

Main Section

ASSOCIATIONS BETWEEN OBSESSIVE-COMPULSIVE PHENOMENA, AFFECT AND BELIEFS: CROSS-CULTURAL COMPARISONS OF AUSTRALIAN AND ITALIAN DATA

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Abstract. Consistent with cognitive-behavioural formulations of Obsessive-Compulsive Disorder (OCD), recent research has supported the association between obsessive-compulsive phenomena, specific dysfunctional beliefs and negative affective states. However, such research has not been conducted across sufficiently different cultural contexts using the same measures in comparable samples. In the present study, university psychology students from Australia and Italy completed questionnaire measures of obsessive-compulsive phenomena, inflated responsibility, perfectionism, guilt, depression, and anxiety. Australian and Italian cultures can be seen to differ in a number of ways that could impact on the pattern of expected interrelations between these measures. Similarities in the factor structure and psychometric properties of the measures were apparent across the two cultural contexts,

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suggesting the appropriateness of cross-cultural comparisons in the pattern of intercorrelations. Significant interrelations were found between the measure of obsessive-compulsive phenomena, dysfunctional beliefs and negative affect in both cultural contexts. While there were some differences in the specific patterns of interrelations, these were few in number and, generally, could be explained by sociocultural factors or stereotypes, although the overall pattern of intercorrelations was stronger for the Australian cohort. The results suggest that cognitive-behavioural formulations of OCD can be generalized across these two different cultural contexts, although idiosyncratic cultural factors may need to be considered in developing cognitive-behavioural treatments.

Keywords: OCD, cross-cultural, Italian, Australian, cognitions.

Introduction

Obsessive-Compulsive Disorder (OCD) is an anxiety disorder characterized by marked distress associated with: (i) recurrent, persistent, and intrusive ideas, thoughts, impulses, or images (*obsessions*), and/or (ii) repetitive or ritualized and often bizarre behaviours or mental acts (*compulsions*) frequently aimed at neutralizing distress caused by obsessions (American Psychiatric Association, 1994). OCD constitutes the fourth most common psychiatric disorder with a lifetime prevalence estimated at 1% to 3%, and is commonly associated with comorbid conditions (especially, depression and other anxiety disorders), and significant social, personal, and health service consequences (Rasmussen & Eisen, 1992). The incidence of OCD appears to be similar across various cultural contexts (e.g., USA, Canada, Germany, New Zealand, Puerto Rico, Iceland; see Rasmussen & Eisen, 1992; Regier, Narrow, & Rae, 1990; Stefansson, 1993; Weissman et al., 1994), although methodological factors may influence prevalence estimates. While it is generally held that adult OCD is associated with an equal gender distribution, conflicting results have been reported (Pigott, 1998; Regier et al., 1990; Samuels & Nestadt, 1997; Sanavio, 1988). Obsessive and compulsive phenomena are found in non-clinical populations, and are considered to parallel the form and content of those found in clinical groups (Rachman & Hodgson, 1980). It has been argued that analogue studies of normal populations help to understand the clinical disorder (Burns, Formea, Keortge, & Sternberger, 1995).

Various models have been developed to guide our understanding of OCD, including: (i) neurobiological theories that explore brain structures and functions (Saxena, Brody, Schwartz, & Baxter, 1998), and the role of serotonin (Baumgarten & Grozdanovic, 1998; Delgado & Moreno, 1998); and (ii) psychological theories that focus on various influences including developmental (Guidano, 1987; Guidano & Liotti, 1983), information processing (Foa, Ilai, McCarthy, Shoyer, & Murdock, 1993; Kyrios & Iob, 1998), neuropsychological (Purcell, Maruff, Kyrios & Pantelis, 1998), and cognitive-behavioural (Rachman, 1998; Salkovskis, 1985; Salkovskis, Forrester, & Richards, 1998).

