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Developing a framework for youth empowerment to prevent smoking behavior in a rural setting: study protocol for a participatory action research

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Abstract

Purpose – There is limited research examining community-based youth empowerment that addresses smoking prevention in the rural Indonesian context. This paper describes participatory action research (PAR) applied to develop a framework for empowering youth aged 17–25 years toward smoking prevention. This research conducted in the Indonesian rural community setting was divided into four stages: diagnosing, planning action, taking action and evaluating action.

Design/methodology/approach – PAR was chosen as the approach to developing a framework for youth empowerment in smoking prevention programs. In this study, the PAR cycle started with a prestep stage through interviews with village heads, community leaders, youth organization organizers, observations of target resources and observations of participation in youth activities as well as forming teamwork with target

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participants. The diagnosis stage consists of three activities, that is, focus group discussions with youth groups of male and female, youth assessment of empowerment domains through the Participatory Rural Appraisal (PRA) with the Empowerment Assessment Rating Scale (EARS) and measuring individual and group involvement levels related to the smoking behavior prevention program by questionnaire. The EARS assessment results were presented in the action planning stage, followed by a discussion on youth empowerment plans and strategies. In the action stage, activities and programs are planned according to the planning discussion, that is: training in healthy life skills (outbound and training) and initiating youth health programs without smoking called "Remaja Berdaya Sehat Tanpa Rokok" (Empowered Youth Healthy Without Smoking) or the JayaStar Program. After these community participation activities, the evaluating action stage will assess the empowerment domain in the youth groups, conduct focus group discussions with parents, evaluate the impact of empowerment on individual and group changes with a questionnaire and facilitate self-reflection by the youth community called Madiska.

Findings – This protocol describes a doctoral research project on developing a youth empowerment framework in smoking prevention programs through PAR. The intended study will provide valuable information on the planning, implementation and evaluation of youth empowerment in the prevention of smoking behavior.

Originality/value – This research project is expected to contribute to the literature relating to PAR for rural settings and the use of empowerment strategies to prevent youth smoking behavior. The results can be replicated in the same settings, but the process of empowerment must still be adapted to the characteristics and local wisdom of the community.

Keywords Study protocol, Youth empowerment, Smoking prevention, Tobacco control, Participatory action research

Paper type Research paper

Introduction

Prevention of tobacco use in youth is very important to end the tobacco epidemic in the world (Backinger *et al.*, 2003). The results of a systematic review and meta-analysis on a population of young people aged 11–21 years in America found that interventions engaging youth in community activities in smoking behavior prevention programs in youth groups using health promotion messages and education were effective (Macarthur *et al.*, 2016). Meanwhile, another review demonstrated that health promotion methods are more effective than other smoking prevention methods. Effective health promotion interventions consist of three main approaches, namely: (1) reaching the wider community such as social marketing and mass media interventions; (2) reaching out to individuals, including through peer education and motivational interviews; and (3) reaching the community through community mobilization and environmental change with advocacy and setting-based interventions. Of the three approaches, community mobilization is an effective method for smoking prevention and smoking cessation. Community mobilization is an essential method of health promotion that aims to empower the community. Empowering people to change the social domain they have is not only more sustainable but also very effective (Golechha, 2016).

Research on youth empowerment for smoking behavior prevention in the context of Indonesian rural communities is still very limited. Recent research showed that the number of smokers in rural areas is higher than in urban areas with 30.3 and 27.6%, respectively (Kementerian Kesehatan Republik Indonesia, 2018). Furthermore, based on the current review, research on smoking prevention and control programs that focus on youth, which was mostly conducted in the school setting, have not been effective (Backinger *et al.*, 2003). As a viable alternative, this research is conducted in the community with youth empowerment and engagement strategies that are well established and proven to be effective. The community setting was chosen because there are youth organizations that naturally enable young people to do activities independently, and the informal ambiance of the community compared to schools allows youth to interact with peers in a more relaxed manner. This strategy is believed to be able to contribute to initiating social change (Backinger *et al.*, 2003). Other research also found that the youth empowerment model is effective in preventing teen smoking compared to helping them stop smoking when they have tried smoking once (Saw

et al., 2018; Wheeler *et al.*, 2007). This is because smoking behavior that begins in adolescence will become an unhealthy habit primarily during adulthood (United States Department of Health and Human Services, 2012).

Empowerment as a health promotion strategy can improve the health status of individuals, groups and communities (Glenn Laverack, 2006). As the main concept of health promotion (Kasmel and Tanggaard, 2011), empowerment can be achieved through planning strategies that enhance each domain identified by community members. According to Lavarack (2007), there are nine domains of community empowerment, namely: (1) increasing participation, (2) developing local leadership, (3) developing organizational structure empowerment, (4) increasing capacity in problem assessment, (5) improving the ability of the community to be critical, (6) increasing resource mobilization, (7) strengthening the relationships with others and other organizations, (8) creating fair relations with outside agencies and (9) increasing control over program management (Laverack, 2007).

