

Original Research Article

The impact of herpes zoster infection awareness program on myths, knowledge, and practices among the rural population of western Maharashtra

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ABSTRACT

Background: In India, there is a paucity of population-based studies and data on herpes zoster in reporting herpes zoster cases. Several shreds of evidence reflect that the disease causes a burden on population health in India. Besides several known risk factors, myths, lack of knowledge, attitude, and practices towards treating this infection may affect the quality of life and disease burden. Imparting knowledge, awareness regarding myths and misconceptions, and early approaches for treatment can help prevent disease and complications in the population.

Methods: Our study variables were myths about herpes zoster infection, knowledge about herpes zoster infection, and attitudes and practices towards the treatment of herpes zoster infection and to evaluate the impact of health awareness programme on it. It is an interventional study where study population is the families of adopted villages by D.Y. Patil Medical College, Kolhapur from the rural population of western Maharashtra.

Results: The awareness programme which was the intervention in this study, was effective in increasing the awareness about myths and knowledge about herpes zoster infection as well as positive impact related to treatment practices for herpes zoster infection among the rural population in the adapted villages in western Maharashtra.

Conclusions: The awareness programme which was the intervention in this study, was effective in increasing the awareness about myths and knowledge about herpes zoster infection as well as positive impact related to treatment practices for herpes zoster infection among the rural population in the adapted villages in western Maharashtra.

Keywords: Awareness, Herpes zoster, Knowledge, Myths, Practices, Villages

INTRODUCTION

Herpes zoster (HZ) is an acute highly contagious infection caused by the varicella-zoster virus (VZV). VZV is a member of the alpha herpes viridian family, a group of double-stranded DNA viruses that lead to human infection and latency in the dorsal root ganglia.¹ Post-herpetic neuralgia (PHN), limb paralysis, cerebrovascular

disorders like stroke, cardiovascular diseases such as myocarditis, and serious skin alterations such as intense scarring are Various post-herpes complications and sequelae.²⁻⁴ To hasten recovery, pain management is very important and is usually managed with analgesics or opioids. Acyclovir, famciclovir, and valaciclovir are common antiviral agents used in the treatment of the disease. To alleviate the discomfort and prevent the

development of long-lasting skin lesions, local application of lotion may help. In the case of post-herpetic neuralgia anticonvulsants, tricyclic antidepressants, topical therapies, and opioids are very useful.³⁻⁶ Pain and persistent rash are the most frequent complications seen with herpes zoster infection. This Post-herpetic neuralgia can be debilitating and lead to physical disability, emotional distress, and sleep disorder.^{7,8}

Herpes zoster remains a global public health issue due to several common myths and misconceptions about exposure, risk, transmission, and current treatment options. Though challenging, it is important to address these myths and misconceptions. In India, there is a paucity of population-based studies and data on herpes zoster in reporting herpes zoster cases. Several shreds of evidence reflect that the disease causes a burden on population health in India. Besides several known risk factors, myths, lack of knowledge, attitude, and practices towards treating this infection may affect the quality of life and disease burden. Imparting knowledge, awareness regarding myths and misconceptions, and early approaches for treatment can help prevent disease and complications in the population.

This study aimed to assess the knowledge, myths and practices as well and impact of awareness programs about herpes zoster infection in rural populations. So our main objective is to study the myths, knowledge, and practices regarding herpes zoster infection among the rural population of western Maharashtra. And also to study the effectiveness of herpes zoster awareness programs on myths, knowledge, and practices among the rural population of western Maharashtra.

METHODS

This study was conducted over a period of 4 months (July to October 2023) in the rural population of western Maharashtra and Families of adopted villages by D.Y. Patil Medical College, Kolhapur from the rural field practice area of the medical college. It is an Interventional study where study population is the Families of adopted villages by D.Y. Patil Medical College, Kolhapur from the rural population of western Maharashtra were selected randomly by a simple random sampling technique using Slovin's formula for calculating sample size i.e. $n = \frac{N}{1 + Ne^2}$ with $e=5\%$.