Given its implications for psychological treatments, particular attention has turned to cognitive-behavioural theory, which asserts that behavioural patterns or symptoms associated with emotional disorders develop or are maintained as a result of distorted assumptions and unrealistic appraisals of experiences (Beck & Emery, 1985). Further supporting this association, symptom reduction has been associated with expected changes in cognitive patterns (Ladouceur, Leger, Rheaume, & Dube, 1996). Van Oppen and Arntz (1994) have argued that the efficacy of cognitive-behavioural treatments for OCD is dependent on the specificity of the dysfunctional beliefs that are challenged and restructured.

Belief systems commonly associated with OCD include: (i) an inflated sense of personal responsibility and morality (Salkovskis, 1985, 1989; Rachman, 1993); (ii) a tendency towards appraisals of threat and guilt (Carr, 1974; Wade, Kyrios, & Jackson, 1998; McFall & Wollersheim, 1979;); (iii) an inflated need for mental control (Clark & Purdon, 1993); and (iv) high levels of perfectionism (Bhar & Kyrios, 1999; Hewitt & Flett, 1991; Frost & Steketee, 1997; Rheaume, Freeston, Dugas, Letarte, & Ladouceur, 1995). Such beliefs influence the appraisal of specific intrusions leading to maladaptive emotional, behavioural and cognitive responses (i.e. distress, obsessions, compulsions and other neutralization strategies, avoidance and other safety patterns).

From previous research, measures of such beliefs have consistently correlated with measures of checking and other compulsive activities, obsessional thoughts, thought suppression, depression, and anxiety (Clark & Purdon, 1993; Freeston, Ladouceur, Thibodeau, & Gagnon, 1992; Obsessive-Compulsive Cognitions Working Group, 1997). While such research has generally utilized a range of countries and cultures, specific studies have usually been conducted with cohorts from only one cultural context. Furthermore, these studies have used a variety of measures, making it difficult to examine the inter-cultural consistency of the relationships between beliefs, OCD phenomena, and affect. No published research has examined the cross-cultural consistency of relationships across different cultures using the same measures.

If there is consistency across cultures in the patterns of interrelationships between cognitive, affective and obsessive-compulsive phenomena, one might be entitled to greater confidence in cognitive-behavioural models and/or measures that have been developed. In turn, such confidence could generalize to the cross-cultural applicability of cognitive-behavioural therapy for OCD. On the other hand, if there is little consistency across cultures in the patterns of such results, one would need to consider cultural factors, firstly, to explain any inconsistency and, secondly, to account for adaptations to cognitive-behaviour therapy. Alternatively, the cognitive-behavioural model of OCD may need to be reconsidered.

The present study aimed to investigate differences in the interrelations between measures of obsessive-compulsive phenomena, inflated responsibility, perfectionism, guilt, depression, and anxiety across similar cohorts from two sufficiently different cultures (specifically, Australian and Italian undergraduate psychology students). With similarities in the reliability and factor structures of the measures used across the two cohorts having been previously established (Bhar, 1996; Liguori, 1994), the present paper examined differences in the pattern of interrelations and postulates possible cultural factors that might influence such differences. While Italian culture has traditionally been associated with a collectivist cultural orientation (Sica, Novara, & Sanavio, *in press*), Anglo-Australian and Western culture have a relatively more individualistic orientation (Triandis, 1995). Furthermore, because of its homogeneous and extensive religious tradition (Sica *et al.*, *in press*), one might expect relatively greater concerns about morality within Italian culture. Moreover, one could argue for a more marked gender influence in Italian culture. Hence, while no striking differences were expected in the overall pattern of interrelations between the two cultural contexts, compared to the Australian cohort, the Italian cohort was expected to exhibit relatively greater associations between obsessive-compulsive symptoms and concerns about morality and social perceptions. Accordingly, relatively weaker associations were expected in the Italian cohort between self-oriented concerns and obsessive-compulsive experiences.

Method

Participants

Two-hundred-and-three participants from an Anglo-Celtic cultural background attending the University of Melbourne (Australia) and 243 participants from an Italian cultural background attending the University of Padova (Italy), all undertaking undergraduate psychology, were recruited for this study. Australian students participated in the research as part of a course requirement, but chose to take part in this particular study after responding to advertisements. Italian students completed the questionnaires on a voluntary basis as part of a class exercise.

