
Somatisation in primary care: A comparative study of Australians, Latin Americans, Vietnamese, and Polish living in Australia

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This study identified differences in somatisation symptoms, psychiatric status, and the relationship between acculturation and somatisation. It also investigated GP's (general practitioners) ability to detect somatisation in primary healthcare setting. A survey was carried out on 207 patients from Australia, Latin America, Vietnam, and Poland. A demographic questionnaire, an acculturation questionnaire, the Somatization Scale of the Symptom Checklist-90-Revised (SCL-90-R), the Self-Reporting Questionnaire (SRQ), and the Illness Behaviour Questionnaire (IBQ) were administered in the participants' respective languages. In addition, GPs completed a brief rating scale with findings from medical consultation. These results demonstrated that psychosocial status was highly correlated to somatisation for Australians, Latin Americans, Vietnamese, and Polish. Overall, however, these groups did not present significant differences in symptoms of somatisation. GPs were generally inaccurate in detecting psychosocial difficulties and acculturation did not predict levels of somatisation in the three ethnic groups.

Keywords: acculturation, ethnic groups, primary care, psychiatric disorder, somatisation

BACKGROUND

The term somatisation has been referred to as the expression of distress through bodily complaints (Beiser, 1985). Katon, Kleinman and Rosen (1982) defined somatisation as 'the presentation of physical symptoms in the absence of organic pathology, or the amplification of physical complaints accompanying organic disease beyond what can be accounted for by physiology' (p.130). When placed in the context of levels of suffering for the somatising patient, and considering its social and cultural connotations, Kleinman (1986) identified somatisation as 'the expression of personal and social distress in an idiom of bodily complaints with medical help-seeking' (p.235). From another perspective, Pilowsky (1992) defined somatisation as a 'defence mechanism involving turning away unacceptable thoughts and situations towards a focus on physical problems. It seems likely that by being concerned about physical symptoms, the patient manages to deflect attention from their current predicament.' (p.216). Patients may endeavour to avoid responsibility for their current problems by somatising, thus deflecting the overt expression of mental conditions such as depression (Marsella, 1985).

Somatisation is related to various interacting influences, including the patient, the GP (general practitioner), and the health system (Wickramasekera, 1986). A patient presenting somatic symptoms may be seeking to avoid expensive treatments by displaying a readily treatable ailment, gaining a clear physical diagnosis, preventing a psychiatric label and the stigma attached to it and more easily receiving reimbursement from appropriate medical funds. GPs, on the other hand, may fear 'missing something' in the diagnostic process of somatisers, which can lead to expensive and unnecessary medical examinations. As a result, GPs tend to conform to the expectations of patients searching for attention for their somatic complaints.

GPs see a significant number of people with psychiatric disorders who complain of physical problems (Weich, 1994). Bridges and Goldberg (1985) for instance found that approximately one-third of patients presenting physical complaints to their GPs met the criteria for psychiatric disorders as established by the *Diagnostic and Statistical Manual of Psychiatric Disorders, version IV* (DSM-IV). In studies conducted in England and Australia, it was estimated that at least 30% of patients attending a medical practice had psychiatric disorders hidden by somatic presentation (Clarke, Minas & McKenzie, 1991; Bhatt, Tomenson, & Benjamin, 1989). This evidence indicated that somatic presentation of psychiatric difficulties in primary healthcare was more common than was often assumed (Gureje, Simon, Ustun, & Goldberg, 1997). Indeed, direct psychological presentation of psychiatric problems is now even considered atypical in primary healthcare settings (Paulley, 1994). Given that GPs are usually the first health practitioners to have contact with somatisers, it is important to enhance their skills in the assessment and treatment of somatisation in different cultural groups (Lobo, Garcia-Campayo, Campos, Marcos, & Perez Echevarria, 1996).

