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Ethnic Identity and Wellbeing: Implicit In-group Identity and language dominance predicts Wellbeing in Emirati Women

Identifying the determinants of psychological wellbeing occupies a central, and important, place in psychological research. Over the past twenty years, a large body of work has accumulated articulating both the constituent elements of wellbeing and the factors that promote and maintain it. However, much of this research has focused attention on the broad factors contributing to wellbeing such as the respective roles played by autonomy, positive interpersonal relations, environmental mastery, self-acceptance and purpose in life (Ryff & Keyes, 1995; Seligman, 2000).

One variable and its relationship with wellbeing that has attracted some attention, is the role of cultural identity. Early work on this domain suggested that the incidence of psychological distress was higher in ethnic groups in their adopted countries. For instance, Patel (1992) reported that young British Asian women living in the United Kingdom experienced more psychological difficulties than their white counterparts. Of particular interest was that such a finding appeared to be generation specific and that the findings did not extend to Asian women of grandmother status but who were also living in the United Kingdom (Quraishi & Evangeli, 2007). One broad avenue of interpretation suggests that these age differences are attributable to the concept of cultural identity with older individuals having a more established identity but younger individuals experiencing more flux in identity and perhaps more cultural conflicts as a result. Research has been however equivocal in respect of this issue with Quraishi & Evangeli (2007) reporting that cultural identity status appeared to have minimal overall impact on psychological wellbeing. However, the authors

suggest that the relationship may be far less pronounced in non-clinical samples in contrast to clinical samples (i.e., those reporting distress or engaging in self-injury).

This research highlights a number of issues. Firstly, cultural identity does appear to be related to the occurrence of psychological difficulties in some individuals. For instance, there is strong evidence that psychological problems occur at a higher rate in minority populations (i.e., from a different ethnic grouping) in contrast to the local indigenous population. This effect appears to be pronounced when individuals are living in areas with a majority ethic population not when individuals are living in predominantly ethnic minority neighbourhoods (Bosqui et al., 2014). Secondly, results such as these suggest that the role of cultural identity and its relationship with wellbeing and may be far more nuanced than previously thought and investigations need to cognizant of such subtlety. For example, merely assessing ethnic identity without regard to specific social-cognitive processes that interact with specific contexts may be futile. The issue therefore is bridging the gap between research with non-clinical samples which is equivocal regarding the role of ethnic identity and research with clinical populations that points to a relationship between ethnic identity and the occurrence of psychological difficulties. Building this bridge requires identification of the psychological processes or mechanisms that result in either wellbeing or psychological distress.

One candidate for this role is the possible role of identity consistency and its relationship with cultural identity drawn from social-cognitive theories (Suh, 2002). Early personality theorists proposed that psychological difficulties emanated from a lack of congruence between two concepts. First, that the self-view needs to be coherently organized but secondly that is also needs to be maintained across situations and that psychological health results from greater congruence from a self-view that is

consistent across psychological contexts. Considerable empirical evidence supports this proposition and which demonstrates that the degree of identity consistency is predictive of psychological adjustment. For example, Donahue et al., (1993) reported that individuals who reported who viewed themselves highly inconsistently across social roles experienced higher levels of depression than others. In summary, it appears that personal identity and the clarity of personal identity mediates psychological wellbeing. Approaches drawn from social psychology, and in particular, Social Identity theory (Tajfel, 1978; 2010) have proposed that identity arises from the group or groups to which individual belongs is considered to be an influential contributor to identity. However, cultural identity and the clarity or stability of that identity has attracted relatively little empirical attention. First a number of researchers have sought to expand this conceptualization by including the idea of cultural identity clarity. For example, Taylor (2002) has proposed that individuals without a clear collective or cultural identity may experience difficulties in developing a clear personal identity, which then may translate into poorer psychological functioning. This represents an expansion of social identity theory from a conceptualization of self-concept (personal identity) at an individual level towards including a collective level of identity. Self-concept is posited as involving two components, a knowledge component and an esteem component (Campbell, 1990) and Taylor (2002) argues that collective identity also has these same two components of knowledge and esteem. What is crucial however is that a clearly defined collective identity is critical to the development of a clearly defined personal identity (Taylor, 2002). In this theory, an individuals' personal identity is relative in that when an individual reflects on himself or herself, it is because he or she is comparing themselves to a clear reference group or normative template. What is crucial however is that a "clearly defined cultural identity that includes a clear definition of values, traits, ideological positions, shared behaviours and history of ones group can also operate as a normative template" (Usborne, 2009, p. 9). Furthermore, clarity is not considered to be synononomous with accuracy or even knowledge as what is considered important is an individuals perception of the clarity or stability of their own cultural identity.

