Community attitudes to institutional care of the aged in Hong Kong

TP Lam, I Chi, L Piterman, CLK Lam, I Lauder

The objective of this study was to assess community attitudes to institutional care of the aged in Hong Kong. A random sample of 1023 adult residents were interviewed by telephone, with 22.7% and 57.5% of the respondents agreeing or strongly agreeing that non-disabled and disabled elderly should be accommodated in institutions, respectively. Both social factors pertaining to the respondents and physical and behavioural factors of the elderly had significant effects on these attitudes. Age, gender, educational level and life experience or previous experience looking after the elderly also had significant effects. This study provides important information on the community attitudes to institutionalisation of the elderly in Hong Kong. These attitudes will have significant effects on the demand for institutional care for the elderly in the next decade. The findings should also help health care workers to identify those elderly at risk of institutionalisation. Early intervention may help to reduce some of these placements.

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Introduction

The tradition of living in extended family units in Hong Kong has gradually disappeared over the past two decades,[1] on account of westernisation and other social changes which have taken place. The improvement in social conditions has also meant that the life expectancy of the local population is among the highest in the world, the result of which is a rapidly ageing society.[2,3] One of the concerns arising from these developments is the provision of adequate care for our senior citizens aged 60 years and older, who numbered 750 000 in 1992. This population is expected to increase by one third within the next decade.[2]

It is well-known that the attitudes of family members have very significant effects on institutionalisation of the elderly.[4] In Hong Kong, family member attitudes may be especially important in terms of deciding on the institutionalisation of the elderly because most elderly people are supported by their families. As they are not financially independent, their self-determination and preferences are limited. Although there has been much debate on the subject of attitude/behaviour consistency, most recent research has concluded that attitudes and behaviour are generally related.[5,6]

Opinions vary as to the factors which determine institutionalisation of the aged.[2,3,7-12] Most authors believe that family and social factors are just as important as are physical disabilities in determining whether or not the elderly will be cared for at home or in an institution.[4,7-11,13-17] For instance, the Framingham study revealed that for those who survived a stroke for at least 30 days, independent living was determined by social factors as much as by severity of disability and that family and social factors had an equal impact in determining the final outcome of the stroke.[7] However, these studies were all concluded in countries where the culture and attitudes towards the elderly are quite different from those in Hong Kong. The objectives of our study were to identify the factors which may influence these attitudes in Hong Kong. If health care providers can identify those elderly at risk of in-

The University of Hong Kong, Pokfulam, Hong Kong:
General Practice Unit, Department of Medicine
TP Lam, FRACGP, FHKAM (Family Medicine)
CLK Lam FRCGP, FHKAM (Family Medicine)
Department of Social Work and Social Administration
I Chi, DSW
Department of Statistics
I Lauder, PhD
Department of Community Medicine, Monash University, Victoria, Australia
L Piterman, FRACGP
Correspondence to: Dr TP Lam

Table 1. Responses to the question "Should the elderly be cared for in an institution?"

	Non-disabled No. (%)	Disabled No. (%)
Strongly agree	40 (3.9)	173 (16.9)
Agree	192 (18.8)	415 (40.6)
Neutral	73 (7.1)	50 (4.9)
Disagree	407 (39.8)	217 (21.2)
Strongly disagree	244 (23.9)	118 (11.5)
Don't know/ refused to answer	67 (6.6)	50 (4.9)
Total	1023 (100)	1023 (100)

stitutionalisation and intervene by providing early community support to families, they may be able to encourage more families to maintain their elderly relatives at home.[7,18,19]

Materials and methods

For the purposes of this study, an elderly person was categorised as one aged 60 years or more. An institution was considered to be a place where the elderly no longer lived independently. Disabled individuals were considered to be those who could not live independently without help.

The development of the questionnaire

After an initial literature review and discussion among the authors, interview by questionnaire was chosen as an appropriate method for data collection. The questionnaire was developed after focus group discussions with various groups, e.g. relatives of the disabled elderly, social workers, and general practitioners during August and September 1992. Focus group discussions were considered to be vital to the development of the questionnaire as Hong Kong experience in this area is very limited.

The first draft of the questionnaire was pilot-tested in October 1992 on a sample of 20 respondents. The questionnaire was then extensively rewritten based on the experience of the pilot study. The second pilot study was performed in July 1993 on 40 respondents to enhance the reliability, internal consistency, content validity and construct validity of the questionnaire items prior to the formal study. After the second pilot, further changes were made. Some of the wording was changed to make it easier to understand. The five-point Likert scale that was originally used for most of the attitudinal items was reduced to a three-point scale, leaving only the four main attitudinal items with a five-point scale. The main reason for this was to reduce the time required to answer the questionnaire, as previously it had taken up to 15 minutes. Most of the respondents who failed to successfully complete the questionnaire probably did so because of the time required. These changes allowed the interview time to be reduced to 10 minutes.

