

Cultural Values and Alexithymia

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Abstract

Alexithymia refers to difficulty with reflecting on and articulating emotional states. Previous research has found that Asian groups may tend toward greater alexithymia and that cultural values may mediate this difference, although the content of Asian values that form these pathways is unclear. This study examined the relationship between Confucian values, ethnicity, and alexithymia. A sample of 216 undergraduate students completed the Chinese Value Survey and the Toronto Alexithymia Scale. Asian Canadians scored more highly on alexithymia than non-Asian Canadians. Individuals who valued trustworthiness, patience, and kindness were found to be less alexithymic. The ability to be a source of kindness and security to others may be tied to the development of reflective awareness. Individuals who valued purity from desire and respect for social order were found to be more alexithymic. Such individuals may tend not to reflect on impure or socially disruptive thoughts and feelings. Values associated with purity and order mediated the difference between Asians and non-Asians on alexithymia. Asian Canadians may therefore score more highly on alexithymia because they prefer not to reflect on emotions associated with impurity or social disorder.

Keywords

alexithymia, culture, emotion, ethnicity, values

Introduction

Alexithymia refers to difficulty with reflecting on and articulating emotional states (Bagby, Taylor, & Parker, 1997). Although alexithymia can be conceptualized as psychopathology resulting from such factors as trauma (Franzoni et al., 2013) or right hemisphere dysfunction (Jessimer & Markham, 1997), it is also an individual difference variable related to beliefs about the value of emotions in social life, shaped by developmental context (Eid & Diener, 2001; Le, Berenbaum, & Raghavan, 2002; Mayer, Salovey, Caruso, & Sitarenios, 2001). From this perspective, alexithymia shares much in common with the construct of emotional ambivalence, which refers to uncertainty about the value of emotional rumination and expression and is affected by cultural beliefs (Chen, Cheung, Bond, & Leung, 2005). Key attributes of alexithymia include difficulty identifying emotional states from other bodily sensations, difficulty describing emotional experiences to others, and an externally oriented thinking style focused on concrete details of events as opposed to their emotional significance (Bagby et al., 1997). The purpose of the present study was to examine how alexithymia may relate to cultural values and ethnicity.

East Asian cultures may tend to emphasize emotional restraint and externally oriented thinking, rather than emotional exploration and articulation relative to Western European cultures (Butler, Lee, & Gross, 2007; Chen et al., 2005; Dere, Falk, & Ryder, 2012; Dere et al., 2013; Tsai, Levenson, & McKoy, 2006). Individuals of Asian heritage

have been found to score more highly on alexithymia compared with individuals of European background (Dion, 1996; Le et al., 2002). This effect may be explained by group differences in cultural values and beliefs relating to individualism and the expression of inner experience, rather than biomedical factors or differences in metacognitive ability. Dere et al. (2012) found that differences in alexithymia between Asian and European Canadians were mediated by the endorsement of modernism and Euro-American values. However, greater specificity in the content of Asian values associated with alexithymia remains to be identified.

Non-Western value systems have been rarely operationalized for assessment, but one such system is Confucianism (Chinese Culture Connection, 1987). Confucianism is an ethical system that focuses on the cultivation of virtues conceptualized as foundational to social responsibility and civic order (Yao, 2000). These virtues include humaneness and compassion, honesty and righteousness, loyalty and sincerity, propriety and correctness, and wisdom and knowledge. Originating in ancient China, the Confucian value system has had greatest historical influence in East Asia and parts of

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Southeast Asia, specifically Vietnam and Singapore (Yao, 2000). Confucian values have also diffused into other parts of Southeast Asia owing to the influence of Chinese diaspora that possess an economic and political power disproportionate to their minority status (Warden, Chen, & Caskey, 2005). Although Confucian values retain a sense of cultural distinctiveness when articulated, they overlap with other systems of human valuation and are understandable to different peoples (Chinese Culture Connection, 1987).

Using a multicultural sample, this study explored the associations between alexithymia, Confucian values, and ethnicity. Asian Canadians were hypothesized to score more highly on alexithymia than non-Asian Canadians. No predictions were made concerning which Confucian values would be most associated with alexithymia. There were also no predictions concerning which Confucian values would be associated with ethnicity beyond the general expectation that Asian Canadians would score more highly than non-Asians on at least some Confucian values. Values that were associated with both ethnicity and alexithymia were tested as mediators of the effect of ethnicity on alexithymia.