Youth empowerment focuses on creating opportunities for active group participation in developing positive youth. Participation is a manifestation of the empowerment process and the direct cause of empowerment outcomes (Holden *et al.*, 2004). This model links the quality and natural participation of young people in building youth group atmosphere and structure with the individual attributes that they bring into the group. Adult involvement is indirectly associated with youth participation, by influencing the structure and climate of youth organizations. Finally, youth participation is linked to changes in the concept of youth participation itself and also their potential actions as agents of social change that influence tobacco control efforts in adults and youth (Holden *et al.*, 2005).

Youth empowerment emphasizes the participation of youth during the research process so that a good rapport between youth and researchers and a good relationship between researchers and society, in general, are needed (Holden *et al.*, 2004). Youth involvement is known as one of the best practices in health education and promotion as recognized by the Center for disease Control and Prevention (CDC-P) (Anyon *et al.*, 2018). For example, youth participation in structured, organizational activities has been associated with positive impacts related to self-identity and social achievement. This includes an increase in self-esteem followed by an increase in competence and control with improvements in personal and social skills (Holden *et al.*, 2005). Participation outcomes include reducing school dropout rates, increasing academic performance and involvement and lowering delinquency and drug use or tobacco use (Holden *et al.*, 2004).

Health promotion through youth empowerment in this smoking prevention program applies the theoretical framework of the stages of empowerment from Laverack (Laverack, 2006) and the youth empowerment model in tobacco control from Holden (Holden *et al.*, 2004). Empowerment is a process in which there are community activities to increase the empowerment domains such as participation, local leadership, resource mobilization, among others. Factors that influence the process of youth empowerment are predisposing factors for youth, group structure and group climate. The empowerment indicators are measurable as an increase in empowerment domains during the intervention. Furthermore, this empowerment will have an impact on the individual or group changes (Holden *et al.*, 2004).

Empowerment approaches have been used for noncommunicable disease prevention programs in India (Mohan *et al.*, 2006), to prevent suicide in residents in Japanese cities (Motohashi *et al.*, 2007), for malaria prevention in Thailand (Geounuppakul *et al.*, 2007), for safe community programs, acquired immunodeficiency syndrome (AIDS) prevention and drug abuse, programs improving the quality of life of the elderly and many other health promotion activities (Kasmel and Andersen, 2011). In Indonesia, several agencies have experience implementing community empowerment in immunization programs (World Health Organization and Indonesia, Regional Office for South-East Asia and Departemen Kesehatan Indonesia, 1993), for examples, integrated health posts for infants (Menteri Dalam

Negeri dan Otonomi Daerah Republik Indonesia, 2001), integrated health posts for the elderly and helminth/diarrhea control (World Health Organization and Regional Office for South-East Asia, 1987). Furthermore, an empowerment strategy has also been used to initiate noncommunicable disease prevention programs for cardiovascular diseases and diabetes in Yogyakarta, Indonesia (Dewi, 2013).

Furthermore, Youth Empowerment Strategies (YES) through Community-Based Prevention Research (CBPR) is designed using participatory action research (PAR) methods to improve problem-solving skills, social action and participation in elementary and junior high school adolescents. The YES program was adopted from the Adolescent Social Action Program (ASAP), which was previously implemented in several junior and senior high school schools in America. ASAP aims to reduce morbidity and mortality, encourage adolescents to make healthier choices, conduct a critical dialogue about youth experiences led by facilitators and encourage youth involvement in social and political change actions in schools and their neighborhoods (Wilson *et al.*, 2008). Meanwhile, the YES program aims to help vulnerable children have a healthy life and a better future. The stages of youth empowerment begin with designing a curriculum domain consisting of team building, photography and activities based on empowerment education, involving groups in the identification of social action projects. Another example is community empowerment for people living with AIDS and drug abuse prevention programs of adolescents in Estonia (Kasmel and Andersen, 2011). The stages of empowerment for these programs consist of: (1) assessment of empowerment domains; (2) community empowerment planning by defining empowerment objectives, measuring indicators and identifying process assessments and action plans; (3) comparing the two parallel implementation processes of the empowerment process and the issue-specific process; and (4) evaluation of changes in empowerment domains. There are four domains for empowering the results of the assessment, namely increasing community activities, increasing community competence, improving program management skills and creating a supportive environment. Each of these domains is described in the form of activities by community members as a group. There are specific activities for the prevention of AIDS and drug abuse, including organizing education for adolescents to raise awareness of adolescents, lobbying local policymakers to support alcohol sales regulations and reducing youth access to alcohol, holding alternative activities for adolescents (summer camp, drug-free discotheque), conducting anti-AIDS campaigns and distributing condoms to adolescents and producing printed materials about sexual education for adolescents (Kasmel and Andersen, 2011).