Taylor (2002) has indeed proposed without a clear cultural identity there might be no clear, available reference group and consequently no comparative mechanism by which an individual can construct a coherent sense of personal identity. The evidence appears to support this proposition with Usborne and Taylor (2010) reporting that the relationship between cultural identity clarity and indices of wellbeing and adjustment is mediated by clarity of self-concept. Indeed they further propose that those individuals negotiating two cultural identities, cultural identity clarity predicted markers of wellbeing via personal identity clarity. Research evidence to date appears to support the argument that within-culture variation in the clarity of individuals cultural identities is associated with personal identity and wellbeing (Usborne & Taylor, 2010). The implication of this argument is that individuals with a less clear cultural identity will be prone to markers of psychological distress.

Determining the nature of the relationship between cultural identity and psychological wellbeing necessitates the use of validated means of determining cultural identity in particular. One important methodological issue is whether cultural identity is static or shifting and dynamic (Okazaki at al., 2008). However as others have argued, cultural clarity is best defined as "a clear subjective knowledge and understanding of a groups values, norms and characteristics" (Usborne & Taylor, p.

85). Studies such as those reported above have typically relied on self-report methods to evaluate cultural identity such as the Cultural Identity Clarity Scale (Usborne & Taylor, 2010). What has not been explored to any significant degree, is the role implicit assessments can play in assessing cultural identity. Implicit assessments can substantially contribute in this domain when one considers that previous studies investigating social-cognitive processes have reported discrepancies between explicit and implicit in-group/out-group evaluations in respect of paranoid ideation in particular (Thomas et al., in press).

The relationship between cultural identity and wellbeing is not one that has been systematically examined in Arab Gulf countries and in the United Arab Emirates in particular. However, it is a context that provides a valuable opportunity to do so for a number of reasons. The UAE has been witness to rapid social and economic changes over a comparatively short time frame. Part of this change has brought with it increasing western acculturation and a diminishing proficiency in Arabic ability amongst a minority of younger Emiratis (Thomas et al., 2016). A number of mechanisms accounting for this have been proposed including the widespread use of Western educational curricula in the educational system, the widespread access to all forms of media and information technology and a high mobility of locals in respect of overseas travel (Thomas et al., 2016). It does appear that, at least in the UAE, Arabic language proficiency does appear to bear a relationship with cultural identity and in so doing psychological wellbeing. For instance, Thomas et al., (2016) report that Arabic proficiency was negatively correlated with markers of paranoia and measures of in-This finding indicates that language proficiency may be a group positivity. particularly salient marker of cultural identity clarity in particular.

The current study sets out to investigate the relationship between cultural identity and wellbeing. It extends previous research by systematically investigating the role played by language proficiency as a marker of cultural identity and by using an implicit assessment methodology of cultural identity in conjunction with a self-report measure. We hypothesize that relatively low Arabic language proficiency, and relatively low levels of in-group (own culture) positivity (implicit and explicit) will be associated with poorer psychological wellbeing. The present study uses a computerized affective priming task alongside traditional self-report assessment to this end.

