Health Education

The use of a documentary drama film to improve the knowledge, attitude and practice of an endemic village population towards mycetoma at Sennar State, Sudan

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Abstract

Background: Mycetoma is a badly neglected tropical disease, characterised by enormous deformities, disfigurement and disabilities if untreated early. Frequently, the majority of the mycetoma patients present late with advanced disease, and the only available treatment for them will be amputation of the affected part.

Aim: This study aimed at producing a health promoting film to be used to improve the knowledge, attitude and practice (KAP) of a targeted population in one of the mycetoma endemic villages at Sennar State, Sudan.

Materials and Methods : A 26 - minute drama film on a mycetoma patient journey from a small painless mass to advanced disease till lower limb amputation due to missinformation and negligence was performed. Professional actors and cinema work team were employed in the film production. It was filmed in one of the mycetoma endemic areas.

A cohort of 250 individuals from two mycetoma endemic villages were included in this study. A closed ended pre-designed questionnaire was used to collect data from the targeted population. The collected data included demographic characteristics, knowledge, attitudes and practices towards mycetoma. The data was collected before and after the film was shown.

Results: In this study, 218/250 responded to the questionnare with a response rate of 87%. Fifty-five percent of the respondents were males, 21.6% were farmers, 29.4% were students and 29.4% were unemployed.

The film had improved the KAP of the targeted population hence it can be used as a health educational material in other mycetoma endemic areas in the Sudan.

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Introduction:

Mycetoma is a badly neglected disease that attracts meager attention from health and social sectors across the world, especially in Sudan. However, its recent inclusion in the WHO/Neglected Tropical Diseases list came with the mandate to improve the patients' care and disease's advocacy hoping to eliminate the disease globally.[1,2] Mycetoma has many serious negative impacts on the health and well-being of patients, families, communities and health systems particularly in endemic regions.[3,4] It is endemic in many tropical and subtropical regions across the world. Sudan has the highest endemicity.[5-7] It starts as a small painless subcutaneous nodule and progresses slowly to affect the skin, deep

structures and bones,[8-10] leading to devastating deformities, disability and high morbidity[11-13]. The affected patients are usually children and young adults of low socio-economic status. It leads to serious economic and social consequences.[14,15]. Most patients present late with advanced disease and serious complications due to the painless nature of the disease, low socioeconomic status, low health education and lack of health facilities in endemic areas[16,17]. Early mycetoma is amenable to treatment but late disease is difficult to cure and has a bad prognosis[18-20].

There is no prevention or control program for mycetoma neither in Sudan nor globally. Equally, no strategy for expansion of the mycetoma services, nor the best modality for service provision is known[21,22]. High burden areas need to be identified to design appropriate evidence-based interventions to promote early detection of disease, proper patients' treatment and disease control and elimination.[10] The involvement of health workers in endemic areas in early case detection will improve the patients' diagnosis, treatment and disease prognosis.[11] The present study has been set out to produce a drama film to test and improve the knowledge, attitude and practice (KAP) towards mycetoma of targeted population in two mycetoma endemic villages, Sennar State. The available medical and health literature revealed that no similar study was reported from Sudan previously.

Materials and Methods:

This descriptive, cross-sectional, community-based study was carried out at Wad Onsa and Wad Elnimeir villages, Sennar State, Sudan. A twenty six minute drama film describing the journey of the protagonist character, Sewaikit, who had a small painless foot nodule which was neglected, This ultimatey developed advanced disease that eventually ended in lower limb amputation. The film shows the agony of both the patient and his family during the different disease stages, various local traditional treatments use, financial difficulties to acquire the proper treatment, and the socio-economic impact of the disease on the patient and his family. The film provided considerable information on the disease, its clinical presentation, investigation to confirm the diagnosis and treatment. It also shows the patient's positive progress, becoming a dedicated health advocate.

Professional actors and cinema work team had contributed to the film production. The film was produced in one of the endemic areas of the disease. The film was positively discussed by different groups of qualified arsists, designers and drama experts as well as some medical staff.The film followed the well-established process of documentary films production.[28]

The study included 250 individuals from two mycetoma endemic villages: Wad Onsa and Wad El Nimear at Sennar State, Sudan. These were randomly selected. Informed consent was obtained from every individual. (Figs.1,2)

A closed ended pre-designed questionnaire was used to collect data from the targeted population. The colleted data included: demographic characteristics, knowledge, attitudes and practices towards mycetoma. The data was collected before and after the film was shown. Assistance was provided to illiterate individuals.