This PAR project applies a framework for empowering youth aged 17–25 years toward smoking behavior prevention involving stages, namely prestep, diagnosing, planning action, taking action and evaluation activities in the rural communities setting, in Bantul District, Yogyakarta Province, Indonesia. Based on the aforementioned research objectives, the following research questions are formulated:

RQ1. How will the process of diagnosing, planning action, taking action and evaluation activities of the youth empowerment strategy in the smoking prevention program be implemented?

Methods

Study site

The study setting is in rural areas of Bantul district, Yogyakarta province, Indonesia. Yogyakarta is one of the 34 provinces of Indonesia and lies in Middle Java. Yogyakarta is bordered by the Indonesian Ocean to the south, and the northeast, southeast, west and northwest are bordered by Central Java (BPS DIY, 2019). Meanwhile, Bantul district is one of the five districts/Cities of Daerah Istimewa Yogyakarta (DIY) Province. Bantul District is bordered by Yogyakarta City and Sleman District in the north, Gunungkidul District in the

east, Kulon Progo District in the west and the Indonesian Ocean in the south (BPS Bantul, 2019). Furthermore, this research was conducted in the Karet Hamlet, Pleret Village, Pleret Subdistrict, Bantul District, Yogyakarta. Karet Hamlet is located near the community health center and Pleret district. The area of Karet Hamlet is 32 ha. Karet Hamlet is located 12 km from Bantul District and 15 km from Yogyakarta Province.

The land use in Karet Hamlet is as follows: 60% for settlers and 40% for agriculture. The livelihood of the community is predominately as farm worker. Hamlet Karet has 452 families (household) and 8 RT (neighborhood units) and is headed by a village head. The number of youths aged 17–25 years was 36.2%, and most of the participants attended high school. Generally they work after graduating from high school, but there are some participants who go to undergraduate programs. They come from low socioeconomic status such that 72.2% of the young people's parents earn less than IDR 1,572,150 (Bantul district minimum wage).

Karet Hamlet has a youth community called *MudaMudiDusunKaret* or commonly called by its acronym, Madiska, who engage in activities to coordinate religious activity in children such as *Taman PendidikanAlquran* or Bible study groups and children's *tarawih* praying, assist activities held in the hamlet, such as being a committee of the independent day, helping to clean tombs and helping with clean water monitoring activities. Madiska holds religious monthly meetings and coordination activities are done at any time when needed using the WhatsApp group. Karet Hamlet has a leader who is very supportive of the youth program. The dukuh head and his wife play a role in motivating youth to be more active in advancing youth activities. There is also the organization that consists of mothers called *PemberdayaanKesejahteraanKeluarga* (PKK) or (Family Welfare Empowerment), and the organization that consists of fathers is called the Bapak's meeting with activities, which are routinely held once a month.

The researchers have a close relationship with the youth leaders and stakeholders in the area of Karet Hamlet, and this facilitates the empowerment process in that place. The role of the researchers in this case is as facilitators. Meanwhile, the challenge at the study site is that there are already some young people who smoke, and smoking behavior is still considered normal for most people as well as for youth. At the time of youth activities, there was still some who smoked. The expectation of community leaders and youth officials interviewed was that children and youth who had not smoked would not be interested in trying cigarettes. This PAR project is an opportunity for a youth empowerment program to prevent youth and children who have not smoked from becoming interested in smoking.

Another opportunity that can support the youth empowerment program at the research site in Bantul is the regulation that bans smoking in smoke-free healthy areas, namely Regent Regulation No. 18 of 2016. Furthermore, Karet Hamlet is an area in Pleret Village that has declared a nonsmoking area with the name of Smoke-Free Home or "*RumahBebasAsapRokok*" (RBAR). Meanwhile, the control area is the Purworejo Hamlet, located in Purworejo Village, Pleret Subdistrict, Bantul Regency. This hamlet has characteristics that are almost the same as the location of the intervention and is also declared as an RBAR nonsmoking area.

In the control area, no intervention was done through the empowerment process, but a pretest and a posttest were given to determine the area's indicators of empowerment. The pretest and posttest with a questionnaire in the intervention and control areas aim to evaluate the indicators of successful empowerment such as attitudes toward sociopolitical control, efficacy, knowledge resources, participation competencies, assertiveness, advocacy, intentions involved and openness in matters of smoking. The function of the control group in this study is as a comparison to measure the effectiveness of health promotion strategies through empowerment in smoking prevention programs.

Strategy to minimize the bias such as the possibility of the participants from Karet Hamlet and Purworejo Hamlet sharing some information that they got, they were asked to sign the informed consent and promised not to inform others about the contents of the questionnaire

and the information obtained from the researcher. This is very necessary for the success of the empowerment program that will be conducted. Besides, although Karet and Purworejo Hamlet are located in one subdistrict, the two hamlets are located in different village areas, Karet Hamlet in Pleret Village and Purworejo Hamlet in Wonolelo Village (Appendix Figure A1). Generally, the routine activities of a youth organization such as *Karangtaruna* are centered at the village level while the activities of the *Karangtaruna* at the subdistrict level are still incidental. Thus they are less likely to interact with each other.

