ORIGINAL RESEARCH

Successful recruitment and retention strategies for women health volunteers: viewpoints of the volunteers' supervisors and relevant researchers

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Background: Women health volunteers (WHVs) are a link between people and healthcare workers. Despite their key role in promoting community health, strategies are rarely designed to keep them volunteering. The aim of this research was to find successful strategies to overcome barriers to recruitment and retention of the volunteers in assigned activities.

Subjects and methods: A three-round online national Delphi technique was used to ask the opinions of Iranian health volunteers' supervisors and the relevant researchers. At the first round, the participants were asked ten open-ended questions across four barriers: inadequate capability of the volunteers and trainers, inadequate acceptance of the volunteers, restrictive social norms, and organizational problems. At the second round, with the questionnaire consisting of closed-ended questions, the experts were asked to rank the feasibility of each strategy using a seven-point Likert scale. Items along with the feedback received from the second round were included in the third-round questionnaire. Strategies with a median of 6 or higher and with an interquartile range ≤1 were regarded to be feasible.

Results: Consensus was obtained on 100 of the 133 strategies. A mixture of improving group work, implementing motivation tactics, assessing the needs of people/WHVs, reforming policy, monitoring and evaluation of WHVs/trainers, mobilizing the community, empowering WHVs/trainers, rationalizing WHVs/trainers/ people, improving intersectional collaboration, implementing problem-based approaches, allocating proper resources, appropriate recruitment of WHVs, using social networks, and information dissemination were found to be the effective strategies to overcome the barriers to active participation.

Conclusion: The highest consensuses among experts were on implementing motivation tactics and mobilizing the community. It seems that community mobilization, incentives, and logistical supplies such as providing prizes and transportation facilities for volunteers are mechanisms that can help retain WHVs and also overcome barriers to their active participation.

Keywords: health volunteers, Delphi technique, consensus, community health, retention strategies

Introduction

The new primary healthcare approach emphasizes strengthening of social participation to promote health.[1] Community participation is a process by which people are actively and effectively involved in determining issues, deciding on the factors influencing their lives, formulating and implementing policies, designing, developing and delivering services, and trying to achieve changes.[2] As a consequence of these changes, an empowered and developed community can be established.[3] People's participation in diagnosing and identifying health problems leads to improvement in health service

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coverage, increase in community health literacy,[4] social learning, increase in knowledge and skills,[5] and reduction in employee absenteeism.[6] Involvement of the community in health developing activities can also be done through voluntary work or community-based activities.[7] Many governments strengthen their health system by using voluntary actions.[8]

For these reasons, in 1990, the Ministry of Health and Medical Education of Iran developed the women health volunteers (WHVs) initiative nationwide.[9] Inside the program, volunteers are the people living in a geographic area covered by a health center, who are familiar with the culture and customs of the society. WHVs recruited those women who voluntarily took part in community health activities including attending training sessions, educating health issues, updating demographics, and following up the covered 50 households.[10]

Health volunteers contributed to disease control, public health promotion,[11] oral health improvement,[12] and an increase in childhood immunization as well as breastfeeding rates[13] in different countries worldwide. Similarly, in Iran, the evaluation and survey of the WHV program showed that their activities contributed in improving individual and community health.[5] In general, health volunteers can play an effective role in empowering the community due to ongoing communication with families and cultural, economic, and social similarities with the community members.[14]

Nevertheless, studies showed that the lack of transportation facilities, negative attitude of the community members toward volunteering, lack of community support, lack of effective supervision, multiple chronic difficulties, geographic limitations, literacy limitations, limitations of professional respect on behalf of health care workers to health volunteers, and inadequate training were particularly the important barriers to health volunteers' active participation.[15–18] In Iran, these challenges were mainly categorized as lack of familiarity with the program, lack of incentives, and disregarding the needs of WHVs.[9] Furthermore, Vizeshfar et al determined the challenges faced by WHVs, including role confusion, ineffective training program, lack of good reputation among people, and inability to communicate with, and therefore teach, as barriers to the active participation of Iranian health volunteers.[19] As a result, many health volunteers have been inactive to do their duties in recent years.[20]

Although various strategies have been used to overcome barriers to the active participation of health volunteers worldwide,[21,22] various evidences have shown that WHVs initiatives are basically culture oriented. In this case, the intervention approach has to be based on the culture and contexts of the community in which the researchers, healthcare workers, and program supervisors have to collaborate with each other to present suitable and executable strategies.[8] Therefore, the aim of this study was to identify feasible strategies to overcome perceived barriers to the active participation of WHVs utilizing national Delphi technique.