Method

Participants and Procedure

This study was approved by the Research Ethics Board at the University of Toronto. Participants were undergraduate students recruited in exchange for psychology course credit. After a research assistant obtained written informed consent from participants, they were asked to complete a questionnaire package and provide demographics as part of a study on cultural values and personality. After completion, individuals were given a debriefing sheet explaining the study and were given an opportunity to ask questions. Individuals were categorized into one of three broad ethnic groupings: (a) East or Southeast Asian, (b) European, and (c) Remaining Ethnicities, which included all other individuals not falling into the first two groups. Sampling continued until these groups were approximately balanced. In total, 216 participants consented to this study, with a mean age (*SD*) of 20.19 (2.86) years. Sixty-one percent of the sample (132/216) was female. Thirty-three percent of the sample (71/216) were of East or Southeast Asian background, 34% (74/216) were of European background, and 33% (71/216) were of Remaining Ethnicities.

Measures

The 20-item Toronto Alexithymia Scale (TAS) is a 5-point Likert-type scale with a range of 1 = *strongly disagree* to 5 = *strongly agree* (Bagby, Parker, & Taylor, 1994). Items assess difficulty with identifying feelings (e.g., I am often confused by what emotion I am experiencing), difficulty with describing feelings (e.g., It is difficult for me to find the right words

for my feelings), and an externally oriented thinking style (e.g., I prefer to just let things happen rather than to understand why they turned out that way). The scale generated a summed total that could range from 20 to 100. Internal reliability for the TAS has been found to be 0.81 (Bagby et al., 1994) and was 0.84 in the present study.

The 40-item Chinese Value Survey (CVS) is a 9-point Likert-type scale with a range of 1 = *of no importance at all* to 9 = *of supreme importance* (Chinese Culture Connection, 1987). Respondents rate the personal importance of 40 values from a Confucian perspective. All CVS items are listed in Table 1. The CVS was found to have convergent validity with Hofstede's (1980) value dimensions in a large multisite international study (Chinese Culture Connection, 1987). However, the findings were from an ecological factor analysis and the identified factors are not appropriate for individual-level analyses. A preliminary principal components analysis was described by Matthews (2000) who found four dimensions. They were Self-Development (reliability = 0.82), which included such values as persistence, patience, and sincerity; Relationships with Others (reliability = 0.91), which included such values as having few desires, a belief in benevolent authority, and being contented with one's position in life; Social Responsibility (reliability = 0.82), which included solidarity with others, ordering relationships by status, and patriotism; and Worldly Wisdom (reliability = 0.57), which included wealth, a sense of cultural superiority, and a belief in the repayment of the good and evil of others.

Uncertainty about the CVS factor structure suggested that an exploratory factor analysis be conducted. Principal axis factoring is the standard method for factor extraction and was used here. Promax rotation was applied because value dimensions may not be orthogonal. The number of factors extracted was guided by examination of the scree plot and the magnitude of the eigenvalues. Naming of factors was based on the highest loading items on that dimension, ignoring cross-loading items.

Five factors were extracted from the CVS, all with eigenvalues greater than 1. See Table 1 for factor loadings and other item statistics. Factor 1 was labeled *Trustworthiness*. Values loading on this dimension included a combination of personal and relational virtues including patience, persistence, trustworthiness, kindness, and personal steadiness and stability. Factor 2 was labeled *Purity and Order*. Values loading on this dimension included remaining disinterested and pure, having few desires, the importance of chastity in women, and a preference for righteousness and social order. Factor 3 was labeled *Confucian Tradition*. Values loading on this factor included filial piety, respect for tradition, observation of rites, industriousness, and loyalty. Factor 4 was labeled *Status*. Values on this factor included valuing wealth and knowledge, reputation, and the power to do unto others as they have done unto you. Factor 5 was labeled *Social Harmony*. Values on this dimension were harmony with others, tolerance, and non-competitiveness.

Table 1. Chinese Value Survey Factor Loadings and Item Statistics.