Study design

Participants in this study were youth groups located in Pleret Village, and Wonolelo Village, at Pleret Subdistrict, Bantul District, Yogyakarta Province. The criteria of the participants were all youth aged 17–25 years who were willing to be involved in the program and voluntarily agree to sign the informed consent before participating in the action research. At this stage of the study, the key informants are the head of the village, hamlet chief and the wife of the head hamlets, youth administrators, health promotion officer, Pleret Health Center and Health Department Health Promotion Section Bantul. The number of youth in the intervention group include 50 young people in Karet Hamlet, Pleret Village. While the research team consists of the main researcher, two research assistants and two coresearchers, namely the wife of the hamlet head (community leader) and the head of the Madiska youth community.

This study uses PAR also called the action research (AR) method. The PAR process cycle is as follows: problem identification, planning, intervention and evaluation (Montgomery *et al.*, 2015). Meanwhile, other authors added the prestep stage before the diagnosis stage, involving the activity of understanding the context and explaining the objectives of the project, which are the same as those in the problem identification. Next, the stages are continued with planning action, taking action and evaluating action (Coghlan and Brannick, 2014). Following is a figure of the stages of PAR (see Figure 1):

Table 1 shows PAR stages in the Madiska program for youth empowerment to prevent smoking behavior, which is called "Remaja Berdaya Sehat Tanpa Rokok" (Empowered Youth Healthy Without Smoking) or the acronym, JayaStar.

Prestep: context and purpose

The PAR cycle takes place in the real-time frame, starting from finding an understanding of the program context, reasons why the program is needed and considered and change the driving force (Coghlan and Brannick, 2014). Before the study, researchers established rapport with the community at the study sites (Smith *et al.*, 2010). The purpose of this stage is to understand the suitability of the context of the program, building trust with the target at the research location, socialization of research objectives on the target, identification of resources and potential possessed by the target, forming a research team.

The activities included an introduction meeting with the village head, hamlet head as well as youth administrators to convey the purpose of the intended activities. The researchers interviewed these people to find the target level of acceptance of the planned activity and identify the available resources. Besides, the researchers also held meetings with health promotion officers of Pleret Community Health Center and Health Promotion Section of the Bantul District Health Office to introduce the program and explore possibilities for collaboration. At this stage, available resources and potential targets for change were identified. In addition to meeting key personnel, the researcher also developed groups to be invited to cooperate in tackling raised issues. Review of the secondary data of hamlet profiles was obtained from Bantul District website, including *PerilakuHidupBersihdan Sehat* (PHBS), or Hygiene and Healthy Behavior, and data obtained from the Pleret Community Health Center. Furthermore, the principal researcher approached youth groups through participation in activities organized by youth, such as religious activities during Ramadan

Table 1.
Participatory action research stages of youth empowerment program to prevent smoking behavior: "Remaja Berdaya Sehat Tanpa Rokok (JayaStar)"

Research stages and time	Objective	Activities/Method
Prestep: context and purpose March–September 2019	• Understand the suitability of the context of the program • Building trust with the target (communities at the research location such as stakeholder, youth group, mothers groups and fathers groups) • Socialization of research objectives on the target • Identification of resources and potential possessed by the target • Forming a research team (coresearchers)	• Introductions and interviews with the Pleret Village Head, Karet Hamlet Head, the representative of the youth organization (Madiska), health promotion officer at the Pleret Health Center, Health Promotion Section of Bantul District Health Office • Participation in every activity held by Madiska • Secondary data review from the Bantul Regency website, Hamlet Karet profile, Pleret Puskesmas data profile • Discussion with coresearcher (wife of Head of Karet Hamlet and Secretary of Madiska) related to the program, the division of roles and responsibilities in the research process
First Round *Diagnosing* The first week of November 2019 First week of December 2019 The first–fourth week of January 2020	• To test the validity of the measuring instrument of empowerment and change the level of individuals and groups in Hamlet Kersan, village Tirtonirmolo, Bantul Yogyakarta, and test validity to three experts in empowerment • To collect data of the youth empowerment determinants: Apperception the meaning of empowerment (goals, forms of activity, indicators of empowerment success, duration of activity) • Describe youth's understanding of youth health problems, and efforts to prevent smoking • Assessment of the domain or indicators of youth empowerment: collective participation, the ability to identify problems, the formation of organizational structures, the ability to relate to others, resource mobilization, leadership, cooperation with outside agents, program management and critical awareness • Pretest: (1) Individual level: attitude towards control, efficacy, knowledge of resources, assertiveness, advocacy, intention to engage, openness in smoking; (2) Group level: there are activities to plan smoking prevention programs, effective activities improve results, there is a level of member satisfaction • To share experiences and motivate youth about the importance of youth organization	• Assessment of youth empowerment indicators and filling out questionnaires by Karang Taruna Plosok (hamlet youth group) of 30 people • Discuss with the youth group about the measurement results and ask for input on the clarity and use of language in the measuring instruments used • Focus group discussions on groups of young boys (6–12 people) • Focus discussion group of young women (6–12 people) • Participants for FGD are Madiska management and members who are willing to sign an informed consent • Focus group discussions are conducted for 90–100 min • Participatory rural appraisal: FGD with EARS measurement tools (30 male and female youth) • Filling in the questionnaire on all members Madiska (Hamlet Karet) and youth in Hamlet Purworejo group • Sharing sessions on the management of the youth organization "Karangtaruna"