There are 5 villages adopted by D.Y. Patil Medical College Kolhapur. The total number of houses in 5 villages is 8884. So, about 1310 houses have to be surveyed. Our study variables were myths about herpes zoster infection, knowledge about herpes zoster infection, and attitudes and practices towards the treatment of herpes zoster infection and to evaluate the impact of health awareness programme on it. Written Informed consent was taken in vernacular language from the head of the family to participate in our study.

Pre-validated test questionnaire consisting of 16 questions addressing the myths, knowledge, and practices towards herpes zoster infection was given to the head and other family members before the intervention of the health awareness program, and the prior knowledge also assessed.

Health awareness has been done by giving explanations through charts, pictures, and information bulletins approved by the government to the family members.

The information clears the myths and explores their knowledge about the herpes zoster infection so that to make changes in their practices after being infected.

The families ready to participate voluntarily, ready to give written consent, completed the interaction for 3 visits, understood the information clearly in vernacular language, completed pre and post-test were included in the study. The families not ready to participate voluntarily, not ready to give written consent, not completed 3 visits and interaction, not able to understand the information clearly even in vernacular language, not completed pre and post-test were excluded from the study.

Evaluation of this program was carried out after 3 visits (4 months) in the form of a post-test questionnaire to the same families. Data collected in the form of pre-test and post-test was analysed. For data analysis, we used SPSS (version 29.0) will be used for data analysis. The chi-square test and paired "t-test" were used to study the impact of awareness programme on knowledge and practices about herpes zoster infection by comparing pre-test and post-test results. Ethical approval for the study was granted by the Institutional Ethics Committee, D. Y. Patil Medical College, Kolhapur, India.

RESULTS

In this study, we assessed the impact on the knowledge myths and practices of the people regarding herpes zoster for study we got responses from 1310 people out of which 950 are males and 340 are females we also get the education level of the people to access the awareness program 115 are below high school, 560 are studied high school and 395 in college 215 graduate and 25 are postgraduate (Table 1).

In this study, we assessed the 3 things knowledge, myths and practices among the rural population of western Maharashtra. Total response we got is 1310.

Knowledge

This we assessed the knowledge about herpes zoster infection through the questionnaire then found that 44% think that it is a viral disease and 27% people think it is a bacterial disease and 19% think it is a fungal disease and 16% think it is a superstitious and curse of god and evil eye. Out of 1310, 48% think is a contagious while 52%

think it is not contagious. Out of 1310, 46% think males only can suffer more from herpes zoster infection while 44% people think females only can suffer more from herpes zoster infection and 7% think children and 3% think elder people can suffer more from herpes zoster infection. 36% think skin blister is the early symptom of herpes zoster, 11% itching is the early symptom of herpes zoster, 10% tingling sensation is the early symptom of herpes zoster, and 3% numbness in that area is the early

symptom of herpes zoster and 1% headache is the early symptom of herpes zoster. Then 48% think the weakened immune system is the risk factor of the disease, 11% think immune deficiency because of taking steroids, diabetes, AIDS and chemotherapy, 8% stress either physical or mental is the risk factor of the disease, 23% think and aging related stress is the risk factor of the disease (Figure 1).

Table 1: Demographic distribution of participants.

Category	Variable	Frequency (n=1310)	Percentage
Previously suffered from Herpes zoster virus	Yes	628	47.94
	No	682	52.06
Gender	Male	950	72.52
	Female	340	25.95
	others	20	1.53
Education	Less than high school	115	8.78
	High school	560	42.75
	College	395	30.15
	Graduate	215	16.41
	Postgraduate	25	1.91
Socioeconomic status	Lower class	670	51.15
	Upper class	640	48.85
Geographical distribution	Rural	435	33.21
	Suburban	300	22.90
	urban	575	43.89
Type of occupation	Healthcare workers	195	14.89
	others	1115	85.11
Comorbid illness	Thyroid	140	10.69
	Diabetes	120	9.16
	Hypertension	65	4.96
	Asthma	25	1.91
	Allergic reaction	20	1.53