Subjects and methods

An online national three-round Delphi technique was used to identify strategies to overcome barriers to the participation of WHVs. The steps and procedure are briefly presented in Table 1.

Round 1
Aim

The aim of the first step was to identify prospective solutions to overcome barriers to the active participation of health volunteers.

Participants and procedure

A list of authors of 40 scientific articles relevant to WHVs and their supervisors was provided in cooperation with the Ministry of Health and Medical Education. Based on purposive sampling, eligible participants were chosen if they had at least a couple of years of experience in the WHVs program, had at least a bachelor's degree, and had published scholarly articles. Potential participants were contacted by phone/email and were requested to participate in the project. The questionnaire was sent via email and the participants were asked to express their ideas about how to overcome the barriers to the active participation of health volunteers. Two telephone reminders were attempted on 14 and 28 days after the initial distribution.

Questionnaire

The questionnaire items were obtained from the first phase of a qualitative study.[10] Barriers to the active participation of health volunteers were categorized into "inadequate capability of the volunteers and trainers", "inadequate acceptance of the volunteers", "restrictive social norms", and "organizational problems". Also, the subthemes included "volunteers' inadequate knowledge, trainers' inadequate skills, inefficient communication, not taking care of the population covered by the, program, organizational distrust, unrealistic expectations and systemic confusion, escaping and denial of responsibility, lack of motivation and organizational support, and educational failure". Based on perceived barriers, the questionnaire consisted of ten open-ended queries. Each barrier was explained, and then, the participant was asked to report at least five strategies to overcome it. The last section of the questionnaire provided a space for additional comments.

Table 1 The methods and process of implementing the study

Rounds	Aim	Participants	Procedure	Questionnaire	Data analyses
First round	Identifying new solutions to overcome barriers to the active participation of health volunteers	• WHVs program researchers • Health volunteers' supervisors	• Potential participants were communicated by phone/email and asked to participate in the project • Questionnaires were sent via email • Two reminders were sent on 14 and 28 days after the initial distribution through telephone contact	• Consisted of 10 questions about barriers to the active participation of health volunteers • The questions were formulated exploratory (open end) and based on perceived barriers • Provided a space for additional comments	Opinion was analyzed using conventional content analysis technique
Second round	Determining the achievement of consensus around strategies derived from the first round	• All participants of the first round • Other WHV program experts (identified by snowball sampling)	• Invitees received questionnaires via email • Two reminders were sent on 14 and 28 days after the initial distribution through telephone contact	• The questionnaire included 133 strategies obtained from the first round • Using a seven- point Likert scale, participants were requested to rank the feasibility of each item	• Feasible strategies were defined from the statements as possessing a median score of 6 and above • The degree of consensus was defined by calculation of IQR • SPSS software was used to analyze the finding
Third round	Reaching a consensus on strategies that had not previously reached a consensus	All participants in the second round were invited to complete the questionnaire	• Questionnaires were sent by email • Two reminder emails were sent to nonresponders within 4 weeks	• Questionnaire (similar to the second round) was designed on a seven-point Likert scale • The median and IQR derived from the second round of each item was presented	Like the second round

Abbreviations: WHV, women health volunteer; IQR, interquartile range.

Round 2
Aim
The aim of this round was to achieve consensus among specialists on the strategies derived from the first round.

Participants and procedure
All participants of the first round were requested to take part. In addition, snowball sampling was implemented to recruit other potential experts. The received questionnaires were demanded to rate the feasibility of each strategy.

Questionnaire
A questionnaire was developed to identify existing obstacles' solutions. Each barrier was explained first, and then, the suggested strategies were presented. Finally, the questionnaire included 133 strategies. Using a seven-point Likert scale (from 1=low feasibility to 7=high feasibility), participants were requested to score the feasibility rate for each item.

Round 3
Aim
The aim was to obtain consensus over strategies that had not been obtained previously.

Participants and procedure
All participants in the second round were invited to complete the questionnaire. Two reminder emails were sent to nonresponders within 4 weeks.

Questionnaire

Similar to the second round questionnaire, the items were designed on a seven-point Likert scale. In addition, the median and interquartile range (IQR) of each item derived from the second round were presented. Participants were asked to review their responses again and revise their opinions and judgments if needed. Finally, the experts were asked to rerate strategies based on the IQR and median score of each strategy.