## Method

#### **Participants**

All participants were Emirati females enrolled in introductory health science courses at Zayed University or Emirates College for Advanced Education (N = 342). The participant institutions are very similar; they both operate essentially single sex campuses in the city of Abu Dhabi and the respective student bodies are comprised almost exclusively of Emiratis. All participants in the present study were bilingual (English/Arabic) and identified their nationality as Emirati. Academic courses at the participating institutions are delivered in English, and an International English Language Testing System (IELTS) score of 5 or more is required for admission (6 at Zayed University). The mean age for participants was 24.01 (SD = 4.71), with ages ranging from 19 to 42 years. Forty-nine participants who obtained extreme outlying error rates on the affective priming task were excluded for analyses examining performance on priming and other

measures. These extreme error rates suggest that these individuals had poor comprehension of the task.

## Measures

Presentation of self-report measures used both languages, with English and Arabic set alongside each other. All translations and independent backtranslations were undertaken by bilingual Arabic language faculty.

### **Bilingual Language Competency**

A simple scale was used to self-report English and Arabic language proficiency. This four-item scale required participants to provide scores for written and spoken English from 1 (*very poor*) to 10 (*excellent*). The same was asked of Arabic language proficiency. Language proficiency was calculated by subtracting total English self- ratings from Arabic self-ratings. Higher scores are reflective of greater self-reported Arabic language proficiency. A negative score would therefore represent self-reported English language dominance. In terms of language dominance, 39 (11.4%) participants reported being dominant in English. Similarly, 22 (6.4%) of participants reported having equal proficiency in both languages, leaving 281 (82.1%) classed as Arabic dominant. The mean score for Arabic was 18.48 (SD = 2.4), and for English it was 14.81 (SD = 2.8).

#### World health Organization Wellbeing Index (WHO-5)

The 5-item World Health Organization Well-Being Index (WHO-5) is amongst the most frequently used questionnaires designed to assess subjective psychological well-being. It consists of 5 simple simple questions which tap into well-being of

respondants. All items are positively phrased positively as it is designed to assess well-being (e.g., I have felt calm and relaxed). The respondent is asked to rate how well each of the 5 statements applies to him or her when considering the last 14 days. Each of the 5 items is scored from 5 (all of the time) to 0 (none of the time). The raw score therefore ranges from a minimum score of 0 (absence of well-being) to 25 (maximal well-being). Because scales measuring health-related quality of life are conventionally translated to a percentage scale from 0 (absent) to 100 (maximal), it is recommended to multiply the raw score by 4 (Topp et al., 2015). The index is reported to have high clinimetric validity and is a sensitive and specific screening tool for depression (Topp et al., 2015). One particular feature of the index is its wide applicability across fields of study.

Multi-component in-group identification scale (MIIS). The MIIS (Leach et al., 2008) aims to explicitly assess in-group identification. This 14-item, self-report scale assesses five components of in-group identity: centrality, in-group homogeneity, satisfaction, self- stereotyping, and solidarity. Scoring is on a seven-point response scale from 1 (*strongly disagree*) to 7 (*strongly agree*); higher scores indicate greater in-group identification. Example items from the scale include "I think that Emiratis have a lot to be proud of" and "I feel a bond with Emiratis." Good construct, predictive, discriminant and concurrent validity have previously been reported for the MIIS. Additionally, acceptable internal reliability has previously been reported (Leach et al., 2008). Internal reliability in the present study was also good ( $\alpha = .89$ ).

**Implicit Preference Measure.** Implicit in-group evaluations were assessed using an affective priming task (APT). This task assesses response times to positive and negative words that are primed (preceded) by stimuli representing the independent variable, in this case Emirati cultural/national icons versus cultural/national icons strongly associated with the United States of America (American). In an APT, relatively faster response times (RT) to positive compared to negative words following in-group compared to out-group primes are viewed as indicative of ingroup preference (Plant et al., 2009). The primes in the present study were 12 images strongly associated with Emirati national identity, including landmark buildings, the national flag, and traditional clothing etc. Twelve corresponding images of American national identity were also selected (e.g. the statue of liberty, the national flag etc.). The APT's target words were selected from a previously well-validated collection known as the Affective Norms for English Words (Bradley & Lang, 1999). Twenty-four nouns were selected; 12 positive and 12 negative (e.g., fun, party, pain, danger). These target words had been used to good effect in a previous APT study (e.g. Robinson, Ode, Moeller, & Goetz, 2007). Positive and negative words were matched for arousal. Similarly, the word length for positive (M = 6.08, SD = 2.23) and negative target words (M = 6.16, SD = 1.89)did not differ significantly (t(22) = .2, p > .05). The APT was only presented in English as testing in both languages would have greatly increased the testing load and lead to fatigue. APT performance was calculated as a D score, in line with the proposal of Wentura and Degner (2010). The D score formula used was: D = (median response time (RT) for negative targets following Emirati images – median RT for positive targets following Emirati images) – (median RT for negative targets following American images - median RT for positive targets following American images). Based on this formula a positive D score above 0 indicates implicit in-