Although the questionnaire was originally written in English, the survey was conducted in the local dialect, i.e. Cantonese. Help was sought from other researchers and language experts on the translation. The final Chinese version used in this study was constructed

Table 2. Effect of social factors on the decision to consider institutionalisation of the non-disabled elderly

Social factors	Yes (%)	Neutral (%)	No (%)	Don't know/ refused to answer (%)
Requested by the elderly*	797 (77.9)	21 (2.1)	175 (17.0)	31 (3.0)
Emigration*	632 (61.8)	31 (3.0)	269 (26.3)	91 (8.9)
No other help*	573 (56.0)	18 (1.8)	401 (39.2)	31 (3.0)
Poor relationship*	341 (33.3)	24 (2.3)	586 (57.3)	72 (7.0)

*$P < 0.001$ by χ^2; df=1 on testing the Yes/No categories against an expected 50/50 response

Table 3. Effect of social factors on the decision to consider institutionalisation of the disabled elderly

Social factors	Yes (%)	Neutral (%)	No (%)	Don't know/ refused to answer (%)
No other help*	874 (85.4)	5 (0.5)	127 (12.4)	17 (1.7)
Requested by the elderly*	869 (84.9)	7 (0.7)	120 (11.7)	27 (2.6)
Emigration*	790 (77.2)	16 (1.6)	165 (16.1)	52 (5.1)
Poor relationship†	534 (52.2)	20 (2.0)	407 (39.8)	62 (6.1)

*$P < 0.001$ and †$P < 0.01$ by χ^2; df=1 on testing the Yes/No categories against an expected 50/50 response

Table 4. Effect of physical and behavioural factors on the decision to consider institutionalisation of the disabled elderly*

Physical and behavioural factors	Yes (%)	Neutral (%)	No (%)	Don't know/ refused to answer (%)
Violent outbursts	735 (71.8)	8 (0.8)	222 (21.7)	58 (5.7)
Confusion	701 (68.5)	9 (0.9)	278 (27.2)	35 (3.4)
Faecal incontinence	686 (67.1)	11 (1.1)	290 (28.3)	36 (3.5)
Urinary incontinence	679 (66.4)	11 (1.1)	296 (28.9)	37 (3.6)
Unable to shower	633 (61.9)	18 (1.8)	339 (33.1)	33 (3.2)
Unable to feed	619 (60.5)	21 (2.1)	350 (34.2)	33 (3.2)
Unable to walk	613 (59.9)	15 (1.5)	359 (35.1)	36 (3.5)
Unable to dress	602 (58.8)	17 (1.7)	372 (36.4)	32 (3.1)
Poor memory	574 (56.1)	12 (1.2)	393 (38.4)	44 (4.3)

*All these physical and behavioural factors are significant at 0.001 level by χ^2; df=1 on testing the Yes/No categories against an expected 50/50 response

using colloquial Cantonese. Minor modifications were also necessary before the questionnaire could be used for the computer-assisted telephone interview.

The final version of the questionnaire consisted of 38 items, 21 of which related to the beliefs and attitudes of the respondents. Thirteen additional items were concerned with the demography and personal characteristics of the respondents (e.g. experience in looking after disabled elderly). Four items were necessary for telephone number, interviewer number, agreement to participate, and date of interview. Completion time was reduced to approximately 8 minutes.

Study design

The target population of the study was Hong Kong residents aged 18 years and older who were interviewed by telephone. Telephone numbers were first randomly drawn from Hongkong Telecom's residential telephone directories as "seed numbers". Another set of numbers were then generated from these seed numbers using the plus/minus single digit method, in order to capture unlisted numbers. All telephone numbers drawn/generated were then mixed together and filtered for duplicate numbers to produce the final sample, which was roughly five times the size of the seed sample. The order of telephone numbers in the final sample was randomised before use. The research pro-

Table 5. The effect of respondent characteristics on the expected response probabilities* of their attitudes to institutionalisation of the non-disabled elderly

	Expected response probabilities				
	Strongly agree	**Agree**	**Neutral**	**Disagree**	**Strongly disagree**
Age†					
20	0.03	0.16	0.08	0.45	0.28
40	0.04	0.20	0.08	0.42	0.26
60	0.08	0.24	0.07	0.38	0.23
Educational level†					
Never went to school	0.17	0.23	0.06	0.37	0.18
Form one to Form three	0.03	0.12	0.47	0.24	0.14
Tertiary education	0.01	0.09	0.55	0.22	0.15
Living with elderly relatives‡					
Yes	0.06	0.19	0.02	0.44	0.29
No	0.05	0.32	0.12	0.19	0.32
Looked after disabled elderly in the past†					
Yes	0.07	0.12	0.08	0.42	0.30
No	0.05	0.24	0.09	0.42	0.20

*By logistic analysis; †$P < 0.01$; ‡$P < 0.05$

tocol of this study was approved by the Ethics Committee of the Medical Faculty of the University of Hong Kong.

