

“Sahabat Desa” (Village Friend): Innovation in Placement of Health Workers in the Midst of the Community

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There is a gap between what the person in charge of the health sector is trying to do and what the community feels. On the other hand, health problems are found that do not stand alone but are interrelated with many factors from other sectors. Innovation is needed to bridge this gap. This study tries to present "Sahabat Desa" (Village Friend) to overcome the gaps that occur. The study was aimed to describe how the process of Sahabat Desa assisted the community to achieve better conditions. The study, using the participatory action research approach, was conducted by placing a health worker, referred to as a "Sahabat Desa", as a participant – placing Sahabat Desa directly (living) in the midst of the community. The results of the study found that Sahabat Desa could fill the implementation gap between the programs initiated by the government and those accepted by the community. Placing Sahabat Desa as health workers directly in the midst of the community could shorten the time needed to solve many health problems in the village. The presence of Sahabat Desa in the community could also unravel health problems related to other causes. Sahabat Desa could also play a role in connecting health problems in the village with solutions from other resources, even resources from outside the village.

Key words: *Vllage Friend, Participatory Action Research, Community Empowerment, Health Innovation.*

Introduction

Health development in Indonesia has shown progress compared to previous years. But this progress is still unsatisfactory – this is the condition when we compare it with other countries in the same region. Indonesia's efforts are noted to have a relatively lower achievement level. Maternal Mortality Rate (MMR) is an example: in 2015, MMR in Indonesia was 305 per 100,000 live births; the same year Malaysia recorded 24 per 100,000 live births, Vietnam 69 per 100,000 live births, the Philippines at 221 per 100,000 live births, Thailand at 25 per 100,000 live births, and Cambodia at 170 per 100,000 live births (Widyaningtyas, 2018; Wulandari and Laksono, 2020).

Achieving a comparable public health status is inseparable from the three unique challenges that must be faced by Indonesia as a nation. The three challenges are geographical, demographic, and sociocultural challenges. The geographical challenge that must be faced is Indonesia's geographical span that stretches from west to east with more than 17 thousand islands, with disparities in health services that still exist between regions (United Nations Group of Experts on Geographical Names, 2017; Laksono, Wulandari and Soedirham, 2019a).

Demographic factors also colour the challenges Indonesia must face. Poverty and low education are the biggest contributors to the comparatively poor health status. Some previous studies inform the proven gap between wealth status and education (Wulandari *et al.*, 2019). The government has worked hard to reduce the gap in access for the poor. The government initiated the National Health Insurance health financing policy, operating since 2014, although to date it has not produced results as expected (Nasution, Mahendradhata and Trisnantoro, 2020).

Another challenge unique to Indonesia is the diversity of ethnic groups in Indonesia; noting that Indonesia has more than 500 ethnic groups (Badan Pusat Statistik, 2011). It seems that Indonesia with its diverse culture becomes a challenge when each ethnic group has its own health beliefs, which are often not in harmony with modern medical knowledge (Dwiningsih and Laksono, 2019; Pratiwi *et al.*, 2019). This condition is a challenge in itself, especially for programs that are generic nationally. Additional efforts are needed so that a program can be accepted incorporating local wisdom.

There is a gap between what the person in charge of the health sector is trying to do and what the community feels. On the other hand, health problems are found that do not stand alone but are interrelated with many factors from other sectors. Innovation is needed to bridge this gap. This study tries to present "*Sahabat Desa*" (Village Friend) to overcome the gaps that occur. By presenting the Village Friends directly in the community it is hoped that the information chain can be bridged and problems can be immediately overcome (Megatsari *et al.*, 2019).

Friends of the Village can directly utilise the network of resources in the village, including connecting with other resources outside the village.

Based on the background description, the study was aimed to describe the process of Sahabat Desa, assisting the community to achieve better conditions. The results of this study are important to provide information on the strengths and weaknesses of placing health workers directly into the community. The result is also important for the government to allow it to replicate the program and ensure sustainability.

Methods

Study Design

The study was conducted with a participatory action research approach. Action research is research conducted to solve problems either directly or through a reflective process of progressive problems carried out by individuals who work with others in the team or as part of the target community to improve the way they solve problems (Boyer *et al.*, 2019; Haynes *et al.*, 2019). Qualitative data collection is done through in-depth interviews and participatory observation.