Item	M	SD	F1	F2	F3	F4	F5	h2
24. Persistence (perseverance)	7.40	1.26	66	-9	10	-3	-9	0.44
25. Patience	7.67	1.40	64	-12	16	-9	9	0.52
30. Trustworthiness	8.21	0.98	57	-5	-2	-5	5	0.33
18. Personal steadiness and stability	7.39	1.41	54	20	-12	26	3	0.43
9. Kindness (forgiveness, compassion)	8.09	1.07	54	6	-9	-22	33	0.55
28. Adaptability	7.30	1.41	50	14	-10	23	-8	0.31
21. Sincerity	7.73	1.44	49	21	21	-31	-21	0.41
32. Courtesy	7.54	1.27	42	2	1	20	19	0.32
36. A close intimate friend	8.14	1.18	39	-21	9	1	2	0.19
13. Self-cultivation	6.91	1.42	31	14	-17	18	13	0.18
19. Resistance to corruption	7.31	1.72	29	30	-6	-27	-5	0.19
22. Keeping oneself disinterested and pure	4.53	2.15	-5	62	14	-29	11	0.48
15. Sense of righteousness	6.01	1.95	30	60	-10	13	-13	0.48
37. Chastity in women	4.52	2.57	-10	59	29	-8	-9	0.49
38. Having few desires	3.88	2.20	-21	48	21	-2	11	0.37
27. A sense of cultural superiority	3.39	2.31	-19	46	3	43	-14	0.55
29. Prudence (carefulness)	6.67	1.56	32	46	-3	21	2	0.45
23. Thrift	4.92	1.75	-12	45	-12	0	24	0.24
14. Ordering relationships by status and observing this order	4.05	2.05	-15	43	17	28	1	0.44
16. Benevolent authority	5.59	1.91	15	41	2	9	8	0.28
34. Being conservative	4.59	2.11	-2	36	32	18	6	0.44
31. Having a sense of shame	6.06	1.95	19	35	0	26	8	0.32
7. Observation of rites and rituals	5.29	1.91	-4	-2	69	6	-2	0.47
1. Filial piety	6.89	1.75	0	3	67	7	5	0.52
39. Respect for tradition	5.48	1.96	17	18	60	0	-7	0.55
6. Loyalty to superiors	5.83	1.75	-2	14	54	3	24	0.51
2. Industry (working hard)	7.31	1.29	26	3	49	18	-4	0.46
40. Wealth	5.73	2.17	6	-3	13	66	-15	0.50
35. Protecting your "face"	5.11	1.99	-6	23	14	52	2	0.47
26. Repayment of both the good and the evil that another person has caused you	4.97	2.12	-12	10	-3	51	10	0.30
10. Knowledge (education)	8.24	1.00	18	-28	12	42	13	0.25
8. Reciprocation of greetings, favors, and gifts	6.61	1.60	31	-3	-3	34	14	0.24
4. Harmony with others	7.26	1.44	16	2	10	-1	62	0.54
17. Non-competitiveness	4.70	1.89	-14	18	-15	-10	62	0.39
3. Tolerance of others	7.10	1.64	29	-11	12	-3	43	0.38
12. Moderation (following the middle way)	5.19	2.02	-12	14	15	20	39	0.30
11. Solidarity with others	6.58	1.42	13	2	18	14	38	0.31
33. Contentedness with one's position in life	7.14	1.79	6	-5	1	9	30	0.11
20. Patriotism	5.32	2.15	15	25	-1	11	29	0.26
5. Humbleness	6.80	1.51	20	28	14	-20	27	0.35

Note. Factor loadings were multiplied by 100. Loadings greater than 35 are bolded. Factor 1 (F1) was labeled *Trustworthiness*. Factor 2 (F2) was labeled *Purity and Order*. Factor 3 (F3) was labeled *Confucian Tradition*. Factor 4 (F4) was labeled *Status*. Factor 5 (F5) was labeled *Social Harmony*.

Factor 1 or Trustworthiness corresponded to Matthew's (2000) dimension of Self-Development. The second factor of Purity and Order corresponded to Matthew's Relationships with Others. Factor 4 or Status resembled the dimension she labeled as Worldly Wisdom. Her Social Responsibility factor referred to values spread out across the dimensions found here.

Factors 1 to 5 uniquely explained, respectively, 20%, 16%, 12%, 14%, and 11% of the common variance. The reliabilities of Factors 1 to 5 were calculated based on non-cross-loading items loading at least 0.35 on a dimension. These were found to be, respectively, 0.79, 0.80, 0.79, 0.62, and 0.65. See Table 2 for interfactor correlations, which ranged from 0 to -0.33. This pattern of negative relationship

Table 2. Interfactor Correlation Matrix.

	F1	F2	F3	F4	F5
F1: Trustworthiness	1				
F2: Purity and order	-.02	1			
F3: Confucian tradition	-.21	-.33	1		
F4: Status	.02	-.24	-.14	1	
F5: Social harmony	-.26	-.10	-.16	-.11	1

indicates varying degrees of antagonism between dimensions. Individuals tended to score highly on a dimension to the exclusion of others.

