

Prevailing Attitudes Towards Cancer: A Multicultural Survey in a Tertiary Outpatient Setting

Kae Jack Tay, ¹MBBS, MRCS(Ed), MMed(Surg), Nor Azhari Mohamad Zam, ¹MRCS(Ed), MMed(Surg), FAMS(Urology), Christopher WS Cheng, ¹FRCS, MMed(Surg), FAMS(Urology)

Abstract

Introduction: Cultural influences affect attitudes towards cancer screening, diagnosis, treatment and palliation. The objective of this study is to survey the prevailing attitudes towards cancer in a multicultural tertiary outpatient setting. **Materials and Methods:** This is a cross-sectional study of 300 respondents visiting the Singapore General Hospital (SGH) Urology Centre over a period of 1 month. A questionnaire was developed assessing responses to various facets of cancer management and administered in English, Chinese or Malay to every 10th person visiting the centre. Institutional review board approval was obtained. **Results:** Of 300 respondents, 57% were Chinese, 17% Malay, 19% Indian, and 7% others. Mean age was 54.3 years. Most respondents were male (68%) and had up to secondary education (56%). Most Chinese were Taoist/Buddhist (42%) or Christian/Catholic (36%) while Indians were largely Hindu (47%) or Muslim (27%). Thirty-seven percent of respondents had ever participated in cancer screening. Eighty-nine percent of respondents wanted to be the first to know if they had cancer, and 76% found it unacceptable if the diagnosis of cancer was withheld from them. These were irrespective of race, religion or other factors. Forty percent of respondents believed that being diagnosed with cancer was a matter of fate. Sixty percent of respondents would undergo treatment with 50% chance of cure, even if it involved major surgery and adjuvant therapy. Eighty-one percent believed in efficacy of at least 1 form of alternative treatment. Seventy-one percent of respondents preferred to die at home and this was most marked among Malay respondents (90.4%). **Conclusion:** This better understanding of patient attitudes will allow us to help patients balance wishes for autonomy versus family involvement in dealing with cancer. This will help us achieve a more holistic and patient-centred approach to cancer care.

Ann Acad Med Singapore 2013;42:492-8

Key words: Attitude, Autonomy, Confidentiality, Culture

Introduction

Culture, a complex of “ideas, customs, and social behaviour of a particular people or society”,¹ influences lifestyle practices as well as emotional, cognitive and social responses to cancer. In our tertiary urological practice, we often encounter patients who are fearful of cancer or dealing with the anxiety of a cancer diagnosis. These fears and anxieties must be addressed in order for oncologic diagnosis and treatment to be successfully implemented. In the local setting, we often find it also necessary to address the assumptions and attitudes of patients’ families—a key influence in cancer treatment.²

In multiracial and multicultural Singapore, there may be disparities in attitudes towards the prevention, diagnosis, management and palliation of cancer. There is a paucity of local literature on the influence of culture on attitudes towards cancer care. Knowledge of cultural effects may

guide individual physicians, as well as healthcare attitudes and policies in a more holistic way.

We report here, the prevailing attitudes towards cancer screening, disclosure of diagnosis, treatment and palliation in a multicultural and multiracial tertiary outpatient setting.

Materials and Methods

Study Design

We conducted a cross-sectional study by means of a survey using a self-administered questionnaire conducted over a period of 1 month in January 2010.

Participants

Participants were randomly sampled from a population of visitors to the Urology Centre of the Singapore General

¹Department of Urology, Singapore General Hospital, Singapore

Address for Correspondence: Dr Tay Kae Jack, Department of Urology, Singapore General Hospital, Outram Road, Singapore 169608.

Email: kaejack.tay@gmail.com

Hospital (SGH) by selecting every 10th person (patient or accompanying relative) entering the centre. When a candidate refused participation, the next person in line would be approached. A self-administered questionnaire was given out by a dedicated staff member in order to avoid selection bias. This staff member was also available for any queries by the participants to ensure consistent interpretation of survey questions.