Study Sites

The study was conducted for 2 years (2018-2019) in two regencies in East Java Province (Malang and Kediri). In 2018, a site study was conducted in Malang Regency. The study was conducted in three villages in Kalipare Subdistrict, namely in Arjosari Village, Kaliasri Village, and Sumber Petung Village. In 2019, a study was conducted at Kediri Regency. The study was conducted in three villages in Kepung Subdistrict, namely Kepung Village, Kebonrejo Village, and Besowo Village.

Participants

The participatory action research was carried out by placing a health worker, referred to as a "Sahabat Desa", as a participant. Health workers were selected who had a Bachelor of Public Health graduate qualification. Selected *Sahabat Desa* were trained with several related materials by academicians and health researchers. The materials consist of a set of public health approaches, public health priorities, and several indicators of minimum service standards in the health sector. Furthermore, the *Sahabat Desa* are placed directly in the middle of the community (lived in) for one year. Each *Sahabat Desa* was fully responsible for one selected village.

Data Analysis

The data collected were transcribed verbatim. Data were analysed using a thematic analysis approach. The study results will be narrated in several case study forms during the participatory process in the field.

Limitation

The limitation of this study is that it is done in rural areas. The results will certainly be different if implemented in urban areas with the same approach. The rural or urban classifications have several specific indicators, especially supporting facilities, in the form of different facilities and infrastructure for the two categories (Laksono, Wulandari and Soedirham, 2019b; Laksono and Wulandari, 2020). Social bonding that is much stronger in rural areas will also be a differentiator; if we apply the same study in urban areas we tend to find a more fluid social system (Ogum Alangea *et al.*, 2020).

Results

The study results will be narrated in several case study forms during the participatory process in the field. Four case studies were raised as a result of the study, namely assistance for high-risk pregnant women, mentoring efforts to improve nutrition status in infants, acceleration of achieving freedom from open defecation, and potential innovation activities such as egg gathering and aquaponics.

Assistance for High-Risk Pregnant Women

This case study narrates the assistance process to one of the informants (IN, 39 years). She is a mother with a high-risk pregnancy with primary education and not working. Six years ago, IN was the legal wife of BU, who was working abroad at the time. This household is blessed with two daughters and lives in another district.

When left to work abroad by BU, IN established a relationship with HE, who also still has a legal wife. The forbidden relationship produced a pregnancy. These conditions forced IN to leave her husband, BU, and continue to choose to live with HE in Sumberpetung Village by bringing his two children. Their marriage was done secretly after learning that IN was pregnant. Currently IN lives with HE, who is senior high school educated. HE works as a construction worker with a minimum income. At present HE's status is still as the husband of another woman.

New households (IN and HE) have 3 children (2 children between IN and BU, and 1 child between IN and HE), and are pregnant with a fourth child with 31 weeks' gestation. This is a high-risk pregnancy, yet she was hiding the pregnancy from the general public, including local village midwives. IN's case finding is known from health cadre reports.

Receiving reports from health cadres, *Sahabat Desa* and village midwives immediately make a home visit for a pregnancy check-up. Based on the results of the examination, IN was diagnosed with danger signs for the pregnancy. Among them are hypertension, severe dizziness, the whole body experiences swelling, so it's difficult to walk. The midwife advised IN to check the condition of her pregnancy with an advanced health service facility because the condition was dangerous for the mother and foetus.

IN admitted that in addition to the cost factor, her husband was also less attentive. IN's last check with the midwife was at 3 months of gestation. Not only are there economic difficulties, but this household also has difficulty in managing an official identity, especially for their children. His previous background was a major factor in complicating this identity. Incomplete identity ownership can hamper the administrative process to get help in the National Health Insurance mechanism.

Seeing the IN condition, midwives also had difficulty in referring patients with childbirth assistance due to limited ownership of identity, not having a resident identification card, family card, and marriage book. However, midwives and *Sahabat Desa* still try to take care of the delivery guarantee requirements by using an old family card and accompanying mothers to help deliver mothers with high-risk pregnancies.

Sahabat Desa accompanies and motivates IN to examine the health centre. Assistance starts with picking up IN, then transferal to the registration room until the inspection by the midwife. After examination it was found that IN was positive for protein 3 mg/dl of urine, which can cause preeclampsia; blood pressure measurements are 210/120 mmHg. With this condition, IN is experiencing termination which is very dangerous for the health of mother and child, thus requiring IN to be referred to the hospital for a more complete pregnancy check-up.

