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Strategies to Enhance the Cervical Cancer Screening Uptake Rate Among Rural Nepalese Women: An interventional Study

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Abstract

This study is based on a small-scale interventional programme carried out among the rural village women in Baglung district, one of the districts in Gandaki province of Nepal, the aimed of this study was to facilitate the women in rural areas in accessing healthcare services including cervical cancer screening, and identifying the ways through which rural women's uptake rate could be enhanced. Cervical cancer is the first most common cancer among the women in Nepal. The age standardized incidence rate and mortality rate of cervical cancer among the female population of Nepal were 18.5 per 100,000 and 14.3 per 100,000 respectively. The government of Nepal claims that primary preventive measures such as HPV vaccination, PAP smear test, VIA test are available to people. However, the coverage rates for cervical cancer screening services in 2003 was significantly low (2.4%). Previous studies have identified various factors such as socioeconomic, cultural barrier and lack of adequate health facilities that hinder the access to cervical cancer screening services among rural women. In order to identify the ways that can facilitate the women' increased access to cervical cancer screening services in rural areas, a small-scale health intervention programme on cervical cancer prevention was organized. A total of 500 women took part in the intervention in which 264 women utilized the cervical cancer screening services. The findings of this study suggest that affordable, acceptable and actionable intervention programmes can facilitate the rural women's increased participation in cervical cancer screening services. In addition, effective use of local media platforms and community representatives to promote the interventions programmes enhance the women's uptake rate in cervical cancer screening. This study was a tailor-made for a small village population. A large-scale population-based survey is needed to identify the prevalence of cervical cancer among rural women so that such affordable, acceptable and actionable intervention programmes could be implemented effectively in the rural setting.

Keywords: Cervical Cancer, Screening, Rural Women, Nepal

Introduction

Disease related to human papillomavirus (HPV) remains a major cause of morbidity and mortality among women worldwide [1]. Cervical cancer is currently ranked as the fourth commonly diagnosed cancer among the women globally [2,3]. In 2012, it was reported that approximately 528,000 new cases of the cervical cancer and 266,000 deaths resulting from it. Almost 90% of the cervical cancer related mortality and morbidity were reported from the low and middle-income countries [3,4]. According to BLOBOCAN, it was estimated 175,000 new cases of cervical cancer and 94,000 deaths occurred in South –East Asia Region [5]. Regular and effective screening services are significantly useful to detect the cervical cancer in the early stage and contribute to reducing the incidence of the cervical cancer [4,6,7]. Early detection allows more options for the treatments with the better outcomes, improves survival rates and lowers the healthcare costs [6]. Therefore, the regular health screening to detect the cervical cancer is highly recommended for the women aged from 25 and above to minimize the health complication related to the cervical cancer regardless of any health history and cultural background [3].

Cervical cancer screening test, called Papanicoluou test (pap smear test) is one of the most effective screening tests to detect the cervical cancer at early stage [8]. Due to the high cost, lack of skilled health work force, lack of adequate resources and complicated procedures the women from the rural setting are faces difficulties in participating Pap smear test. Another cytology test named as visual inspection with acetic acid (VIA) test potentially effective alternative cytology test for the women from the rural village. This test is simple test, economically friendly, and relatively easy to use by the health professionals including doctors, nurses, and midwives' and lab technician. This approach does not require highly skilled work force and infrastructures and have great impact in reducing the number of mortality rate related to this cancer in the developing countries such as India (Catrarino et al., 2015). Immediate results of the VIA test facilitate the women to find out the abnormalities and allow them to participate in the further treatment procedures. These tests are regarded as safe, effective, and accepted by the women from the rural village. Recent studies show that the use of the HPV vaccine is effective among the young adolescent age around 13 to prevent the cervical

cancer in the early stage however HPV vaccination is not common in the rural setting due to its high cost [7].