Survey Questionnaire

The questionnaire used was available in 3 languages—English, Malay and Mandarin. Each translation was validated by a staff member familiar with the language. Demographic data including age, gender, race, marital status, number of children, home members, education level, religion and perceived level of religiosity was collected. A further 11 questions, classified into 6 parts assessing attitudes towards cancer screening, response to a diagnosis of cancer, cancer treatment, alternate treatment modalities and palliation were administered in the questionnaire (Table 1).

Statistical Analysis

Data were analysed using SPSS version 17. Univariate analysis was performed to determine the effect of race or religion on responses to each of the 11 questions. Significance was tested using a chi-square test, accepting a 2-tail probability of the observed difference being due to

chance less than 0.05 as significant. For those with significant differences found, further analysis was performed for each demographic factor (age, gender, marital status, whether they had children, home members, education level, whether they described themselves to currently have a critical illness and whether there was a family member diagnosed with cancer). If more than one factor was significant, multivariate analysis using logistic regression was performed, accepting the odds ratios of the significant model.

Ethical Approval

Ethical approval for the study was obtained from our institution's Centralised Institutional Review Board (CIRB). Informed consent was obtained from all participants in the study. Participants who so desired were allowed to remain anonymous.

Results

There were a total of 300 respondents, of which 171 (57%) were Chinese, 52 (17.3%) were Malay, 56 (17.8%) were Indian and 21 (7%) other races. Other races were a heterogeneous group and thus excluded. Eight further questionnaires had incomplete data and were also excluded, leaving 271 respondents available for analysis. Survey questions and possible responses are presented in Table 1 and demographic data is presented in Table 2.

Table 1. Survey Questions

Questions	Responses
Have you ever participated in cancer screening?	Yes, regularly/Yes, at least once before/Never
If you were found to have cancer, would you want to be informed of the diagnosis first before your family?	Yes/No
Would you want your family to decide what the best treatment for you is?	Yes/No
If your family decides that it is best for you not to know the diagnosis, is that acceptable?	Yes/No
If your parent/family member were diagnosed with cancer, would you want the doctor to inform you of the diagnosis first?	Yes/No
Will you decide it is not in your family member's best interest to know the diagnosis?	Yes/No
If you were diagnosed with cancer and making decision for treatment...	You would solely decide for yourself.
	You would decide in consultation with your family.
	You would want your family to decide for you.
If the treatment involves major surgery and further chemotherapy or radiation therapy and the chance of success is 50%...	You would go all the way.
	You would opt for something less aggressive.
	You would let nature take its course.
If there is no further hope for cure and further treatment is just to prolong life by a few months, you would...	Go for it, even if there are significant side effects.
	Go for it, only if there are minimal side effects.
	Let nature take its course.
If you are having terminal cancer, you would rather die at...	Home/Hospital/Hospice
If your parent/ family member is having terminal cancer, would you rather he dies at...	Home/Hospital/Hospice

Table 2. Demographics

		Total		By Race			P
		Mean $\pm$ SD		Chinese Mean $\pm$ SD	Malay Mean $\pm$ SD	Indian Mean $\pm$ SD	
Age (Years)		54.3 $\pm$ 14.7		56.9 $\pm$ 13.9	48.6 $\pm$ 16.6	52.0 $\pm$ 13.8	<0.01
		n	%	%	%	%	P
Gender	Male	185	68.3	68.5	54.9	80.0	<0.05
	Female	86	31.7	31.5	45.1	20.0	
Religion	Islam	69	25.5	1.8	100.0	27.3	NA
	Hindu	26	9.6	0.0	0.0	47.3	
	Taoist/Buddhist	71	26.2	42.4	0.0	1.8	
	Christian/Catholic	70	25.8	35.8	0.0	20.0	
	Atheist/ Free thinkers	33	12.2	20.0	0.0	0.0	
	Sikh	2	0.7	0.0	0.0	3.6	
Highest Education Attained	ITE/Secondary	152	56.1	52.7	62.7	60.0	NS
	Diploma/University Degree and Higher	119	43.9	47.3	37.3	40.0	
Marital Status	Single	40	14.8	14.5	17.6	12.7	NS
	Married	224	83.8	83.6	78.4	83.6	
	Divorced	7	2.6	1.8	3.9	3.6	
Has Children?	No	61	22.5	22.4	25.5	20.0	NS
	Yes	210	77.5	77.6	74.5	80.0	
Stays With...	Spouse	57	21.0	23.6	9.8	23.6	NS
	Children	13	4.8	5.5	2.0	5.5	
	Spouse and Children	148	54.6	52.7	64.7	50.9	
	Alone	23	8.5	8.5	7.8	9.1	
	Friend/s	3	1.1	1.8	0.0	0.0	
	Parent/Sibling	27	10.0	7.9	15.7	10.9	
Has Critical Illness?	Yes	32	11.8	15.8	5.9	5.5	<0.05
	No	239	88.2	84.2	94.1	94.5	
Has Family Member with Cancer?	Yes	86	31.7	36.4	29.4	20.0	NS
	No	180	66.4	61.2	68.6	80.0	
	Unknown	5	1.8	2.4	2.0	0.0	