After the pregnancy check-up, *Sahabat Desa* mediated between HE (husband) and the village midwife. *Sahabat Desa* takes a personal approach to HE to provide support to IN to actively check themselves. Mediation was carried out because there was a dispute between HE and the midwife. HE is not ready for the condition that requires IN to be referred to the hospital, being of the view that getting to a hospital costs a lot of money. While IN can only surrender, because her condition is weak, and she already understands the stubborn nature of HE. Eventually, IN was able to survive; IN was referred to the hospital for further examination and ended with a caesarean section.

Mentoring Efforts to Improve Nutrition Status in Toddlers

Anthropometric measurements were carried out on all toddlers who were targeted at Posyandu (*Pos Pelayanan Terpadu/Integrated Service Post*) Sedap Malam –obtained from about 36 toddlers who were selected. The number of these toddlers, with a breakdown by sex, consisted of 19 boys and 17 girls under five. Based on the results of the examination it was found that there are toddlers with age categories ≤ 2 years and age categories > 2 years dominated by stunting cases. Ranking of the problems of the two toddlers ≤ 2 years is dominated by wasting, while the position of the two toddlers > 2 years is dominated by the problem of underweight.

Based on the assessment of the nutritional status of toddlers, 8 toddlers with at least 2 nutritional status problems have been found. From 8 toddlers, 7 families accompanied the under fives, while 1 toddler family dropped out due to illness and moved address. Friends of the Village in the process of deepening in the field carried out the assessment with the help of Posyandu cadres.

In general, based on interviews and observations, it is known that under-five family income is relatively low as one of the causes of limited purchasing power, so that has an impact on children's nutritional status. The limited purchasing power of food items often causes toddlers' diet to be less varied so that nutritional fulfillment is felt to be less than optimal. This condition is added to by the educational level of parents of toddlers, most of whom are only primary school graduates. Another interesting fact obtained is the phenomenon of toddlers experiencing underweight and poor nutrition problems are often cared for by their fathers and/or grandmothers. The results of in-depth interviews found that the father or grandmother did not understand the problems of nutrition and healthy eating patterns in children. Often the variety of food provided is lacking.

The mentoring method was chosen based on the results of discussions and agreements with relevant stakeholders. Assistance is carried out to reduce the number of children under five suffering from malnutrition. This assistance is also one of the preventive interventions for toddlers and children to avoid malnutrition and poor nutrition.

Choices for malnutrition and underweight compared to stunting are often due to time considerations. The problem of stunting is not possible to be solved by an intervention in just a few months. With these considerations, the underweight problem was chosen as evaluation material for assistance interventions (Aryastami *et al.*, 2017).

Assistance is carried out with direct education to families who have underweight and poor nutrition. Technically, this hands-on education brings together *Sahabat Desa* with the family, so that *Sahabat Desa* can persuade the family to be willing to follow the advice of health

workers. Assistance efforts are carried out once a week for three months. At each mentoring visit, *Sahabat Desa* used leaflets as a tool for understanding the material presented. The theme presented is adjusted to the conditions in the field (according to input from mothers or toddlers' families) as well as the condition of the children experiencing nutritional problems.

The stages in the mentoring activities begin with informal communication with mothers or toddlers' families to get information about family characteristics, nutritional knowledge, and parenting. After that, the material was given, either through leaflets or direct communication. In the final stage, the facilitator is directly involved in activities that are being carried out by toddlers, such as playing, feeding, or even assisting mothers in providing supplementary food to toddlers.

Assistance to 1-3. The first mentoring focussed on the dissemination of a balanced diet for infants and toddlers. In the initial stages the *Sahabat Desa* do not directly disseminate. The *Sahabat Desa* chooses to get to know and ask questions about the family and education and parenting that has been applied by the family – mother, father, or grandmother. This step is taken to avoid the less pleasant target response. The companion chose to be more familiar with the family of toddlers or caregivers. In the next step, a mild explanation was given regarding nutritional problems that could be disturbing.

The next meeting began to use tools in the form of leaflets that were equipped with pictures of various menus to make it easier for clients to understand the material presented. At this stage an explanation is given about the concept of feeding, eating portions, frequency of eating, and balanced menus for toddlers, as well as general guidelines for balanced nutrition for families. During Phase 1-3 assistance, observations were also made on target toddlers regarding daily eating habits. Based on observations habits were found in toddlers who are accustomed to consuming snacks haphazardly, especially snacks that contain additional ingredients.