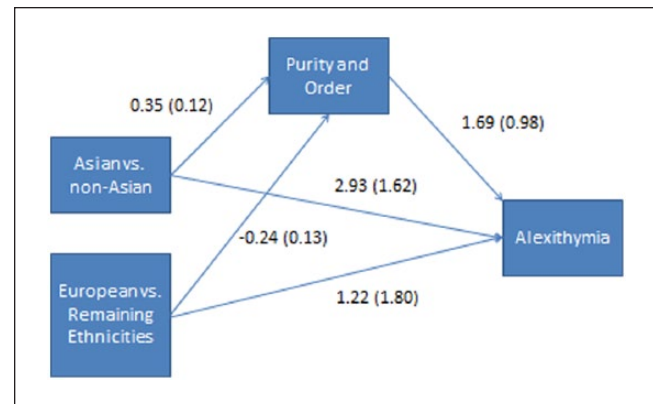
Statistical Analysis

The relationship between alexithymia and ethnicity was examined using two planned orthogonal contrasts. The first contrast was an Asian versus non-Asian comparison testing whether the mean of the Asian group differed from that of the combined non-Asian groups, that is, $(\text{European } M + \text{Remaining Ethnicities } M) \div 2$. The second contrast was a European versus Remaining Ethnicities comparison, which tested whether the means of the two non-Asian groups differed from each other. The contrasts were conducted within the setting of ANOVA. By combining the two non-Asian groups, this procedure gives a more powerful statistical test of the central hypothesis that Asians would differ from non-Asians, relative to conducting all pairwise comparisons or relying on the omnibus F test. The testwise alpha was .025 after a Bonferroni correction.

The relationship between alexithymia and Confucian values was examined using regression. Alexithymia was regressed on the five CVS value dimensions as quantified by their factor scores. Factor scores are linear composites calculated by multiplying item responses by their factor loadings and summing together (Hatcher, 1994). They are scaled to have a mean of 0 and standard deviation of 1. Only significant predictors were retained in the final regression model.

CVS factors associated with alexithymia were tested for ethnic group differences using the same contrast procedure outlined earlier (i.e., Asian vs. non-Asian; European vs. Remaining Ethnicities).

CVS factors found to be related to both ethnicity and alexithymia were tested as mediators of the relationship between ethnicity and alexithymia. If mediation by values is demonstrated, this would mean that ethnic differences in alexithymia can be explained by the different values held by ethnic groups (i.e., ethnic groups differ in the extent to which they hold certain values, which in turn affect levels of alexithymia). Mediation was tested using a path model with bootstrapped, bias-corrected confidence intervals (CI; Hayes & Preacher, 2014). The number of resamples was 1,000. Ethnicity was again operationalized as contrast variables identifying Asian versus non-Asian groups, and European

**Figure 1.** Mediation model for Purity and Order controlling for other Confucian value dimensions.

Note. Path coefficients are shown with standard errors in parentheses. Control variables are not shown.

Ethnicity versus Remaining Ethnicities. Mediation is evaluated by estimates of the indirect effect of ethnicity on alexithymia (as operating through values). The indirect effect is estimated by multiplying the ethnicity to values path coefficient against the values to alexithymia coefficient. If the CI of the indirect effect does not encompass zero, then mediation is said to be demonstrated.

Results

The mean alexithymia (SD) score was 46.19 (11.18). Planned contrasts revealed that the Asian group was more alexithymic than non-Asians, $M = 48.70$ versus 44.95 , MS contrast = 670.29, MS error = 122.81, $F(1, 213) = 5.46$, $p = .02$, Cohen's $d = 0.34$, and that the European group did not differ from the Remaining Ethnicities group, $M = 45.38$ versus 44.51 , MS contrast = 27.04, MS error = 122.81, $F(1, 213) = 0.22$, $p = .64$, Cohen's $d = 0.08$.

When regressed on CVS factors, alexithymia was found to be negatively associated with Factor 1 (Trustworthiness), raw beta = -3.15 , standard error = 0.80, $p = .0001$, and positively associated with Factor 2 (Purity and Order), raw beta = 2.76, standard error = 0.80, $p = .0007$.

There were no ethnicity differences on Factor 1 (Trustworthiness). Concerning Factor 2 (Purity and Order), the Asian group scored higher than non-Asians, $M = 0.36$ versus -0.18 , MS contrast = 12.93, MS error = 0.79, $F(1, 213) = 16.35$, $p < .0001$, and the European group scored lower than the Remaining Ethnicities group, $M = -0.35$ versus 0, MS contrast = 4.06, MS error = 0.79, $F(1, 213) = 5.14$, $p = .02$, Cohen's $d = 0.35$.