(*continued*)

Research stages and time	Objective	Activities/Method
Second Round *Planning action* First week of February 2020	• Describe the results of youths assessment about the domain of empowerment in Karet Hamlet (presentations and discussions) • Determine empowerment goals, strategies, and resources needed, division of responsibilities • Make a list of activities to increase the empowerment domain: training in healthy life skills (outbound and training), initiation of a youth health program without smoking "Remaja Berdaya Sehat Tanpa Rokok (JayaStar)"; Madiska Empowered with the activity of making posters on the impact of smoking on youth life, following youth agreement or initiatives youth for the prevention and control of smoking behaviour	• Presentation and discussion with Madiska group: around 30 people • Discussions with Madiska groups, main researchers as facilitators, secretaries of Madiska and discussion participants were all youth present • Coordination with psychologists for youth activities and training modules • Coordination with youth health care communities in Yogyakarta
Third Round *Taking actions* Fourth week of October–November2020	• Activating youth activities through Implementing youth health program without smoking or "Remaja Berdaya Sehat Tanpa Rokok (JayaStar)"	• Healthy life skills training for youth • Exposure to youth health, the impact of smoking on youth life • Parenting education: The role of parents in realizing a healthy and superior young generation • Vlog or video contest about the impact of smoking on youth's lives • Inauguration of youth volunteers for youth health programs without smoking (JayaStar Volunteers) • Declaration of a youth movement with healthy power without smoking(JayaStar Movement)
Fourth Round *Evaluation actions* December 2020	• Reassessment the empowerment domain • Evaluate individual-level changes, and group level changes (post-tests) related to smoking prevention programs • To get feedback from the Madiska Group regarding activities that have been carried out and follow-up plans	• PRA (Participatory Rural Appraisal) with focus group discussions to reassess the empowerment domain • Posttest with a questionnaire to all members of Madiska (Karet Hamlet) and youth groups in Purworejo Hamlet • Focus group discussions on parents (father and mother groups) • Madiska wrote down their experiences while being involved in the program and made a follow-up plan

Note(s): During the COVID-19 pandemic, starting from March to August 2020, youth empowerment activities stopped according to the direction of the hamlet head, but the communication between the youth community and researcher continued by telephone and WhatsApp. Community activities such as the elderly Integrated Healthcare Center "posyandu" have started in September 2020 by implementing health protocols such as using masks, maintaining distance and washing hands. Thus, youth empowerment activities can also be started from mid-September 2020 while still applying health protocols

Table 1.

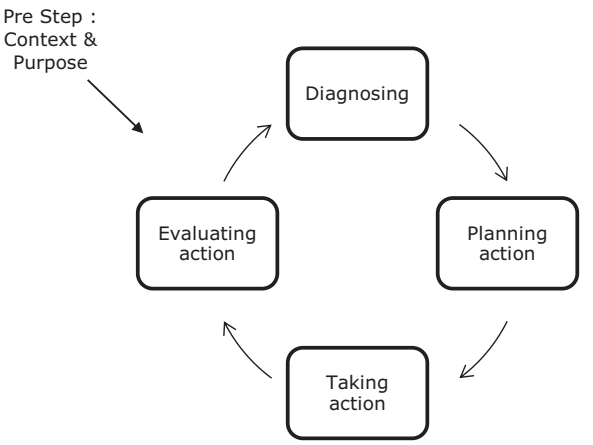

Figure 1.
Stages of action research according to Coghlan and Brannick (2014)

and Eid Mubarak celebration, supporting the development of a children's reading corner initiated by Madiska youth by providing children's books and magazines.

Stage 1. Diagnosing

The diagnosing phase focuses on identifying and defining the problem and collecting data for further investigation (Coghlan and Brannick, 2014; Susman and Evered, 1978). This stage involves conducting dialogue activities with stakeholders in the program to determine the themes of the planned activities to be conducted. The topics discussed concerned general youth problems and explored youth smoking prevention programs. The diagnosis stage includes an articulation of the underlying theory with careful consideration of the community context (Coghlan and Brannick, 2014). What is important in diagnosis is the collaborative interaction between the researcher and the target audience (Smith *et al.*, 2010). At this stage, several research steps were accomplished. First, the validity test of the empowerment indicators was done on the community and experts, and the second-stage focus group discussions were conducted to equalize the perceptions related to the meaning of empowerment and the domain of empowerment through participatory rural appraisal (Holden *et al.*, 2004). Secondly, interviews were conducted to explore youth issues and determinants of youth empowerment such as predisposing youth group structure and group climate, and finally, the pretest about the level of the individuals with the research questionnaire was administered to the intervention and control groups.