Assistance to 4-6. The material on this accompaniment is based on previous observations, namely a type of good snack for toddlers. Assistance at this stage is information about healthy snacks for children. Mothers were given knowledge about the dangers of consuming unhealthy snacks while teaching them to make healthy, nutrient-dense, and affordable snacks. At this stage of the visit, another problem was discovered, namely the habit of toddlers who have difficulty eating.

Further interesting information conveyed by *Sahabat Desa* is the processing of additional food derived from vegetables or fruit that is easily obtained around the location. With this material provision, it is hoped that there will be no reason not to provide additional food as food support for toddlers. Some examples of these processed foods are those made from moringa leaves, corn, beans, including some other high-fibre foods.

Assistance to 7-9. The information provided at this stage develops on the material on tips for dealing with toddlers who have difficulty eating. The material was chosen based on observations made in the previous mentoring. Besides, the causes of toddlers having difficulty eating was also discussed and wrong actions that are often done by parents in dealing with difficult eating habits.

Difficult eating habits tend to be left by the family or the mother of young ones. They reasoned that they had run out of ideas to persuade toddlers to want to eat. If this habit is allowed to continue it will have an impact on the deteriorating nutritional status of children under five because of the fulfillment of inadequate nutritional intake. Not only for caregivers or toddlers' families, but *Sahabat Desa* also persuades toddlers to eat more often, so that not only is it the families who try, children are also motivated. Another way is to reward children if they have eaten well. This reward can also be a solution to increase the child's desire to eat.

Assistance to 10-12. At this stage *Sahabat Desa* gives rewards to the caregivers of toddlers in the form of booklets that contain a collection of food recipes. The reward is given so that mothers are motivated to try variations on nutritious menus for toddlers. The recipe is easy to practice and at the same time gives information about the nutritional content.

Acceleration to Achieve Open Defecation Free

Available data on families who do not have healthy latrines in Kaliasri Village, Kalipare Subdistrict, Malang Regency, consists of many versions, although the source is the same, from the sanitation officer of the Kalipare Health Centre. This confusion of available data makes *Sahabat Desa* feel the need to validate the data of families who do not have healthy latrines. Based on input from sanitarians, cadres, and local community leaders, 22 families needed verification and validation.

Furthermore, *Sahabat Desa* visited the house of 22 target family homes to validate the data. The final result of the validation found that there were at least 12 families who did not have healthy latrines. Five families already have private bowel movements, but they are still in the form of ordinary earthworks. The rest are accustomed to defecating in the river, or riding in on other facilities owned by neighbours.

The results of field observations found empirical facts that families who do not have healthy latrines are all in the poor category. This is marked by the floor of the house that has not been cemented, or the walls of the house that has not been walled in, or are made of woven bamboo. Other information unearthed found that the twelve family heads worked as farmers or farm labourers.

The results of observations in the field show that there are still some families defecating in the river or open spaces. Kaliasri Village people who defecate in the river use a river that does not flow around the house. This condition causes piles of human waste that accumulate in the river. Some residents have localised their faeces in pit latrines. A pit latrine is a simple attempt to localise faeces, because at a minimum the community has their latrines, and does not defecate just anywhere, and has been concentrated at a certain point.

A pit latrine is made by making a 30-50 cm deep hole with a wooden body that is arranged on top of it or made of woven bamboo. These rows of wood or woven bamboo also function as dug hole covers. Toilet walls are usually made of makeshift materials, the most common are used rice sacks or used banners as semi-permanent walls. Most latrines that are made do not have roofs and doors.

Based on previous information, the problem of open defecation requires accelerating efforts so that the target of government programs to end open defecation can be realised immediately and the community can feel the impact. *Sahabat Desa* who have a network with sources outside the community, are trying to help solve the problem of open defecation in Kaliasri Village.

Several philanthropic sources were successfully identified by the *Sahabat Desa* who could help solve the Open Defecation problem in Kaliasri Village – the Al Falah Social Fund Foundation (YDSF) Malang, and the Indonesian Sanitation Management and Empowerment Association (APPSANI). YDSF Malang is one of the National *Amil Zakat* Institutions that has received recognition from the Ministry of Religion. APPSANI is a collection of sanitation entrepreneurs who are gathered in an association. This association is present in response to requests for quality toilet facilities, as a result of the incessant triggering process and sanitation education carried out by local governments and partner organisations. The response from APPSANI is expected to be able to support the process of changing the behaviour to using healthy latrines that is expected to occur (Soedjono and Fitriani, 2016).