Somatization has frequently been associated with lower socioeconomic and educational levels (Racy, 1980). In addition studies have shown that women present twice the risk of somatization compared to men (Portegijs, Van Der Horst, Proot, Kraan, Gunther, & Knottnerus, 1996), as do people from urban backgrounds (Fosu, 1995). Somatisation has been also associated with those who are actively religious; people with traditional values; and individuals from diverse ethnic backgrounds (Katon, Ries, & Kleinman, 1984). While some authors indicated that somatisation is not associated with race (Racy, 1980), others such as Schurman, Kramer and Mitchell (1985), found that more non-Caucasians presented somatic symptoms than Caucasians in the US. Westermeyer, Neider and Callies (1989) found that strong traditional links such as uses of folk medicine, large family size, older age, and marital distress were frequently associated with somatic complaints. Craig, Drake, Mills, and Boardman (1994) found that somatising patients had few skills to cope with stressful events and developed secondary gains through somatisation. Social stresses such as marital disharmony (Bridges, Goldberg, Evans, & Sharpe, 1991), and lack of social support played a part in somatisation (Craig et al., 1994). A disturbed

childhood, with a history of abuse and neglect, can also precipitate somatic presentation of discomfort and further somatisation in adulthood (Lown & Vega, 2001, Craig et al., 1994).

The claim that somatisation is more prevalent in some cultures than others has been questioned by several researchers (Cheng, 1989; Kirmayer, 1984; Racy, 1980) who reported that there is insufficient data to support that claim. In some cultures, however, somatisation may be diagnosed using another term such as neurasthenia describing the symptoms of persistent fatigue or weakness following minimal mental or physical efforts and treated as the somatic counterpart of depression (Lee, 1994). In other research however, Asians and Latin Americans have been reported to somatise more than Caucasians (Koss, 1990). Bhatt and colleagues (1989) found that some Asians (particularly Gujaratis and Urdu) had consistently higher levels of somatisation than Western patients. These groups presented more symptoms of somatisation, had somatised perception, and over-emphasized physical health concerns. Cheng (1989) on the other hand, emphasised that somatisation has not been demonstrated as a unique Asian phenomenon and it seems to be more of a universal expression of distress across cultures.

The association of somatization with personal distress and depression is consistent with somatisation in Caucasians from lower socioeconomic status. Caucasians though, tend to articulate their distress in cognitive terms and thus somatisation is not as prevalent as for other groups (Marsella, 1985). On the other hand, Asians are more likely to feel ashamed to verbalise feelings of distress, so therefore, it is easier for them to somatise. Understanding somatisation in ethnic groups has been further complicated by the inappropriate tendency of grouping together migrants, refugees and some cultural groups such as Asians without regard to the extensive diversity within different races and subcultures (Kim & Chun, 1993). Difficulties in detection and management could be partially attributed to the difficulty of the Western mainstream culture in overcoming the limits of an ethnocentric perception.

Somatisation has often been explained as masked depression. Transcultural studies show that depression is a universal diagnostic category; however, somatic symptoms of depression can vary across cultures (Ulusahin, Basoglu & Paykel, 1994). Marmanidis, Holme, and Hafner (1994) when comparing Australian and Greek subjects found that Greeks frequently complained of dizziness, paraesthesia, and masticatory spasms, whereas, Australians reported higher symptoms of drowsiness, hypersomnia, and non-refreshing sleep. Greeks presented symptoms related to hyperventilation whereas Australians reported problems with their sleeping patterns.

The current study was concerned with identifying different patterns of somatisation among three cultural groups living in Australia. In this instance, Latin American, Vietnamese, and Polish were selected. These were chosen because they represent three of the largest migrating groups to Australia i.e., Hispanic, Asian and European. This study sought to identify whether there were any significant differences in areas such as: (1) the incidence of psychiatric difficulties with somatic presentation; (2) the relationship between somatisation and acculturation; and, (3) the accuracy of assessment of the presence of mental disorders by GPs serving these ethnic groups.

The research evidence indicates that Latin Americans somatise their emotional problems more than other ethnic groups (Escobar, Rubio-Stipec, Canino, & Karno, 1989). Escobar, Burnman, Karno, Forsythe, and Golding (1987) found high levels of somatisation in Hispanics with or without psychiatric disorders in the US. Somatisation for Latin Americans had, according to Koss (1990), a social connotation, as it resolved conflict encountered at the interpersonal level. Latin American women in particular somatised more than men (Escobar et al., 1987).

Vietnamese frequently present the classical symptoms of neurasthenia often observed in Chinese culture when assessed for psychiatric diagnosis (Kleinman, 1986). If neurasthenia is translated into

Western medical terms, it becomes an equivalent to depression, generalised anxiety disorder and somatisation disorder (Kim & Chun, 1993). This tendency can be explained in Asian or Western concepts of medicine where psychological and physical symptoms are presented together (McKelvey & Webb, 1996). Like other Asians, Vietnamese tend to avoid the socially sanctioned negative connotations of mental disorder and are therefore, more likely to present somatic symptoms (Chung & Singer, 1995).