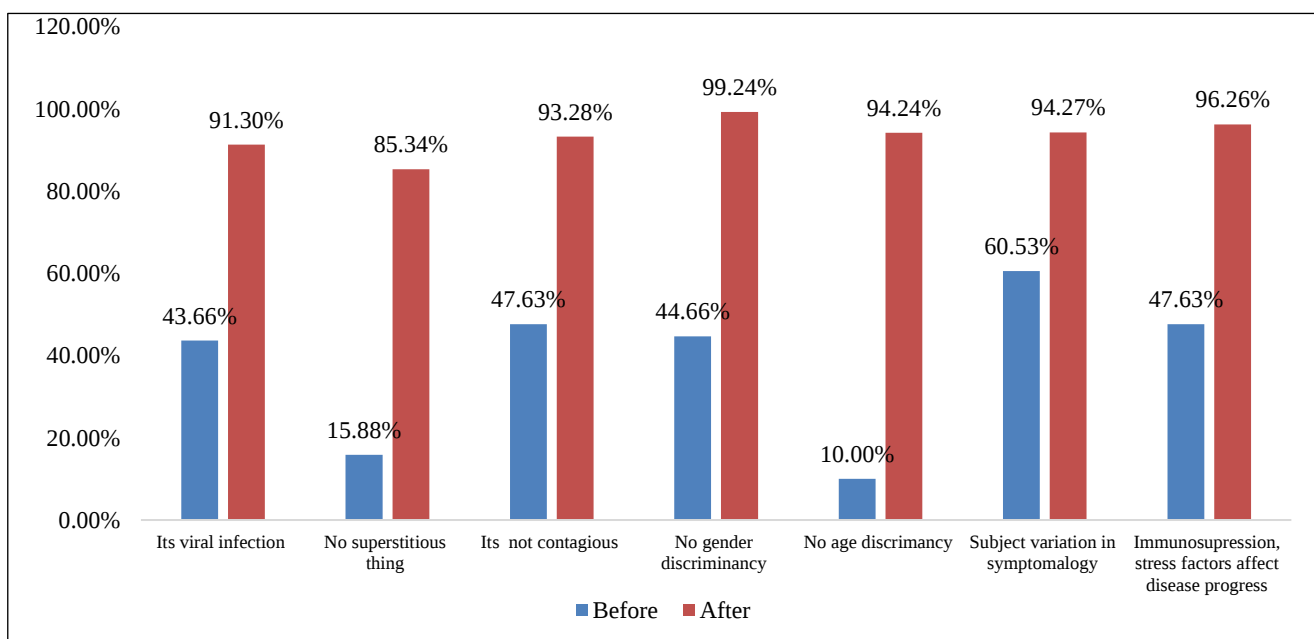


Figure 1: Impact of awareness programme on the knowledge.

Practices

Total 16% went to a dermatologist, 21% went to a general practitioner/family physician, 14% went to quacks, 36% went to Baba or Sant, 5% did self-medication at home, and 8% left it as it thinking that its curse of God, evil eye or it's due to superstitious. It was found that 36% suffered from nerve pain as a complication, 22% from organ

damage involving the same dermatome, 2% from paralysis, and 11% death occur 29% people nothing will happen the home remedies they know or followed when infected 26% bathing daily to avoid unhygienic conditions 29% anti-itching lotion i.e., calamine lotion 5% wearing loose clothes 11% isolating the patient 9% leaving the oily food 13% beating yourself because you think it is the curse of God 7% cold compress (Figure 2).