Data analyses

Round 1

Data analysis was done using the conventional content analysis method. Therefore, a six-step process of thematic analysis was used.[23] After collecting experts' responses, two researchers independently reviewed the proposed responses and identified themes. Any disagreement was discussed carefully and then adjusted with other research team members' opinions. MAXQDA v.12 software was used to manage the data.

Rounds 2 and 3

Data were analyzed by calculating the median; a median score of ≥6 indicated a "feasible" or "very feasible" strategy. The degree of consensus was defined by calculating the IQR (the distance between the 25th and the 75th percentiles). An IQR value of 1.00 indicated that 50% of all the rankings listed by the participants were located within one point on the scale and was considered as indicative of a high degree of consensus.[24] We wanted to identify which group played a more important role in no-consensus items statistically. Therefore, the Mann–Whitney U test was used to compare the opinions of health volunteers' supervisors and researchers on nonconsensus strategies applying SPSS software because the distribution was not normal. The consolidated criteria for reporting qualitative research were used in presentation of the study results.[25]

Ethics and consent

This study was approved by the Ethical Review Committee of the Tabriz University of Medical Sciences (IR. TBZMED; REC: 1395-1038). The participant had to fill out the online informed consent which explained the aims, reasons for doing the research, the method, and keeping responses confidential, and the procedures of the study.

Results

In order to identify feasible strategies to overcome perceived barriers to the active participation of WHVs through national Delphi technique, a total of 42 specialists including 26 health volunteers' supervisors and 16 researchers were invited to participate in the current study. The response rates for the first, second, and third rounds were 90%, 81.57%, and 78.94%, respectively. Overall, 10 (24%) were male and 32 (76%) were female. The experts were aged 27–51 years (M=35.23, SD=6.65). Experts' field of study included educational administration (n=6, 14%), public health (n=22, 52%), health education and health promotion (n=10, 24%), and family health (n=4, 10%).

At the first round, results of the study revealed that the 133 suggested strategies to overcome barriers to participation of WHVs were categorized into 14 themes including empowering WHVs/trainers, allocating proper resources, assessing the needs of people/WHVs, improving group work, implementing problem-based approaches, using social networks, appropriate recruitment of WHVs, implementing motivation tactics, improving intersectional collaboration, reforming policy, information dissemination, monitoring and evaluation of WHVs/trainers, rationalizing WHVs/trainers/people, and mobilizing the community. Participants at the second and third rounds reached consensus over 81 and 100 items. In the following sections, the suggested strategies are reported through questions.

Q.1. What is needed to increase the knowledge of health volunteers?

A good consensus was gained about empowering WHVs/trainers to increase the knowledge of health volunteers. Furthermore, allocating proper resources, assessing needs of people/WHVs, and improving group work were consensually approved. No consensus was obtained on five strategies (Table 2).

Q.2. What do you believe are contributors to the adequate skills of the volunteers/trainers?

The highest consensus was about allocating proper resources. Other themes included implementing motivation tactics, improving group work, and empowering WHVs/trainers. However, lack of consensus was found for about five items related to implementing motivation tactics, allocating proper resources, and empowering WHVs/trainers (Table 3).

Q.3. Which intervention approaches are needed to improve people's cooperation with WHVs program?

Most of the panelists recommended community-based interventions to improve people's cooperation with WHVs program,

Table 2 Strategies for inadequate knowledge of volunteers: Q.1. What is needed to increase the knowledge of health volunteers?

Consensus status	Theme	Possible solutions
Consensus	Empowering WHVs/trainers	- The implementation of continuous training by healthcare workers - Developing educational materials about important health issues - Increasing the professional knowledge of experts in the health centers where health volunteers are taught - The use of appropriate educational materials and new educational methods for training volunteers - Holding workshops and giving end-of-course certificates to WHVs - Providing training to low-literate or illiterate health volunteers individually
	Allocating proper resources	- The use of active and empowered health volunteers in training new health volunteers - Providing suitable educational places for training and meetings with volunteers - Allocating enough time to train the health volunteers - Specialist health volunteers tailored to the health problem
	Assessing the needs of people/ WHVs	Needs assessment and prioritization to the beginning of the health volunteers' educational course
	Improving group work	Increasing the participation of health volunteers in the provision of educational materials
No consensus	Implementing problem-based approaches	Organizing question and answer sessions regularly with WHVs
	Using social networks	The use of educational software such as Health Ambassador software
	Appropriate recruitment of WHVs	Engaging health volunteers with a higher educational level
	Allocating proper resources	Employing a health trainer who lacks organizational responsibility
	Empowering WHVs/trainers	Requesting volunteers to attend health centers in order to directly observe service delivery system

Abbreviations: Q, question; WHV, women health volunteer.

