

SOCIAL ENGINEERING FOR REDUCING HYPERTENSION CASE IN INDONESIA: A QUALITATIVE STUDY IN A RURAL AREA

REKAYASA SOSIAL UNTUK MENGURANGI KASUS HIPERTENSI DI INDONESIA: STUDI KUALITATIF DI DAERAH PEDESAAN

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ABSTRACT

Consuming foods with a large amount of salt is an unhealthy lifestyle that raises blood pressure. People currently love salty foods in Indonesia. One of district in Indonesia called Jeneponto referred to hypertension as Nai' Cera. The Jeneponto community consumes more significant salty food higher than the provincial average for South Sulawesi. An intervention study was carried out to change the habit of consuming high salt, smoking and drinking coffee. This study is qualitative with participatory action research approach. The in-depth interviews and focused group discussion were addressed to twenty-two informants which involved in an intervention program. Social engineering became the key-point to socialize the importance of the program. Well-trained local people recruited as an agent of change. They followed the social engineering intervention and focused on what people need to reduce hypertension. The program raised awareness on hypertension towards their lives by educating as well as discussing on their risky habits on over consumptions fatty, sugar, salt substances. The successful behavior changes in this program comprised several keys to consider such as: the intervention locations, the closest relationship towards the agent, the agent as frontliner, sustainability of the program, and commitment of all components of intervention.

Keywords: family-based intervention, social commitment, social engineering

ABSTRAK

Mengonsumsi makanan dengan jumlah garam yang banyak merupakan gaya hidup tidak sehat yang dapat meningkatkan tekanan darah. Masyarakat Indonesia saat ini sangat menyukai makanan asin. Salah satu kabupaten di Indonesia; Kabupaten Jeneponto, menyebut hipertensi sebagai Nai' Cera. Masyarakat Jeneponto mengonsumsi makanan asin lebih banyak dibandingkan dengan rata-rata provinsi Sulawesi Selatan. Sebuah studi intervensi dilakukan untuk mengubah budaya kebiasaan mengonsumsi makanan asin, merokok dan minum kopi. Penelitian ini bersifat kualitatif dengan pendekatan penelitian aksi partisipatif. Wawancara mendalam dan diskusi kelompok terfokus ditujukan kepada dua puluh dua informan yang terlibat dalam program intervensi. Rekayasa sosial menjadi kunci utama untuk mensosialisasikan pentingnya program ini. Masyarakat lokal yang terlatih direkrut sebagai agen perubahan. Mereka mengikuti intervensi rekayasa sosial dan fokus pada apa yang dibutuhkan masyarakat untuk mengurangi hipertensi. Program ini meningkatkan kesadaran tentang hipertensi terhadap kehidupan mereka dengan mendidik serta mendiskusikan kebiasaan berisiko mereka dalam mengonsumsi lemak, gula, dan garam secara berlebihan. Keberhasilan perubahan perilaku dalam program ini terdiri dari beberapa hal yang perlu diperhatikan, yaitu: lokasi intervensi, hubungan terdekat dengan agen, agen sebagai frontliner, program yang bersifat keberlanjutan, serta komitmen semua komponen intervensi terhadap program tersebut.

Kata kunci: intervensi berbasis keluarga, komitmen sosial, rekayasa sosial

INTRODUCTION

Indonesia, which is formed up of numerous ethnic groups, offers a wide variety of regional foods. In general, the tongue represents the taste of the

food consumed. There are standards for what constitutes delectable food in each region. Food is considered to be tasty by Makassarese ethnic,

particularly those from the Jeneponto region, especially three distinct flavors: salty, savory, and sour (Widyasari, 2014). The study also showed that people of Jenetalassa, Jeneponto rarely used spices like garlic, shallots, ginger, and lemongrass when serving cuisine. They use such spices only to preserve the food's original flavor. People frequently add excessive amounts of flavorings in food to boost the tastiness (Ministry of Health Republic of Indonesia, 2013a). Approximately, 92.5% of the residents of Jeneponto Regency regularly use spices more than once per day. The spices following both North Luwuk and Sinjay Regency in South Sulawesi Province for flavoring is Jeneponto.