Jayasuriya, Sang, and Fielding (1992) noted that there was a higher incidence of schizophrenia among Eastern Europeans compared to the incidence of this disorder in other ethnic groups and Australians. This high incidence was more prevalent in the refugee groups such as Polish (Krupinski, 1984). It has been also reported that Polish develop somatisation symptoms as a way of coping with the isolation and alienation from mainstream society (Johnston, 1988).

METHOD

Participants

A total of 207 participants from Australia, Latin America, Poland, and Vietnam took part in the study. Responses were came from 47 Australians (all participants were at least fourth generation Australians), 52 Latin Americans, 61 Polish, and 47 Vietnamese. The criteria for inclusion in the study were that participants are over the age of 18, were attending a GP's practice, could clearly be identified as members of one of the above ethnic groups and were currently living in Australia (see Table 1).

About 70% of participants from Australia, Latin America, and Poland were females which is consistent with previous studies that indicated that females were less reluctant to visit GPs when experiencing distress (Racy, 1980). It was particularly interesting to note that this did not apply for Vietnamese where 50% of participants were male. Sixty per cent or more of the participants for each group were married. For the Latin Americans and Vietnamese participants, between 20% to 30% were single. These are newer groups to Australia and this may explain their higher percentage of single status. Second generation migrant and refugees still tend to be bounded by parental norms of behaviour even regarding health issues. This is even more evident with groups such as Latin Americans and Vietnamese who have settled in Australia only recently (Bankston & Zhou, 1995).

Overall, the youngest population was the Vietnamese, of whom about 38% were between the ages of 18 and 29. Each of the other groups had more than 62% of their population aged 30 years or older. This is in the direction predicted by previous studies where people older than 30 years old are more likely to visit GPs with health-related concerns such as somatisation (Racy, 1980). Most of the subjects in each group had completed high school and many were working towards a university degree, which is not typical of patients attending GPs. Bridges and colleagues (1991) mentioned that people from lower education levels are more likely to approach GPs with health concerns of a somatic nature. Along with a lower education level, however, low income also seems to be associated with somatic concerns. A high proportion of subjects in each of the four groups were at a low-income level.

Instruments

Illness Behaviour Questionnaire (IBQ) – The IBQ was developed to assess illness behaviour and maladaptive views that people have about their health (Pilowsky, Murrell, & Gordon, 1979). It has been considered a valuable instrument for the assessment of somatising syndromes in several cross-cultural studies (Paisson & Kaij, 1985) and has been used to help understand the complex connection between somatisation and abnormal illness behaviour (Chaturvedi & Bhandari, 1989). The IBQ is a 62-item, self-reporting questionnaire that only requires a yes or no answer. A high score in the IBQ would represent a high level of maladaptive views about health. Pilowsky (1992) assessed test-retest reliability by retesting subjects between one to twelve weeks following initial testing. The test-retest reliability of the IBQ expressed as Pearson's r was 0.89, $p < 0.001$.

Self-Reporting Questionnaire (SRQ) – The SRQ is a 24-item, self-reporting questionnaire first developed by Harding and colleagues (1980). It has been constructed as a screening instrument to assess mental disorders (psychiatric status) in developing countries. The first 20 items of the SRQ attempt to assess disorders such as phobia, anxiety, and depression. There are also items that assess somatisation, in view of the fact that somatisation is a frequent presentation of mental disorders in developing countries. The last four items assess the presence of psychotic symptoms (Harding et al., 1980). The biserial correlation values between items and total items score of the SRQ are positively correlated. The sensitivity of the SRQ fluctuates between 73% and 83% and specificity has been placed between 72% and 85% (El-Rufaie & Absood, 1994). A study by El-Rufaie and Absood in the United Arab Emirates found that the SRQ could accurately detect minor psychiatric morbidity. The recommended cut-off score was 5/6 that resulted in sensitivity of 78.3% and specificity of 75%.