Table 3 Strategies for inadequate skills of the volunteers/trainers: Q.2. What do you believe are contributors to the adequate skills of the volunteers/trainers?

Consensus status	Theme	Possible solutions
Consensus	Implementing motivation tactics	The use of encouragement and motivational skills such as verbal encouragement or giving awards
	Allocating proper resource	- The assignment of simple activities to health volunteers - The use of specialist healthcare worker in order to train health volunteers - Using the educational method according to the WHVs' skills
	Improving group work	- Designing group works to enhance the communication skills of health volunteers - Using techniques such as role play and demonstration in order to enhance the health volunteers' skills
	Empowering WHVs/trainers	- The use of films and PowerPoint slides, not relying solely on verbal education - The use of new educational methods to enhance the health volunteers' skills
No consensus	Implementing motivation tactics	The ranking of WHVs in terms of the diverse skills as an incentive to promote rank
	Allocating proper resources	- Dividing responsibilities among WHVs and providing feedback to them - Assigning more time to train the WHVs by trainers
	Empowering WHVs/trainers	- Conducting educational classes for WHVs about the communication skills - Implementing educational courses outside the health education series for WHVs

Abbreviations: Q, question; WHV, women health volunteer.

mainly with a consensus about mobilizing the community. Other consensus strategies included information dissemination, reforming policy, improving intersectional collaboration, and assessing the needs of people/WHVs. Conversely, there was no consensus over strategies related to empowering WHVs/trainers and rationalizing WHVs/trainers/people (Table 4).

Q.4. What strategies may be effective on inefficient communication in WHVs program?

Consensus was obtained on the feasibility of all suggested strategies, except for empowering WHVs/trainers and allocating proper resources (Table 5).

Q.5. How could social norms be better to improve the active participation of WHVs?

Most panelists agreed on the use of interventions associated with mobilizing the community, problems' attentiveness, allocating proper resources, rationalizing WHVs/trainers/people, and reforming policy to overcome social norms barriers. Two strategies related to mobilizing the community and rationalizing WHVs/trainers/people had median scores of 5 and were not regarded to be feasible (Table 6).

Q.6. Which interventions are needed to reduce organizational distrust?

Experts agreed that the executive interventions should include reforming policy, improving intersectional collaboration, empowering WHVs/trainers, and allocating proper resources. Three strategies were disagreed for being feasible in reducing organizational distrust. These items were categorized as appropriate recruitment of WHVs, reforming policy, and monitoring and evaluation of WHVs/trainers (Table 7).

Q.7. Which intervention approaches to reduce systemic confusion are most likely to succeed?

A high consensus was achieved on reforming policy. In addition, the five items that emphasized the implementation of short-/medium-term strategies included implementing problem-based approaches, rationalizing WHVs/trainers/people, information dissemination, assessing the needs of people/WHVs, and allocating proper resources. However, no consensus was obtained on three strategies related to rationalizing WHVs/trainers/people, reforming policy, and allocating proper resources as intervention approaches to reduce systemic confusion (Table 8).

Table 4 Strategies for not taking care of the population covered by the program: Q.3. Which intervention approaches are needed to improve people's cooperation with WHVs program?

Consensus status	Theme	Possible solutions
Consensus	Assessing the needs of people/WHVs	Educating people according to their expressed needs
	Mobilizing the community	• Rationalizing community members by local influential people like religious leaders • Appealing education materials • Informing via media and social networks in order to attract people's participation • Educating people about the importance and capabilities of health volunteers • The use of WHVs' collaboration to implement some health programs in the presence of the public
	Improving intersectorial collaboration	Collaborating with the Literacy Movement Organization, the Basij, and other cultural organizations
	Reforming policy	Merging Health Ambassador program with WHVs program
	Information dissemination	Familiarizing households with their WHVs by healthcare workers in various ways such as by text messages
No consensus	Rationalizing WHVs/trainers/people	Putting health information and health-related indicators in the hands of the community members
	Empowering WHVs/trainers	• Family referrals to WHVs by health personnel in some cases • Assigning the delivery of some basic health services to WHVs, such as blood pressure screening

Abbreviations: Q, question; WHV, women health volunteer.