Regarding the habit of consuming salty food in the Riskesdas 2013 indicated that the habit of consuming salty food in the Jeneponto community is far above the average consumption of people in South Sulawesi Province. Given by age group, the preference for salty foods is evenly distributed in all age groups. In fact, there was no reduction in salt consumption in the age group over 40 years. A study showed that the risk of hypertension is closely related to increasing age (Faisal et al., 2022). Regarding high salt intake, a portion of food could contribute to the incidence of hypertension that known as the term *Nai' Cera*. *Nai'* means up and *cera* means blood. *Nai' Cera* means anger, a sign that people get angry easily. It is also known by the local language of Mangkasara' to as hypertension (Irianto, 2014).

The risk of vascular diseases including stroke, myocardial infarction, and all other causes of death linked to vascular disorders are significantly increased by hypertension (Nuraini, 2015). Morbidity and mortality from cardiovascular disease are inversely correlated with hypertension (Rahajeng & Tuminah, 2009). If the people do not raise their awareness to control blood pressure and adopt preventative measures, their condition will worsen.

The prevalence of hypertension is currently rising in Indonesia. According to Riskesdas data, hypertension prevalence raised from 25.8% in 2013 to 34.1% in 2018. According to age category, the percentage of people with hypertension in 2018 who were 18–24 years old was 13.22%,

25–34 years old was 20.13%, and 35–44 years old was 31.61% (Ministry of Health RI, 2018). By age, the likelihood of having hypertension rises. Men are more likely than women to experience hypertension early in life. The prevalence of hypertension rises with people aged over 40 years (Ministry of Health, 2006).

Age, heredity, obesity, high salt intake, smoking, and coffee consumption were a few factors of hypertension (Martiani & Lelyana, 2012), (Sugiharto, 2007), (Ministry of Health Republic of Indonesia, 2013b). The prevalence of non-communicable diseases, particularly hypertension, is also influenced by changes in socioeconomic position, urbanization, and life expectancy (Kisjanto et al., 2005) but few empirical data exist on its risks in Asian populations. Methods: 235 cases and 682 age-matched controls of women of reproductive age (20–44 years). As a result, both prevention and therapy are required to manage hypertension. Intervention studies must be carried out since managing hypertension is crucial. The target community, community leaders, stakeholders, and researchers collaborated to create a design for this hypertension management intervention. The therapeutic model aims to transform risky behavior into *Nai' Cera* overcome behavior.

Many studies identified the cause and medication of hypertension. Unfortunately, information on hypertension based on local specific to rural and remote area. Preventive and promotive system are needed to improve health status. When the system functions to decrease the number of cases implies limited number of medications.

RESEARCH METHODS

Study design

This research is qualitative with a Participatory Action Research (PAR) design. This intervention research is a follow-up to the Health Ethnographic Research conducted in 2014. From the Health Ethnographic Research, an illustration was obtained that people in the study area are at risk of hypertension. This study identified the empowerment model of Reducing and controlling

Nai Cera based on local specific in remote and rural area. By this, all research subjects are involved in problem identification, action planning, implementation, and evaluation. The research subjects were selected purposively to contribute and carry out the mutually agreed-upon roles.

Participants consist of ten agents of change from district health office personnel; ten keypersons from cadres, community figures, and religious leaders; and 2 informants from administrative leaders. The research location was the place for implementing Health Ethnographic Research i.e., Jenetalassa Village, Rumbia District, Jeneponto Regency. The periods started from 2 January - 31 Desember 2017.

In-depth interviews to selected participants to identify the changing of their behavior of their either food consumption or food processing. Besides, to identify the process of cooking and the use of additional substances immediately to people of Jeneponto was using observations. Focused group discussion (FGD) arranged to identify perceptions on hypertension and solve this health issue. All the results of interviews were confirmed to the informants and the result was reviewed by senior researcher who matches medical anthropology.