Cervical cancer is the first most common cancer among Nepalese women. The age standardized incidence rate and mortality rate of cervical cancer among the female population of Nepal were 18.5 per 100,000 and 14.3 per 100,000 respectively [1,9]. Around 2,332 Nepalese women were identified with the cervical cancer each year and 1,367 die from it every year in Nepal [5]. Human papillomavirus (HPV), is the main risk factor that causes cervical cancer among women aged between 15 and 44 years of age in Nepal [5]. However, the uptake rate of the cervical cancer screening among the women from the low and middle-income countries such as Nepal is significantly low. Various factors such as poor and inadequate health literacy, socioeconomic situation, cultural stigma, quality of care and services and health status are associated with the poor uptake of the screening services [5,8]. Thus, our interventional study aimed at facilitating and providing the opportunities to take part in the cervical cancer screening services and identifying the ways through which rural women's uptake rate could be enhanced.

Data sources

The data for this paper is taken from a small-scale intervention programme and our own experiences in conducting a cervical cancer prevention programs in a rural village of Nepal. The experience comes from the implementation of the programs on cervical cancer prevention, the outcome of the programs and challenges encountered during the implementation of the cervical cancer prevention programs.

Results

A total of 500 women from different rural villages participated in the intervention however only 264 women screened for the cervical cancer. Due to limited resources all women who participated in the intervention did not go through the screening but they participated in the health educational program and they were provided with a opportunity to approach the health care providers during the intervention.

Table 1: Socio-demographic status of the participants

Descriptions		Number (n=264)	Percent (100%)
Age range	20 and below	19	7.2 %
	20-34	103	39%
	35-44	72	27.3 %
	45-54	26	9.8 %
	55-64	16	6.1%
	65 above	28	10.6%
	Total (n)	264	100%
Education level	No schooling	160	60%
	Primary and below	66	25%
	Secondary and post secondary	25	9.9%
	Tertiary	13	5.1%
	Total (n) = 264	264	100%
Ethnicity	Chhetri	30	11.53%
	Brahmin	125	47.34%
	Janajati	83	31.43%
	Dalit	26	9.84%
	Don't want to answer	0	
	Total (n) = 264	264	100%
Marital status	Single	5	1.89%
	Married	245	92.8%
	Cohabiting	1	0.38%
	Divorced	1	0.38%
	Widowed	12	4.55%
	Total	264	100%
Age at marriage	Below 20	185	70.05 %
	20 and above	79	29.05%
	Total	264	100%

Occupational status	Full time	20	7.6%
	Part time	5	1.9%
	Homemaker	240	90.9%
	Unemployment	5	1.9%
	Retired	3	1.2%
	Total	**264**	**100%**

Table 1 above demonstrated the socio-demographic information of the participants who have participated in this study. Almost 40% of the participants were women of age between 20-34 years followed by women of age ranges 35-44 years (27%), women of aged 65 and above (10.6%), women of age ranges 45-54 years (9.8%), women of aged 20 and below (7.2%) and women of aged from 55-64 years (6.1%) respectively. Education level of the participants was also presented in the table 1, more than 60% of the women who have participated in this study have never been to school and almost 25 % of the women have had the education level of primary or below. Approximately 10% of the participants had the education level of secondary and post secondary and only 5% of the women who participated in this study had the tertiary level of study. Participants from different ethnic groups had participated in the study, almost 50% of the women were Brahmin, more than 11% of the women were Chhetri, more than 31 % of the women were Janajati and less than 10% of the participants were Dalit respectively. Similarly, more than 90 % of the participants were married and only 10 % of the participants were single, widowed, divorced and cohabiting. Table 1 also demonstrated the age of the women at their first marriage. Approximately, 70% of women who took part in the study got married when their age was 20 and below. Approximately 30% of the women get married at the legal age after the 20 years and above. More than 90% of the women were the homemakers and only less than 10% of the women were employed either full time basic employment or part time job.