Table 5 Strategies for inefficient communication: Q.4. What strategies may be effective on inefficient communication in WHVs program?

Consensus status	Theme	Possible solutions
Consensus	Using social networks	• Creating a social media channel for WHVs and sharing the channel link to their covered households • Updating work skills using social networks
	Empowering WHVs/trainers	• Empowering WHVs trainers using the participation workshops • Training WHVs in the field of efficient communication
	Rationalizing WHVs/trainers/people	• Updating the knowledge of WHVs and assuring people that most of the educational content in social networks needs to be further explained by WHVs • Rationalizing healthcare workers about using the potential of health volunteers
	Allocating proper resources	• Identifying WHVs with high social interactions and using their potential • Solving the problems of each area using local health volunteers
	Appropriate recruitment of WHVs	• Engaging well-known people in the program • Encouraging all volunteers to identify the norms of communities well
No consensus	Allocating proper resources	Employing the healthcare worker who is more compatible with the roles of WHVs
	Empowering WHVs/trainers	Establishing a sociology workshop (in order to get acquainted with the culture of the community) for WHVs and healthcare workers

Abbreviations: Q, question; WHV, women health volunteer.

Table 6 Strategies for restrictive social norms: Q.5. How could social norms be better to improve the active participation of WHVs?

Consensus status	Theme	Possible solutions
Consensus	Implementing problem-based approaches	• Receiving suggestions and experiences from WHVs about how to overcome the problems and to share their ideas and experiences • Receiving suggestions from communities' key informants about removing or reducing barriers
	Allocating proper resources	• The use of educational posters and banners • Engaging people who have more social acceptability as WHVs
	Rationalizing WHVs/trainers/people	Holding Q & A sessions about barriers to the active participation of WHVs with the participation of influential people
	Reforming policy	• Providing clear guidelines and regulations for WHVs' activities regarding social norms • Engaging male health volunteers in order to educate male individuals
	Mobilizing the community	• Appointing appropriate persons in order to create the suitable conditions for solving cultural problems and expressing issues • Improving peoples' awareness about the role of health volunteers in the health system and the community • Describing the activities of WHVs to their spouses and getting their consent
No consensus	Mobilizing the community	Conducting some meetings with the participation of local community members to express their problems in the presence of other people
	Rationalizing WHVs/trainers/people	Educating influential people with a focus on reducing barriers and supporting them

Abbreviations: Q, question; Q & A, question and answer; WHV, women health volunteer.

Table 7 Strategies for organizational distrust: Q.6. Which interventions are needed to reduce organizational distrust?

Consensus status	Theme	Possible solutions
Consensus	Reforming policy	Strengthening the status of WHVs program in the health system
	Improving intersectorial collaboration	Organizational advocacy to support the efforts of WHVs
	Empowering WHVs/trainers	• Visiting WHVs from healthcare worker activities • Organizing official education courses and giving certification to WHVs
	Allocating proper resources	• Engaging WHVs to help the healthcare worker on specific days of the year • Involving the entire staff in the educational sessions for health volunteers (not using specific trainers)
No consensus	Appropriate recruitment of WHVs	Recruiting people as health volunteers who do not expect any rewards from the health system
	Reforming policy	Efficient implementation of the WHVs program in city centers due to lack of full knowledge of urban health care workers about their community members
	Monitoring and evaluation of WHVs/trainers	Questioning the WHVs about the services that were provided to the households covered

Abbreviations: Q, question; WHV, women health volunteer.

Table 8 Strategies for unrealistic expectations and systemic confusion: Q.7. Which intervention approaches to reduce systemic confusion are most likely to succeed?

Consensus status	Theme	Possible solutions
Consensus	Reforming policy	• Providing a stable position for the WHVs program at the Ministry of Health and Medical Education universities • Setting up a regular work program annually in which if the supervisors change, the program will run regularly • Delegation of some authorities and decisions to the health centers on how to use WHVs • Incorporating WHVs program within the operational programs of the Ministry of Health and Medical Education • Incorporating the WHVs program within the strategic programs of the Ministry of Health and Medical Education • Making decisions from bottom to top about the WHVs program • Increasing the number of WHVs and reducing their tasks
	Implementing problem-based approaches	Inviting volunteers to attend some of their related sessions and getting their opinions
	Rationalizing WHVs/trainers/people	Rationalizing the directors of the health centers about the existing potentials of the WHVs
	Information dissemination	Listing the capability of the WHVs by healthcare workers and displaying it on the health center board for public viewing
	Assessing the needs of people/WHVs	Educational needs assessment by health center staff
	Allocating proper resources	Appointing a WHVs program specialist in all health system categories
No consensus	Rationalizing WHVs/trainers/people	To clarify the role of WHVs for all organizational units
	Reforming policy	Establishing NGOs or associations for WHVs
	Allocating proper resources	Creating job stability and not changing the trainers who educate the WHVs

Abbreviations: Q, question; NGO, nongovernmental organization; WHV, women health volunteer.