Knowledge about the disease refers to the understanding of the concepts of mycetoma included risk groups, mode of transmission, symptoms, diagnosis, treatment, and prevention. This section consisted of 22 statements, and these were scored 1 or 0 for correct or incorrect answer respectively. Scores were summed for each respondent and levels of knowledge were categorized as Poor [0-10], Satisfactory [11-15], and Good [> 15].

Attitude refers to the degree of positive or negative agreement with statements concerning attitudes and beliefs towards interaction with mycetoma patients and appropriate treatment methods. The questionnare included four statements about attitude. The responses were scored 1 or 0 for positive or negative attitude respectively. The levels

of attitude scores were summed for each respondent and grouped into five categories as: totally negative [0], almost negative [1], moderate [2], almost positive [3], totally positive [4].

In this study practices refer to practices that reflect medical advice seeking, shoes wearing habits and other habits. The items were scored 1 or 0 for good or poor practice respectively. The levels of practice scores were summed for each respondent and grouped into two categories as: poor [0-3], good [4-5]

Ethical Considerations:

Ethical clearance was obtained from Soba University Hospital Ethical Committee.

The data was statistically analyzed using SPSS version 23, and statistical tests were used as appropriate

Results:

The questionnaire was distributed to 250 individuals in the selected villages, 218 responded with a response rate of 87%. There were 121 males (55.5%) and 97 females (45%). More than half of the respondents (55.2%) were in the age group 10-30 years, and 58.3% were non-educated or had only elementary education. Most of the respondents were workers (27%), housewives (29%) and pupils (27%) with a monthly income was less than SDG 1000 in 96.3%. (Table 1).

The sources of their knowledge about the disease were from the radio, television, press or contact with other people. (Fig. 3)

Most of the respondents thought that wearing shoes during work hinders their ability to carry out their work efficiently.

All of the respondents sought traditional herbal treatment first before ultimately (ranging from1-3 years) seeking medical advice. This was due mainly to difficulty of accessing medical service either from lack of it or its high cost as shown in Table 2.

Table 1. The demographic characteristics of the targeted population

Demographic characteristic	No. (%)
Age in years	
10-20	67(30.8%)
21-30	53(23.3%)
31-40	47(21.6%)
41-50	33(15.1%)
>50	18(8.3%)
Educational Level	
Basic	76(34.9%)
Intermediate	17(7.8%)
High Secondary	51(23.4%)
University	22(10.1%)
Postgraduate	1(0.5%)
Not-educated	51(23.4%)
Marital Status	
Married	110(50.5%)
Single	86(39.4%)
Divorced	10(4.6%)
Widow	12(5.5%)
Family Size	
Less than 5	78(35.8%)
6-8	78(35.8%)
>8	62(28.4%)
Occupation	
Farmers	47(21.6%)
Shepherds	12(5.5%)
Civil Servants	19(8.6%)
Free lancers	12(5.5%)
Pupils	64(29.4%)
Unemployed	64(29.4%)
Monthly Income in (SDG)	
Less than 500	107(49.1%)
500- 1000	104(47.2%)
1001- 1500	6(3.2%)
Have you had the Disease Before?	
Yes	22(10.1%)
No	196(89.9%)