After the analysis of the whole process of the promotion and implementation of the cervical cancer screening among the rural women from the rural setting, the three main approaches were identified for the effective screening services among them. The three approaches included the 3As (affordable, acceptable and actionable) framework interventional program for the promotion of the cervical cancer screening. These approaches are elaborated in the following section.

Affordable

Previous studies showed that the socioeconomic status of the rural women is directly associated with the poor access to the healthcare services including utilization of the cervical cancer screening services. Our study found similar findings in which approximately 90% of the participated women were engaged to take care of the family members, animals and their farms and less than 10% of women from our study were employed. This finding is supported by the Nepal labour Force Survey's report. According to Nepal Labour Forces Survey 2017-2018, only 22% of the working age women are employed in Nepal and most of the employed women were from urban areas of the country (Report on the Nepal Labour Force Survey 2017/ 2018). Further another study indicate in Nepali society husbands control the family finance and husbands and male family members of a family are the main decision maker whether women need healthcare services including the cervical cancer screening or not [4]. In addition, the cost of the available medical services including cervical cancer screening services is not affordable by the rural women and these services are only available in the tertiary hospitals which are located in the cities of the country for which these women have to travel long way to get these services. Medical service charges together with the traveling expenses and accommodation cost large amount of money which is not affordable for the women from rural areas of Nepal. Thus, we considered to providing the health interventions to these women for free. All the expenses for the medical services including the medicine were provided to them for free. Free transportation services were also arranged to those women who were came from far villages. By knowing that all the services were provided for free, women made self-decision to take part in our health intervention. As a result, almost 500 women from different villages took part in the intervention. Therefore, we would like to suggest the government as well as other related organizations to conduct the affordable intervention to the women from the rural areas of Nepal so that the uptake rate of the cervical cancer screening could be enhanced.

Acceptable intervention

A study systematic review paper conducted by Chan and So, findings showed that those interventions and programs which were conducted in the community settings with culturally and linguistically appropriate materials with multiple interventions were effective in enhancing the utilization of the cervical cancer screening services, enhance knowledge related to the cervical cancer and effective in improving the screening intensions [6]. Similar approached was adopted in this study, a culturally sensitive interventional progarm was designed and carried out among the rural Nepalese women. The cervical cancer prevention program was promoted through various means such as the social media Facebook, promoted through radio advertisement, and most importantly the promotion of the programs by the local Female Community Health Workers (FCHVs) was most effective and reliable strategy to promote the programs among the local women from the rural areas. Further, collaborating with the local healthcare providers from the health post and sub-health post is another most important strategy to promote the programs among the rural women. Building strong rapport and relationship with local healthcare providers and rural women plays a key role to enhance the participation of the rural women towards health-related activities such as cervical cancer screening programs. Those invited healthcare professionals from the Dhaulagiri Hospital which is in the headquarters of district were mostly female healthcare providers. They were responsible for performing the cervical cancer screening test called visual inspection with acetic acid (VIA). This also allow the rural women to accept the intervention. In addition, the family members particularly husband and male members of the family allow their wives and the female members of the family to take part in these sorts of the programs. This might be because during the promotion of the program, it was promoted saying it the "Female Health Camp" which facilitate the husband and male members of the family to understand that all the interventions would be related with the women. Thus, they accept that female members of their family should participate in such as cervical cancer screening programs which ultimately help in enhancing the uptake rate of the cervical cancer screening.