group (Emirati) preference (IIGP), and a negative D score suggests out-group preference.

#### **Procedure**

Upon arrival participants were sat at a workstation in a quiet room. The workstation was equipped with a MacBook Pro laptop computer with a 17-inch anti-glare display; the computer's screen resolution was set to 1680 x 1050 pixels. All instructions and experimental stimuli were presented using a custom-built computer application developed in Visual Basic.Net, version 10 (Microsoft, 2010). Informed consent was collected from each participant prior to study commencement, and the Institutional Review Boards of Zayed University and ECAE (Ref: ZU14045F) approved the research protocol.

Once seated at the workstation, participants first read standardized task instructions and then completed a basic demographics form. Under the direct observation of the experimenter, participants next completed a 5-trial dummy run of the APT; this was an attempt to ensure participants fully understood the task requirements. The APT was engineered as a two-alternative, forced-choice procedure. For the first 1000 milliseconds (ms) of each trial a cross in the center of the screen was presented, followed by a prime image displayed for 300 ms. The target noun (e.g. fun, pain) immediately replaced the prime after 300 ms and remained on screen until participants pressed either the P or Q key for positive or negative targets respectively (see Figure 1). There were a total of 96 trials, with an equal number of Emirati positive/negative and American positive/negative primetarget pairings. Trials for each participant were randomized, with the computer generating a unique sequence for each participant. The affective priming task was

followed by the self-report measures. Participants first completed the language competencies assessment, followed by the WHO-5 and then the MIIS.

#### **Data Analysis Plan**

Pearson's product moment, a bivariate correlational technique, was used to explore the relationships between in-group preferences (IIGP and MIIS) and well-being (WHO-5).

Independent samples T-tests were used to explore differences in wellbeing scores between those who reported Arabic language dominance (N = 281) and those who reported English language dominance (N = 39). T-tests were also used to compare the wellbeing scores of participants that exhibited an implicit in-group preference (N = 141), with those who demonstrated the converse: an implicit outgroup preference (N = 152). Both groups were also compared on all other relevant variables (age, explicit in-group identity etc.). Finally, a multiple linear regression was calculated to further explore the predictors of wellbeing.

#### **Results**

Participants with an error rate of greater than 10 on the implicit assessment task were excluded from analysis. This resulted in a sample size of 293.

#### Correlations

Both language dominance in Arabic and positive implicit group preference was positively correlated with wellbeing (WHO-5; see table 1). In other words, those who reported relatively stronger Arabic language proficiency and those who implicitly demonstrated more positive in-group evaluations also reported higher levels of wellbeing. A similar pattern was observed using explicit measures of group identity

(i.e., the MIIS). Each of the five subscales, and the total score, was positively correlated with wellbeing scores (see table 2) suggesting that individuals with higher levels of explicit in-group positivity had higher wellbeing.

Table 1
Pearson Product Moment Correlations between Wellbeing, Implicit In group Positivity and Language Dominance

Measures	1	2	3
1. Language Dominance	-	.204**	.060
2. Wellbeing		-	.252**
3. Implicit In-group Positivity			-

<sup>\*\*</sup> *p* < .01.