Data analysis

Two-way observation noted from the people observed what the researchers did. All observations were noted in a checklist that led to elaboration in tables. Moreover, the in-depth interview and FGD recordings were transcribed verbatim. All transcripts were in open coding stage, then summarized in categories. All the axial coding or categories were selected to be heading as using the selective coding. All the key terms are synthesized to become the main theme or heading; and sub theme or subheading to complete the result of the study. All data analysis used the software namely opencode 4.0 series.

Ethical consideration

This research project was approved by Ethics Committee of NIHRD Ministry of Health

Republic of Indonesia. The ethics code number was KEPK-BPPK No. LB.02.01/2/KE.089/2018.

RESEARCH FINDINGS

Jenetalassa was a small village and has people with a unique tradition for their living. They live in mountains with a cold and humid area. It is located in northern side of subdistrict Rumbia for more or less seventeen kilometers. The distance between Jeneponto to Jenetalassa about 34 kilometers.

People of Jenetalassa usually work at fields and the female stays at home doing all domestic matters. They also work to grow coffee plants. Jenetalassa with his Makasarese ethnicity is well-known from consuming unusual meat, horse meat. They prefer this to other meats. They eat the meat almost regularly and believe that it will give them power to do daily activities. Eating habits of them comprised in 3 principal tastes such as: jappa (umami), cekla (salty), and kacci (sour). They also consume sweet coffee together with snacks in the evening *called abulo sibatang*.

Their habits of consuming meals such as: horse meat, sweet coffee and snacks, and salty fish led them to potential hypertension called *nai cera*. Therefore, to overcome this situation, stakeholders of health and village initiated intervention for saving them from hypertension.

The Findings

The participant's total was twenty-two (n=22). Ten agents of change from district health office personnel; ten keypersons from cadres, community figures, and religious leaders; and 2 informants from administrative leaders were taken for this study.

The findings of the present study revealed three main themes such as: design planning for social engineering, using social engineering as an agent of change, and reviewing social change. Each theme comprised several subthemes, with several meaning units. This study elaborates several main points to describe all the findings regarding to results and discussion. There are as follows:

Table 1. Lists of informants

	Initials	Sex	Positions/Role	Occupations
1	AN	Female	AoC	NCD department
2	AS	Male	AoC	Health Promotion officer
3	JS	Female	AoC	Health Promotion officer
4	RS	Female	AoC	Chief of Village (wife)
5	BE	Female	AoC	Midwife coordinator – health center
6	DB	Female	AoC	Coordinator of women community program
7	SF	Male	AoC	Health Promotion Officer
8	IS	Female	AoC	Nutritionist
9	US	Female	AoC	Family Medicine
10	MT	Male	AoC	NCD department
11	EL	Female	Keyperson	Community Midwife
12	DJ	Female	Keyperson	Traditional Birth Attendant
13	DC	Male	Keyperson	Sub village chief 1
14	DB	Male	Keyperson	Sub village chief 2
15	DP	Male	Keyperson	Sub village chief 3
16	CC	Male	Keyperson	Sub village chief 4
17	SE	Male	Keyperson	Sub village chief 5
18	FA	Female	Keyperson	women community program
19	NS	Male	Keyperson	Religious leaders
20	RW	Female	Keyperson	women community program
21	DS	Male	Administrative	Chief of village
22	AM	Male	Administrative	Secretary of village

Source: researchers' documentation

Design Planning for Social Engineering

The initial procedure of this study was to socialize the activity and review the hypertension issues encountered by the neighborhood, like the phases of operational research activities. It primarily addresses the hazards and causes encountered. The results of the *Nai' Cera* risk behavior ethnographic investigations are constantly being updated.

“...There are many Nai' Cera in this area; they frequently consume salted fish and hammer checkers, particularly if you must bring coffee to the garden along with a sizable 1.5-liter bottle of mineral water. ...”