Stage 2. Planning action

Planning action involves considering courses of action based on initial diagnosis (Coghlan and Brannick, 2014; Susman and Evered, 1978). At this stage, several meetings were held to share ideas and experiences as well as learn techniques, models and experiences. Participants provided their assessment of each domain, by comparing experiences and opinions (baseline assessment), then recorded the reason for the agreed rank (Laverack, 2007). The objective of planning action is to describe the results of youth's assessment about the domain of empowerment in Karet Hamlet with presentations and discussions; to determine empowerment goals, strategies and resources needed, division of responsibilities; and to make a list of activities to increase the empowerment domain. The activity plan involves training in healthy life skills with the following materials: self-awareness, empathy, interpersonal relationship, effective communication, critical thinking, emotional control,

problem-solving, coping with stress and decision-making skills. This stage also included the initiation of a youth health program called JayaStar with Madiska empowerment activities such as making posters on the impact of smoking on youth life followed by youth agreement making or initiatives by the community youth for the prevention of smoking behavior.

Stage 3. Taking action

Taking action is implemented according to the specified plan (Coghlan and Brannick, 2014; Susman and Evered, 1978). This section describes the taking action of some programs that have been mutually agreed between the participants and the facilitator. The mechanism of youth empowerment programs consisting of enhancing local leadership and management skills. Youth activation programs that have been agreed on include training (indoor) and outbound (outdoor) activities with the theme of boosting the potential of young people by explaining the dangers of smoking to health, parenting activities, initiation of the youth movement into the JayaStar youth group, creating a banner with the JayaStar declaration and the inauguration of health care youth volunteers as official JayaStar representatives.

Stage 4. Evaluating action

Evaluation is assessing the actions and their consequences, documenting and interpreting cycle outcomes to aid improvement (Coghlan and Brannick, 2014; Susman and Evered, 1978). At this stage, evaluation and visual representation are needed at the group level, namely the evaluation of the youth empowerment domain, which aims to find out the extent of the process and implementation of youth empowerment in smoking prevention programs. This is done with the PRA method with the EARS (Empowerment Assessment Rating Scale) measuring tool, and then spider web configuration will be created to reflect the community ties to the PAR project goals. Next, evaluation of the impact of the JayaStar youth empowerment program on individual and group level changes will be done using the research questionnaire. Evaluation of the individual-level changes will assess attitudes toward control, efficacy, knowledge resources, assertiveness, advocacy, intention to engage and openness in smoking after the intervention. Furthermore, evaluation of group-level changes includes the presence or absence of activities for planning smoking prevention programs, effectiveness of activities implemented on the results and whether or not there is an increase in the satisfaction of members of the youth group among themselves. Moreover, the Madiska youth community will ultimately conduct self-reflection and conduct youth meetings to explain the lessons learned while being involved in the JayaStar program and to develop a follow-up plan.

Data analysis

Analysis of the qualitative and quantitative data obtained at the diagnosis and evaluation stages uses mixed methods. Qualitative data analysis involves using three interacting stages, namely data reduction, data presentation and conclusion drawing or verification (Miles and Huberman, 2014). To ensure the trustworthiness and quality of the data, three different techniques are used: (1) prolonged involvement in the community, (2) peer debriefing in research participants and (3) triangulation of resources with the research team (Miles and Huberman, 2014). Moreover, the quantitative data collection using the computer program in the evaluation phase applies the PRA method to compare the pretest and posttest results. Each domain of youth empowerment is measured and displayed visually as part of an evaluation program using the spider web configuration. Figure 2 is an example of a spider web configuration.

Research ethics in the context of PAR research is built on participation with the community in which the research is conducted. This participation assumes that community members consist of the youth community and stakeholders in the setting area who

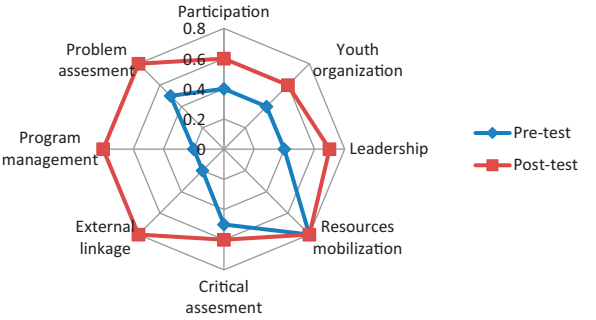

Figure 2.
Example of a *spider web* configuration

understand the research process and actively participate in the research process. All youth participants in this research had permission from their parents and provided informed consent before the study started. This study received approval from the Medical and Health Research Ethics Committee of the Faculty of Medicine, Public Health and Nursing, Universitas Gadjah Mada (KE/FK/1334/EC/2019).