There were 60 male and 143 female Australian participants, while the Italian cohort consisted of 101 males and 142 females. The mean age for the cohorts was consistent with a first year undergraduate population (i.e. around 19 to 20 years).

Measures

All participants completed the following measures of OCD symptoms, associated affective factors and beliefs.

Padua Inventory (PI; Sanavio, 1988). The PI is a 60-item self-report inventory that uses a 5-point Likert-type scale to measure the degree of disturbance caused by a range of specified thoughts, behaviours and urges associated with OCD. A Total Score, 2 obsessional subscales (Impaired control over mental activities; Urges & worries of loss of control over motor behaviour) and 2 compulsive subscales (Washing & becoming contaminated; Checking behaviour) can be calculated from the 60 items. The psychometric properties of the PI in non-clinical populations have been documented in Italy (Sanavio, 1988), Australia (Kyrios, Bhar, & Wade, 1996) and other countries (Sternberger & Burns, 1990; van Oppen, 1992).

Beck Depression Inventory (BDI; Beck & Steer, 1987). The BDI comprises 21 items that ask recipients to indicate the extent to which they exhibit cognitive, affective, somatic and vegetative symptoms of depression and dysphoria. The psychometric properties of the English language BDI are well documented (Beck, Steer, & Garbin, 1988). The psychometric properties of an Italian translation have been previously reported for a student sample ($n = 903$) with a Cronbach alpha of .81 and test-retest reliability (30 days) of .74 (Centomo, 1992).

State-Trait Inventory – Form Y (STAI; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). The STAI comprises two 20-item self-report scales that ask recipients to indicate how they feel “right now . . . at this moment” (State scale) or “generally” (Trait scale) in response to a series of self-descriptive statements. The psychometric properties of the STAI have been documented elsewhere (Spielberger et al., 1983). An Italian translation of the STAI has been published (Spielberger, 1989) with Cronbach alphas reported in the range of .91–.95 for State Anxiety and .85–.90 for Trait Anxiety in various Italian groups.

Inflated Responsibility Questionnaire (IRQ; Kyrios, 1993). The IRQ comprises 60 items that use a 7-point Likert-type scale whereby recipients rate the degree to which they agreed

with the self-descriptive statements (1 = “strongly disagree”, 7 = “strongly agree”). Factor analysis of the IRQ revealed three factors: (a) Inflated responsibility for the safety of others (“Safety”); (b) Need to control, hinder or compensate for negative outcomes (“Control”); and (c) Blame and personal responsibility for faults and negative outcomes (“Blame”). In a non-clinical sample, Kyrios and Bhar (1995) reported that the IRQ exhibited adequate internal consistency (Cronbach alphas in the .72 to .96 range), 8-week test-retest reliability of 0.76, and adequate convergent validity with measures of obsessive-compulsive phenomena, depression, anxiety and responsibility.

Multidimensional Perfectionism Scale (MPS; Hewitt & Flett, 1991). The MPS consists of three 15-item subscales measuring: (i) Self-oriented perfectionism, the expectation that one should attain unrealistic standards and excessive perfectionism; (ii) Socially-prescribed perfectionism, the belief that significant others expect one to be perfect; and (iii) Other-oriented perfectionism, the expectation that others should be perfect. The MPS has exhibited adequate psychometric properties (Hewitt & Flett, 1991; Wade et al., 1998).

Guilt Inventory (GI; Kugler & Jones, 1992). The GI is a 45-item self-rated inventory and comprises 3 scales: (i) Trait guilt (20 items measuring an enduring propensity for feeling guilty, remorseful and regretful); (ii) State guilt (10 items measuring the immediate experience of guilt based on the recent violation of one’s moral code); and (iii) Moral standards (15 items measuring the degree that one subscribes to a set of moral standards). The GI has also exhibited adequate psychometric properties in previous research (Kugler & Jones, 1992; Wade et al., 1998).