Q.8. What can be done to overcome escaping and denial of responsibility problem?

Strategies were located in rationalizing WHVs/trainers/people, reforming policy, using social networks, allocating proper resources, and improving intersectional collaboration. The consensus was not achieved on four suggested factors to resolve escaping and denial of responsibility (Table 9).

Q.9. Which intervention approaches are needed to improve the motivation of health volunteers and their supervisors?

The highest consensuses were obtained on implementing motivation tactics, so that all but one of the eight recommendations was ranked as "very feasible". Three other consensus strategies were related to implementing problem-based approaches and improving intersectional collaboration. However, no consensus was obtained on rationalizing WHVs/trainers/people as an appropriate intervention approach to improve the motivation of health volunteers and their supervisors (Table 10).

Q.10. How can we overcome educational failure?

Consensus was obtained over empowering WHVs/trainers, improving group work, allocating proper resources, reforming policy, mobilizing the community, monitoring and evaluation of WHVs/trainers, and using social networks. There was no consensus over the two suggested strategies in the theme of allocating proper resources. There was no consensus over reforming policy and empowering WHVs/trainers as the strategies to overcome educational failure (Table 11).

Differences between researchers and health volunteer's supervisors

Overall, no consensus was reached for about 33 items of the strategies to overcome barriers to the active participation of health volunteers. Opinions between the two groups of participants were compared using the Mann–Whitney U test. A statistically significant difference was found only among four strategies (Table 12). In all four strategies, researchers had a significantly higher median rank, except "establishing nongovernmental organizations or associations for WHVs".

Table 9 Strategies for escaping and denial of responsibility: Q.8. What can be done to overcome escaping and denial of responsibility problem?

Consensus status	Theme	Possible solutions
Consensus	Rationalizing WHVs/trainers/people	• Introducing the importance of WHVs activities to healthcare workers • To justify the health centers directors about the roles of WHVs, at the beginning of their responsibility
	Reforming policy	• Reducing the number of households covered by WHVs • Prioritization of the WHVs program in health centers
	Using social networks	Setting up an online or telephone system about WHVs problems in order to receive their complaints and comments
	Allocating proper resources	• Providing the necessary facilities for WHVs • Allocating independent budgets to health centers for WHVs training programs • Employing healthcare workers with high responsibility and high commitment as being responsible for health volunteers • Recalculating the health care worker workload and changing the number of employees if necessary
	Improving intersectorial collaboration	The use of facilities of other related organizations for educational programs
No consensus	Reforming policy	Replacing WHVs program with Health Ambassador program
	Implementing problem-based approaches	Referring WHVs' problems to higher levels
	Assessing the needs of people/WHVs	Educational needs assessment and prioritization of issues in health centers
	Empowering WHVs/trainers	Teaching the main principles of management to health center directors

Abbreviations: Q, question; WHV, women health volunteer.

Table 10 Strategies for lack of motivation and organizational support: Q.9. Which intervention approaches are needed to improve the motivation of health volunteers and their supervisors?

Consensus status	Theme	Possible solutions
Consensus	Implementing motivation tactics	• Developing material and spiritual support programs to encourage trainers • Free visits for WHVs and their family members by the health center physicians • Holding recreational competitions among WHVs • Developing material and spiritual support programs for the WHVs • Showing appreciation to WHVs in the workplaces • Promoting the motivation of WHVs and employees based on Maslow's hierarchy of needs • Providing pilgrimage and recreational tours for WHVs
	Implementing problem-based approaches	• Applying problem-solving approach • Prioritizing the health problems of WHVs by the health centers and supporting them
	Improving intersectorial collaboration	Using the community potential such as collaboration of WHVs with Basij to support-deprived areas
No consensus	Rationalizing WHVs/trainers/people	Implementing an educational course for directors of health centers about how to motivate healthcare workers and WHVs
	Implementing motivation tactics	Providing a monthly fee as an allowance to volunteers

Abbreviations: Q, question; WHV, women health volunteer.