Discussion

This paper describes the stages of JayaStar youth empowerment in smoking behavior prevention programs in a rural area of Indonesia that is called Karet Village. The proportion of smokers aged over ten years is more in rural areas than in urban areas with a percentage of 30.3 and 27.6% (Kementerian Kesehatan Republik Indonesia, 2018). This finding is in line with the results of research by (Rahim *et al.*, 2016), which showed that smoking in rural areas is higher than in urban areas, respectively 36.8 and 31.9%. The study took data from the Global Adult Tobacco Survey among Indonesian adults aged ≥15 years. The strongest predictors of smoking behavior in rural areas were the high tolerance of the community toward smoking in the house and the male gender. Men smoke more than women, which has implications for family economic stability. Besides, tobacco consumption shows addiction, which means smoking is an irrational behavior (Rahim *et al.*, 2016). Furthermore, smoking behavior at a young age is associated with low socioeconomic status, the use and acceptance of cigarettes in siblings and peer groups, the perception that smoking is an acceptable norm and low skills to resist the social influence of smoking (United States Department of Health and Human Services, 2012). This is following the characteristics of rural communities, namely generally living in poverty, having a conservative nature and respecting others (Jamaluddin, 2015).

Community empowerment is a process that involves community components continuously in a strong relationship between differences in individuals and social groups in society (Laverack, 2006). However, in the context of a program, empowerment is a process with individuals, groups and communities that are more organized and broadly shaped based on community action. Empowerment can overcome social, economic and structural conditions that affect public health status (Laverack and Labonte, 2000; Laverack, 2006, 2007).

Research has shown that community empowerment has an impact on improving health outcomes (Laverack and Labonte, 2000; Laverack, 2006, 2007). According to the community psychology research, empowerment is an effort to increase individual competence and self-esteem and increase perceived control, which will have a direct impact on improving outcomes, namely health (Wallerstein, 1992) (Laverack, 2007). Community-based empowerment initiatives that can improve health outcomes focus on broad environmental

change. The direct impact of empowerment is a behavior that can be measured during the intervention period. Community action can promote sustainable changes in the social and organizational environment and is associated with improving health, for example, prevention of alcohol use, tobacco use and accidents (Laverack, 2007).

The process of participation is the basis of empowerment, and it is believed that participation will not occur if the strategy used does not address unresponsive institutional capacity and overcome power imbalances. The empowerment strategy will be effective depending on the number of agency and leadership people involved in the various contexts in which they exist. One aspect that affects the success of the empowerment strategy is if it is done in marginalized communities such as the youth population with risky behavior (smoking) and among those living in poverty since this condition is in line with the characteristics of rural communities (Jamaluddin, 2015). This strategy encourages participation, which can increase autonomy and decision-making ability, a sense of community and social interaction and power from within, which leads to change in people's circumstances (Laverack, 2007).

This study applies the theoretical framework of the stages of community empowerment (Laverack, 2007) and models of youth empowerment in tobacco control (Holden *et al.*, 2004) using the PAR method. The PAR cycle of youth empowerment programs for smoking prevention consists of diagnosing, planning action, taking action and evaluating action. While the stages of community empowerment according to (Laverack, 2007) consist of program design, program objectives, strategies approach, implementation and evaluation of the program outcomes.

The rationale for choosing the PAR method in this study was because it uses a participatory approach to the target (Smith *et al.*, 2010), and this participation is an indicator of empowerment (Holden *et al.*, 2005; Laverack, 2007). Also, there are seven principles of the PAR process that support the success of youth empowerment strategies, namely ongoing self-examination, haring power, giving voice, facilitating awareness-raising, building strength and equipping communities with the skills needed for social change (Smith *et al.*, 2010). Furthermore, PAR bridges the difference between theory and practice, then focuses on problem-solving (Montgomery *et al.*, 2015). The outcomes achieved from the PAR process are dynamic and the novelties created by each PAR team are a cycle between education, reflection, investigation, interpretation and action for a period of months or years (Smith *et al.*, 2010). PAR has been used successfully in many community development projects in developing countries as well as in community-based projects in developed countries. PAR plays a role in various fields such as community development, agricultural expansion, education, health and organizational management (Lennie, 2005). Youth engagement has been recognized as best practice in health education and promotion by the CDC-P (Center for Diseases Control and Prevention, 2010, 2019). For youth empowerment, YPAR is believed to be an effective tool for engaging youth in public health planning and youth-driven transformative community change (Anyon *et al.*, 2018).

The diagnosis phase focuses on identifying and defining the problem under investigation and entails an analysis of the educational needs of the Madiska youth community. At this phase, program design uses a participatory planning approach to the target because it is believed to be more empowering (Laverack and Labonte, 2000; Laverack, 2006, 2007). For example, youth were involved in assessing the empowerment domain and the results of this assessment will be used as the basis for planning the JayaStar program. In the context of empowerment, the program becomes an important vehicle for health promoters to build relationships with communities and stakeholders (Laverack and Labonte, 2000; Laverack, 2007).