Procedure

For the Australian cohort, questionnaires were administered in a randomized order to groups of 3 to 25 participants in classrooms. For the Italian cohort, questionnaires were also administered in a randomized order to groups of 20 to 50 participants in classrooms. In both cohorts, minimal verbal instructions were given.

A bilingual psychologist translated the MPS, GI, and IRQ into Italian. Back translations of the Italian versions of these questionnaires into English were further undertaken by a different bilingual psychologist, and examination of the back translations by a third psychologist indicated the linguistic equivalence of the two versions of each questionnaire. Standardized Italian versions of the PI, BDI, and STAI were already in existence.

Results

Cohort characteristics and preliminary analyses

In order to ascertain the comparability of Italian and Australian data, a number of preliminary psychometric analyses were conducted. Internal consistency for all measures used were remarkably similar for the two cohorts (Table 1). With the exception of GI Moral Standards ($\alpha = .69$) in the Italian sample, all other scales exhibited alpha coefficients above .70.

Although details are not reported in this paper (for details see Bhar, 1996; Liguori, 1994), preliminary analyses indicated that the factor structures of all measures used were almost identical for the Australian and Italian cohorts, and consistent with those previously reported.

Table 1. Internal consistency and for all measures used in Australian and Italian cohorts

Measure	Italian	Australian
PI Total	.94	.95
PI Mental control	.92	.93
PI Contamination	.86	.86
PI Checking	.90	.85
PI Urges/Worries	.77	.80
BDI	.85	.92
STAI State	.94	.94
STAI Trait	.91	.95
MPS Self	.87	.90
MPS Other	.87	.79
MPS Social	.79	.85
IRQ Total	.96	.97
IRQ Safety	.92	.93
IRQ Blame	.80	.82
IRQ Control	.86	.89
GI State	.83	.87
GI Trait	.83	.91
GI Moral	.69	.79

Hence, there was a high degree of confidence that the various scales were measuring similar constructs in both cohorts, and that any between-cohort differences in the patterns of inter-relations were likely to be associated with cultural factors.

Means and standard deviations for the Italian and Australian cohorts are presented in Table 2. Data are presented separately for males and females. Cross-cultural comparisons of mean scores were not conducted, despite confidence in the equality of measures based on initial analyses of factor structure and internal consistency. Even if differences were found, these might have been due to culture-specific response biases rather than differences in beliefs or symptom levels. However, within-cohort gender differences were investigated. Given the large number of *t*-tests, a Bonferroni adjustment was considered appropriate to avoid Type 1 errors.

T-tests revealed significant gender differences ($p < .001$) for both cohorts on age, with females slightly younger than males. In addition, Italian females scored significantly higher on Padua Total, Mental Control and Contamination Fears. No significant gender differences were found for either cohort on the cognitive or affective measures. Given the general lack of gender differences, and in order to simplify cross-cultural comparisons, male and female samples were combined for Australian and Italian cohorts.

Inter-relations between OC phenomena and cognitive/affective factors

Pearson correlations between obsessive-compulsive and all affective and cognitive measures were then calculated separately for the Australian and Italian cohorts (Table 3). As expected,

Table 2. Means and standard deviations for all measures in Australian and Italian males and females