The Symptom Check List-90-R (SCL-90-R) – The SCL-90-R is a 90-item self-report symptom inventory assessing psychological symptoms in clinical and non-clinical populations, first developed by Derogatis (1994). SCL-90-R items are reported on a five-point scale (0–4) which varies from 'not at all' to 'extremely'. The internal consistency for the somatisation scale of the SCL-90-R has been measured at 0.86 for symptomatic volunteers and 0.88 for psychiatric outpatients. The test–retest reliability over a one week interval has been measured at 0.68 for symptomatic volunteers and 0.86 for psychiatric outpatients (Derogatis, 1994). Convergent validity for the somatisation scale is 0.66. The theoretical–empirical match between Procrustes (P) and Varimax (V) has been found to be almost perfect for the 12 items somatisation sub-test used in this study.

The Acculturation Rating Scale for Mexican Americans (ARSMA) – This scale was first developed to measure the acculturation process of Mexican Americans from both normal and psychiatric populations living in the USA (Cuellar, Harris, & Jasso, 1980). Administration of this scale to other Latin-American groups should be however undertaken with caution (Cuellar, Arnold, & Maldonado, 1994). According to Cuellar et al. (1980), the ARSMA's usefulness lies in the fact that it can be given both in Spanish and English. The 20 questions on the scale are organised along a five-point Likert scale ranging between Mexican/Spanish to Anglo/English. Internal reliability of the ARSMA has been found to be 0.88, for normal population and 0.81 for psychiatric population. Test–retest reliability was shown to be 0.72 for psychiatric population and 0.80 for normal population. Further test–retest reliability over an interval of a week was 0.96 (Cuellar et al., 1994). The concurrent validity of the ARSMA has been demonstrated to be 0.89 (Cuellar et al., 1980).

The Suinn–Lew Asian Self-Identity Acculturation Scale (SL-ASIA). – The SL-ASIA is a 21-item scale modelled on the ARSMA (Suinn, Ahuna, & Khoo, 1992). Like the ARSMA, items are organised on a Likert

scale of 1 to 5, indicating increasing levels of acculturation. The internal consistency of SL-ASIA has yielded an alpha coefficient of 0.88 indicating a high level of stability (Suinn, Rickard-Figueroa, Lew, & Vigil, 1987). Cronbach's alpha coefficient was even higher at 0.91 (Suinn et al., 1992). Suinn and colleagues measured validity in two ways. Firstly, validity was measured according to whether individuals belonged to first, second, third generation, or more. An ANOVA was carried out and was found to indicate highly significant differences ($F = 7.20, p < 0.001$). Secondly, validity was assessed by how long people had lived in the US as an indication or measure of acculturation. The results of the ANOVA were significant ($F = 14.26, p < 0.001$) with means of total scores in the expected direction (Suinn et al., 1987).

GPs' Ratings

GPs working in private practice and experienced working with ethnic groups were asked to rate their patients immediately after consultation, utilising a questionnaire developed by Bhatt and colleagues (1989). This questionnaire involved rating patients according to one of three different categories, based on the GP's knowledge of each patient on the following: (1) overall diagnosis; (2) physical ratings; and, (3) psychiatric ratings. In the first category, overall diagnosis, GPs were asked to rate the complaints presented by patients as follows: 'only physical', 'mainly physical', and 'only or mainly psychiatric'. In the second category, physical ratings, GPs rated whether their patients presented 'no organic pathology', 'possible minor pathology', or 'definite organic pathology'. In the third category, psychiatric rating, patients were rated as presenting 'no mental disorder', 'possible minor disorder', and 'definite mental disorder'.

Procedure

Two Polish, three Spanish, and two Vietnamese speaking GPs participated in this correlational study. The purpose is to recruit GPs who consulted their patients primarily in their native language. Primary care sites selected were frequented by ethnic groups participating in this study. Three GPs who consulted their patients in English were also invited to participate. Following a routine medical consultation, GPs then invited their patients to participate in this study. Each patient was given an explanation of the purpose of this study and signed a consent form. All patients responded to the questionnaire in the GP's waiting room. All patients attending each GP's practice were potential participants in this study regardless of the frequency of their visits, since the purpose of the research was to obtain as wide as possible representation of typical patients within each ethnic group.

Professional interpreters who were also qualified translators were used to translate all the instruments used in this study (Bontempo, 1993). Following an earlier work on translation (i.e., Sperber, Devellis & Boehlecke, 1994), independent professional translators were then asked to re-translate the instruments back into English. The various additional materials such as consent forms, explanation sheets, and questionnaires were also presented in each language: English, Spanish, Vietnamese, and Polish.