Planning action is concerned with the design and development of a pilot training program. The training program will be informed by an analysis of the results from the diagnostic phase. At this stage, program objectives were determined and the selection of planning

strategies to be implemented. Program objectives and empowerment goals are accommodated together in a program (Laverack, 2007) so that the purpose of the empowerment program in this study is to increase the domain of youth empowerment, which consists of participation (Holden *et al.*, 2004; Laverack, 2007), problem assessment capacity, local leadership, structure organization, mobilization of resources, relations with other parties, being critical, program management and relations with outside agents (Laverack, 2007). Training and outbound were chosen by the youth community as a strategic approach because they are intended to create positive action in every empowerment domain that requires improvement (Laverack and Labonte, 2000; Laverack, 2006, 2007).

Stage 3, taking action: at this stage, the mechanism of youth empowerment programs is described to increase the capacity of adolescents in smoking prevention programs. This phase is closely related to the problem identification stage and the expression of the needs of the target population (Laverack, 2007). Factors that influence the process of youth empowerment are predisposing factors for adolescents, group structure and group climate. The empowerment indicator is any increase in the empowerment domains during the intervention (Holden *et al.*, 2004; Laverack, 2007). The relationship between the facilitator and participants and the development of participant's critical awareness are two aspects that are very important in the empowerment process (Mohajer and Earnest, 2009)

The fourth stage of action evaluation is assessing the suitability of action and plan and assessing the impact of youth empowerment programs (Coghlan and Brannick, 2014; Montgomery *et al.*, 2015). The evaluation uses the PRA method, which involves the youth community becoming more active, more visual and acting as a sharing-empowering group (Chambers, 1994). Furthermore, youth empowerment will have an impact on individual and group changes (Holden *et al.*, 2005). The results of youth empowerment at the individual level include youth actively participating in the planning and implementation of smoking prevention activities with the community. In the context of smoking prevention, these changes can occur as a result of youth participation in organizations. Specific characteristics that indicate the outcome of the empowerment process are changes in attitudes and beliefs of adolescents (such as certain efficacy domains, attitudes toward sociopolitical control and participatory competence), specific knowledge such as knowledge about the availability of resources and skills as agents of social change such as assertiveness and advocacy (Holden *et al.*, 2004, 2005). Meanwhile, indicators of group changes include activities that have been made for planning, effective activities in increasing results, retaining and adding members and level of member satisfaction (Holden *et al.*, 2004). Moreover, empowerment impacts on health and well-being with indicators of increasing awareness of risk behaviors and behaviors that improve health (Wilson *et al.*, 2008).

An evaluation to see the relationship between the empowerment process and the outcome also needs to be done (Rothman *et al.*, 2019). The purpose of the evaluation design is not to detect the impact of the program on changes in adolescent smoking behavior, because it is a longer outcome compared to the length of time this study was collected (Holden *et al.*, 2004; Rothman *et al.*, 2019). The model for the "JayaStar" youth empowerment program emphasizes the descriptive analysis of the characteristics of participants, group structure and youth initiation related to tobacco control. The key point to increase youth empowerment is the quality and participation of youth who naturally engage in activities that contribute to empowering individuals. This empowerment process will affect changes in individuals, groups and society and other desired outcomes. Empowerment manifests interactions between individuals and the environment that are culturally and contextually defined. As a result, the manifestation of empowerment will look different in different people, organizations and locations. In some people, the empowerment mechanism can give rise to a sense of control; for some others causing real control, and the result is that the power of practice affects their own lives as well as the lives of the people around them (Holden *et al.*, 2004).

This research is part of a dissertation project. Some papers related to research results will be published in international journals and scientific meetings at an international and a national level. Besides, the results of the activity will be published to local masses both online and off-line to increase public awareness of the importance of the program. The findings will also be disseminated to stakeholders, health centers and local health offices.

Conclusion

The PAR cycle of youth empowerment framework for smoking prevention consists of four stages: diagnosing, planning action, taking action and evaluating action. The rationale for choosing the PAR approach in our study is found in action research characteristics, which include participatory, collaborative and empowering. This approach is suitable for contextualization of problems faced in the process of development and implementation of the JayaStar Youth empowerment in the smoking prevention program. The diagnosis stage consisted of three activities, that is, focus group discussions with groups of male and female, youth assessment of empowerment domains and measuring individual and group involvement levels related to the smoking behavior prevention program. The diagnosis results were applied in the action planning stage, followed by a discussion on youth empowerment plans and strategies. In the action stage, activities and programs are arranged according to discussion and planning, that is, training in healthy life skills (outbound and training) and the "rites of passage" initiation of community youth as members in the JayaStar Program. The evaluating action stage will assess the progress in the empowerment domains in the youth group, then conduct focus group discussions with parents, to evaluate the impact of the empowerment program on individual and group changes and to facilitate self-reflection by the Madiska youth community. This research project is expected to contribute to the literature relating to PAR for rural settings and the use of empowerment strategies to prevent youth smoking behavior.

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Appendix

Figure A1.
Map of Pleret district according to Pleret (2019)

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