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Anxiety and depression in Chinese patients attending an Australian GP clinic

Background
Incidence of depression among Chinese people living in traditional Asian regions is low. Recent Chinese immigrants to Australia may be at greater risk of depression and anxiety because of issues related to integration into Australian society. General practitioners are often the first point of contact for people with anxiety and depression. Patients from a Chinese background may be reluctant to discuss their mental health problems with their GP.

Methods
A cross sectional survey was undertaken of Chinese patients 18 years of age and over attending a general practice in southwestern Sydney (New South Wales) during July 2005. Patients were asked to complete the Kessler Psychological Distress Scale (K10) and Somatic and Psychological Health Report (SPHERE) depression screening questionnaires, along with a demographic questionnaire. All questionnaires were available in English or Chinese.

Results
A total of 161 patients completed the questionnaires. Fifty-five percent (83) of patients had a K10 score that indicated medium or high risk, and 44% (71) had a high SPHERE score (PSYCH-6 and/or SOMA-6). There was an association between increased risk of depression or anxiety and reduced occupational status but not social isolation.

Discussion
Half the Chinese patients presenting at this general practice were at high risk of psychological distress (as measured by standard screening instruments). The proportion of patients in this study at risk of psychological distress on screening is more than would be expected in the general Australian population. Though limited by a small sample size and a single general practice location, these findings are of concern and should direct further research.

Anxiety, depression and somatoform disorders account for 7.4% of all problems seen in general practice in Australia.[1] The Australian National Survey of Mental Health and Wellbeing reported a 12 month prevalence of major depression among adults of 5.8%; for anxiety disorder, it was 9.7%.[2] The New South Wales Health Survey reported a prevalence of high level psychological distress of 10.7%.[3]

General practitioners are often the first point of contact for people with these conditions. Previous studies, however, suggest a low rate of recognition of these conditions in general practice.[4–6] Detection can be improved significantly using a screening tool such as a health and mood questionnaire,[4] which will lead to improved outcomes for people with anxiety and depression disorders.[7] Limited available evidence suggests that under diagnosis may be substantial in non-English speaking[8] and Asian patients.[9,10]

There is a low incidence of depression among Chinese people living in traditional Asian regions,[11–13] although prevalence does increase with increasing deprivation.[14] The situation may be different for Chinese immigrants in Australia, for whom isolation due to poor language skills, nonrecognition of former qualifications and occupations, and failure to adapt to Australian society are significant issues. Previous studies have shown that immigrants who are less well integrated into society are more likely to suffer depression.[15,16]

The aim of this study was to estimate the extent of anxiety and depression among Chinese immigrant patients attending a single family practice in southwestern Sydney (New South Wales). In addition, we explored the patient characteristics associated with anxiety and depression in these patients.

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Methods

Survey

A cross sectional survey was undertaken of Chinese patients 18 years of age and older attending a general practice surgery during the month of July 2005. Over 98% of patients who attend this surgery are Chinese speaking. Patients were asked to complete the Somatic and Psychological Health Report (SPHERE) questionnaire[17] and the Kessler Psychological Distress Scale (K10) questionnaire.[18] These brief questionnaires can be used to identify people at risk of anxiety and depression in general practice settings.

Publicly available Chinese translations of the SPHERE and K10 questionnaires were used. The Chinese version of the K10 has been used in the New South Wales Health Survey and the Chinese version of SPHERE was from SPHERE-GP. Patients were also asked to complete a questionnaire that contained demographic and general health questions. The demographic questionnaire was designed in English by the first author who then translated it into traditional Chinese and simplified Chinese. A bilingual doctor checked the translation by back translation of the Chinese versions to English.

All Chinese patients 18 years of age and older attending the surgery during July 2005 were invited to take part in the survey. The receptionists gave each patient an information sheet; patients were free to choose if they wished to participate in the study. Written informed consent was obtained from all those who agreed to take part. The patients either completed the questionnaires in the waiting room and handed it to the GP or took the questionnaire home to complete and posted it back to the GP.

The levels of risk for anxiety and depression as determined by the K10 and SPHERE questionnaires were calculated using published methods.[17,18] Patients were considered to have a higher risk of anxiety or depression if they were assessed as having a medium or high risk (score >16) with the K10 and either a positive PSYCH or SOMA (level 1) or both PSYCH and SOMA (level 2) risk with the SPHERE questionnaire.

Data analysis

All data was analysed using SPSS V.13. Categorical data was summarised using contingency tables and the proportion with the attribute of interest; the differences between groups were compared using the Chi-square statistic. Continuous variables such as age were summarised as the mean (standard deviation).

The study was approved by the Human Research Ethics Committee of the University of New South Wales.