Design

This study compared four groups: Latin American, Polish, Vietnamese, and Australian. Predictor variables were acculturation, GP's recognition of the presence of mental disorders, while the criterion variable was somatisation.

There were four research hypotheses submitted for analysis. A one-way ANOVA was utilised to establish whether the differences between groups were greater than the differences within groups. A Pearson product moment correlation, bivariate correlation was used to assess the relationship between acculturation and somatisation. A regression analysis was carried out to establish the relationship

between psychiatric status (SRQ), and illness behaviour (IBQ). A Pearson correlation was carried out in order to determine the GP's accuracy in recognising psychosocial difficulties. The purpose was to establish an association between GPs' ratings (dichotomous variable) and SRQ (continuous variable). Also, one-way ANOVA was performed to establish the relationship between demographic data and somatisation. Finally, descriptive data on the most frequent somatization symptoms across the four groups was analysed.

Hypothesis 1 claims that the three ethnic groups will each exhibit higher levels of somatisation than Australians based on their higher scores on the SCL-90-R somatisation scale. This hypothesis was not supported. A one-way ANOVA was performed and produced results that were not significant. The F -ratio was not significant. $F(3,203) < .01$ (see Table 2).

Hypothesis 2 states that poorly acculturated individuals will present more somatic symptoms and that highly acculturated individuals will present less somatic symptoms. This would be indicated by lower scores in acculturation as indicated by the ARSMA and the SL-ASIA, and would be associated with higher somatisation based on scores on the SCL-90-R somatisation scale. This hypothesis was not supported for ethnic groups participating in this study because the bivariate correlation that was performed to assess the correlation between acculturation and somatisation was not significant (see Table 3). In addition, acculturation for the total group did not correlate with somatisation ($p = 0.11$).

Hypothesis 3 proposes that higher levels of illness behaviour (as shown by the IBQ) will be reflected in higher scores on psychiatric difficulties (as shown by the SRQ), for the ethnic groups as opposed to the control group. Likewise, this hypothesis was not confirmed. Psychiatric status as measured by the SRQ however, strongly predicted the level of illness behaviour (IBQ) in all groups.

Four regression analyses were performed with IBQ scores as the dependent variable and the SRQ scores as the independent variable (see Table 4). The purpose of this was to establish the extent to which psychiatric status could predict levels of illness behaviour across the four groups. The SRQ accurately predicted illness behaviour in Australians, Latin Americans, Vietnamese, and Polish. In each case F values were significant at the 0.001 level. For the Latin American group, SRQ explained 66% of the variance in illness behaviour and was highly significant ($F = 95.887$). For the control group (Australian sample), SRQ explained 43% of the variance and was highly significant ($F = 34.574$). For the Polish group, SRQ explained 25% of the variance on illness behaviour and was highly significant ($F = 19.072$). For the Vietnamese group, SRQ explained 45% of the variance on illness behaviour and was highly significant ($F = 37.477$).

The t -value indicated that SRQ added to the predictive power of the regression equation for all four groups. The hypothesis that higher levels of illness behaviour will be reflected in higher scores in the SRQ and IBQ for some ethnic groups as opposed to others was not confirmed. Psychiatric difficulties contributed significantly to the prediction of illness behaviour in all groups.

A regression analysis was performed with IBQ scores as the dependent variable, and SRQ scores as the independent variable. SRQ was used to determine if psychiatric status predicted levels of illness behaviour. Scores on SRQ were strong predictors of illness behaviour for the entire group. Table 5 shows the regression analysis and standardised regression. The predictor had significant prediction power, $F(1, 203) = 159.800$; $p < 0.001$). The partial t -test indicated that the SRQ had significant power in predicting illness behaviour. SRQ (psychiatric status) uniquely accounted for 44% of the variance in illness behaviour. This indicates that predicting the psychiatric status of patients visiting GPs will be reflected on levels of illness behaviour for all groups.