ITE: Institute of Technical Education; NA: Not applicable; NS: Not statistically significant; SD: Standard deviation

Demographics

The Chinese respondents were significantly older than their Malay and Indian counterparts. There were significantly more males among Indian respondents compared to Malay and Chinese respondents. There were no other significant differences among respondents of the 3 races with regards to education level, marital status, having children or who they stayed with at home. A significantly higher proportion of Chinese respondents identified themselves as suffering from a critical illness compared to Malay and Indian respondents. There was no significant difference with regards to whether a family member had ever been diagnosed with cancer.

Cancer Screening

Overall, 13.8% of respondents reported attending cancer screening regularly, 23.5% had attended cancer screening at least once, and 62.7% reported having never attended cancer screening. At univariate analysis, race, gender, having children, having a critical illness and a family member diagnosed with cancer appeared to be significant factors. Age was not significant but a trend was seen towards greater rates of ever having attended screening with those over 55 years old (45.0%) compared to less than 55 years old (32.9%). At multivariate analysis, only female gender (OR 2.64, 95% CI, 1.39 to 5.05), tertiary education (OR 2.56, 95% CI, 1.40 to 4.68) and not having a critical illness

(OR 2.75, 95% CI, 1.17 to 6.50) were significant factors predicting ever having attended cancer screening.

Forty percent of respondents stated that no amount of screening would prevent cancer as it was a matter of fate. There was no demonstrable difference between respondents of different races, but in contrast to other religions, majority of Hindus (68.0%) felt that this was true. This finding was independent of other factors at multivariate analysis.

Disclosure of Diagnosis

Overall, 89.1% of respondents felt that if they were diagnosed with cancer, they would want to be informed first before their families came to know of it (Fig. 1). This was independent of race and other demographic factors at multivariate testing. Additionally, 76.0% of respondents found it unacceptable for their family to withhold the diagnosis from them. Malay respondents were more likely to find it unacceptable (90.2%) compared to their Chinese (76.5%) and Indian (61.1%) peers ($P < 0.05$). There were no other significant factors at multivariate analysis.

On the contrary, when asked if their parent or family member was diagnosed with cancer, independent of race and other factors, 88.5% of respondents wanted the doctor to inform them first before disclosing the diagnosis to the parent or family member. At multivariate analysis, having undergone tertiary education was the significant factor for wanting to be informed first (OR 5.79, 95% CI, 1.91 to 17.52). Furthermore, 47.9% of respondents would consider withholding the diagnosis from the family member. On the univariate level, this was more so in Indian (66.7%) and Malay (58.3%) compared to Chinese (38.4%) respondents ($P < 0.01$). At multivariate testing, education level was again the only significant determinant with those of tertiary education less likely to withhold the diagnosis this time

(OR 0.48, 95% CI, 0.25 to 0.89). Of those who answered in the affirmative, cited reasons were concerns regarding the family member's ability to comprehend or to cope with the stress of the diagnosis.

Cancer Treatment

Up to two thirds of respondents felt that if they were diagnosed with cancer, they would consult with their families in making the decision for treatment. Nearly one third would decide alone and 4% wanted their families to decide for them. No other factors were found to be significant at multivariate testing. When faced with a scenario where cancer treatment involved major surgery followed by chemotherapy/ radiotherapy with a chance of success of only 50%, more than half of respondents would go for it in spite of the side effects, one third would undertake such treatment only if the side effects were tolerable, and 10% would let nature take its course (Fig. 2). However, when treatment was palliative and would only prolong life by a few months at best, less than one third of respondents would go for it even with significant side effects, another one third would go for it if there were minimal side effects and 40% of respondents would eschew treatment (Fig. 3). These findings were all independent of race and other factors.