Quotation 1. [RW, Keyperson – Women community program]

The selection of AoC and keyperson

There was consensus regarding *Nai' Cera's* risk behaviour, and debates about their necessary to be followed up by officers from the Jeneponto Health Service program, Rumbia Primary healthcare officers, Jenetalasa Village Government, community leaders, PKK, youth organizations, and representatives of those suffering from *Nai' Cera* were among the participants in this activity. They all agreed to take action to reduce the risk of *Nai' Cera*. The individuals engaged in this action, known as Agents of Change, carry out the movement to effect change (AoC). Keypersons are the participants from the Village.

It is obvious during the conversation that putting out change activities requires a lot of effort. It was agreed that this action should

continue halfway to optimize results. The selection of the AoC should be aware of the significance of sustainability and that they have to contribute time, possess communication skills, and be dedicated to the success of this change movement. This is a glimmer of hope from the participants' talk regarding the significance of sustainability of the activities.

“There are many activities that are very difficult, like having to smoke less, drink less coffee, and eat more vegetables, but later there will be results. This activity must be completed to the end and must not stop in the middle of the road. According to research from the Ministry of Health in Jenetallasa, the number of people who are sick with Nai' Cera is high.....”

Quotation 2. [AS, Health Promotion officer]

Identifying public awareness

The first step of the implementation was raising public awareness on the dangers of Nai' Cera. Information was shared and discussed between the people and the vulnerable to hypertension. The AoC shared to keyperson on the basic food preparation and hypertension information as a precaution so that they are away from the disease.

Keyperson delivers information to the target of intervention. They sometimes get denial and acceptance from the community. The hardest thing is to adjust their habits of smoking. Moreover, the understanding of Nai Cera and the risk factors follow are shared and discussed.

Another way is keyperson give examples to the community several cases to the Nai Cera. The cases follows the hypertension such as: stroke, CVDs, and the like. This represents what currently happens to their neighborhoods.

Using social engineering as an agent of change

The researchers provided the AoC a debriefing, so they were capable to perform their jobs. In order to understand some practical information on Hypertension, including how people understand hypertension, this debriefing has to be executed. The second is the idea of healthy and nutritious

food, which is conceptually distinct from what locals internalized.

AoC were trained on how to perform effective communication. It made the AoC convey ideas, emotions, and information to a target audience such as: speech, writing, or body language. Moreover, this also increased public support for and raised confidence to AoC. The concepts of communication used by AoC to acquire acceptance are discussion, sharing knowledge, and no frivolous. Of course, this is inextricably linked to the support given by stakeholders to the AoC in its time of need. Other abilities offered to the AoC were practical skills in addition to excellent communication. Based on a variety of health data, the AoC created this content.

“to make people understand, we have to train keyperson by effective communication... meaning that local language is a must. The important thing is closest neighbor should know the risk of Nai Cera”

Quotation 3. [AN, NCD Officer]

Due to the possibility of causing Hypertension, the number of activities are being changed. The Jenetallasa people's tradition in preparing food in *pallu cekla* is the first thing to consider. Cekla means salt and Pallu means to cook. The primary ingredients are salt, food seasoning, and a few spices. The second is *abulo sibatang*, which involves doing conversation by smoking, snacking with chili sauce, and drinking strong and sweet coffee. This activity has similarity to afternoon tea break. Third, the practice of consuming coffee was more than 10 cups per day. The skills offered are food processing technology, menu planning, and healthy eating patterns, all of which adopt the traditions of the local community and are based on the scenario of solving current issues.

“..... It turns out that cooking food without seasoning can still provide delectable results as long as there are plenty of spices used. It has a party food flavor.

Quotation 4. (AS. Health Promotion officer)

In addition to the family strategy, religious rituals and abulo sibatang tradition are used in social marketing to promote behaviors that reduce the risk of hypertension. Furthermore, a structural strategy is applied to increase stakeholder support for this course of action. Officials from the village government will constantly remind them of the mutually agreed-upon actions in both internal and public gatherings. Religious and community leaders also play a strategic role. An essential component of the intervention's successful implementation is the social and cultural legitimacy of the two figures carrying out the activity.

