

Assessment of community's behaviors focusing on knowledge and attitude towards cancer in Hlinethaya Township, Yangon Division in 2006

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This cross-sectional study was carried out in Hlinethaya Township, Yangon Division in 2006 to assess community's knowledge, opinion, and attitude towards cancer. A total of 400 randomly selected subjects were interviewed. The mean age of participants was 39 ± 11.33 years. Median income was 50,000 Kyats per month (10000- 300000). Forty-four percent finished primary level of education and 71% were females. All of respondents were found to have common knowledge regarding cancer. One-third of respondents were aware that the canned food also causes cancer. Thirteen percent of them had cancer patients in their families and relatives. The health personnel (33.1%) and the neighbors (32.3%) were found to be common knowledge sources regarding cancer. The breast, cervix, and stomach were most common sites for cancer which was answered by 41.4% of the respondents. Breast self examination (86.2%) and mammography (86.7%) were found to be methods of diagnosis for cancer responded by interviewees. Regarding treatment, surgery (33.6%) and radiotherapy (95.5%) were commonly cited methods. More than 90% knew that smoking and alcohol drinking behaviors were related to cancers. According to their opinions, early diagnosis (87.4%) of cancer is important and can be hereditary (66.4%) in nature. The knowledge of cancer was not related to age, sex, and income but it was strongly related to education. So it is recommended to introduce cancer information in upper, middle and high school curriculum to develop favorable attitude that leads to promote better preventive practice.

INTRODUCTION

Of all the maladies that human beings have to suffer, cancer imposes as a most fearful and burdensome disease. Worldwide, approximately 10 million people are diagnosed with cancer annually and more than 6 million died of the disease every year. The burden of cancer is distributed unequally between the developed and the developing world. The total cancer burden is highest on affluent societies, mainly due to high incidence of tumors associated with smoking and western life style. In developed countries the overall mortality due to cancer is

more than twice as high as in developing countries. But now in some western countries, cancer mortality rates have recently started to decline due to reduction in smoking, improvement in early case detection and advance in cancer therapy [1].

Formerly, populations in developing countries are vulnerable to cancer in which infectious agents play a significant role. Now, it is due to adoption of western life style, such as consumption of tobacco, alcohol abuse, sedentary habits without adequate physical exercise and over-indulgence that lead to double burden for cancer in these communities. On the other

side, due to increased life span and better diagnostic facilities, more cases of cancer are detected in general population. But in most cases, the patients present themselves to a medical facility when the disease is far advanced and is not amenable to treatment [1]. Therefore, it is necessary to inform people thoroughly about cancer. Before giving information about cancer to community, the behavior of community about cancer has to be assessed first. So, the findings of this study will hopefully provide information to develop appropriate Information Education Communication (IEC) material for cancer prevention.

General objective

- To assess the knowledge, opinion, and attitude regarding cancer among the community in Hlinethaya Township.

Specific objectives

- To document socio-demographic characteristics of study subjects.
- To identify source of information regarding cancer among community members.
- To assess knowledge of signs and symptoms, sites of cancer, diagnostic method, treatment, and risk about cancer.
- To assess opinion and attitude of community regarding cancer.
- To find out association between the knowledge of cancer and attitude, opinion and demographic characteristics

MATERIALS AND METHODS

Study area and population

A cross-sectional community-based study design was used. Both urban and rural setting of Hlinethaya Township, Yangon Division was selected because the reported cases of cancer in hematology unit of Yangon General Hospital were increasing. Five out of 20 wards from urban and 3 out of 15 villages from rural were randomly selected. Eligible house-holds were selected consecutively. Age between 18-60 years and

both genders were eligible for the study if they were willing to give consent. If there were more than one eligible subject in the household, each individual per household was randomly selected.

Sample size determination

The probability of people who never heard & never come across cancer cases (q) was 0.5, the desired precision was set at 5%. The calculated sample size was about 384 at 95% confidence level. In this study, a total of 400 subjects were recruited.

Data collection and analysis

Before the data collection, informed consent was obtained from each participant. Respondents were interviewed (face to face) individually by trained interviewers using pre-tested structured questionnaires. Before the data entry, data were checked daily for error, incompleteness and inconsistency. Data entry was done by Epi Data 2.1b and range and consistency check was carried out before analysis. Data analysis was performed with computer software Epi info 6.04d. Univariate analysis was used to show the frequency distributions for categorical data and mean \pm SD for continuous data. The chi-square test was used to examine the significance of association between categorical variables. P value at <0.05 was considered as the association was statistically significant. Logistic regression analysis was done to find out the association between knowledge, attitude, opinion and demographic variables.