When asked regarding alternative cancer treatments, up to 210 (81%) respondents reported that they believed in some form of alternative therapy, the most popular being prayers, traditional Chinese medicine and herbs/natural substances.

Palliation

In the terminal stage of cancer, 70.7% of respondents wanted to die in their own home compared to hospital (14.8%) or hospice (14.5%). At univariate analysis, this

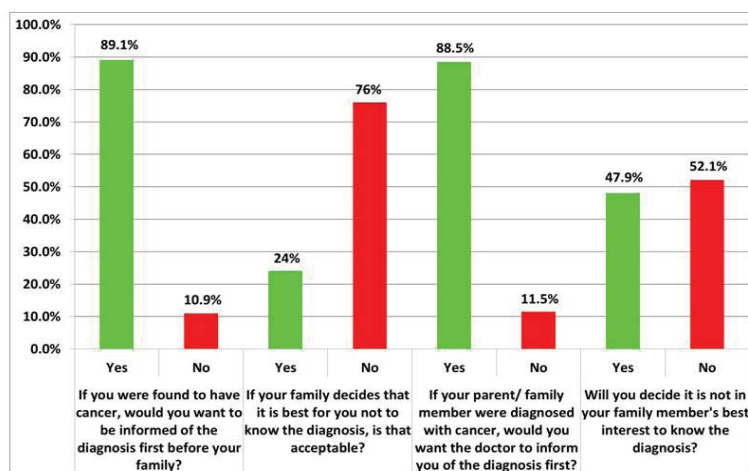


Fig. 1. Graph showing findings on disclosure of cancer diagnosis.

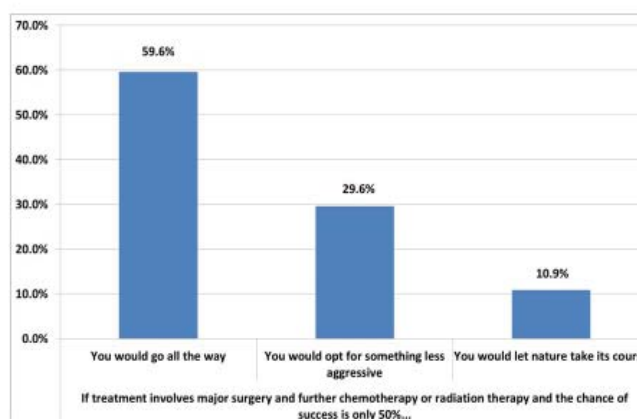


Fig. 2. Graph showing decision for aggressive treatment in potentially curable disease.

sentiment was associated with being Malay (92.2% wishing to die at home) compared to Chinese (62%) and Indians (71.7%). Being Muslim was also associated with wishing to die at home (89.9%). There was also a significant association with a younger age group (89.4% in those younger 40 years compared to 56.3% in those older than 65 years, $P < 0.01$) and was noted to be associated with respondents not having children (84.2%) compared to those having children (66.8%). At multivariate testing, race was not a significant determinant. Those in older age groups of 50 to 65 years (OR 0.18, 95% CI, 0.05 to 0.62) and older than 65 years (OR 0.1, 95% CI, 0.03 to 0.38) were less likely to want to die at home compared to those aged less than 40 years. Belonging to Islam compared to being an atheist or free thinker was the only other significant factor (OR 18.31, 95% CI, 2.20 to 152.26), although religion as a whole was not significant ($P = 0.82$).

If a family member was terminally ill, 71.7% of respondents opted for the relative to die at home, 16.1% in hospital and 12.0% in a hospice. This was again, accentuated among Malay respondents (88.2%). At multivariate testing, age was the only significant factor, with the oldest age group (>65 years) less inclined for a relative to die at home (OR 0.162, 95% CI, 0.04 to 0.63) compared to those younger than 40 years old.