Reviewing the Social Change

The Jenetalassa village has a secondary health centre (puskesmas pembantu) that facilitate both health care and promotion and prevention. Nevertheless, for activities such integrated service post (posyandu) was still initiated by the chief of the village. Therefore, to remain the posyandu's activities, he recommends to use the village office buildings for them. The alternative may move to school buildings i.e. elementary school near the village office. It means that no specific building set for posyandu

Considering the idea of operational research, researchers established indicators to assess the success of hypertension risk prevention efforts from the start of the implementation of activities. This indicator was developed as the assessment material for the AoC's activities' implementation and local community outcomes. The indications for AoC as a change-driver was recruited from the most influencing figures from target communities. Moreover, the AoC changed the health status from the risk to be better. The community is the target group. The ability of the target group is to comprehend the risk factors of hypertension, serve nutritious food, and respond when they experience hypertension symptoms are considered as indicators of success.

When comparing the outcomes of the initial planning of the AoC activities, each AoC's achievement increased. They can recruit new keyperson gradually. The new key person recruited from old key person's social network or

family and closest neighborhood; several strategic activities were successfully launched with a new healthier concept. This represents abullo sibatang by substituting coffee to tea. In short, people with less or never drink coffee has lower risk of hypertension than those who consume 1-3 per day (Miranda et al., 2021) specifically, coffee consumption has long been a suspected cause of hypertension. However, previous findings on coffee consumption and its association with the incidence of hypertension are not homogeneous and still inconsistent. Purpose: To examine the association of habitual coffee consumption with the risk of developing hypertension in a middle-aged Brazilian cohort. Methods: Data were from the multicenter prospective cohort "Brazilian Longitudinal Study for Adult Health - ELSA-Brasil". The cohort comprises 15,105 civil servants, aged 35–74 years at baseline, who were sampled from universities located in six Brazilian cities. For the present study, we analyzed data from 8780 participants initially free of hypertension during a mean follow-up of 3.9 years. The consumption of coffee was obtained at baseline using a previously validated semi-quantitative food frequency questionnaire (FFQ).

People of Jenetalassa finally found their habits and consumption had lead them into Nai Cera. The village midwives and health center staff have also actively engaged in education and promotion on hypertension. The role of AoC is not only to raise awareness but also reinforce and refresh to the people on Nai Cera. Culturally, many of them concerned about medication to lowering their blood pressure by consuming the ingredients from their local harvest such: cucumber, celery leaves, coffee leaves, and *ruku-ruku (Ocimum tenuiflorum)* leaves.

I am no longer lethargic (aching aches), minro-minro (feeling dizzy), and I feel fresher after almost three months of quitting smoking and limiting coffee

Quotation 5. [DP, Keyperson - Sub-village chief 3]

After all, they are experienced the fact that their lifestyle makes them vulnerable to Hypertension as they already knew the symptoms.

Aches (*mala'-mala'*), dizziness with a spinning head (*dete dete paccini*), and head and neck pain are several signs that their blood pressure is starting to arise (*minro-minro paccini*). This awareness was then followed up at the primary healthcare by routine check-ups.

In terms of food processing, the community can select which foods are good for families and which are not. The AoC and any supporting health professionals must put time and effort to developing this capacity. The AoC's observations indicated that certain targets did not oversalt and flavor vegetables when preparing dishes for consumption.

Wow, ma'am, I just tried it, and it's really nice. It turns out that there are a lot of spices in it, but they don't taste like herbs and they are healthy because they don't use seasoning.

Quotation 6. [RS, AoC – chief of village-wife]

Cooking horse meat is a tradition that must be performed whenever a household hosts a party. Horse meat is more valuable than beef in terms of culture. As a result, businesses are required to offer a menu of dishes served with horse meat to people of Jenetalasa or Jeneponto in general. When the seasonal festivity began, It is already understood that over consuming horse meat could increase the risk of hypertension. They said that they should control over the amount of horse meat they consume.