Table 1. Demographic characteristics of participating patients

	Female		Male		Total	
	N	%	N	%	N	%
Age group	**(n=106)**		**(n=44)**		**(n=150)**	
<20	2	1.9	1	2.3	3	2.0
21–30	10	9.4	2	4.5	12	8.0
31–40	29	27.4	5	11.4	34	22.7
41–50	34	32.1	15	34.1	49	32.7
51–60	13	12.3	7	15.9	20	13.3
>60	18	17.0	14	31.8	32	21.3
Country of birth	**(n=107)**		**(n=46)**		**(n=153)**	
China	78	72.9	35	76.1	113	73.9
Hong Kong	23	21.5	10	21.7	33	21.6
Taiwan	2	1.9	1	2.2	3	2.0
Other (including Australia)	4	3.7	0	0.0	4	2.6
Years in Australia	**(n=104)**		**(n=44)**		**(n=148)**	
<5 years	26	25.0	12	27.3	38	25.7
6–10	36	34.6	10	22.7	46	31.1
11–15	27	26.0	15	34.1	42	28.4
16–20	12	11.5	6	13.6	18	12.2
>20	3	2.9	1	2.3	4	2.7
English proficiency	**(n=105)**		**(n=46)**		**(n=151)**	
Not at all	8	7.6	7	15.2	15	9.9
Not well	36	34.3	13	28.3	49	32.5
Well	15	14.3	5	10.9	20	13.2
Very well	46	43.8	21	45.7	67	44.4
Education level	**(n=106)**		**(n=46)**		**(n=152)**	
University/college degree	66	62.3	35	76.1	101	66.4
Completed high school	22	20.8	8	17.4	30	19.7
Some high school	8	7.5	1	2.2	9	5.9
Completed primary school	8	7.5	0	0.0	8	5.3
Some primary school	1	0.9	0	0.0	1	0.7
Other	1	0.9	2	4.3	3	2.0
Occupation status	**(n=96)**		**(n=44)**		**(n=140)**	
Better in Australia	17	17.7	5	11.4	22	15.7
Same	24	25.0	12	27.3	36	25.7
Better in home county	46	47.9	15	34.1	61	43.6
Retired	9	9.4	12	27.3	21	15.0
Depression or anxiety ever	**(n=107)**		**(n=46)**		**(n=153)**	
Self report depression or anxiety	17	15.9	3	6.5	20	13.1

Results

A total of 834 patients attended the practice and were eligible to participate in this project. Of these, 500 agreed to take a questionnaire and gave written informed consent (59.9%). Completed K10 and SPHERE questionnaires were received from 161 people; 153 also completed the demographic questionnaire. Denominators in the results below refer to numbers of participants who answered specific questions. All participants chose Chinese language questionnaires.

The mean age of respondents was 47.6 (SD: 13.7) years of age; 70% were female. All but four of the subjects were born outside Australia and 56.8% (84/148) had lived in Australia for 10 years or less (*Table 1*). Of the respondents, 66.4% had a university/college degree and 66.1% of their partners had finished tertiary education. This statistic was similar for those born in Hong Kong and China, and is significantly higher than the proportion of the general population completing tertiary education (5%) in this southwestern Sydney suburb.[19] Of those born in China, 50% (51/103) experienced occupational deprivation compared to only 26% of those born in Hong Kong (8/31) (p=0.01).

A medium or high risk of depression was identified for 54.6% (83/152) of patients using K10 score (score >16), and level 1 (psychological or somatic symptoms) or level 2 (psychological and somatic symptoms) for 47.6% (71/149) of patients using SPHERE (*Table 2*). There was no significant difference in the level of risk between those born in China and those born in Hong Kong. When the K10 cut off of 22 was used, as in the NSW Health Survey, 30.8% (49/159) had a high risk of depression. Only 12.4% (20/161) of respondents self reported a history of ever having depression or anxiety.

Table 3 details the factors that were associated with a high risk of anxiety or depression as measured by the K10 (medium or high) or SPHERE (level 1 or 2) questionnaires. While there was no significant association between gender and medium or high K10 risk, women were significantly more likely to have a high risk as assessed by the SPHERE questionnaire (χ^2 p=0.02). Occupational deprivation (χ^2 p=0.04) and domestic violence (χ^2 p=0.01) were associated with a significantly higher K10 risk, but not a higher SPHERE score. There was no significant association between religious belief or practice and risk of depression, as determined by Chi-square. Most (84.5%) respondents were health care card holders. Those patients with private health insurance had significantly less risk of depression as measured by the K10 and SPHERE score.