Discussion

Practitioners in Singapore are sensitive to local attitudes towards cancer care while educating the public about screening, breaking bad news,^{3,4} or making therapeutic decisions.⁵ However, there has been a paucity of recent literature about contemporary attitudes in the community towards cancer care and the possible impact of cultural differences. We comment here on several interesting findings.

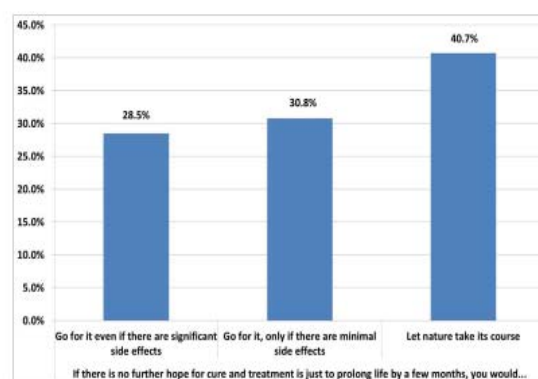


Fig. 3. Graph showing decision for aggressive treatment in terminal disease.

Cancer Screening

In our study, we find that only 37.3% of respondents had ever attended screening. This is similar to findings of Ong et al⁶ that only 47% of 677 persons from a public housing estate in Singapore had ever attended cancer screening.

Female gender was significantly associated with screening attendance (OR, 2.64). This is likely due to the presence of an established national breast and cervical cancer screening programme. Still, the overall proportion of female respondents having ever attended was just less than 50% and among females older than 50 years, only 52.2% had ever been screened. This is lower than the findings of the Ministry of Health National Health Survey in 2010, where 71% of women reported having ever attended cervical cancer screening and 66.3% had ever attended breast cancer screening.⁷

We found that respondents with a tertiary level of education were more likely to have attended screening (OR 2.56), possibly reflecting better awareness of disease. This corroborates with Ong et al who reported that low education level was associated with limited cancer knowledge which significantly impacted on cancer screening attendance.⁶

Those respondents without a critical illness were more likely to have ever gone for screening (OR, 2.75). While we may postulate that screening may have prevented critical illness, we do not have the details of the kind of critical illness that respondents had. It is not possible to determine a causative relationship due to lack of temporal data and recall bias regarding attendance of screening among individuals with critical illness may exist.

Disclosure of Diagnosis

The western principle of medical confidentiality dictates that patients should be given their diagnosis which should not be revealed to anyone unless the patient explicitly allows

it. In Asian society, however, it is often perceived that when children come to maturity, they take on the responsibility of making decisions for their elderly parents. In local practice, we sometimes explain the diagnosis to the adult children who stay behind in the consultation room after the patient leaves.

It is a striking finding that 89.1% of our respondents want to be the first to know their diagnosis and furthermore, 76% would find it unacceptable if the diagnosis was withheld from them. On the other hand, 88.5% of respondents want to be the first to know their family member's diagnosis and 47.9% would consider withholding the diagnosis from them. This schism in attitude towards disclosure of diagnosis may be due to the relative youth of our respondents (mean age: 45 years), resulting in them feeling better informed and capable of handling a diagnosis of cancer for both themselves and their perceived dependents.

In a recent survey of Singapore oncologists, Tan et al showed that 72% of them would disclose the diagnosis to the patient first rather than the relatives.⁴ Family resistance was the most important factor resulting in less than complete disclosure of the diagnosis to the patient. These findings are in stark contrast to a 1993 survey by Tan et al: of 186 medical doctors, 90.4% would reveal the diagnosis to the family first, and only 43.6% would inform the patient.³

In clinical practice, family still plays a substantial role in diagnosis disclosure. In a retrospective study of 55 patients who died in an oncology ward in Singapore, Chong et al⁸ reported that only 61% were included in the first disclosure, although by 1 month after initial diagnosis, 88% had been informed of their disease.

The dilemma of cancer disclosure is present elsewhere in Asia. In a study of 617 dyads of patient-designated caregivers across 21 hospitals in Taiwan, Tang et al⁹ reported substantial discrepancies in being informed about their diagnosis and prognosis between terminally ill cancer patients and their family caregivers. Moreover, it was found that cancer patients strongly proclaimed their superior rights to be informed about their disease over their family and preferred their physicians to inform themselves before releasing any information to their family caregivers.