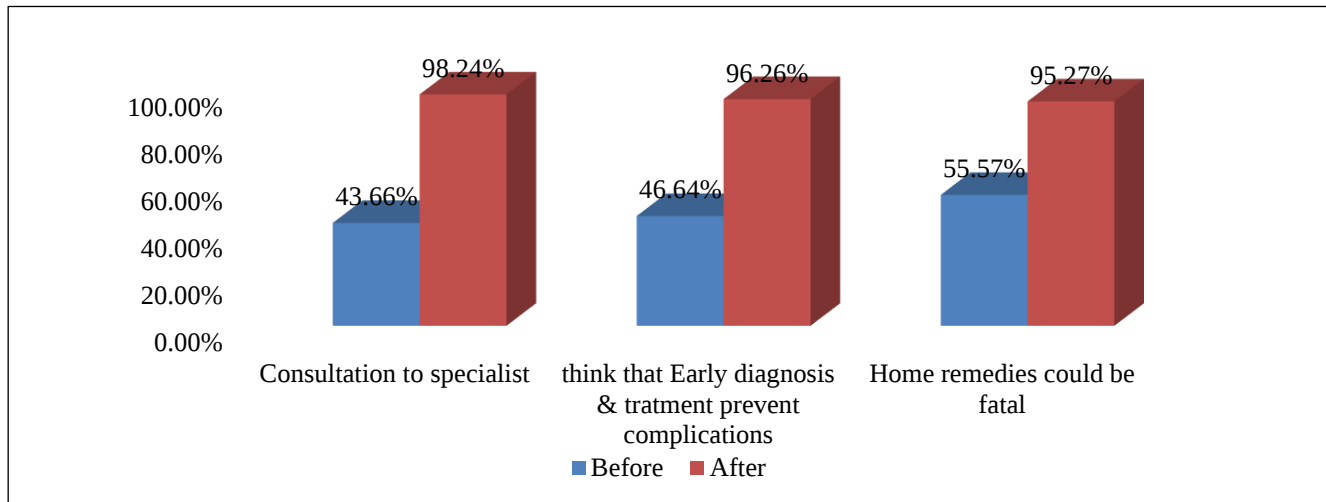


Figure 2: Impact of awareness programme on the practices.

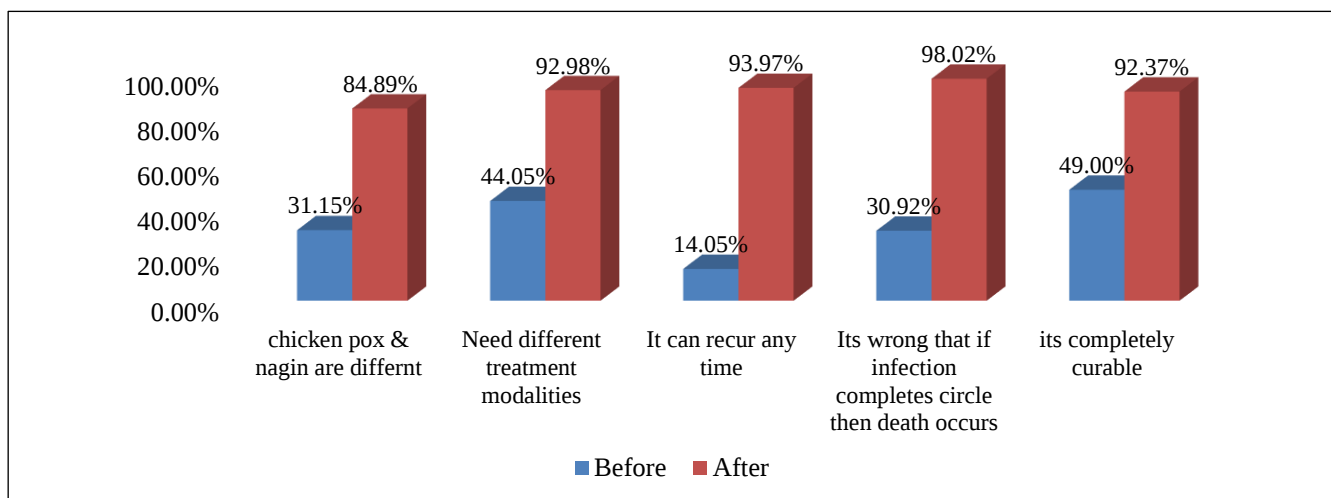


Figure 3: Impact of awareness programme on the myths.

Myths

Total 44% population think that chicken pox and Nagin are the same, 42% think that herpes is different from chicken pox and 14% think that it is caused by the same virus but treatment modalities are different. Then we observed that 44% people think that herpes zoster (also known as Nagin in Maharashtra local language) infection can happen more than once while 48% think it can't happen again. We also evaluated that 49% think when the infection occurs around the west and if it completes the circle (i.e. whole dermatome involved) then it causes the death of the person. Only 31% think it is completely

curable disease and 20% it is due to curse of god and evil eye so that's why in some rural areas they can't do anything. This thinking also make a barrier in the treatment (Figure 3).

DISCUSSION

This study attempted to investigate the knowledge, myths, and practices among the rural population of western Maharashtra and then conduct an awareness program that increases their knowledge, clears their myths, and improves their practices in an ethical and scientific way.