Computer-assisted telephone interviews

Telephone ownership in Hong Kong is very high, as more than 98% of households own one. The respondents were telephone-interviewed by research assistants between 6 pm and 10 pm (mainly Tuesdays and Thursdays) at the Social Science Research Centre (SSRC) of the University of Hong Kong from January 1994 to the third week of March 1994. With this system, telephone interviewers read the questions from a computer-controlled display terminal and key the responses directly into a computer data file. This makes interviewing more accurate and it eliminates the steps of coding, thus greatly speeding up data analysis.

In order to avoid sampling bias, no interviews were carried out during the first and second weeks of February as it was Chinese New Year, a period when the more affluent local people take their annual holiday. The interviewers were trained by the principal author and random checks were carried out to ensure the quality of the interviews. They were also supervised at all times during the study by the principal author or by the supervisor at the SSRC.

Data analysis

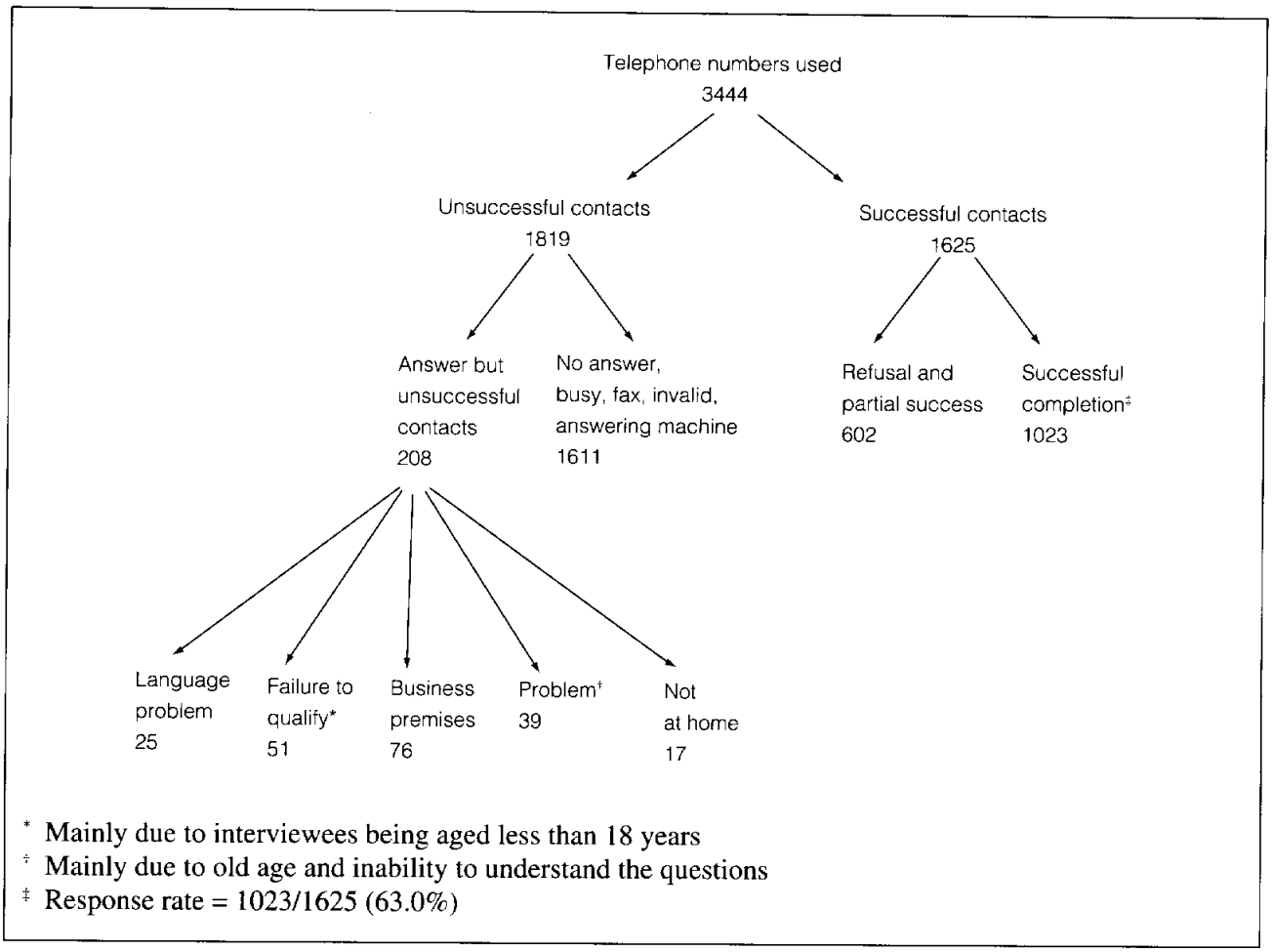
The data were analysed using the SAS (version 6.07) software package (SAS Institute Inc., Cary, NC, US). The logistic regression model was appropriate for the variables selected in Tables 5 and 6. Chi-square (χ^2) analysis was used on the data shown in Tables 2 to 4. The statistical significance level was set at $P = 0.05$.