Therapeutic Decision-Making

While western bioethics hold the principle of autonomy as sacred, the Asian value of the family as a basic unit often results in the main decision maker being the head of the household. Parents of young families make decisions for their offspring as well as their own elderly parents. This approach is supported by findings of Hanssen et al,¹⁰ that to force a socioculturally unprepared person to make independent choices may violate his or her integrity.

Up to two thirds of our respondents reported that they would decide on treatment in consultation with their family. Another 29% would decide alone and 4% would leave the decision solely in the hands of the family. These findings suggest that physicians should balance patient desires and autonomy with that of the family, again being clear that in event of disagreement, patient's preferences would be paramount.

Alternative Treatments

In our survey, 81% of respondents believed in some form of alternative therapy for cancer. While alternative therapies may not be evidence-based, they may be important coping strategies. Chui et al¹¹ studied Chinese-Australian patients struggling to accept a diagnosis of advanced cancer. Five culturally specific coping mechanisms employed were traditional Chinese medicine, traditional Chinese beliefs on the use of food for health maintenance, qi gong, fengshui and the worship of ancestors and gods. Kohler¹² discussed the needs of 27 terminally ill French patients in 'spiritual distress', suggesting that the true benefit may be from active listening and help with the rereading of life by the nurses caring for them rather than from religious personnel. Indeed, hope, contributed by psychosocial or spiritual interventions, is well recognised locally as an essential component in cancer treatment.¹³

Palliative Care

We found that 70% of respondents preferred end-of-life care to be at home rather than at an institution. This may reflect Asian beliefs of what constitutes a good death. Indeed, it is frequently seen that dying patients request for terminal discharge to pass on peacefully at home. This is particularly seen among Malay/Muslim respondents and may reflect the strong familial ties within the community as well as the desire to pass on in the presence of loved ones.

We found that those in an older age group were less likely to want to die at home. This corroborates with an analysis of the Singapore Cancer Registry data by Hong et al who found that older age was associated with dying in a hospice (OR, 1.35).⁵ This may reflect a sentiment among the elderly that they do not want to burden their children, or the logistic difficulties of nursing the elderly terminally ill in Singapore.

Strengths and Limitations

This is a cross-sectional study performed in the setting of an Urology Centre in a tertiary institution with the intention of documenting prevailing attitudes towards cancer care. The nature of the sample population is a limitation of this

study and caution is required in direct extrapolation of the study findings to the general population. While effort was taken to randomly select individuals entering the centre, the respondents were likely to be patients or patients' relatives and they may have a biased perception to cancer care compared to individuals coming from the general population. We attempted to control for this by including whether the respondent was suffering from critical illness in multivariate analysis. We also note some proportional discrepancies in our study with a greater proportion of Indian respondents and males compared to population norms.

While culture may defy classification, we sought to examine cultural differences in attitudes towards cancer within our population using race and religion as the main surrogates for culture. This approach has limitations but may be pragmatic as race and religion are often the most obvious demographic factors at first patient contact.

Ultimately, race and religion did not have a significant impact on attitudes towards cancer care after controlling for other demographic factors. The population visiting our urology centre were mainly Singaporeans or permanent residents and thus homogenous in exposure and beliefs. Exclusion of other races ($n = 21$) may have contributed to the homogeneity of the remaining major races. Their number, however, was too small to analyse meaningfully.

Conclusion

This study casts important light on attitudes towards cancer in our multiracial and multicultural setting. We find that patients desire autonomy in dealing with diagnosis, yet are ready to deal with a cancer diagnosis for a relative and even conceal it. Majority would decide on treatment together with their family but a substantial minority would decide alone. Majority would choose to die at home rather than in an institution. Race and religions do not play an important role in determining attitude towards cancer care. Rather, education may be an important modifier in some areas. This understanding of prevailing attitudes towards cancer will allow us to better manage cancer patients in a holistic manner.

Acknowledgements

The authors would like to acknowledge Ms Juriyah Yatim and Ms Lim Hui Zhen for assisting in data collection and entry.

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