In our study for study we got responses from 1310 people out of which 950 are males and 340 are females we also get the education level of the people to access the awareness program 115 are below high school, 560 are studied high school and 395 in college 215 graduate and 25 are postgraduate. The study conducted by Cheong et al where out of 603, 271 are males and 332 are females.⁹ Another cross-sectional study of the knowledge, practice, and attitude towards herpes zoster vaccination among the general population in the western region of Saudi Arabia conducted by Alhothali et al.¹⁰ During study they observed that out of 500 responses 31.6% are male and 68.4% are female and 58.6% people are graduated.

Knowledge

In our study improvement in the knowledge of the participants is seen after awareness programme, so impact is positive. It reflects in our study results showing that after the awareness program 91.30% of people learned it is a viral disease, 85.34% learned that it is not a superstitious thing, 93.28% learned it is not contagious, 99.24% of people learned there is no gender discriminant, 94.24 % came to know that there is no age discriminant, 94.27 % admitted that they experienced subject variation in symptoms, signs and severity of disease, 96.26 % agree to fact that immunity of the individual affect the disease severity and frequency of the infection. The study conducted by Lam et al in Hong Kong states that out of 784 people 664 people think immunocompromised people are at higher risk, 84 people think young people will not have herpes zoster.¹¹ Alhothali et al conducted study to explore the knowledge and they found that less than 40% people think age is the risk factor for the herpes zoster and less than 30% people think stress is the risk factor for the disease and less than 20%, total 10% people think not getting enough sleep, mobile phone usage is the risk factor for the disease respectively.¹⁰

Practices

The impact of this awareness programme reflected in second parameter also where different wrong practices get clarified with scientific reasons after awareness programme. Now 98.24% of people learned to consult to a specialist, 96.26% learned that early diagnosis and treatment prevent complications, 95.27% learned that home remedies could be fatal. Alhothali et al also explored attitude of the respondents and found that only 5.4% had received the shingles vaccine.¹⁰ However, mostly 77.4% agreed or strongly agreed that they would get the vaccine if the doctor recommended it. Approximately one-third of the participants (29.4%) were worried about the cost of the vaccine. The most frequently reported barriers to get vaccinated are the lack of awareness about the vaccine (46.0%) and concerns about the possible side effects (20.2%). Alhothali et al, while observing practice towards shingles, came to know that the majority of participants agreed or strongly agreed that they were interested in knowing about how to prevent

shingles (82.2%) and about the disease (75.0%).¹⁰ Conversely, almost one-quarter of participants (23.4%) disagreed or strongly disagreed that they were worried about getting shingles.

Myths

To clear myths and facts about herpes zoster infection and its treatment modalities was main objective of this awareness programme. After this programme 93.97% learned that it can recur at any time, 98.02% learned that it was wrong that if infection completes the circle then death occurs, 92.37% people learned it is a completely curable disease. The study conducted by Lam et al in Hongkong states that 148 people think if the rash of herpes zoster circumvents the body the individual will die.¹¹ 80 people out of 784 think individuals who have contact with herpes zoster patients will acquire herpes zoster and 88 people think there are no drugs to treat herpes zoster.

Lack of awareness programme, we got very few references and made paucity in discussion. So our awareness program conducted for the rural population of the western Maharashtra gave the great impact on the people and the huge increase in their knowledge and that also clear their myths and improved their practice regarding the herpes zoster infection.

This awareness program will improve the knowledge of the rural population about herpes zoster infection, a guide to remove myths and misconceptions and impart the benefits of rational treatment and prevention of complications.

CONCLUSION

The awareness programme which was the intervention in this study, was effective in increasing the awareness about myths and knowledge about herpes zoster infection as well as positive impact related to treatment practices for herpes zoster infection among the rural population in the adapted villages in western Maharashtra.

However, as the topic and concept of MYTHS, KNOWLEDGE, and PRACTICES about herpes zoster infection is especially community-based programme, volunteers are new to this community, and some participants had doubts. To change the attitude and clear the myths need more efforts and faith with more conversation, more visits, interactive sessions, more trained, competent and confident students, volunteers' and community support for better and effective impact of this awareness programme.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee of D. Y. Patil Medical College, Kolhapur, India

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