Healthcare seeking behavior for acute illnesses among adult Aborigine communities (Orang Asli) in Cameron Highlands, Malaysia: a house-to-house survey

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Abstract

Indigenous people often have poor health due to a lack of access to health care. We studied healthcare-seeking behaviors and associated factors of Orang Asli populations living in remote hilly areas of Peninsular Malaysia. A house-to-house survey was done in 11 of 28 randomly selected villages. A sample of 225 Adults aged 18 years and above were interviewed about healthcare-seeking behavior for an episode of illness 30 days before the survey date. Factors associated with appropriate healthcare-seeking behavior as determined by binary logistic regression analyses. More than a third of the Orang Asli adults (88/225) did not consult any healthcare provider (39%) for which "illness does not need treatment" or "not sick enough" (22%) and no transportation (12%) were the main reasons. Being of older age (aOR 0.95, 95%CI 0.9, 0.98), income higher than 500 Malaysian Ringgits per month (aOR 2.35, 95%CI 1.04, 5.39), perception of illness as "severe" (aOR 54.79 95% CI 12.61, 239.9), and closer distance of health facility (aOR 0.86 95% CI 0.81, 0.93) were associated with appropriate healthcare-seeking behavior. Health promotion campaigns are needed to improve awareness about common illnesses and improve care-seeking behavior.

Introduction

Wide gaps exist in the health status of indigenous compared to non-indigenous populations.[1] Disparities in health are often due to the lower education and economic status of the indigenous population. Nevertheless, the indigenous populations are reportedly undergoing a socioeconomic development and they are even facing a non-communicable disease burden.[2,3] The indigenous people of peninsular Malaysia known as orang Asli (OA), account for about 0.6% of the total Malaysian population. An estimated 200,000 OA population living in Malaysia have about 18 subgroups. OA people speak unique dialects and have diverse cultures and belief systems. However, OA people from each settlement speak the same dialect. OA people are marginalized and lack access to education, social services, and healthcare.[4] However, in recent years the Malaysian government has taken initiatives led by Jabatan Kemajuan Orang Asli (JAKOA) to bring about the socioeconomic development of OA populations. Despite such initiatives, the health indicators of the OA population are still poorer than the national population. OA people have lower child survival, life expectancy, and a higher undernutrition and communicable diseases burden than the national population.[5]

The Ministry of Health Malaysia is the main healthcare provider in Malaysia and has implemented special services such as setting up dedicated hospitals and clinics, catering for transit and treatment, mobile Teams, and landing zones in remote areas where OA people usually reside. The National Health and Morbidity Survey has reported that government facilities are the preferred choice by OA.[6] Survey studies among different OA settlements in Malaysia have also shown that government healthcare facilities are the preferred choice for seeking healthcare.[7, 8]

However, the choice of healthcare provider may be affected by geographic barriers, health beliefs, and preference for traditional and spiritual ways of healing by the OA people.[9] OA settlements of Malaysia vary in their dialects, beliefs, and culture. These settlements are in geographically diverse locations, such as hills, and coastal areas with differential access to modern healthcare facilities.[4] Studying the morbidity profile and healthcare-seeking behavior during illness is important information needed to improve illness management. It helps policymakers address demand-side factors and barriers in accessing healthcare facilities aimed to improve appropriate HSB.[10] Few studies have reported HSB among other settlements of OA in Malaysia.[7,8,9] We studied those OA populations in deep forest areas of Cameroon highlands in Pahang State. We aimed to study the type of healthcare provider consulted during an illness 30 days before the survey and the reasons for not consulting a healthcare provider.

Materials and Methods

Study design

A cross-sectional, house-to-house health interview survey.

Study setting

The survey was conducted in the OA settlements (villages) in Cameron Highlands, Pahang state, Peninsular Malaysia. There are 28 villages scattered in the remote forests along the hills of Cameron Highlands.Therefore, trading forest products, hunting, and farming is their main source of income.

Study participants

All the adults aged 18 years and above and are permanent residents of the household were eligible.

Sample size calculation

Sample size was estimated for a finite population using the Lynch formula (N = $2c$ $2N$ $\rho(1-\rho)$/(A*N) +(c $\rho[1-\rho]$).]). The total estimated sample of OA living in the Cameron highlands was 2626.[4] There were no prior surveys that estimated the proportion of individuals who sought appropriate healthcare. We anticipated that 20% would be seeking appropriate healthcare for their most recent episode of an acute illness (p). For a 95% confidence level (c) and a 5% allowable error (A), the minimum sample required (N) was 225 adults who had experienced an acute illness during the last 30 days.

Sampling method

A two-stage sampling method was followed. In the first stage, from the list of 28 villages (sampling frame) having an estimated population each village ranging from 300 to 700, 11 villages were randomly chosen by a lottery method. In the second stage, in each selected village, the households (primary sampling unit) were selected by moving in a randomly chosen direction starting from the Center of the village. The random direction was chosen by rotating a bottle. The researcher moved in the direction the mouth of the bottle was facing. Since the informal settlements did not have any street or house numbers this was the only feasible method to select the households. All the consecutive households in the selected direction were selected for the survey all eligible adults. Households were sampled until about 20-25 adults were interviewed in each village. If the sample of eligible was not reached in a chosen direction, a different direction was chosen from the village center.