	Australian				Italian			
	Male (<i>n</i> = 60)		Female (<i>n</i> = 143)		Male (<i>n</i> = 101)		Female (<i>n</i> = 142)	
	Mean	<i>SD</i>	Mean	<i>SD</i>	Mean	<i>SD</i>	Mean	<i>SD</i>
Age	19.2	1.6	18.7	0.8*	20.9	1.5	20.0	1.0*
PI Total	37.3	27.4	40.3	29.6	48.5	24.5	59.8	23.8*
PI Mental control	13.6	11.3	14.3	12.1	17.4	10.4	22.0	10.4*
PI Contamination	7.5	7.2	7.0	6.4	9.0	5.7	12.3	6.5*
PI Checking	6.2	5.1	6.1	5.3	8.7	5.7	9.6	5.4
PI Urges/Worries	3.9	4.0	3.4	4.4	4.0	3.8	3.3	3.1
BDI	9.0	9.2	10.9	9.2	8.6	6.1	10.1	7.3
STAI-State	38.3	12.3	41.6	12.9	39.8	10.3	41.9	11.9
STAI-Trait	39.3	10.9	42.5	12.1	41.7	10.2	45.3	10.1
MPS Self	63.5	15.3	65.3	15.4	59.2	12.2	60.8	15.9
MPS Other	56.5	10.9	53.8	11.6	54.2	12.2	52.6	11.3
MPS Social	52.6	11.8	56.6	12.9	48.0	11.8	50.1	13.8
IRQ Total	212.8	51.2	216.5	58.9	189.4	47.9	199.4	48.6
IRQ Safety	40.8	11.9	39.8	14.2	37.0	13.6	39.8	13.7
IRQ Blame	38.9	9.8	39.8	10.0	34.4	8.4	36.4	7.4
IRQ Control	30.8	11.4	34.0	12.8	29.7	10.3	31.4	10.4
GI State	27.9	8.1	30.6	7.6	26.2	6.6	28.7	7.7
GI Trait	56.7	13.0	59.4	14.2	53.8	12.3	56.5	11.4
GI Moral	43.3	7.0	43.0	8.1	43.4	8.3	46.7	8.3

* Using *t*-tests, gender differences significant at $p < .001$

for both Australian and Italian cohorts, notable patterns of intercorrelation were found between the obsessive-compulsive, inflated responsibility, perfectionism, guilt, depression, and anxiety measures. Affective measures were generally moderately correlated with obsessive-compulsive phenomena (r 's around .2 to .6). Similarly, inflated responsibility factors were generally moderately correlated with obsessive-compulsive phenomena (r 's around .2 to .7) with the exception of Urges/Worries in the Italian cohort where correlations in the $-.09$ to $.10$ range were found. Perfectionism exhibited low to moderate correlations with obsessive-compulsive phenomena (r 's around .1 to .4), again with the exception of Urges/Worries in the Italian sample, which exhibited correlations in the $-.08$ to $.05$ range. Moral standards were not generally related to obsessive-compulsive phenomena. Compared to other obsessive-compulsive phenomena, contamination fears exhibited generally lower correlations with affective and cognitive factors in both cohorts and, as already indicated, Urges/Worries in the Italian cohort did not correlate significantly with cognitive measures.

Cross-cultural variations were examined through the use of Fishers' Z tests of significance for differences between correlations (see McNemar, 1969). Generally, there were few differences between the Australian and Italian cohorts in their patterns of interrelations (see Table

Table 3. Correlations between Padua scores and all other measures in Australian (Aus) and Italian (Ita) cohorts

	PI Total		PI Mental Control		PI Contamination		PI Checking		PI Urges/Worries	
	Aus	Ita	Aus	Ita	Aus	Ita	Aus	Ita	Aus	Ita
BDI	.50	.54	.57	.58	.16+	.16+	.29	.30	.56	.30**
STAI State	.41	.45	.50	.49	.18	.13+	.26	.26	.27	.19
STAI Trait	.54	.60	.64	.70	.16+	.17	.30	.32	.44	.29
IRQ Total	.52	.51	.57	.49	.20	.28	.37	.40	.31	.02+**
IRQ Safety	.37	.39	.42	.34	.09+	.24	.30	.33	.23	.00+*
IRQ Blame	.38	.32	.39	.30	.19	.17	.29	.34	.19	-.09+*
IRQ Control	.60	.57	.68	.59	.27	.29	.39	.39	.40	.10+**
MPS Self	.39	.13+**	.32	.24	.42	.18**	.31	.22	.19	-.05+*
MPS Other	.24	.13+	.18	.03+	.25	.26	.18	.18	.24	-.08+**
MPS Social	.42	.35	.44	.33	.18	.18	.31	.29	.35	.05+**
GI State	.37	.38	.45	.45	.09+	.14+	.25	.22	.29	.15+
GI Trait	.44	.49	.53	.55	.13+	.19	.36	.31	.33	.10+*
GI Moral	.07+	-.05+	.13+	-.06+	.14+	.00+	.09+	.02+	-.21	-.08+