Results

Telephone interviews

Of the total of 7981 telephone numbers generated by the method described earlier, 3444 were used in this study. One thousand and twenty-three respondents

Fig 1. Results of telephone interviews conducted



completed the questionnaire, of a total of 1625 respondents who were successfully contacted and qualified for the study. Hence the response rate was 63%. A detailed breakdown of the telephone interviews is shown in Fig 1.

Characteristics of respondents

The various characteristics of the respondents (e.g. district of residence, age, sex, educational level, type of accommodation, occupation) were generally representative of the Hong Kong population when compared with the 1991 Hong Kong Census data.

Attitudes to institutionalisation of the elderly

Table 1 shows the various attitudes towards institutionalisation of the non-disabled and disabled elderly. Nearly 23% and 57.5% of the respondents either agreed or strongly agreed with the placement of non-disabled and disabled elderly, respectively.

Tables 2 and 3 show the effects of some important social factors on the decision to institutionalise the non-disabled and disabled elderly, respectively. Factors such as the absence of additional help, the emigration of close relatives and requests for institutionalisation by the elderly were all considered by the respondents to increase the need for placement, whether the elderly person was disabled or not. However, a poor relationship with the elderly person had the least effect on these attitudes. Physical and behavioural problems also increased the willingness of respondents to consider placing the disabled elderly in an institution (Table 4).

The significance of the respondent's responses to institutionalisation of non-disabled and disabled elderly were analysed using univariate logistic regression. Age, educational level, and previous experience with disabled and non-disabled elderly had significant effects on the decision to institutionalise the non-disabled elderly (Table 5). Older and less well-educated respondents were more willing to consider placement. Those respondents with experience in living with the elderly or looking after disabled elderly were less likely to consider this option.

In the case of disabled elderly, the age, sex or educational level of the respondents were shown to influence their decision (Table 6). Again, older or

Table 6. The effect of respondent characteristics on the expected response probabilities* of their attitudes to institutionalisation of the disabled elderly

	Expected response probabilities				
	Strongly agree	**Agree**	**Neutral**	**Disagree**	**Strongly disagree**
Age†					
20	0.12	0.39	0.05	0.26	0.18
40	0.18	0.43	0.06	0.22	0.11
60	0.25	0.45	0.06	0.17	0.06
Sex‡					
Male	0.17	0.38	0.05	0.26	0.14
Female	0.20	0.45	0.05	0.20	0.10
Educational level†					
Never went to school	0.30	0.40	0.06	0.17	0.07
Form one to Form three	0.19	0.43	0.05	0.22	0.11
Tertiary education	0.11	0.42	0.04	0.26	0.17

* By logistic analysis
† $P < 0.001$
‡ $P < 0.005$

less-educated respondents were more willing to consider placement of the disabled elderly. Female respondents were also more likely to consider this option. However, previous experience with living or looking after an elderly person did not show an effect in this case. These results are summarised in Table 7. Occupation, social class, and experience in living overseas did not show any effect.

Discussion

The aim of this study was to assess community attitudes to institutional care of the aged in Hong Kong and to identify the factors which influence these attitudes. This study surveyed more than 1000 individuals from different administrative districts, age, sex, occupations, educational levels, types of accommodation, and income brackets in Hong Kong. Comparisons with the 1991 Hong Kong Census data revealed our sample to be generally representative of the Hong Kong population.