Questionnaire

A structured questionnaire was adapted from the National Health and Morbidity Survey 2019, Malaysia.[6] It consisted of three sections namely i) sociodemographic factors, ii) self-rated health status and illness during the past 30 days, and iii) health-seeking behaviors such as the type of healthcare provider consulted for the illness and the reasons for not seeking healthcare if any healthcare provider was not consulted.

Operational definition the main outcome variable
Appropriate HSB

Appropriate HSB was consultation with a qualified medical professional in either the public or private sector. Consultation with a traditional healer and purchase of over-the-counter medications using home remedies or self-medication were considered inappropriate HSB. We adopted the above operational definition to suit our study context.

Predictor variables

Demographic variables such as age, sex, marital status, education, monthly household income, distance from the nearest health facility (in kilometers), self-rated health status (excellent, good, fair, poor, and very poor), and perceived severity of illness (mild, moderate and severe).

Data collection procedure

A house-to-house survey was carried out in the selected villages during September and October 2022. In each selected house all the adults were listed and were asked if any episode(s) of illness. For ease of recall, they were asked to report the symptoms experienced during a period of 30 days before the day of the survey. In each household, only one adult member who reported any illness was invited for an interview about HSB. In the event of multiple illnesses reported data was collected for the most recent illness. Informed consent was taken from the head of the household and each participant after reading out the participant information sheet. For consenting participants, a face-to-face interview was done in Bahasa Malaysia by the principal researcher. When necessary, a community health volunteer was used as an interpreter. Each interview took around 15 to 20 min.

Data analyses

Data were analyzed using Statistical Package for Social Sciences version 24.0. Descriptive statistics of absolute numbers and proportions were calculated. Bivariate comparisons of appropriate HSB with sociodemographic, illness-related factors were made. Appropriate HSB was the dependent variable whereas sociodemographic, and illness-related factors were the independent variables Univariate analyses followed by multivariable analyses were done to identify the factors associated with appropriate HSB. Factors significant in univariate analyses were entered into the binary logistic regression analyses by enter method. Adjusted odds ratios and their 95% CI were estimated. A p-value less than 0.05 was considered significant.

Results

Sociodemographic and morbidity profile

A total of 412 households were surveyed in a random sample of 11 villages and 225 eligible adults were identified all of them

agreed to participate in the interview. The mean age of the respondents was 41 years (SD 14.3) and about 70% of them were aged between 20-60 years, and 60% were women. About 70% were employed and 72% were living with a partner, and most earned <1000 Ringgit Malaysian per month. The median number of members in the household was 6 (IQR 4-7, range 1-12), whereas the median distance of the household from the nearest health facility was 5 (IQR 3-5, range 3-40). The top five morbidities reported by the respondents were cough fever (17.3%), joint pain(14.2), wheezing(12.0%), and heartburn (7.6%).

Health-seeking behavior and reasons for not seeking healthcare

We assessed the type of healthcare provider consulted by 225 survey respondents for their illness during the last 30 days. Appropriate HSB was shown by 132 (58.7%) respondents. Of these 52% had consulted a medical doctor including a specialist. About 39% of the respondents did not seek any consultation at all. The main reasons cited by 88 respondents for not consulting any HCP during the illness were "illness does not need treatment" (32%), "no transportation (31%), and not sick enough (23%) (Figure 1).

Factors associated with appropriate HSB

A significantly higher proportion of the younger respondents, women, educated up to secondary school and had a monthly household income higher than RM 500 reported an appropriate HSB during an episode of illness in the past 30 days. Similarly, respondents who were nearer to the health facility and reported their self-rated health as poor and perceived their illness as severe showed a significantly higher proportion of appropriate HSB. Bivariate and multivariate analyses *i.e.* binary logistic regression association with HSB with sociodemographic, health, and illness-related factors was done. By binary logistic regression analyses, the age of the respondents, self-rated health as "fair", monthly family income of RM 500 and more, distance from the health facility, and perception of illness as "severe" were associated with appropriate HSB. For a unit increase in respondent"s age, the odds of appropriate HSB decrease by a factor 0.95 AOR 0.95 (95% CI 0.9, 0.98). As compared to the respondents who rated their health as good/excellent, respondents who rated their health fair had
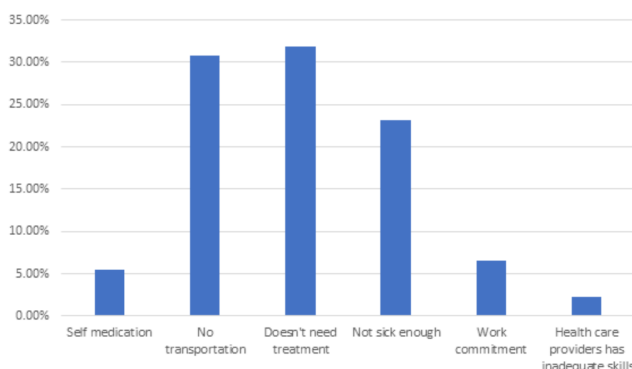
71% lower odds of appropriate HSB. Respondents from households with a family income higher than RM 5OO had 1.5 times higher odds of appropriate HSB than their counterparts with household income ≤RM500. For a unit increase in distance of a household from a health facility the odds of appropriate HSB decreased by a factor 0.86, AOR 0.86 95%CI 0.81, 0.93). Finally, respondents who perceived their illness as severe had 54 times higher odds of appropriate HSB than those who perceived their illness as not severe.