Horse meat is typically consumed in the upper regions to combat the cold because it is hotter. Many people from Jenetalasa Village who live throughout the holiday season complain of having high blood pressure. Horse meat is typically preferred to other meats by Jeneponto residents. Despite the widespread belief that horse meat has a distinctive smell....

Quotation 7. [AN, AoC – NCD Department]

The people have reduced the practice of cooking *pallu-cekla* to preserve milkfish. They turned into cooking by adding spices such as: turmeric, lemongrass, ginger, bay leaves, and lime leaves to prepare cooked fish. These spices

can enhance the flavor of recipes with fish as a main ingredient. They began using candlenut pepper, sand ginger/ aromatic ginger, and ginger in the food preparation process, particularly to obtain a savory flavor.

The strategy used by AoC to promote *abulo sibatang* activities helped raising the awareness to reduce daily cigarette consumption from two packs to half pack. Moreover, some community figures have fully given up smoking. The amount of coffee consumed has also significantly lowered from an initial average of 12 cups per day. Nowadays, it changed only 2 cups. Some of them even drink tea instead of coffee. Basically, they already perform balanced physical activity. Nevertheless, the understanding on less physical activity impact as *Nai Cera* risk factor needs to be improved.

The Discussion

This study was conducted to figure out the way how to reduce hypertension in a certain rural area, i.e. Jeneponto, Indonesia. The remote and rural access become burden in reducing hypertension. Principally, the mode was used community participation encouraged by researcher and stakeholders participatory. The local specific tradition was enriched by healthy and safety food education to their basic consumption to prevent them from risks of blood pressure.

Activities for health intervention depend on a well-planned strategy. One condition for the effectiveness of public health initiatives or programs on reducing hypertension is the community acceptance. An overview of recent studies on elderly interventions in the United States is provided. They utilize a health education strategy which focused on preventing hypertension using a model developed in partnership along with participants such as: knowledge improvement, stress control, and blood pressure monitoring (Wright et al., 2022). Additionally, it is possible to use local culture-based approach to reduce hypertension in nearby communities (Ningsih et al., 2020).

Our intervention study highlights several critical moments. First, intervention studies in

people with hypertension vary depending on the subject area. The research locus in Jenepono where knowledge of hypertension is relatively limited. Particularly, the risk factors that lead to many incidents of hypertension in this area is similar to several studies that people with less control are due to consumption patterns and minimal hypertension knowledge in a social society. This is based on the notion that altering diet might help controlling hypertension (Buheli & Usman, 2019). More extreme social disparities are highlighted in other studies. These studies show that social and even ethnic factors have an impact on hypertension treatment. One of the studies stated that white and black races differed in their possession. Blood pressure control is better for white people (Milani et al., 2022).

Second, social life and the smaller social structure i.e. the family are intimately connected. The family which is the intervention's primary focus is the smallest segment of society and at least briefly mentioned in the emphasis on behavior change in hypertension control. A change in healthy living habits can play a big part in family-based intervention programs. This intervention can help parents and kids have better communication (Nguyen et al., 2021). A family is a location where everyone may help one another for greater changes, particularly while dealing with health issues (Mao et al., 2019).

Regarding an agent of change, the family must select the one to be considered as role model. Parent to child relationship in education gave positive impacts each other (Lechuga-Peña, 2023). The family is the focus of intervention efforts in this study. Family is a key to children's nutritional status (Al Yazeedi et al., 2021). Food and coffee consumption can be effectively addressed through the family. It is believed that dangerous eating habits can be restrained by mothers and young women in daily meal plan. They were some replaced by much healthier eating practices that begin with food preparation, processing, and preservation using healthy ingredients with less number of flavoring or preservatives.

Third, the frontliner of the effective application of hypertension control education is

the AoC. This person represents human interaction in a metaphorical way. These symbols serve as agents of transformation in society (Ormerod, 2019). An appropriate first step in symbolic engagement is to drill or model the subject that is the aim for controlling hypertension. Existing societal stages are necessary in order to change society's perception on the risks associated with hypertension. The AoC prioritizes social transformation, starting with environmental adaptation and moving on to goals, integration, and sustainability (Rusydiyah & Rohman, 2020).