Discussion

In the current national Delphi study, strategies to overcome barriers to the active participation of WHVs were investigated. Results revealed the views of WHVs' supervisors and researchers. In the first round, 133 strategies emerged, using a consensus level of 70%. The consensus was obtained over 81 items at round 2 and 100 strategies at round 3.

In all questions, the use of educational methods was emphasized as the strategy to overcome barriers to WHVs' active participation. These results were in line with many other studies.[11,26,27] For example, Correia believes that education is effective in developing skills and increasing participation as well as empowering the WHVs/trainers of people in the society.[28] Education contributes to better understanding of active social participation by creating participation knowledge among people.[29] Moreover, studies have shown that training health care workers will improve their performance through the following three mechanisms: critical awareness about health service performance, acquiring the ability to carry out changes, and improving knowledge and skills.[21,30]

Among educational methods, the highest consensus was for the face-to-face training. This may be due to the more interactional nature of these training methods. Due to the fact that the availability of space and facilities are prerequisites for achieving the unit's definition of problems and learning

from each other,[31] it can be said that social participation requires direct training. Therefore, more the health volunteers interact with each other at the time of training, their active participation increases.

Although motivating factors to join voluntary programs are very important,[32] as our findings suggest, there was no consensus over the strategy of regular wages such as monthly payments as a motivational factor. These findings are in line with many studies in this area. For instance, Glenton et al believed that wages may be a threat to the sustainability of the female community health volunteer initiatives.[22] The WHVs program may lose its voluntary nature by regular wages, and women join the program in order to receive wages. Therefore, it is likely that other intentions for participation (such as learning and developing individual skills) will be overshadowed by the regular wages.[33] Nevertheless, the WHO guidelines considered payment as an essential strategy for sustainability of voluntary programs in the long term.[33,34] It seems that facilities such as free visits and recreational camps may be alternatives for regular wages, upon which the experts in this study had consensus.

Many strategies that were identified in the present study can be generally categorized as improving group work, implementing motivation tactics, assessing the needs of people/WHVs, reforming policy, monitoring and

Table 11 Strategies for educational failure: Q.10. How can we overcome educational failure?

Consensus status	Theme	Possible solutions
Consensus	Empowering WHVs/trainers	Updating educational materials for WHVs
	Monitoring and evaluation of WHVs/trainers	Continuous monitoring of WHVs training programs
	Improving group work	Practicing teamwork on training WHVs
	Reforming policy	Setting the curriculum based on the level of education and the culture of the region
	Mobilizing the community	Supplementing existing educational capacity in the community
	Allocating proper resources	• Providing educational resources for health volunteers (hard and soft copies) • The seriousness of supervisors to implement training programs • Reducing the routine responsibilities of the WHVs' supervisors in order to assign more time to train WHVs • Providing an appropriate training environment for WHVs and clients • Leveling the WHVs and providing educational content based on different levels of health volunteers • Providing transportation facilities for WHVs
	Assessing the needs of people/WHVs	Educational needs assessment before starting educational programs
	Using social networks	The use of social media such as telegram by center trainers
No consensus	Allocating proper resources	• Provision of necessary educational equipment for training WHVs • Using trainers who create motivation among WHVs
	Reforming policy	Considering a level of education for recruiting WHVs
	Empowering WHVs/trainers	Determining the level of practical skills (after the needs assessment) before starting the training

Abbreviations: Q, question; WHV, women health volunteer.

evaluation of WHVs/trainers, mobilizing the community, empowering WHVs/trainers, rationalizing WHVs/trainers/people, improving intersectional collaboration, implementing problem-based approaches, allocating proper resources, appropriate recruitment of WHVs, using social networks, and information dissemination. These themes may be used to carry out an effective comprehensive intervention to increase the active participation of health volunteers. The current study was the first research to explain the feasible strategies for increasing the active participation of health volunteers in Iran. The explanation of feasible strategies helps improve the performance of health volunteers and increases their active participation.[35] It also contributes to the establishment of trust between health volunteers and people.[36] These feasible strategies can be used in policymaking and planning management by policymakers and health volunteer program managers.[22]

Implications

The current study presented a set of possible strategies to overcome barriers to the active participation of health volunteers. In future studies, researchers may test these strategies experimentally using a multilevel approach to improve the participation of health volunteers. The findings of this study can provide a framework for health program policymakers. The studied factors should be considered by policymakers in designing and developing WHVs program.