†not significant, $p > .01$

Significant differences between correlations for each cohort: * $p < .05$; ** $p < .01$

3). Most significant differences ($p < .05$) were found for the PI Urges/Worries subscale, particularly with regard to inflated responsibility (IRQ Total, Safety, Blame, Control), perfectionism (MPS Self, Other, Social), depression (BDI) and trait guilt. Other significant differences were found for the correlations between the MPS Self measure and Padua Total and Contamination Fears. There were no significant differences between Italian and Australian cohorts in correlations for PI Checking or Mental Control. Where significant cross-cultural differences were found, the Australian cohort exhibited stronger correlations.

In order to detect whether differences in correlation effect sizes between the cohorts could be due to cohort differences in distribution range, Levene's tests for homogeneity of variance were conducted. Amongst those variables involved in cross-cultural differences in correlation patterns, only two variables displayed significant differences in variance ($p < .05$) between cohorts: BDI ($S^2_{\text{Aust}} = 84.75$; $\text{range}_{\text{Aust}} = 0-42$; $S^2_{\text{Italian}} = 47.05$; $\text{range}_{\text{Italian}} = 0-35$) and IRQ Control ($S^2_{\text{Aust}} = 153.96$; $\text{range}_{\text{Aust}} = 12-70$; $S^2_{\text{Italian}} = 107.71$; $\text{range}_{\text{Italian}} = 11-55$).

Discussion

Cohort characteristics and gender differences

Having previously established similarities in internal consistency, variance and factor structures (Bhar, 1996; Liguori, 1994), the present paper examined cross-cultural differences in the pattern of interrelations between measures of obsessive-compulsive phenomena, inflated responsibility, perfectionism, guilt, depression, and anxiety in university student cohorts

from Italy and Australia. Both Italian and Australian cohorts were comparable to previously reported non-clinical cohorts in terms of obsessive-compulsive and affective symptoms endorsed (Kyrios et al., 1996; Sanavio, 1988). Scores on the depression and anxiety measures were typical of those found in similar university samples (Dent & Salkovskis, 1986; Kendall, Hollon, Beck, Hammen, & Ingram, 1987; Kyrios et al., 1996).

Given conflicting reports of gender differences in OCD, these were examined first, separately in the Italian and Australian cohorts. Using a Bonferroni adjustment, gender differences were not found in either Australian or Italian cohorts in measures of beliefs. However, some significant differences were found in the Italian cohort on obsessive-compulsive symptoms that were generally consistent with previous findings (Sanavio, 1988). Nonetheless, given that there were no notable gender differences, particularly on cognitive measures, male and female samples were combined in order to simplify the cross-cultural comparisons in patterns of intercorrelation amongst the various measures.

Interrelations between measures of obsessive-compulsive, affect and beliefs

Consistent with Salkovskis' cognitive-behavioural model of OCD, negative affect (anxiety, guilt, depression) and inflated responsibility were highly related to obsessive-compulsive phenomena. There was some support from both Australian and Italian cohorts that, compared to compulsions, obsessional phenomena exhibit a generally higher degree of association with affective and belief measures (OCCWG, 1997). Consistent with Wade et al. (1998), contamination fears and cleaning compulsions exhibited significant correlations with perfectionism scales. In accordance with Salkovskis (1985), checking compulsions were moderately correlated with inflated responsibility in both cohorts.

Cross-cultural differences in interrelations

Supporting the cross-cultural generalizability of the cognitive model of OCD, there were generally few differences between the Australian and Italian cohorts in their patterns of interrelations between obsessive-compulsive phenomena and measures of affect and beliefs. The most notable cross-cultural differences centered around: (i) self-oriented perfectionism that generally exhibited stronger correlations with obsessive-compulsive phenomena in the Australian cohort; and (ii) the Urges/Worries scale for which the Australian cohort exhibited consistently stronger relations with various affective and cognitive measures. While the PI Urges/Worries scale has been reported as exhibiting inadequate internal reliability in previous research, it was satisfactory in the present Italian cohort. Cross cultural differences in correlations of BDI and IRQ Control with PI Urges/Worries may be an artifact of differences in distributional range between the two cohorts. Further research will need to establish the robustness of these latter differences in correlations found in the present study.