Discussion

Main findings

A house-to-house survey in remote OA settlements revealed most of the OA people had appropriate HSB, with over half of them consulting medical doctors. Yet more than a third of them did not seek any consultation. Perceptions that "illness either does not need treatment", "not sick enough", and "lack of transportation" were reported as the main reasons for not consulting an HCP. Younger age, farther distance from health facilities, and perception of their health as "fair" were associated with inappropriate HSB, whereas higher income and perceived severity were associated with appropriate HSB.

Comparison with existing literature

The OA population is specific to Peninsular Malaysia and has been identified as one of Malaysia"s most socio-economically disadvantaged populations. They also have poor health and nutritional status,[5] While several studies have highlighted the various health issues,[5] very few have studied various aspects of healthcare utilization by the OA population.[7,8,9] These studies were done in different settlements that are close to Urban regions and studied HSB and perceptions about health services,[8] health, socioeconomic status,[9] and use of goods and services.[7] The socio-economic status of the respondents in our is comparable to those from other settlements of Peninsular Malaysia.[7,8,9,11] In studies from other settlements OA had mainly sought healthcare from governmental hospitals and clinics.[8,9] The findings are suggestive that OA is aware of the modern healthcare facilities available to them.[12] However, a notable proportion of them had used local traditional healers and self-treatment with roots and shoots from the forest[9] Similar findings were reported among the tribal populations in India.[13-15] In our survey as well as comparable proportions had not sought any consultation from any HCP, it is likely that these respondents had used some indigenous treatments as in tribal populations of India.[13,14] The initiatives are taken by the Ministry to improve the health services to the OA are being utilized, nevertheless, there appears to a considerable proportion who either do not consult any modern HCP or use herbal medicine or consult a traditional healer.

Lack of transport was one of the reasons for not seeking any consultation. By multivariate analyses, a lesser distance of health facility was associated with appropriate HSB. Other main reasons were "illness does not need treatment, and "not sick enough" are supported by the association of appropriate HSB with self-rated health status and perceived severity of health. Studies from other OA settlements have not reported any transport-related barriers to appropriate HSB.[7-9] These study sites were much closer to an urban community, where health facilities are located compared to the remote settlements in Cameroon highlands where the median distance to the nearest HCP as reported by the respondents was five kilometers. HSB studies among the tribal populations of India,

Figure 1. Reasons for not seeking consultation from any type of provider during an episode of illness during the last 30 days by an adult Orang Asli.

Bangladesh, and Brazil have also identified ease of access or lack of transportation as barriers to seeking consultation from an HCP.[13,14,16,17] In all studies including ours, OA usually consulted a doctor or a nurse when they were ill. A mixed-methods study supports these findings as it reported positive attitudes of OA towards HCP and their acceptance of government health facilities,[8] but they highlighted the lack of family support is also a barrier to seeking modern healthcare.[9]

Policy implications

Though there are transitory treatment services and mobile clinics about of third of adults did not consult any HCP during an episode of acute illness and most of them perceived the disease as mild to moderate. Health education campaigns are needed in the OA settlement to improve the HSB. As the settlements are in hilly areas not easily accessible, satellite health Centers and mobile clinics should be made available within a more accessible distance from the settlements. Continued efforts are needed to tackle the existing burden of ill health among the OA population.[18]

Limitations

Our findings should be interpreted considering some limitations of the survey. Though we sampled settlements of OA documented by the JAKOA, smaller settlements may have been missed due to the remoteness of this hilly region. As the OA people can understand the Malay language, they were interviewed in the Malay language, in the presence of a local community representative. However, some participants may not have correctly understood a few questions. The self-reported HSB may be affected by social desirability bias as the interviewer was HCP. Finally, reasons for not seeking consultation were explored using a questionnaire that may not truly represent actual barriers to HSB. As HSB is a complex decision process that is best studied using qualitative research methods.

Conclusions

OA adults mostly consulted doctors, nurses, and medical assistants during episodes of acute illness. A substantial proportion did not consult any HCP or self-treated or consulted an alternative HCP. Lack of transport and non-perception of illness as "severe" were the main reasons for any healthcare. Health promotion campaigns and improved geographic accessibility are needed in the OA settlements of Cameron Highlands, Malaysia.

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