Furthermore, mediated by *Sahabat Desa*, APPSANI and YDSF Malang tried to communicate, until an agreement was reached for the division of roles for each organisation. APPSANI has a role in the technical aspects of latrine construction in Kaliasri Village, including, in this case, the provision of labor and material for toilet construction. YDSF Malang has a role in raising funds to fund the construction of latrines.

After the construction of healthy latrines facilitated by YDSF Malang and APPSANI, *Sahabat Desa* gradually evaluated the use of latrines for two months. An evaluation was conducted to determine the behaviour of latrine use in families of healthy latrine beneficiaries. Checks through field observations are carried out suddenly without prior notice. This is intended to look empirically in settings that are not made up. The method of observation is carried out by seeing whether there are traces of usage lately. Checking is done after the usual hours when

residents use the toilet. Evaluation results obtained indicate that the residents receiving latrine assistance have used healthy latrines. It can be ensured that the beneficiary community no longer defecates in the river or uses previously owned pit latrines.

Potential Innovation Activities: Social Gathering of Eggs and Aquaponic

Potential innovation activities are innovation activities that can be implemented in each village in the context of stunting control without leaving the potential of each region. This step is strategic to guarantee the success of the intervention (Gugerty, Biscaye and Leigh Anderson, 2019; Malapit *et al.*, 2020). This is called potential because it has not been fully implemented by the *Sahabat Desa*. Limited time to stay with the community has not ensured all the potentials and problems in each region have been successfully handled.

Social gathering of Eggs. At one time after the Posyandu (integrated healthcare centre), the cadre complained to the *Sahabat Desa* about the low attendance of children under five at the Posyandu. The cadre took the initiative to invite mothers of toddlers to make a social gathering so that they were interested in coming, but the cadre felt hesitant to withdraw money because it was feared there would be a conflict. Then *Sahabat Desa* together with cadres held a light discussion to find a substitution for the money. An idea emerged to use eggs as a means of social gathering payments.

Eggs were chosen given their existence which has become a public menu for the community and are there in almost every home. Some communities also have raised chickens. Besides, to make people aware of the threat of stunting for the Indonesian generation to know it can be prevented starting from their own homes, and they do not have to depend on what is given by the government. Eggs are nutrient-dense and delicious food, easy to process, and relatively inexpensive when compared to other animal protein sources. For children, teenagers, and adults, eggs are the ideal food and are very easy to get. The community does not need to worry about consuming eggs, considering eggs as a source of protein that contains irreplaceable amino acids that are needed especially for pregnant women and toddlers as fuel in the body and as building blocks and regulating substances.

A common concern raised by mothers of toddlers is the myth that eating lots of eggs makes children have boils. This was then straightened out by the *Sahabat Desa*. Eggs are not the cause of boils. Boils are very individual. The ulcer is an inflammation of the skin that usually affects the hair follicles and is caused by *Staphylococcus aureus* bacteria.

How is the social gathering of the eggs method carried out? The social gathering of eggs is carried out as a gathering in general, it's just that the payment does not use money, but 1 egg for every 1 toddler paid by parents for every Posyandu. At each Posyandu, the social gathering

will be drawn, where 1 toddler who attends a social gathering can receive 1 kg of eggs which generally consist of \pm 16 eggs. Only 1 kg per month is given considering the fresh clean eggs stored in the refrigerator can last for 14 days. But it can also be adjusted to the wishes of mothers of toddlers in each Posyandu. So, if in one Posyandu there are 50 toddlers, in one Posyandu implementation if every toddler participates in a social gathering number, 50 eggs will be obtained. Thus, it can be drawn if 2 toddlers join a social gathering they get 25 eggs each, or 3 toddlers get 16-17 eggs each (according to agreement).

Aquaponic. Today we are faced with one of the problems associated with malnutrition. Stunting has the potential to become a massive problem in the future if not addressed as early as possible. The condition of malnutrition as a toddler is likely to increase the risk of future infections and degenerative diseases. Of the three target villages in Kepung Subdistrict, Kediri Regency, two of them are highland areas with distinctive mountainous characteristics. This shows obstacles to fulfilling nutrition, especially for food access in the form of fish. The main obstacle to accessing fishery commodities in mountainous areas is the difficulty of continuous water access for independent livestock so that they must rely on vegetable vendors from the market.