Nonetheless, a number of cultural influences can be posited as accounting for the present results. For instance, Anglo-Celtic culture may be more concerned than Italian culture about the experience of urges and loss of motor control; hence, Australians may use specific belief structures (e.g., inflated responsibility, perfectionism) to negatively appraise their experience of such urges. In turn, negative appraisals of intrusive urges are likely to lead to dysphoric states (Salkovskis, 1985). This is consistent with the generally greater degree of correlation between measures of urges and both depression and trait guilt in the Australian cohort.

On the other hand, Italian cultural factors may trigger a different range of cognitive factors in the appraisal of urges and worries. The results could support a stereotype of Italian culture as being more accepting of urges, perhaps associated with a generally greater intensity of emotional expression and/or experience. Conversely, it might be expected that acceptance of certain urges (e.g., sexual) in Italian culture is contrary to traditional Catholic teachings about self-control, which support cognitive styles such as thought-action fusion (i.e. thinking about an urge is the same as carrying out that urge; see Shafran, Thordarson, & Rachman, 1996) that were not assessed by the current cognitive measures. However, religious attitudes might not be closely associated with fears about loss of motor control (e.g. throwing oneself off a bridge, driving the car into something, urge to break or damage something for no reason) which the PI Urges/Worries subscale measures. Furthermore, the relative youth of the Italian cohort might be associated with decreased adherence to traditional Catholic teachings and, hence, a greater acceptance of their urges. It is also conceivable that Italians detach traditional Catholic teachings from their appraisal of urges. Sica et al. (in press) indicated that a highly religious Italian cohort (nuns and friars) did not indicate more concerns about loss of control than an Italian student cohort. Given that urges were significantly correlated with dysphoria in the present Italian cohort, but not significantly correlated with any of the beliefs measures, it remains to be seen which specific beliefs and, hence, appraisal processes are used by Italians in response to their experience of urges. Recent research with Italian cohorts indicating the association of superstition to obsessive-compulsive symptoms may provide some directions for future research regarding Italo-specific cultural influences (Sica et al., in press).

With regard to the Australian cohort, inflated responsibility concerns about safety and control, and all aspects of perfectionism were most closely related to intrusive urges. Anglo-Celtic culture, being more individualist in its orientation (Triandis, 1995), might be more concerned with aspects of high personal standards (e.g. self-control) than Italian culture. Concerns with perfectionism, particularly self-oriented perfectionism, are likely to lead to negative self-appraisals in light of perceived imperfections such as the experience of intrusive urges or contamination fears (Guidano & Liotti, 1983).

It was interesting to note that, unlike self-oriented perfectionism, there were generally no cross-cultural differences in the relationship of socially-prescribed perfectionism to obsessive-compulsive phenomena. The only exception concerned urges and worries where socially-prescribed perfectionism failed to exhibit a significant correlation with concerns about loss of control over urges and worries in the Italian cohort. Overall, it would be expected that, with its collectivist cultural orientation, socially-oriented but not self-oriented perfectionistic beliefs would be influential in the Italian cohort. While the individualist nature of Anglo-Celtic culture may account for the moderately strong associations between self-oriented perfectionism and obsessive-compulsive phenomena found in the Australian cohort, future research will need to examine the influence of individualism and collectivism on OC phenomena in Italian culture. With Western influences increasingly permeating Italian culture, particularly amongst younger generations, there may be a movement away from the assumed stereotypic collectivist cultural orientation.