Actionable intervention

literacy rate among the women who participated in the health intervention was significantly low. Almost 85% of the women from that remote villages had never been to school or have had just completed the primary level of school or below. As a result, rural women described that they never heard the disease name called "cervical cancer" and they thought cervical cancer was not a common disease that affect women's health. They reported that "after attending today's health talk on promotion of the cervical cancer prevention, we now know what cervical cancer is, importance of cervical cancer screening and found out that this cancer is a common cancer among us". Health talk provided to the women before the cervical cancer screening test might have allowed them to make a decision to take part in the cervical cancer screening programs as a result almost 60% of the women who took part in health talk screened for the cervical cancer screening. After the screening test, women with some abnormalities were provided with some sorts of medication and women with VIA test positive results were referred to tertiary hospital for the further investigation and treatment. All the related expenses for the further investigation and treatment were covered by the project. Such free packages of interventional program encourage the women to take part in the healthcare services including cervical cancer screening services leading to reducing the incidence of cervical cancer among the rural women. Thus, large-scale packages of actionable interventional programs should be introduced across the country to increase the uptake rate of the cervical cancer screening services among the Nepalese women.

Discussion

To our knowledge this study is the first study, which aimed at facilitating the women in rural areas in accessing healthcare services including cervical cancer screening and identifying the ways through which rural women's uptake rate of cervical cancer screening could be increased in Nepal. Previous studies conducted locally and in the different countries findings showed various factors such as lack of knowledge or awareness, low level of education, early marriage, socioeconomic status and inadequate and unavailability of the health care facilities were the main contributing factors which prevent women to utilize and access the cervical cancer screening services [3,10,11]. Many other studies findings claimed that low level of education is one of the constraints for utilizing and accessing the cervical cancer screening services among the women [3,11]. For example, a study conducted by Pandey et al. among the women of Nala Village Development committee (VDC), Kavre, Nepal claimed that "cervical cancer screening behaviour has been found to be high among literate women" this indicates that women with high level of education are more likely to utilize the screening services for the cervical cancer than the women with low level of education. In contrast our finding shows that literacy rate among the women were significantly low. Despite low education level women participation in the screening services provided to them during the intervention was significantly high. This might be due to the affordable, acceptable and actional interventions provided to them. Similar finding was found in a study conducted by Thapa et al. in Jumla district, that women with high literacy rate had significantly high knowledge on the cervical cancer but had lower favourable attitude and lower practice of screening than the illiterate women [10]. The authors of the study concluded that education is not a single factor that motivates the rural women to participate in the screening programs. In this study having no knowledge on cervical cancer among women is one of striking finding. Despite having inadequate or no knowledge and information related to cervical cancer prevention through screening and its importance, rural women were more likely to participate in the cervical cancer screening services. This might be because those rural women seldom facilitate with such cervical cancer-screening program and they had provided limited opportunities to meet with the health care professionals. In contrast, a study conducted by Thapa et al. stated that "the participation of the women in the cervical cancer screening using cytology and visual tests in Jumla district of Nepal was not encouraging despite being free of cost" [10]. In addition, the authors claimed that those ethnic groups claimed to be upper class women from Brahmin and Chhetri groups had high level of education and knowledge related to the cervical cancer but have had low level of attitudes towards participation in the screening services for the cervical cancer screening. In contrast approximately 60% of the women were from Brahmin and Chhetri ethnic groups had the participation in this study. Ethnicity and level of education are not only the factors which encourage women to participate in the screening programs, promotional strategies of the programs, strong relationship with the local women, use of the local resources including the local health care providers determined the participation of the eligible women in the study. Further, many studies claimed that social and cultural norms are also the biggest concern for women which limits them to access the screening services of cervical cancer [3,10]. A shameful and uncomfortable screening procedure is another biggest constraint for Nepalese women to take part in the cervical cancer screening. Surprisingly, findings of this study show that women who participated in the screening for the cervical cancer felt no such experiences while seeing a male doctor. This might be due to availability of limited opportunities to access the healthcare services and also the healthcare providers regardless of their gender. Further, early marriage or sexual experiences at an early age is one of the risk factors of cervical cancer. More than 90 % of the women from this study reported that they got married in their early twenties or before, while the legal age for marriage in Nepal is 20 years and above. Various similar findings related to early marriage or child marriage were published in different local news articles and journal articles. For example, a news article published in a Nepalese news portal called "MyRepublica" in 2019 shows that the prevalence of child marriage in Sudur Paschim province is around 70% [12]. Similar finding was shown in a study conducted by Thapa et al. in the Mid Western Jumla district Nepal, more than 80% of the participants years of marriage was below than the legal marriageable age 20 in Nepal [10]. Such practice of child marriage or early exposure to sexual activities may result several crisis on women health including cervical cancer. Therefore, awareness programs including the educational activities targeting the rural women and their family members should be introduced in community level. Child marriage and its negative impact on women's health including the family problems should be widely disseminated through the various means such as social media. Nevertheless, our study also includes number of women who participated in the intervention and felt that the attitude of some healthcare professionals towards them was not friendly. Similar finding was observed in another study that poor communication skills and disrespectful behaviour by the health providers towards the women is likely to discourage them to access the screening services leading to poor utilization of the screening services. Thus, the healthcare providers towards the health care receivers should be respectful and most importantly health care providers should be non- judgemental towards the rural women.