RESULTS

Table 1
 Demographic Characteristics

Variables	Australian		Latin American		Polish		Vietnamese	
	N	%	N	%	N	%	N	%
Gender								
Male	12	25.50	15	28.8	22	36.10	27	57.40
Female	35	74.50	37	71.20	39	63.90	20	42.60
Marital status								
Married	34	72.30	32	61.50	37	60.70	29	61.70
Single	3	6.40	11	21.20	5	8.20	15	31.90
Divorced	5	10.60	5	9.60	9	14.80	NA	NA
Widowed	1	2.10	1	1.90	9	14.80	1	2.10
Cohabiting	4	8.50	2	3.80	1	1.60	1	2.10
No answer (NA)	–	–	1	1.90	–	–	1	2.10
Occupation								
Employed	27	57.40	15	28.80	21	34.40	24	51.10
Unemployed	4	8.50	7	13.50	23	37.70	9	19.10
Student	1	2.10	7	13.50	3	4.90	9	19.10
House duties	14	29.80	20	38.50	14	23	5	10.60
No answer (NA)	1	2.10	3	5.70	–	–	–	–
Age group								
18–29	7	14.90	6	11.50	1	1.60	18	38.30
30–59	3	70.20	39	75	38	62.30	25	53.20
60+	7	14.90	6	11.50	22	36.10	4	8.50
No answer (NA)	–	–	1	2	–	–	–	–
Education								
Primary school	1	2.10	11	21.20	9	14.80	1	2.10
Some secondary	17	36.20	8	15.40	10	16.40	4	8.50
Completed secondary	24	51.10	22	42.30	25	41	24	51.10
University degree	4	8.50	10	19.20	17	27.90	18	38.30
No answer (NA)	1	2.10	1	1.90	–	–	–	–
Income								
Less than 10,000 AUD	11	23.40	18	34.60	31	50.80	20	42.60
10,000 AUD – 29,000 AUD	20	42.60	29	55.80	18	29.50	15	31.90
30,000 AUD or more	15	31.90	4	7.70	9	14.80	11	23.40
No answer (NA)	1	2.10	1	1.90	3	4.90	1	2.10
Years in Australia								
Less than 1 year	–	–	–	–	–	–	3	6.40
1–2 years	–	–	3	5.80	–	–	2	4.30
3–4 years	–	–	14	26.90	4	6.60	2	4.30
5–6 years	–	–	11	21.20	5	8.20	8	17
7–9 years	–	–	5	9.60	10	16.40	3	6.40
More than 9 years	47	100	19	36.50	41	67.20	29	61.70
No answer (NA)	–	–	–	–	1	1.60	–	–

Table 2

ANOVA Australian, Latin American, Vietnamese, and Polish Subsets on the SCL-90-R.

Source	<i>df</i>	<i>MS</i>	F
SCL-90-R (between groups)	3	11.038	0.992*
Error (within groups)	203	11.126	–**

* $p < .05$, ** $p < .01$

Table 3

Correlation of ARSMA or SL-ASIA and SCL-90-R Somatization Scale

Acculturation	N	r	p
Latin American (ARSMA)	52	0.21	> 0.5
Polish (ARSMA)	61	0.32	> 0.5
Vietnamese (SL-ASIA)	47	0.03	> 0.5
Total group	160	0.11	> 0.5

Table 4

Summary of Regression Analysis of Psychiatric Status and Illness Behaviour

SRQ	b	$\sigma_{\bar{x}}$	β	R^2
Latin American	0.931	0.095	0.814	0.66***
Australian	0.908	0.154	0.659	0.434
Polish	0.614	0.140	0.501	0.251***
Vietnamese	0.676	0.110	0.674	0.454***

* $p < 0.005$, ** $p < 0.01$, *** $p < 0.001$

Table 5

Summary of Regression Analysis of Psychiatric Status and Illness Behaviour

Variable	b	$\sigma_{\bar{x}}$	B
SRQ	0.778	0.615	0.664***

$R^2 = 0.441$, *** $p < 0.001$

Hypothesis four states that GPs accurately recognised the presence of psychiatric symptoms for patients with SRQ scores at or above the cut-off of five. This hypothesis was addressed using Pearson correlation (0.035, $p = 0.398$). The study results, however, did not support this hypothesis. The GPs were asked to assign each subject to either physical or psychiatric problems and to rate them accordingly on the SRQ. GPs participating in this study were only able to reliably recognise the presence of psychiatric difficulties when scores on the SRQ were higher than eight, which is well above the cut-off score. More than half of the GPs' ratings indicated more physical than psychiatric difficulties.