Table 2
Pearson Product Moment Correlations between Wellbeing and MIIS Subscales

1	2	3	4	5	6
.000	.171*	.097*	.181**	.258**	.209**
		.576**	.570**	.770**	.529*
			.661**	.522**	.378**
				.560**	.362**
					.609**
	.000	1 2 .000 .171*		.000 .171* .097* .181** .576** .570**	.000 .171* .097* .181** .258** .576** .570** .770** .661** .522**

<sup>\*\*</sup> *p* < .01

An independent t test was conducted to compare scores on wellbeing in the Arabic dominant versus English dominant groups. There was a significant difference in the scores for the Arabic language dominant group (M=14.05, SD=5.3) and the English language dominant groups (M=10.48, SD=6.0) groups (t = -3.30, p =002, df= 270). A number of participants obtained discrepant results between scores explicit and implicit measures of cultural identity (n=152). In other words, these participants scored positively on the explicit measures of identity but negatively on the implicit measure. An independent samples t-test was conducted to compare scores on wellbeing in the consistent and inconsistent groups. There was a significant difference in scores for the consistent (M=15.32, SD = 5.9) and the inconsistent

(M=12.43, SD=4.9) groups (t = -4.47, p =000, df= 290) indicating that individuals whose identity was inconsistent across implicit and explicit measures had lower levels of wellbeing than those who were consistent across both measures.

#### **Discussion**

The current study set out to examine the nature of the relationship between cultural identity, language dominance and wellbeing using both implicit and explicit methods to assess cultural identity. These relationships were examined in a homogenous group of Emirati women. In summary, the results suggest a number of important findings. In-group positivity and self-reported Arabic language proficiency were independently predictive of higher levels of psychological wellbeing among Emirati college women. Specifically, relatively negative in-group evaluations, and relatively low self-reported Arabic language proficiency was associated with lower levels of lower levels of psychological wellbeing. This relationship between in-group positivity and wellbeing was observed on both explicit and implicit measures of identity. Similarly, comparing participants who demonstrated an in-group preference with those exhibiting an out- group preference supported the correlational analysis, in that participants with an out-group preference had significantly lower scores on wellbeing than those with an in-group preference. The same pattern of results was also found for the small number of participants who reported a higher proficiency in English compared to Arabic.

Perhaps the most interesting finding in the current study concerns those individuals whose identity was inconsistent across measures of identity.

Approximately half of the sample expressed in-group positivity on the MIIS but expressed an out-group positivity on the implicit task used. The former finding, regarding high in-group positivity in this population has been previously reported in

this population. For instance, Thomas et al., (2016) report that, in their study, the use of the MIIS as an explicit measure of in-group identity revealed a highly skewed pattern, reflecting the near universal positivity expressed about Emirati identity by Emiratis. It has been previously suggested that this pattern of discrepant responding – relatively high explicit compared to implicit responses – may be more reflective of a response style driven by social desirability and a need to reduce dissonance in order to assert membership of the threatened in-group (Brewer, 2001). This particular response style may in fact be attenuated if the group membership is perceived as under threat in some way, for example by perceiving oneself as lacking in a defining attribute of the group, such as language. A comparison between these groupsdiscrepant and consistent across measures- indicated lower levels of wellbeing for those individuals who were discrepant across measures than those who were not. This particular pattern was observed after controlling for language proficiency indicating that Arabic language proficiency was not related to wellbeing for this particular group. This suggests a number of things. Firstly, implicit assessment may more accurately discriminate those with out-group positivity than self-report measures, which appear more susceptible to social desirability responding in this population. Secondly, it appears that those individuals who do express implicit outgroup preferences whilst expressing in-group positivity on explicit measures appear to be more prone to lower levels of wellbeing.

At first glance, the above pattern of results indicates an important relationship between cultural identity and wellbeing. Taylor (2002) has previously proposed that individuals without a clear collective or cultural identity may experience difficulties in developing a clear personal identity, which then may translate into poorer psychological functioning. The results obtained here would appear to support this proposition. If discrepant responding is assumed to be a

marker of a less clear, or less stable, cultural identity, it does appear to be associated with lower levels of psychological wellbeing. Further support to this idea can be found in a parallel body of work using the same population and several of the same measures to those reported here. Specifically, Thomas et al., (2016) report that in Emirati women, both out-group positivity and weaker Arabic language proficiency was associated with increased paranoid ideation, which can be readily interpreted as an index of poorer psychological functioning. Therefore it would appear that stability of cultural identity as proposed by Taylor (2002) and Taylor and Usborne (2010) may influence aspects of psychological health.