Implications of cross-cultural differences for treatment

The cognitive-behavioural model of OCD proposes an association between certain beliefs and the appraisal of intrusions, accounting for maladaptive responses that result in obses-

sions, compulsions and dysphoric affective states (Salkovskis, 1985; Rachman, 1993, 1998). Consistent with Salkovskis (1985), negative affect (anxiety, guilt, depression) and inflated responsibility were most highly related to obsessive-compulsive phenomena in both cohorts in the present study. The strong association of perfectionism to OC phenomena found in the Australian cohort is also consistent with various other cognitive perspectives on OCD (Frost & Steketee, 1997). The overall consistency of the pattern of interrelations in both Australian and Italian cohorts, and the ease with which differences between the cohorts were explained by cultural stereotypes, further supports the cognitive-behavioural model of OCD.

Ultimately, cross-cultural research will help to identify what changes are necessary in the modus operandi of cognitive-behavioural therapy for particular cultural groups. While all effective clinical work relies on an individualized approach, cognitive-behavioural models help to guide interventions. Consistent with aetiological models of OCD, current conceptualizations of intervention emphasize the need to target, amongst other factors, beliefs about inflated responsibility, perfectionism, the nature and control of intrusions, and negative affective states (Salkovskis, 1985; Freeston, Rheaume, & Ladouceur, 1996).

The generally higher level of association between belief measures and urges and worries in the Australian cohort suggests that Australian clinical cohorts are more likely to require intervention of perfectionistic and responsibility-related beliefs in the appraisal of their experience of intrusive urges that results in self-blame and dysphoria. Current cognitive-behaviour therapies for OCD (e.g., Freeston et al., 1996; van Oppen & Arntz, 1994) deal directly with these cognitive and affective issues, and have been found to be effective with Australian clinical samples (Kyrios, Hordern, & Bhar, 2001). As the Italian cohort did not generally exhibit strong relationships between urges and measures of beliefs or dysphoria, it is not clear which influences are at play in the appraisal of intrusive urges and, hence, which require direct intervention.

While future research needs to examine the influence of specific Italian sociocultural and religious factors on the appraisal of intrusive urges, clinicians also need to be aware that existing cognitive-behavioural intervention models for OCD may be limited in their utility for the treatment of urges and worries in an Italian cultural context. Hence, it is suggested that an idiosyncratic approach needs to be taken in clinical work with Italian clinical populations in identifying beliefs used to appraise urges and worries. Clinicians need to be aware that Italians may use a different set of beliefs and appraisals, and that Western-based cognitive-behavioural models of urges and worries may miss some of the cultural idiosyncrasies found in Italian clinical populations. Furthermore, the assumed stereotype of Italians as having inflated socially-prescribed concerns, relative to Anglo-Celtic culture, may not be relevant in clinical work with OC phenomena.

Future research

While this study has investigated cross-cultural variation in patterns of interrelationships between obsessive-compulsive phenomena, affect and beliefs, further investigations need to confirm the interpretations posed for the cross-cultural differences found. Furthermore, with regard to measurement issues, structural equation modelling can be used to more adequately examine the cross-cultural equivalence of measures. The potential content overlap between measures of obsessive-compulsive phenomena, beliefs, and affect also needs to be dealt

with. The OCCWG (1997) is developing a more comprehensive measure of beliefs that is potentially a “cleaner” measure of cognitions as distinct from symptoms associated with OCD, depression and anxiety.

Future investigations will also need to better distinguish between beliefs and the appraisals that may result from the interaction between various beliefs. The present study interpreted cross-cultural differences in the pattern of interrelations between obsessive-compulsive phenomena and beliefs as indicative of cross-cultural differences in appraisals of obsessive-compulsive phenomena. However, it is not clear whether the measures used in the present study consisted of belief or appraisal items. While cross-cultural differences in the association between obsessive-compulsive phenomena and beliefs may be few, differences might be found at the level of specific appraisals that must be accounted for in the development of cognitive-behavioural treatments for OCD. The present study indicates, albeit provisionally, that sociocultural factors may need to be considered in the development of cognitive-behavioural treatments in specific cultural contexts. Finally, while the present study provides some evidence for the overall support of the cognitive model, replication with other cultures and clinical cohorts will help further clarify the generalizability of the model.

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