Limitations

The findings only reflected Iranian volunteers' supervisors and relevant researchers' opinions and did not include researchers from other countries and healthcare authorities' recommendations. Due to multiple responsibilities, Iranian experts were not able to check their emails and researchers had to follow

Table 12 Mann–Whitney *U* test comparing groups (WHVs' supervisors and researchers) around no consensus strategies

Questions	Suggested strategies (no consensus)	Median	IQR	U	P-value
Q.1.	Organizing question and answer sessions regularly with WHVs	5	1.75	83.5	0.189
	The use of educational software such as Health Ambassador software	5	2	87.5	0.254
	Demanding from health volunteers to attend health centers in order to directly observe service delivery system	5	2	98.5	0.487
	Engaging the health volunteers with a higher educational level	5	2	109	0.789
	Employing a health trainer who lacks organizational responsibility	5	2	114	0.951
Q.2.	Conducting educational classes for WHVs about communication skills	5	2	48	0.006[a]
	Dividing responsibilities among WHVs and providing feedback to them	5	2	110.5	0.838
	Conducting educational courses outside the health education series for WHVs	5.5	3	93.5	0.371
	The ranking of WHVs in terms of diverse skills as an incentive to promote rank	5	1.75	99.5	0.514
	Assigning more time to train the WHVs by trainers	5	1.75	100	0.525
Q.3.	Putting health information and health-related indicators in the hands of community members	5	1.75	96.5	0.431
	Family referrals to WHVs by health personnel in some cases	5	2	34	0.001[a]
	Assigning the delivery of some basic health services to WHVs, such as blood pressure screening	5.5	2	98.5	0.489
Q.4.	Employing the healthcare worker who is more compatible with the roles of WHVs	5	2	79.5	0.139
	Establishing a sociology workshop (in order to get acquainted with the culture of the community) for WHVs and healthcare workers	5	3	104	0.638
Q.5.	Educating influential people with a focus on reducing barriers and supporting them	5.5	2.75	84	0.198
	Conducting some meetings with the participation of local community members to express their problems in the presence of other people	5	2	99.5	0.507
Q.6.	Recruiting people as health volunteers who do not expect any rewards from the health system	5	3.75	100.5	0.544
	Efficient implementation of the WHVs program in city centers due to lack of full knowledge of urban healthcare workers about their community members	5	2	63	0.032[a]
	Questioning the WHVs about the services that were provided to the households covered	5	2	84	0.194
Q.7.	To clarify the role of WHVs for all organizational units	5.5	2	95	0.398
	Creating job stability and not changing the trainers who educate the WHVs	5	2.75	17	0.000[a]
	Establishing NGOs or associations for WHVs	5	1.75	97	0.445
Q.8.	Replacing WHVs program with Health Ambassador program	4.5	2.75	101.5	0.572
	Teaching the main principles of management to health center directors	5	1.75	83.5	0.187
	Educational needs assessment and prioritization of issues in health centers	5	1.75	99.5	0.5
	Referring WHVs' problems to higher levels	5	2	99	0.489

(Continued)

Table 12 (Continued)

Questions	Suggested strategies (no consensus)	Median	IQR	U	P-value
Q.9.	Providing a monthly fee as an allowance to volunteers	5	2	83.5	0.187
	Conducting educational courses for directors of health centers about how to motivate healthcare workers and WHVs	5	2	96.5	0.426
Q.10.	Provision of necessary educational equipment for training WHVs	6	2	102	0.569
	Using trainers who create motivation among WHVs	5.5	2	104.5	0.636
	Considering a level of education for recruiting WHVs	6	2	94	0.343
	Determining the level of practical skills (after the needs assessment) before starting the training	6	2	106.5	0.706

Note: [a]Statistically significant (*P*<0.05).
Abbreviations: IQR, interquartile range; NGO, non-governmental organization; Q, question; WHV, women health volunteer.

through the phone, which was time-consuming. It may be better if questionnaires are completed in print format by Iranian experts.

Conclusion

The findings of this study revealed those strategies that can be implemented mainly in the short or medium term. The strategies were at different levels of individual, community, organizational, and policy. A multifaceted approach should be used to improve the participation of health volunteers. In addition to motivational factors, factors such as allocating proper resources, empowering WHVs/trainers, and mobilizing the community should be also considered.

Acknowledgments

Disclosure

The authors report no conflicts of interest in this work.

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