Ethical consideration

This study was approved by the Institutional Ethical Review Committee, Department of Medical Research (Lower Myanmar).

RESULTS

Characteristics of study samples

Total number of respondents was 399, of which 71% were females. Mean age of participants was 40.35 ± 12.43 years in men and 38.66 ± 10.83 years in women. Median

income of their families was 50,000 Kyats per month (ranged from 10,000-300,000). More than half of them were dependents and about 45% completed primary school education. Seventy-eight percent were married. Wooden houses (49.6%) and that of bamboo (35.6%) were commonest types of housing. The median year of living in the study area was 6 and it ranged from 1 to 43 years. Nearly 14% had family history of cancer in their families.

Ninety-four out of 399 (23.6%) respondents were smokers. They started to smoke at the age of 18.5 years (median) and it ranged from 5 to 48 years. Thirty percent of respondents had betel chewing practice. Among male respondents, 8.8% were drinking alcohol. Median time of consuming vegetable was 8 times (1-24), fruit was 4 times (0-15), and that of meat and fish were 10 times (0-21) per week. The reported consumption of green vegetables and fruits more than 7 times a week were 47.7% and 17.8% respectively. Among the respondents, 18.3% consumed meat between 4-6 times per week. Foods (28%) and behaviors (8%) were found to be causes of cancer reported by participants. Eleven out of 399 (2.8%) respondents identified cancer could be due to genetic. But majority (52.7%) of participants did not know the potential causes of cancer.

Early signs and symptoms of cancer reported by respondents

Breast swelling, swelling or thickening of any part of body and difficulty in swallowing were the most frequently responded early symptoms of cancer (91%, 89.9%, and 76% respectively). Forty percent of respondents knew that constipation more than 2 weeks was early symptom of cancer (Table 1).

Source of knowledge of cancer

The health centers and neighbors were common sources for cancer information cited by 33% and 32% of respondents respectively. Eighteen percent of study

subjects received cancer information from mass media.

Table 1. Distribution of early signs and symptoms of cancer reported by respondents

| Signs and symptoms (N=399) | Freq * (%) |
|--|------------|
| Non-healing ulcer | 223 (57.0) |
| Abnormal bleeding or secretions | 237 (60.6) |
| Gradual hair loss | 236 (60.4) |
| Swelling or thickening of any part of the body | 351 (89.8) |
| Chronic cough | 202 (51.7) |
| Bloody cough | 201 (51.4) |
| Sudden chest pain | 188 (48.1) |
| Breast swelling | 356 (91.0) |
| Difficulty in swallowing | 297 (76.0) |
| Constipation > 2 weeks | 153 (39.1) |
| Frequent bone pain | 217 (55.5) |

*Multiple responses allowed

Knowledge of cancer

The most commonly stated sites of cancer were breast, cervix and stomach (41.4%) and it was followed by lung (18.3%) and liver (8.0%). Nearly 12% could not describe where the cancers developed from. Smoking (92.3%), alcohol drinking (93.6%), betel chewing (86.0%), and tobacco chewing (82.4%) were most commonly mentioned risks of cancer by the respondents. But only half of study sample knew occupational exposure could be possible cause of cancer.

Knowledge of diagnosis and that of treatment methods

Regular medical check-up was reported as a method of diagnosis by 95.4% of respondents. The other known methods were breast self examination (87.5%), mammography (88%), and Pap smear (78.1%) examination. Concerning treatment methods, 96.2% of participants knew radiation and 92.4% recognized surgery as methods of cancer treatment. Few (23.7%) identified hormonal method of cancer treatment (Table 2).

Attitude and opinion towards cancer

Nearly all (93.5%) of participants viewed cancer is a serious problem and 85.5% thought some cancer can be detected early. Few (14.5%) believed that cancer is

contagious. Almost all (98.7%) of participants agreed that cancer had to be detected early to save the lives. Sixty-seven percent showed the disagreement to accept traditional mean for treatment of cancer. Of respondents, 57.1% concerned about what they eat (Table 3).