Local community interest in fish consumption is relatively low. This is influenced by various things that vary according to the conditions of the region. Low fish consumption exists because access to it requires more effort compared to a variety of other side dishes that are easier to obtain. Fish becomes important for consumption, especially as a source of protein that contains saturated fat in low concentrations and contains omega-3 fats.

How can the community's interest in consuming fish be higher? *Sahabat Desa* chose to bring the community closer to getting fish more easily. *Sahabat Desa* initiated efforts to produce their own fish. The problem faced is the lack of water supply in typical mountainous areas.

Sahabat Desa found an opportunity by applying the aquaponic cultivation method as one of the efforts to have water-saving fish. Aquaponics is very suitable to be applied on a household scale because it does not require a large area of land and the scale of production is limited to household consumption. In addition to producing fish products, aquaponic also produces products in the form of plants for consumption, including vegetable plants and family medicinal plants. The main component of the aquaponic method is the presence of containers used to collect water containing fish and containers containing planting media for plants and as a natural filter and regulator of water circulation in containers. The design of this cultivation method adapts to the existing environment and can be modified as desired.

Discussion

Filling the Gap

It is common in the community that there is a gap between what people want and what is provided or offered by healthcare facilities or health workers. Community-based participatory action research has succeeded in removing, or at least reducing this gap (Megatsari *et al.*, 2019; Yoto *et al.*, 2020). Placing *Sahabat Desa* directly in the community (community-based), and not in a health facility (facility-based), provides many benefits. Being in the midst of the community means complaints can be directly heard, inequality can be immediately addressed, and deficiencies can immediately be solved (Kusumawardani *et al.*, 2015; McKay *et al.*, 2020). This gives more value in the service process so that it can better pursue quality following the minimum service standards targeted in the health sector. On the other hand, the community also feels more satisfied, because complaints can be directly conveyed. Even though it may not be possible to provide a solution right away, people already feel heard.

Placement in the village, while still taking into account the minimum service standard targets in the health sector, means the *Sahabat Desa* must study the performance or details of the performance of the health sector at the village level. *Sahabat Desa* must be able to describe every indicator in the minimum service standard in the health sector to become a target in the village so that anything they do will lead to a contribution to improving the minimum service standard.

Connecting the Unconnected

The concept of "connecting the unconnected" departs from the fact that there are groups of people in the community that have limited access to health services. This fact is confirmed in previous research in the Indonesia context (Laksono, Wulandari and Efendi, 2020). Limitations to accessing this service is one of the reasons for the lack of access to health services. In general, access can be divided into several aspects, including geographical, economic, and social access. Geographical access can be described as ease of reaching health services as measured by distance, length of time for the trip, type of transportation, road infrastructure (Emerson *et al.*, 2020; Laksono, Rukmini and Wulandari, 2020; Love-Koh *et al.*, 2020). Economic access places more emphasis on the ability of the community to allocate financial capability in reaching health services. Whereas social access is more on communication, culture, hospitality, and service satisfaction issues, which emphasises more the perspective of consumers or the community towards the healthcare system (Megatsari *et al.*, 2018; Prado-Galbarro *et al.*, 2020).

The second point also emphasises a process of community empowerment that can connect a community with resources outside the community, which are not yet connected to these resources. This linking process is quite strategic in helping to solve the health problems faced



by a community so that the connected community gets various kinds of benefits from the connectedness, besides of course the health problems they face (Fasona *et al.*, 2019).

The concept of connecting can be related to one of the recommendations of the Ottawa Charter produced at the first International Health Promotion Conference, which is about Health Promotion Strategies. The Health Promotion Strategy consists of 3 concepts, namely advocate, enable, and mediate. In explanation, the concept of mediate is a form of activity that connects sources that care about health issues (Agide and Shakibazadeh, 2018; Harrison, Loxton and Somhlaba, 2019; Vu, Rutherford and Phung, 2019). Some of them are government, non-governmental organisations, philanthropic institutions, professional organisations, media, industry, and others.

Conclusions

Placing *Sahabat Desa* as health workers directly in the middle of the community can shorten the time needed to resolve many health problems that arise in a village. The presence of *Sahabat Desa* in the community can also unravel health problems related to other problems. *Sahabat Desa* can also play a role in connecting health problems in the village with solutions from other resources, even resources from outside the village.