Considering each key person has a particular intervention output, AoC becomes the locomotive of an intervention, can be the catalyst connecting the interaction process between one target (key person) and an effective intervention carried out by that key person. The key person can precisely and efficiently communicate and give feedback to the target by doing practical communication skills, such as helping people break their dependence on MSG as a flavor enhancer. The AoC can overcome the problems during the intervention process in addition to performing their previous tasks. The main challenge is strengthening the social commitment of community figures in this intervention.

Fourth, the sustainability of the intervention program needs to be addressed. When conditions relapse or return to normal, AoC occasionally needs reinforcing. In order for the intervention program to be sustained, social capital, financial backing, and participation incentive are all necessary (Chen et al., 2022), (McCabe et al., 2022). To endure, strong social ties are required. This connection promotes social cohesion, which ensures the viability of current initiatives (Libertun de Duren et al., 2021).

Whether or not the intervention has been successful, the AoC gradually continues to interact socially with the neighborhood, especially with the key person. It is hoped that this social capital will continue to enhance interventions and use as a warning mechanism for upcoming challenges (Campbell, 2020), (Eriksson, 2011), (Watanabe et al., 2022). Village funds, corporate social responsibility, and administrative support

mechanisms are used to optimize the efforts of community leaders to sustain the intervention.

Fifth, commitment is the key to successful intervention. Stakeholder engagement or commitment to community makes positive progress of a program (Robert & Feijoo, 2022). Community participation is a fundamental element of equitable and rights-based health approaches that have proven effective in optimizing health interventions for positive public health impact. Participatory approaches and health improvement do not occur as linear progressions, but rather consist of complex processes influenced by various contextual factors. Successful collaboration or tailoring in program execution is the commitment from stakeholders and the community. Community engagement is key in prioritizing to drive healthcare improvement and that interventions that leverage community engagement can benefit from a contextual learning phase in which organizational relationships and trust can develop (Haldane et al., 2019). Considering conflict in the target community will directly affect how the intervention process unfolds, social commitment within the community must be maintained. Frequent talking to neighbors, higher levels of self-health, the need for health consultations, and the desire to care for family members when they need help are significantly related to preferences for participation and levels of commitment in community activities (Ohama et al., 2020) Japan implemented the Long-Term Care Insurance System (LTCS).

The election of the village chief was one of the fragmentations that directly impacted on the intervention process. Some studies wrote about the effectiveness of community involvement in the planning and delivery of health interventions (Sansiritaweessook & Kanato, 2015) (Clark et al., 2014). They found that the community participation initiatives reportedly associated with positive gains in social capital, social cohesion, and in capacity building among communities (Haldane et al., 2019). One of the factors affecting the success of social mass interventions or social engineering is the hierarchical validation pattern. A higher perceived quality of collaboration in

partnerships improves outcomes from well-functioning partnerships, by strengthening a sense of community and empowerment that promotes health. A sense of community responsibility does not predict future commitment to health promotion. Community members' ownership and sense of responsibility, as well as empowerment are positive partnership processes (Cicognani et al., 2020). This is to ensure that the intervention goals are always more precise and in a suitable direction. Local knowledge might vary from one place to another.

CONCLUSION

This study is quite challenging to change people's habits and lifestyles, the Hypertension Intervention Process is not such a simple social engineering. Time, effort, and high expenses are required for the many stages such as: planning, initial design, implementation, and reviewing of intervention. The family becomes the main target for intervention as it is the smallest unit in society.

The various interventions carried out depend on the geography, topography, and local culture of the intervention location. Social commitment as a basic capital in intervention activities needs to be maintained and stressed. Maintaining social relations between AOC and the community and social cohesion will promote sustainability. Administration support is crucial, especially when obtaining intervention funding. One of the factors that influence the efficacy of social mass interventions or social engineering is the hierarchical validation pattern.

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