Demographic data analysis

Somatisation and gender. On the overall sample, females presented with higher levels of somatisation than males (Females: $df=3$, $F=3.04$; Males: $df=3$, $F=.33$). For females, ethnic group had a significant effect on somatisation, whereas for males this was not the case (Females: $df=3$, $F=.032$; Males: $df=3$, $F=.807$).

Somatisation and educational attainment. A one-way ANOVA was performed to establish the relationship between educational attainment and somatisation across the four groups. When somatisation was the dependent variable and ethnicity and educational attainment were independent variables, ethnicity was only significant for the Vietnamese group ($df=3$, $\sigma^2=27.9$, $F=.028$). There was no relationship between educational attainment and somatisation among the other groups. As educational level increases ethnicity becomes more prominent as a variable in somatisation. However, it does not reach to the point of being statistically significant.

Descriptive data analysis. The three most common somatic symptoms for Australians were lower back pain, soreness of muscles, and headaches. Latin Americans hierarchically complained of soreness in muscles, lower back pain and headaches. Polish complained of lower back pain, soreness of muscles, and feeling weak in different parts of body. Vietnamese complained of soreness of muscles, feeling of weakness in various parts of the body, and frequent headaches. The only symptom common across the four groups was soreness of muscles.

DISCUSSION

This study investigated the patterns and differences of somatisation among Latin Americans, Vietnamese and Polish living in Australia, and to compare these with an Australian control group. It also attempted to select and translate questionnaires into the target languages for the purpose of cross-cultural research. Additionally, it sought to determine GPs recognition of somatisation. Factors such as the social composition of each ethnic group, family and social tensions, geographical vicinity, the social welfare system, along with other factors may explain some of the differences observed in somatisation between this study and others. These issues highlight the importance of conducting more studies of this nature in Australia.

The results obtained demonstrated that there appears to be no significant differences in somatisation among the various groups participating in this study. It was found that ethnic groups appeared to have no more or no less of a propensity to somatisation than the Australians as demonstrated by the non-significant results on the SCL-90-R. Thus Kirmayer's (1984) views that there were no differences in somatisation presentation across cultures were corroborated. Similarly, the views that levels of acculturation will not make any significant difference on levels of somatisation were supported (Cheng, 1989; Kirmayer, 1984; Racy, 1980). These non-significant results may have also been related to the instruments used to assess ethnic groups. Two of the instruments used to assess somatisation were the SCL-90-R and the IBQ. The SCL-90-R is a screening instrument that focuses more on the bodily symptoms while the IBQ refers to the cognitive experience of somatisation. The IBQ has not been used as widely as the SCL-90-R in cross-cultural studies.

This study attempted to elicit whether a person's psychiatric status (as measured by SRQ) can be used to predict somatisation. Psychiatric status was a predictor of somatisation regardless of ethnicity. The findings of this research support the positive correlation between psychiatric difficulties and somatization as previously reported by Wittchen and Ahmoui-Essau (1990).

GPs were generally not accurate in recognising psychiatric problems in patients with somatising symptoms. In these instances, the diagnostic ratings of GPs did not correspond with the subjects' scores on psychiatric difficulties. While this may relate to the nature of GPs' training i.e., teaching them to focus more on the physical rather than on the psychiatric, it exposes difficulties for the appropriate treatment of patients, particularly when a patient has difficulties related to both physical and psychiatric issues (Ormel, Koeter, Van Den Brink, & Van de Willige, 1991). Their limitations in detecting psychiatric difficulties in primary care may also be a reflection of the atypical presentation of psychiatric difficulties (Clarke et al., 1991). Despite lacking formal tools for the assessment of somatisation, GPs who perform a culturally and psychologically sensitive assessment, can potentially improve the diagnosis of somatisation (Baughman, 1994). Additionally, a GP's own ethnic background has been associated with the accuracy in which they can identify somatising patients (Bhatt et al., 1989).