Challenges

Although this was a small-scale interventional program to promote the cervical cancer prevention among the rural women in Nepal the accomplishment the programs successfully was not easy. The study setting was one of the rural villages of the Baglung district, this district is among 11 districts of Gandaki province, Nepal. The village is regarded as an underdeveloped village in which the

villagers have to travel several hours just to get paracetamol for the fever. Getting proper healthcare services in their own village was beyond the villager's imagination. The villagers rarely have had opportunities to meet with the healthcare professionals and such interventional programs were rarely been organized in that village. The reason behind conducting or organizing such the program in the remote village with limited resources was not easy. Firstly, financial resources were one the biggest constraints for the program organizer. The organisers look for the funding bodies which could contribute financially and help in organizing the intervention. Some of the good heart people helped and the organizer also organized a charity dinner to raise fund for the program. After the charity dinner the organizer raised some budget, but it was not enough. We again started to approach various collaborating partners who could contribute for the program and all the necessary resources were arranged and supplied them to the village. Secondly, hiring vehicles to carry all the necessary supplies was extremely costly, this might be due to the poor roads condition. Thirdly, unavailability of the adequate medical resources such as availability of sterilization machines for the sterilization to sterilize the medical equipment which could be used during the medical procedures. Medical equipment's were kept into a big kettle and boil for several minutes to sterilize them. However, the technique was not up to the standard, in fact unsterilized medical equipment are the source of infection which increases the risk of transmission of the communicable diseases. Further, despite very limited time, approximately 500 women from different rural villages came to join the intervention. However, all women who came to join the program did not get the medical services this is because limited time did not allow healthcare providers to provide services. These could be the limitation of the project and these limitations are also the lesson to be learnt for the future project. In addition, utilization of the local resources is very important and building a strong relation local stakeholder and make them accountable for the interventions are the key components while carrying out such interventional programs in the rural settings.

Conclusion

This study was a small-scale study and very first study, which was carried out among the rural women of Baglung district of Gandaki province, Nepal. This study was successfully completed with the huge participation of the rural women. The findings of this study suggest that there are several barriers, which could limit women to access the healthcare services including the cervical cancer screening services. However, these barriers are not only the factors which determine the women access to the healthcare services including the cervical cancer screening. Effective promotional strategies, affordable, acceptable and actionable healthcare services are the key factors to encourage rural women to participate in the intervention, which ultimately enhances the uptake rate of the cervical cancer screening leading to minimize the incidence and mortality related to the cervical cancer among the rural women. Further, the large-scale population-based survey is urgently needed to conduct to explore the prevalence of the cervical cancer with the factors associated with the cervical cancer screening. Further, it seems that, despite the government and other NGOs or INGOs raising or allocating funds, less attention is paid by the policy makers to prevent cervical cancer among rural women. Policy advocacy on behalf of the rural women could contribute to allocate more resources for the women health in rural areas.

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Conflict of interest

The author has no conflict of financial interest.

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