#### References

Brewer, M. B. (2001). The many faces of social identity: implications for political psychology. Political Psychology, 22(1), 115-125.

Bosqui, T. J., Hoy, K., & Shannon, C. (2014). A systematic review and meta-analysis of the ethnic density effect in psychotic disorders. Social Psychiatry And Psychiatric Epidemiology, 49(4), 519-529. doi:10.1007/s00127-013-0773-0

Donahue, E. M., Robins, R. W., Roberts, B. W., & John, O. P. (1993). The divided self: Concurrent and longitudinal effects of psychological adjustment and social roles on self-concept differentiation. Journal Of Personality And Social Psychology, 64(5), 834-846. doi:10.1037/0022-3514.64.5.834

Leach, C. W., van Zomeren, M., Zebel, S., Vliek, M. W., Pennekamp, S. F., Doosje, B., & ... Spears, R. (2008). Group-level self-definition and self-investment: A hierarchical (multicomponent) model of in-group identification. Journal Of Personality And Social Psychology, 95(1), 144-165. doi:10.1037/0022-3514.95.1.144.

Patel, N. (1992). Psychological disturbance, social support and stressors: A community survey of immigrant Asian women and the indigenous populations. Counselling Psychology Quarterly, 54, 263–276.

Plant, E. A., Devine, P. G., Cox, W. L., Columb, C., Miller, S. L., Goplen, J., & Peruche, B. M. (2009). The Obama effect: Decreasing implicit prejudice and stereotyping. Journal Of Experimental Social Psychology, 45(4), 961-964. doi:10.1016/j.jesp.2009.04.018

Quraishi, S., & Evangeli, M. (2007). An investigation of psychological well-being and cultural identity in British Asian female university students. Mental Health, Religion & Culture, 10(3), 293-300. doi:10.1080/13694670600703429

Ryff, C. D., & Keyes, C. M. (1995). The structure of psychological well-being revisited. Journal Of Personality And Social Psychology, 69(4), 719-727. doi:10.1037/0022-3514.69.4.719

Seligman, M. P. (2000). Positive psychology. In J. E. Gillham, J. E. Gillham (Eds.), The science of optimism and hope: Research essays in honor of Martin E. P. Seligman (pp. 415-429). West Conshohocken, PA, US: Templeton Foundation Press.

Suh, E. M. (2002). Culture, identity consistency, and subjective well-being. Journal Of Personality And Social Psychology, 83(6), 1378-1391. doi:10.1037/0022-3514.83.6.1378.

Tajfel, H. (Ed.). (1978). Differentiation between social groups: Studies in the social psychology of intergroup relations. London: Academic Press.

Tajfel, H. (2010). The social psychology of minorities. In T. Postmes, N. R. Branscombe, T. Postmes, N. R. Branscombe (Eds.), Rediscovering social identity (pp. 143-172). New York, NY, US: Psychology Press.

Taylor, D. M. (2002). The quest for identity: From minority groups to generation Xers. Westport, CT: Praeger

Taylor, D. M., & Usborne, E. (2010). When I know who 'we' are, I can be 'me': The primary role of cultural identity clarity for psychological well-being. Transcultural Psychiatry, 47(1), 93-111. doi:10.1177/1363461510364569

Thomas, J., Bentall, R. P., Hadden, L., & O'Hara, L. (2016). Ethnic identity and paranoid thinking: Implicit out-group preference and language dominance predict paranoia in emirati women. Journal Of Behavior Therapy And Experimental Psychiatry, doi:10.1016/j.jbtep.2016.10.004

Topp, C. W., Østergaard, S. D., Søndergaard, S., & Bech, P. (2015). The WHO-5 Well-Being Index: A systematic review of the literature. Psychotherapy And Psychosomatics, 84(3), 167-176. doi:10.1159/000376585