A response rate of 63% was achieved, which was comparable to other non-political studies carried out at the SSRC of the University of Hong Kong (personal communication, KL Mak, SSRC). Different groups of residents were represented in this cross-sectional study which was conducted by telephone interview because of a relatively small budget.

The two attitudes analysed in this study included attitudes to institutionalisation of the non-disabled elderly and attitudes to the institutionalisation of the disabled elderly. It is understandable that more respondents (57%) agreed with the placement of disabled elderly. However, close to one quarter of our respondents also agreed to the placement of non-disabled elderly (Table 1). This may not sound very surprising to those readers living in Hong Kong or other Western countries in the 1990s. However, these findings would have been unthinkable for a Chinese community such as Hong Kong 20 or even 15 years ago, where looking after the old and living with adult children had been the norm for hundreds of years. Nevertheless, the attitudes of a community change with time.

Table 7. Summary of effect of respondent characteristics on willingness to consider institutionalisation

Respondent characteristics	Non-disabled	Disabled
Older age	More willing	More willing
Female	Neutral	More willing
Less educated	More willing	More willing
Living with elderly relatives now	Less willing	Neutral
Looked after disabled elderly previously	Less willing	Neutral
Occupation (excluding students and housewives)	Neutral	Neutral
Social class*	Neutral	Neutral
Lived overseas previously	Neutral	Neutral

* Based on housing accommodation

One of the findings of this study is that the majority of Hong Kong residents would agree to placing a disabled elderly relative in an institution. Were this to occur, this would impose a tremendous load on an already overworked system. For instance, the Government's planning ratio for Care and Attention Homes was eight places per 1000 of those aged more than 60 years in 1991,[2,3] and it was proposed that it be increased to 11 places per 1000 in 1994.[20] The Hong Kong population is ageing rapidly. A significant number of these elderly will become disabled regardless of how good the medical care given to them is. Therefore, preparations must be made for this projected increase in demand for institutional places for the disabled elderly, both in the private and public sectors. Attempts should also be made to solicit the views of the elderly themselves.[21]

Our study confirmed that social reasons are a major influence on an individual's decision to place an elderly relative in an institution. Three major social reasons are important factors in the decision-making process—absence of additional help, a request for placement by the elderly themselves, and the emigration of close relatives. This reflects the importance of support to the caregiver and the elderly when making their preferred choice of living arrangement.

Of the physical and behavioural factors which might influence the respondents' attitude to institutionalisation of a disabled elderly relative, the categories "confused and wanders away from home" and "violent outbursts with hitting" influenced more respondents to agree to placement. This is a clear indication that psychogeriatrics demands priority when planning services for elderly citizens, yet this area has been badly neglected.[20]

For health care workers, many findings in this study should be useful in daily clinical practice. If a disabled elderly person is looked after by a woman, there is an increased chance that the elderly person will be placed in an institution. This is also true if the caregiver is a relative who has received little or no education. These are interesting findings, as one might expect men to be more likely to place the disabled elderly in institutions. A possible explanation is that men may rely on their spouses to provide the care and women may feel that they have no one to call on to help provide care for the disabled elderly person. Hence, these elderly are probably more at risk of institutionalisation if their caregiver is a single woman rather than a married couple. As for educational level, better-educated individuals may think of other alternatives such as home help services, before they consider placing their elderly relatives in an institution. However, it is difficult to interpret the significance of the age factor. Younger respondents appeared to be less likely to want to place disabled elderly in institutions. This is an unexpected finding as the authors had anticipated that younger respondents might be more in favour of this. It is possible that the chance of these young respondents having to look after a disabled elderly person is small and they may believe that there would be someone else at home to look after the disabled elderly relative, should the need arise. However, these explanations probably do not fully explain this observation and further studies are needed to explore the reasons.

Although most respondents did not agree with the institutionalisation of non-disabled elderly, more than 20% of respondents did. This finding may be an important indication of the future demand for accommodation for the non-disabled elderly. It is anticipated that there will be one million elderly citizens in Hong Kong by the year 2002. If one fifth of these people are going to require accommodation in institutions, the system will never be able to cope. This study also con-

firmed that someone living with elderly relatives or who has looked after a disabled elderly person in the past is less likely to place a non-disabled elderly person in an institution. People with such a social background are in fact becoming far less common in Hong Kong because of westernisation and rapid social and economic development. Extended families are no longer popular. Fewer people will have the experience of looking after a disabled elderly person and consequently they are more likely to be placed in an institution. General practitioners should try to identify elderly patients who are in social situations which put them at increased risk of being institutionalised. Extra medical and social support may help to keep some non-disabled elderly in the community where they are generally happier and healthier than they are in institutions.

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