Table 2. Distribution of knowledge of diagnosis and treatment methods

| Knowledge variables | Freq* (%) |
|----------------------------------|------------|
| <i>Diagnosis methods (N=397)</i> | |
| Regular annual medical check-up | 375 (95.4) |
| Breast self examination | 344 (87.5) |
| Mammography | 346 (88.0) |
| Stool examination for blood | 265 (67.4) |
| Pap smear | 307 (78.1) |
| <i>Treatment methods (N=396)</i> | |
| Surgery | 366 (92.4) |
| Radiation | 381 (96.2) |
| Chemotherapy | 337 (85.1) |
| Hormone | 94 (23.7) |
| Combination treatment | 244 (61.6) |

*Allowed multiple responses

Table 3. Opinion and attitudes towards cancer

| Opinions & Attitudes | Freq (%) |
|--|------------|
| <i>Opinions</i> | |
| Cancer can be cured if detected early | |
| Yes | 347 (87.4) |
| Cancer is a serious problem | |
| Yes | 371 (93.5) |
| Cancer is a punishment for sin | |
| Yes | 228 (57.4) |
| Only smoker will get cancer | |
| Yes | 133 (33.5) |
| Some cancers can be detected early | |
| Yes | 339 (85.4) |
| Cancer is a rare disease that affects the unlucky one | |
| Yes | 148 (37.3) |
| Some cancers are hereditary | |
| Yes | 265 (66.8) |
| Cancer is contagious | |
| Yes | 59 (14.9) |
| <i>Attitudes</i> | |
| I like cancer to be detected early to save my life | |
| Agree | 394 (98.7) |
| All individuals are at risk of getting cancer | |
| Agree | 293 (73.4) |
| I prefer traditional treatment for breast cancer | |
| Disagree | 264 (66.3) |
| I will not see a doctor even if I have early signs of cancer | |
| Disagree | 368 (92.2) |
| I don't like to sit next to a smoker | |
| Agree | 350 (87.7) |
| I am not concerned about what I eat | |
| Disagree | 228 (57.1) |

Association between knowledge and demographic characteristics, attitude, and opinion among respondents

The knowledge score was developed from combination of knowledge of symptoms, diagnosis, methods and risks. Among respondents 61% belonged to high knowledge group and the rest was in low level knowledge group. The age, sex, income, residence, and family history of cancer were not significantly related to knowledge of cancer. But the education, attitude, opinion, and years of living in the study area were related to knowledge of cancer in bi-variable analysis (Table 4).

Table 4. Association between knowledge and demographic characteristics, attitude, and opinion among respondents

| Variables | Total knowledge | | χ^2 | p value |
|---|-----------------|-----|----------|---------|
| | High | Low | | |
| <i>Age (N= 394)</i> | | | | |
| Young (≤ 38 yrs) | 119 | 87 | 1.51 | 0.219 |
| Old (> 38 yrs) | 120 | 68 | | |
| <i>Sex</i> | | | | |
| Male | 67 | 49 | 0.58 | 0.446 |
| Female | 172 | 106 | | |
| <i>Education</i> | | | | |
| \leq middle school | 199 | 144 | 9.77 | 0.008 |
| High school | 11 | 6 | | |
| \geq Graduate | 29 | 5 | | |
| <i>Income (n=391)</i> | | | | |
| Low | 122 | 75 | 0.41 | 0.522 |
| High | 114 | 80 | | |
| <i>Residence</i> | | | | |
| Urban | 193 | 121 | 0.42 | 0.517 |
| Rural | 46 | 34 | | |
| <i>Family history of cancer</i> | | | | |
| Present | 37 | 16 | 2.15 | 0.143 |
| Absent | 202 | 139 | | |
| <i>Years living in the study area (n=391)</i> | | | | |
| ≤ 5 years | 105 | 87 | 5.55 | 0.018 |
| > 5 years | 132 | 67 | | |
| <i>Attitude (n=391)</i> | | | | |
| Favorable | 67 | 85 | 28.5 | 0.000 |
| Unfavorable | 170 | 69 | | |
| <i>Opinion (n=389)</i> | | | | |
| Correct | 97 | 84 | 7.65 | 0.006 |
| Wrong | 140 | 68 | | |

Note: The total knowledge score was 31, if the respondent could answer all the questions correctly. The minimal score of knowledge was 1 and maximal was 31. The mean score 22 was used as cutpoint for determining low and high knowledge score.

Logistic regression analyses examining association of selected characteristics and high knowledge

In logistic regression analysis, high school level of education (p=0.029) was strongly related to high level of knowledge after controlling for other variables. Living in urban was marginally related with high knowledge (p=0.061) (Table 5).

