soliciting communities and policy makers feedback and seek not only the approval for publication but also involving them in disseminating the study findings to their community; and

creating an environment that encouraged fathers, mothers and their children to have fun which is rare in Rwandan families particularly in rural communities.

Conclusions

The use of CBPR in the present research approach and evaluation with a local PAC program offered community participants and researchers the opportunity to work together collaboratively in the development of a parent-adolescent communication about drugs. The PAC program aimed at addressing parents' and adolescents' concerns, while employing CBPR approach that involved the culturally informed application of theory and academic knowledge, PAC training, thus applying established evidence-based principles of prevention research aimed at preventing or reducing risky behaviors among Rwandan youths from rural communities. The research design and methodology was based on questions of PAC program as planned by programme developers but it was found convincing focusing on exploration of lived experiences and perspectives of families' participants in the PAC programme. The researchers' CBPR approach helped the PAC about drugs use as a portion of PAC evaluation by Imbuto Foundation in collaboration with RYFC in ways that it improved the quality, relevance of the research findings but also helped to build trust between researcher and other community partners and were respectful of individual values in contribution of the study. Thus, PAC about drugs was culturally appropriate and sensitive to the needs and wants of parents and their children adolescents from the local community in which this intervention was examined.

Our PAC study was characterized by active interchange among researchers, PAC supervisor from Imbuto Foundation, Facilitators from Rubavu youth Friendly Centre (RYFC) and researchers. However, it should be noted that research design, methodology and participants were initiated by the Imbuto foundation in collaboration with RYFC PAC and collection of the data and analysis by all members involved in the research.

A challenge to CBPR is to empower all participants to initiate these discussions and to independently raise issues relevant to the research. However, employing CBPR approach inevitably focuses attention on particular traits and concerns of the program or community being studied (Israel *et al.*, 1998). The PAC process of individualization is, in fact one of its strengths. Although the study cannot be simply reproduced in another adolescent risk behaviors program or community setting, nor assume that our particular findings can be applied in another communities, it is of paramount importance to note that researchers recognize and build on the contribution of CBPR to general and theoretical questions. Family-based intervention studies such as the involvement of families in prevention of drugs use frequently address problems that have applicability beyond local context. For example, in the case of our PAC research, we explore the advantages of parent-adolescent communication (PAC) about drugs use as a program model, the role of family in prevention of drugs, impact of parenting relationship style and parental readiness in their involvement in adolescent world implementing PAC in low-income communities. One of the benefits of using CBPR in this study is that it brings into dynamic interaction between policy makers, community members and researchers who have different experiences and modes of thinking in relation to

community problems such as alcohol and drugs use among the adolescents. For this reason, it is particularly useful in helping develop new perspectives or new lines of exploration on problem such as drugs use and abuse among the adolescents that have particular local direct or indirect effect but go beyond existing program and community limitations. The present researchers' experience of conducting research with local participants in PAC program developed by Imbuto foundation suggests that certain basics are necessary for, or at least facilitate of, CBPR. Of fundamental importance is the commitment of both community-based stakeholders and researchers to involve in partnership that helped in establishing trust between all partners in the study, and provided opportunity to share knowledge and experiences with potential to increase respect and honest in the whole process of the research evaluation. Under this collaboration process, each person involved contributed into research focus, data collection, and interpretation and application of findings in accord with their own area of expertise. Thus, PAC team and researcher provided scientific knowledge and guidance based on PAC prevention theory and its application in family setting. On the other hand, parents and adolescents supplied insightful information about their knowledge and experience with drugs use among adolescents. The contribution of each participant in the study and process was appropriate, desirable, and culturally sensitive community experts/participants based on community needs.

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Authors' contributions

The First Author conceived of the study, carried out the interviews, read all manuscripts, performed analysis of data and drafted the manuscript.

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