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REFERENCES

- Agide, F. D. and Shakibazadeh, E. (2018). 'contextualising ottawa charter frameworks for type 2 diabetes prevention: a professional perspective as a review. *Ethiopian Journal of Health Sciences*, 28(3), 355–364. doi: 10.4314/ejhs.v28i3.14.
- Aryastami, N. K. *et al.* (2017). 'low birth weight was the most dominant predictor associated with stunting among children aged months in indonesia', *Bmc Nutrition*, 3(1), 12–23 doi: 10.1186/s40795-017-0130-x.
- Badan Pusat Statistik (2011). *kewarganegaraan, suku bangsa, agama dan bahasa sehari-hari penduduk indonesia hasil sensus penduduk 2010*. jakarta.
- Boyer, N. *et al.* (2019). 'using action research to innov8: facilitating culture shifts in the scholarship of teaching and learning', *Community College Journal of Research and Practice*, 43(8), pp. 556–572. doi: 10.1080/10668926.2018.1512060.
- Dwiningsih, S. and Laksono, A. D. (2019). 'How to control the sexually transmitted diseases in benjina?: qualitative studies on the practice of prostitution', *Health Science Journal of Indonesia*, 10(1), pp. 58–66. doi: 10.22435/hsji.v10i1.1044.
- Emerson, P. *et al.* (2020). 'Equity of access to critical care services in scotland: a bayesian spatial analysis', *Journal Of The Intensive Care Society*, in Press, 11, 18, 122-128. doi: 10.1177/1751143720914462.
- Fasona, M. *et al.* (2019). 'Incentives for collaborative governance of natural resources: a case study of forest management in southwest nigeria', *environmental development*, 30, pp. 76–88. doi: 10.1016/j.envdev.2019.04.001.
- Gugerty, M. K., Biscaye, P. and Leigh Anderson, C. (2019). 'Delivering development? evidence on self-help groups as development intermediaries in south asia and africa', *development policy review*, 37(1), pp. 129–151. doi: 10.1111/dpr.12381.
- Harrison, C., Loxton, H. and Somhlaba, N. Z. (2019). 'stress and coping: considering the influence of psychological strengths on the mental health of at-risk south african adolescents. *child care in practice*, 12, 16, 1-15. in press. doi: 10.1080/13575279.2019.1604492.
- Haynes, E. *et al.* (2019). 'community-based participatory action research on rheumatic heart disease in an australian aboriginal homeland: evaluation of the "on track watch" project. *Evaluation and Program Planning*, 74, pp. 38–53. doi: 10.1016/j.evalprogplan.2019.02.010.



- Kusumawardani, N. *et al.* (2015). *Qualitative methods for health research (penelitian kualitatif di bidang kesehatan)*. Yogyakarta: pt kanisius.
- Laksono, A. D., Rukmini, R. and Wulandari, R. D. (2020). 'regional disparities in antenatal care utilisation in indonesia', *plos one*, 15(2), p. e0224006. doi: 10.1371/journal.pone.0224006.
- Laksono, A. D. and Wulandari, R. D. (2020). 'urban-rural disparities of facility-based childbirth in indonesia', in *4th international symposium on health research (ishr 2019)*. denpasar: atlantis press, pp. 33–39. doi: 10.2991/ahsr.k.200215.007.
- Laksono, A. D., Wulandari, R. D. and Efendi, F. (2020). 'determinants of hospital utilisation among urban poor societies in indonesia', *International Journal Of Innovation, Creativity and Change*, 12(9), pp. 375–387.
- Laksono, A. D., Wulandari, R. D., & Soedirham, O. (2019). regional disparities of health center utilisation in rural indonesia. *malaysian journal of public health medicine*, 19(1), 158-166. doi: 10.37268/mjphm/vol.19/no.1/art.48.
- Laksono, A. D., Wulandari, R. D. and Soedirham, O. (2019b). 'urban and rural disparities in hospital utilisation among indonesian adults. *iranian journal of public health*, 48(2), pp. 247–255. doi: 10.18502/ijph.v48i2.819.
- Love-Koh, J., Griffin, S., Kataika, E., Reville, P., Sibandze, S., & Walker, S. (2020). methods to promote equity in health resource allocation in low-and middle-income countries: an overview. *globalisation and health*, 16(1), 6-6. article number 6. doi: 10.1186/s12992-019-0537-z.
- Malapit, H. *et al.* (2020). 'Empowerment in agricultural value chains: mixed methods evidence from the philippines. *Journal Of Rural Studies*, in press, p. in press. doi: 10.1016/j.jrurstud.2020.04.003.
- Mckay, A. S. *et al.* (2020). Types of union participators over time: toward a person-centered and dynamic model of participation. *Personnel Psychology*, 73(2), pp. 271–304. doi: 10.1111/peps.12339.
- Megatsari, H. *et al.* (2018). 'Community perspective about health services access. *Bulletin Of Health Systems Research*, 21, pp. 247–253. doi: 10.22435/hsr.v21i4.231.
- Megatsari, H. *et al.* (2019). '*Connecting the unconnected*': participatory action research on healthy empowered villages. Edited by B. Suyanto. Surabaya: Health Advocacy.
- Nasution, S. K., Mahendradhata, Y. and Trisnantoro, L. (2020). 'Can a national health