See Figure 1 for a model specifying Factor 2 (Purity and Order) as a mediating effect of ethnicity on alexithymia, controlling for other CVS factors. The indirect effect of the Asian versus non-Asian variable on alexithymia was significant with an estimate of 0.59, $CI_{0.95} = [0.02, 1.82]$. The

indirect effect of the European versus Remaining Ethnicities variable was non-significant with an estimate of -0.40 , $CI_{0.95} = [-1.64, 0.009]$.

Discussion

In the present study, the association between cultural values and alexithymia was examined in a multicultural sample of 216 undergraduate students. Consistent with the literature, individuals of Asian heritage scored more highly on alexithymia than non-Asians. The effect size was small, cautioning against the exaggeration and stereotyping of ethnic groups (Terracciano et al., 2005). Nonetheless, small effect sizes can be meaningful (Cohen, 1988) and such cultural differences in emotion have been previously documented and discussed as being important (Bond, 1993; Butler et al., 2007; Markus & Kitayama, 1991).

The present study found that the more individuals valued Trustworthiness, the lower they tended to score on alexithymia. The Trustworthiness factor reflected values such as trustworthiness, patience, kindness, and personal stability. This finding is consistent with previous research, which has found that the ability to be a source of kindness and security for others develops in tandem with reflective awareness (Fonagy, Gergely, Jurist, & Target, 2004). Much emotional life occurs in social context, with its attendant frustrations and misunderstandings (Mitchell, 1997). Navigating social relationships with patience and compassion requires skill in comprehending one's inner states, perspective-taking, and the ability to manage affect in oneself and others (Mikulincer & Shaver, 2007).

The Purity and Order dimension of the CVS included values reflecting the importance of righteousness and of purity from desire, and a belief in benevolent authority and social order. Individuals who valued purity and order tended to be more alexithymic, suggesting that they may prefer not to reflect or dwell on emotions associated with impurity (Douglas, 2005) and social disruptiveness (Chen et al., 2005; Wong, Bond, & Rodriguez Mosquera, 2008). This non-reflectiveness may be associated with psychological suppression (Douglas, 2005), but it may also, contrastingly, be associated with mindfulness and the belief that emotions can be let go of (Tsai, Miao, & Seppala, 2007; Wallace & Shapiro, 2006).

Asians scored higher on Purity and Order than non-Asians, and those with European heritage scored lower on this dimension than the Remaining Ethnicities group. Purity and Order was tested as a mediator of the effect of ethnicity on alexithymia. Only the difference between Asians and non-Asians on alexithymia was found to be significantly mediated by Purity and Order. This finding would support the hypothesis that Asians are more alexithymic than non-Asians because they more highly value Purity and Order. To the extent that Asians exhibit a preference for Purity and Order,

they may be less willing to reflect on undesirable emotional states associated with impurity and disorder. Group differences in alexithymia may therefore be explainable in light of the psychological impact of cultural values and practice, as opposed to deficits in cognitive capacity or processing (Dere et al., 2012). Future work may seek to clarify the sources of disturbing states and the effectiveness of strategies to diminish them within cultural context.

Study limitations that affect the interpretation and generalizability of findings include its multicultural sample, the reliance on self-report measures, and the correlational nature of the data, which prevents causal claims. The categorization of ethnicity was rough and limits the ability to understand psychological relationships within more naturalistic, self-identified ethnocultural groupings. It may be problematic that non-Chinese Asians were considered acculturated in the Confucian tradition and that Southeast Asians were combined with East Asians in this study. The CVS may benefit from further validation and testing of its psychometric properties and other value systems may be worth investigating for their relationship to emotional expression. Given that the primary dimension on the CVS was not a source of ethnic group differences in this study, it may be advisable to develop the assessment of values and behaviors associated with purity and order, as cultural differences may be most compelling in this domain. The use of acculturation measures is also recommended in the study of multicultural samples.

In conclusion, cultural values were associated with individual differences in the processing of emotions, which may help to explain ethnic group differences in alexithymia. More sophisticated methods may be required to understand alexithymia as it relates to the interplay of psychosocial and biomedical factors within cultural context. Improvements to study design would include the study of variation between and within self-identified ethnocultural groups.

Declaration of Conflicting Interests

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