Fig. 3: Disease knowledge among the study population

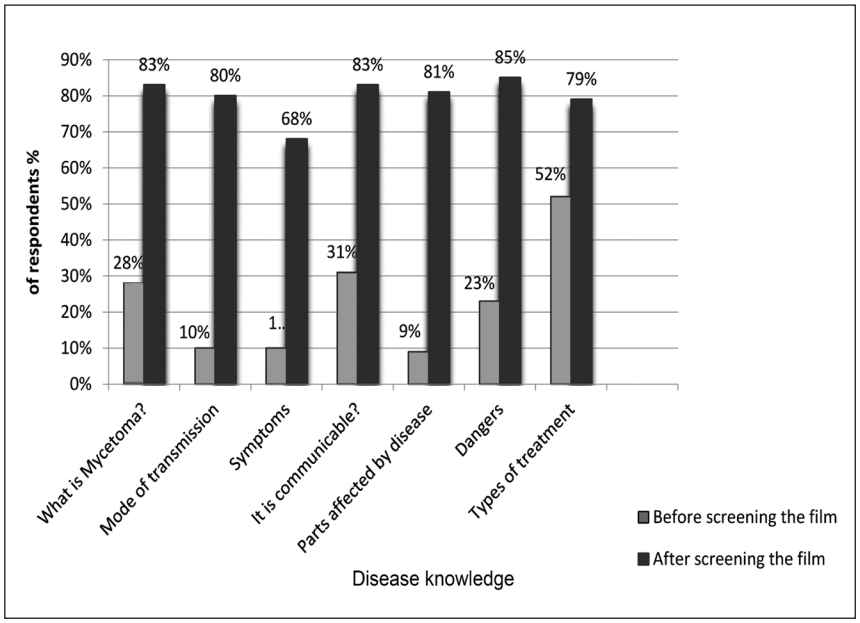


Table 2. Response to Attitude & Practice

Question	Pre-test	Post-test
Reasons for not wearing shoes		
Hinders work	79(36.2%)	73(33.5%)
Unavailability	56(20.7%)	58(26.6%)
Lack of Finance	83(38.1%)	87(39.9%)
Actions taken when disease appeared		
Seek traditional herbal medicines	9(4.1%)	1(o.5%)
Seek medical opinion	175(80.3%)	210(96.3%)
Buy medications without medical prescription	24(15.6%)	7(3.2%)
Reasons for not seeking medical service		
Unavailability	146(67.0%)	148(67.9%)
Medical consultation is expensive	46(21.1%)	31(14.2%)
Medications are expensive	25(1105%)	39(17.9%)
Others	1(0.5%)	0

Patients with current / or past history of mycetoma:

The study included 22 patients with active mycetoma or had a history of the disease. Most of them were males (86%), in the age group 21-30 years (45%), married (77%), farmers (45%), received the basic education (59%) and with monthly income between 500-1000SDG (95%).

Fifteen of these patients had traditional herbal remedies first; while only seven had medical treatment. Interestingly, even the latter group had native traditional at some stage.

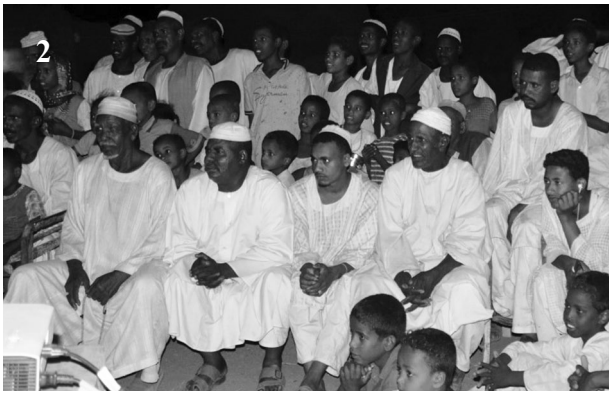
Nine of this group had no surgical intervention and were treated medically, whereas the rest underwent surgical procedures ranging from 1-7. Ultimately, seven of this group ended in amputation

The disease-free period for this group of patients ranged from 2-13 years.

Discussion:

This study shows that the study population is predominantly farmers. Most of the affected group was in the age group 20-40 years, which is the most productive phase of mankind.

The reluctance of participants in wearing protective shoes is due to unavailability and lack of finacial



Figs. 1, 2: The film screening at the studied villages

capacity. They view shoe wearing as an impediment to active and efficient work. This may have been a factor leading to the entry of the causative organism.

The study also showed that most of those affected had, at least, a rudimentary knowledge of its causes and how to combat it

One of the concerns highlighted by this study is the scarcity and lack of necessary medical services. The low socio-economic status of the participants and the high cost of treatment and transport were major factors in not seeking early medical advice and help. This calls for more resources to set-up well equipped primary health care facilities and dedicated health promotion programmes directed towards controlling and eliminating such a disease.

It is profoundly heartening that the health promotion material shown to the participants had a positive impact on their knowledge, attitude and practices towards the disease. They became more aware of the cause of the disease and how to combat it, seeking in the process early medical help and trying to procure protective shoes. The protagonist person himself (Sewaikit) became an ardent health advocate, who, while sitting in front of his small shop, telling the kids around him, his sad and painful story with the disease, which ultimately resulted in amputation of his leg.

The positive impact of multimedia production in shaping and promoting various health issues is reflected in similar studies from Pakistan, Iran, Jordan, Palestine and USA.[22-27]

To the best of our knowledge, this study is the first of its kind in Sudan. As it happened, it helped the villagers to listen carefully, reflect and make connections between the film and their struggle with the disease. The result obtainted reflects a strong positive impact in terms of the knowledge, attitude and practice

Limitations and challenges of the study:

The high cost of such undertaking. It was financed by the Mycetoma Research Centre (MRC) at Soba University Hospital.

Logistics of controlling and monitoring vast numbers of patients, actors, technicians (more than 150 personnel) provided constant challenges.

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