insurance policy increase equity in the utilisation of skilled birth attendants in indonesia? a secondary analysis of the 2012 to 2016 national socio-economic survey of indonesia. *asia-pacific Journal Of Public Health*, 32(1), pp. 19–26. doi: 10.1177/1010539519892394.

Ogum Alangea, D., Addo-Lartey, A. A., Chirwa, E. D., Sikweyiya, Y., Coker-Appiah, D., Jewkes, R., & Adanu, R. M. (2020). Evaluation of the rural response system intervention to prevent violence against women: findings from a community-randomised controlled trial in the central region of ghana. *global health action*, 13(1), 1711336. article number 1711336. doi: 10.1080/16549716.2019.1711336.

Prado-Galbarro, F.-J. *et al.* (2020). ‘Satisfaction with healthcare services among patients with diabetes, hypertension, and/or dyslipidemia in mexico: a cross-sectional study’, *value in health regional issues*, 23, pp. 19–24. doi: 10.1016/j.vhri.2019.11.002.

Pratiwi, N. L. *et al.* (2019). ‘Concealed pregnant women or kemel of gayo ethnic in blang pegayon district, gayo lues district, aceh. *Bulletin of Health System Research*, 22(2), pp. 81–90. doi: 10.22435/hsr.v22i2.1693.

Soedjono, E. S. and Fitriani, N. (2016). ‘Penyediaan jamban sehat sederhana untuk masyarakat berpenghasilan rendah berbasis pemberdayaan masyarakat di kelurahan tambakwedi, kecamatan kenjeran, kota surabaya. *Jurnal Sains Dan Teknologi Lingkungan*, 8(1), pp. 36–45.

United Nations Group of Experts on Geographical Names. (2017). *United nations conference on the standardisation of geographical names*, 11th. available at: <https://unstats.un.org/unsd/geoinfo/ungegn/ungegnconf11.html> (accessed: 1 june 2020).

Vu, A., Rutherford, S. and Phung, D. (2019). ‘Heat health prevention measures and adaptation in older populations—a systematic review. *International Journal Of Environmental Research And Public Health*, 16(22), 158-159. article number 4370. doi: 10.3390/ijerph16224370.

Widyaningtyas, T. (2018). *Red report card on the death rate of indonesian mothers (rapor merah angka kematian ibu indonesia)*. Jakarta. available at: <https://katadata.co.id/analisisdata/2018/05/30/rapor-merah-angka-kematian-ibu-indonesia>.

Wulandari, R. D. *et al.* (2019). ‘Socioeconomic disparities in hospital utilisation among elderly people in indonesia’, *indian journal of public health research and development*. Surabaya, 10(11), pp. 1800–1804. doi: 10.5958/0976-5506.2019.03885.3.



- Wulandari, R. D. and Laksono, A. D. (2020). 'Antenatal care as predictor of neonatal death in rural indonesia. *International Medical Journal*, 25(2), pp. 511–518. available at: <https://www.seronijihou.com/article/antenatal-care-as-predictor-of-neonatal-death-in-rural-indonesia>.
- Yoto, M. *et al.* (2020). *Social determinants of stunting countermeasures: participatory action research in healthy villages empowered by stunting countermeasures (determinan sosial penanggulangan stunting: riset aksi partisipatif desa sehat berdaya fokus penanggulangan stunting)*. Edited by S. Sumarmi. Surabaya: Health Advocacy.