Table 5. Odds ratio (and 95%CI) from logistic regression analyses examining the association of selected characteristics and high level of knowledge

| Characteristics | Odds ratio | 95% CI of odd | | p value |
|------------------------------|------------|---------------|-------|---------|
| | | Lower | Upper | |
| 1. Residence | | | | |
| Rural (reference) | 1.000 | | | |
| Urban | 1.935 | 0.970 | 3.857 | 0.061 |
| 2. Education | | | | |
| =< Middle school (reference) | 1.000 | | | |
| High school | 1.353 | 0.425 | 4.311 | 0.609 |
| => Graduate | 0.298 | 0.101 | 0.882 | 0.029 |

Note: Age, sex, income, family history of cancer, attitude and opinion were also included in analysis. But these were not fit to model thus they were omitted.

DISCUSSION

Hlinethaya is the satellite township with the total population of 273,879. The number of people residing in urban dwelling is 220,387 so, that of rural is only 53,492 [2]. Most of men were working far from the houses as breadwinners and thus majority of respondents in the present study were women. Regarding previous exposure to cancer risk, the proportion of being smokers in the current study was lower than that of the study by Nyo Nyo Kyaing *et al* (23.6% vs. 31.1%) [3]. This is probably due to large number of females who participated in the current study. But for the betel chewing, the proportions were similar in both studies (30% vs 33%). It highlighted that significant number of females were also engaged in betel chewing practice which is one of the risks of cancer.

Although the finding of consumption of green vegetables in meal was higher in this

study (47.7% vs. 31.9%), the consumption of fruits (17.8% vs 17%), and meat (18.3% vs 21.5%) in a week were more or less the same as in Omar Hasan Kasule Sr *et al* study [4]. Knowledge of food in relation to cancer was low in this study (28% vs. 94%) as compared to that in Egypt because the study population in Egypt was students [5] but the study sample in present study was community members. This showed the importance of education in determining level of knowledge. Despite most of study sample were women with an older age, breast swelling (91%), swelling and thickening of any part of body (89.9%) and difficulty in swallowing (76%) were frequently recognized as early symptoms of cancer in our study, this was different view from study among students in Malaysia in which gradual hair loss (75.4%), bloody cough (72.8%), chronic cough (66.7%) were identified as main symptoms. Despite the priority setting in knowledge of cancer sites and that of diagnosis methods (regular medical check up 95.4% vs. 83.2%, mammography 88% vs. 68.2%, self breast examination 87.5% vs. 66.2%) and that of treatment options (surgery 92.4% vs. 85.1%, radiotherapy 96.2% vs. 49.4%, and chemotherapy 85.1% vs. 33.6%) were the same in present study and previous study. But the proportion with correct responses was high in ours. Due to an older age of our participants, they had ever come across cancer patients in their neighbors than students. Although the knowledge of most cancer risk factors between studies were similar, knowledge of occupational exposure (53.6% vs. 45.5%) as cancer risk was lower in both study participants. Because they were not workers, they probably did not aware occupation as a risk.

The respondents get cancer information from diverse range of sources with neighbors and health centers playing the major role. According to culture, Myanmar people are very friendly with their neighbors and willing to help each other. This could be explained why people get information from neighbors even though they are not trust-

worthy. Not only government health sector but also local NGO and international NGO that give curative and preventive services in the study area may be responsible for source of cancer information. Some opinions such as, 'cancer is a punishment for sin', 'only smoker will get cancer', 'cancer is a rare disease that affects the unlucky one', and 'cancer is contagious' have to change in order to accomplish for better preventive practice. Similarly, a few attitudes like preference of traditional treatment for breast cancer, unwillingness to see a doctor even if they had early sign of cancer, and no concern about what they ate were needed to change in order to get proper prevention, early and effective management of cancer. These findings pointed out proper health education message are necessary to improve their existing knowledge that also guided in changing or modifying more favorable opinion and attitude.

As in other studies the knowledge of cancer is strongly related to level of education in present study. This is also consistent with the study on medical students' KAP regarding cancer prevention in which KAP variables showed better scores for continuing than new students [6]. It is well known fact that the education will leave a lifelong impact on students because they will become responsible adults in a few years. This is the important fact that our study findings revealed that the difference in knowledge could be seen only after high school education. Actually the ages between upper, middle and high school children are very receptive to new ideas, while their opinions and attitudes are still amenable to change and modification. These emphasize

the significance of incorporating health education section regarding cancer in school curriculum.

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