Table 2. Risk of anxiety and depression as assessed by the K10 or SPHERE questionnaires

	Female		Male		Total		*p* value
	N	%	N	%	N	%	
K10 risk (n=152)							
Low or no risk	43	40.6	26	56.5	69	45	ns
Medium risk	50	47.2	17	37.0	67	44	
High risk	13	12.3	3	6.5	16	11	
SPHERE level (n=149)							0.02
No symptoms	47	45.2	31	68.9	78	52	
Level 1 (PSYCH or SOMA)	42	40.4	12	26.7	54	36	
Level 2 (PSYCH and SOMA)	15	14.4	2	4.4	17	11	

Table 3. Association between patient factors and a high risk of depression or anxiety as measured by SPHERE and K10 score*

	SPHERE level	K10 risk
Agitation/worry/nervous in past 6 months	p=0.010 (n=153)	p=0.011 (n=156)
Anxiety in past 6 months	p=0.005 (n=153)	p=0.007 (n=156)
Depression ever	p=0.009 (n=114)	p=0.000 (n=116)
Depression in past 6 months	p=0.010 (n=153)	p=0.010 (n=156)
Domestic violence	p=0.4 (n=153)	p=0.01 (n=156)
Live with partner	p=0.02 (n=122)	p=0.003 (n=125)
Occupational deprivation	p=0.07 (n=136)	p=0.04 (n=139)
Partner relationship	p=0.009 (n=125)	p=0.000 (n=128)
Private health insurance	p=0.010 (n=146)	p=0.042 (n=149)
Self health rating	p=0.025 (n=148)	p=0.002 (n=151)
Sleeping problems in past 6 months	p=0.004 (n=153)	p=0.000 (n=156)
Stress in past 6 months	p=0.003 (n=153)	p=0.000 (n=156)

* Results of χ^2, p values recorded

Discussion

Even though only 12% of Chinese patients surveyed reported that they had been diagnosed with depression or anxiety before, responses to two commonly used screening tools (K10 or SPHERE) indicated that nearly half of patients had a medium or high risk of anxiety and/or depression, and that 30.8% had an indicative score for K10 of 22 or more (as used in the NSW Health Survey, where the prevalence observed was only 10.6%).[20] A high risk of anxiety or depression as measured by the K10 or SPHERE questionnaires was significantly associated with traditional predictors of depression and anxiety (eg. low socioeconomic status and domestic violence) and was not associated with language ability, country of birth, education, and social isolation in this population.

Given the low rates of depression and anxiety previously reported in the Chinese population[11–13] and by participants, the high rates of psychological distress observed in this study are of concern. However, patients from a Chinese background may be reluctant to discuss their mental health problems with their GP, suggesting the need for greater vigilance by GPs to identify at risk patients.[21] There may be a tendency to somatisation in Chinese populations.[10] If this is the case, the use of screening questionnaires validated for use in Chinese speaking populations that include items addressing somatisation (eg. K10 and SPHERE) may assist detection in primary care.

There are a number of explanations for the observed high rate of anxiety and depression. First, the study was conducted among general practice patients in whom the higher rates of psychological illness may have been compounded by anxiety about their physical health. Those people experiencing problems may have been more likely to complete and return the questionnaires. There may also be high rates of psychological illness in these patients because of stress associated with recent migration and difficulties establishing themselves in a new country due to language and cultural barriers and lack of recognition of previous training. There may also be protective factors, which could explain why we did not observe an association with language proficiency or recent migration. The Chinese population in this part of southwestern Sydney is large enough that immigrants with poor English skills are less likely to be socially isolated, which may reduce their risk of depression compared to people from other migrant populations.[15,16]

A common feature of migration is that people may not be able to continue to work in their original profession. The Chinese immigrants and their partners generally have a higher level of education compared to the rest of the Hurstville population. This is likely to be the result of the immigration criteria, with the majority of Chinese arriving under the 'special skills' immigration rule. Overseas qualifications may not be recognised in Australia, however, and highly educated respondents may not have been able to find jobs in Sydney equivalent to their occupation at home. Those born in Hong Kong experienced less occupational deprivation than those from China and tended to have better English. Those with low levels of education are likely to be able to do similar jobs in Sydney, as they do not need to have their qualifications assessed. This may lead to a discrepancy in education levels and job satisfaction; it may also weaken the association between job satisfaction and depression.

Limitations of this study

This was a small survey conducted in a single suburban general practice where the majority of patients are of immigrant Chinese background. The results therefore, may not be applicable to the wider Chinese population, such as those of Chinese ancestry born in Australia. The small numbers meant that it was not possible to explore the differences between those born in China and Hong Kong. Psychological distress may be overestimated due to responder bias; responders may have been more likely to report psychological distress than nonresponders. The results were based on self report of ill health and did not include a blind assessment by the GP of psychological health.

Conclusion

In this study, nearly half the Chinese patients presenting in general practice were at high risk of psychological distress when measured by standard screening instruments. The proportion of patients at risk of psychological distress on screening is more than would be expected in the general Australian population. Though limited by a small sample size and a single general practice location, these findings are of concern and should direct further research.

Conflict of interest: none declared.

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