This study endeavoured to use existing instruments in cross-cultural settings. Together with existing screening instruments used for this study, other instruments have been added to the tools for the cross-cultural assessment of people in primary care. A specific contribution of this study is the adaptation and administration of the SRQ and the SCL-90-R to Australian migrant populations from Latin America, Poland, and Vietnam. This study has contributed by translating and administering the IBQ and acculturation instruments (ARSMA and SL-ASIA) into Spanish, Vietnamese, and Polish. In spite of a thorough translation of the instruments, it is possible that some items from scales used may have had a different meaning for specific groups, thereby affecting their responses such as for the psychotic items in the SRQ. The significant number of people from ethnic groups responding positively to the psychotic items in the SRQ confirmed that the SRQ should be administered with caution when used in cross-cultural studies (El-Rufaie & Absood, 1994; Harding et al., 1987). It is uncertain if this reflects more psychotic type behaviour in these groups or lack of validity of these instruments in cross-cultural settings (Mari & Williams, 1986).

Descriptive data gathered for this study on the most common symptoms of somatisation established that while people may present similar levels of somatic symptoms, differences arose in the patterns of these somatic symptoms (Marmanidis et al., 1994). Marsella (1985) argued that assessment of specific patterns of somatisation symptoms presented by patients needed to be understood within the context of a particular culture. The three most common symptoms of somatisation for the four groups participating in this study were soreness of muscles, lower back pain, and headaches. This finding conforms to those of other studies such as Janca, Isaac, Bennett, and Tacchini (1995) who found that the most recurrent symptoms of somatisation across cultures were sleep disturbances, tension headaches, back pain, dizziness, and dyspepsia.

Across the four groups participating in this study, gender was found to be a contributing variable to the presentation of somatic complaints. This was so regardless of ethnic background. It was demonstrated that being female predicts somatisation which is in agreement with the findings of Fosu (1995). Overall, there were a higher number of female participants and this may have resulted in an unbalanced presentation of somatisation symptoms. It is well documented that women find it less threatening to access health services seeking help, somatise more, and are more open to admit to psychosocial difficulties (Gim, Atkinson, & Whiteley, 1990). Other socioeconomic status (SES) variables such as educational attainment did not predict somatisation, and this contradicts the findings of Portegijs et al. (1996).

It is necessary to acknowledge in a study of this kind, the possibility of sample bias. In this instance, subjects were self-selected as they approached their GPs and volunteered to participate in this study. It thus remains unknown how the somatisation factors of each group relate to that group more broadly. What is known, however, is that among those of whom we would expect high levels of somatisation,

ethnicity was not a predictive indicator, neither on their own were factors such as SES, educational attainment, age, and marital status. In line with findings from the US (Portegijs et al., 1996; Racy, 1980), however, this study confirmed gender as a possible predictor of somatisation across Latin Americans, Vietnamese, Polish, and Australians living in Western Australia. Other SES variables such as educational attainment, age, and marital status did not predict somatisation in this study compared to the findings of Westermeyer, Neider, and Callies (1989). Future studies may seek to control factors associated with SES, ethnicity and other variables (Matsuoka, 1993). Prospective studies may also target larger number of subjects to control differences within groups particularly with Latin Americans encompassing many different countries, histories, and values.

New educational and treatment packages need to be introduced within the healthcare system to assist GPs' interventions with somatising patients. This study strongly stressed the utility of the SRQ as an instrument to assess psychiatric difficulties by GPs. Considering the cost involved in the care of these patients, cost effective treatment techniques should be encouraged to avoid chronicity and thus, further costs to the healthcare system (Spitzer et al., 1994). The effectiveness of these techniques should then be estimated against overall costs (Groth-Marnat & Edkins, 1996). Controlled intervention techniques have already been shown to be effective from the point of view of reducing the cost involved in the care of these patients (Cummings, 1991; Gask, Goldberg, Porter, & Creed, 1989; Klimes, Mayou, Pearce, Coles, & Fagg, 1990; Lipowsky, 1988; Sharpe, Peveler, & Mayou, 1992). For example, Smith, Rost, and Kashner (1995) have followed-up somatising patients after delivery of intervention techniques with a reduction in annual medical care cost of \$289 per patient.

In conclusion, this study has found that there are no differences in somatisation among Australians, Latin Americans, Vietnamese, and Polish; although it has found evidence that some SES variables and psychiatric status correlate with somatisation. This study has introduced more instruments for assessment of somatisation and mental health in cross-cultural research. It has also focused on a new, larger group of migrants settling in Australia. Only future studies will confirm the validity of using these instruments with these migrants. Future research needs to assess the importance of treatment packages for somatisation and the value of the relationship between doctor and patient.

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