Cross-Cultural Differences in Coping, Connectedness and Psychological Distress among University Students

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Abstract

Globally the high prevalence of psychological distress among university students is concerning. Two factors associated with low psychological distress among university students are adaptive coping strategies and campus connectedness. The current study examines the cross-cultural differences among university students across three countries, Australia, United States of America and Hong Kong in the utilization of academic coping strategies, levels of campus connectedness and psychological distress. Cross-cultural differences were examined using the theory of cultural orientations; individualism and collectivism. Participants consisted of 217 university students. The results indicated no significant differences between the countries on individualism or collectivism or on the reported use of academic coping strategies and levels of campus connectedness. Lower use of avoidance coping and higher levels of campus connectedness predicted significantly lower psychological distress for university students in all countries. The implications of the results are discussed along with limitations and future directions.

Key words: psychological distress; coping; campus connectedness; cross-cultural differences

1. Introduction

Recent research suggests that university students compared to the general community are at significantly greater risk of mental health concerns (Stallman, 2010). The presence of academic demands, work commitments, financial concerns and adjustments to new living arrangements and social environments are associated with psychological distress among university students globally (Gall, Evans, & Bellerose, 2000; Hunt & Eisenberg, 2010; Wong, Cheung, Chang, & Tang, 2006). Two key factors associated with reduced psychological distress in university students are adaptive coping strategies and social connectedness between peers (Hawkley & Cacioppo, 2009; Park & Adler, 2003; Struthers, Perry, & Menec, 2000). Research suggests the differences in coping strategies and social connectedness between Eastern and Western cultures can be explained by the individual orientation of the university students in the West and collective orientation of university students in the East (Chun, Moos, & Cronkite, 2006; Dykstra, 2009). Although these factors are shown to be important in the university context, no study to date has examined the cross-cultural differences in the use of coping strategies and levels of social connectedness associated with individualism and collectivism. Therefore, this study

conducted such an investigation with university students from Australia, the United States of America (USA) and Hong Kong.

1.1. Individualism and Collectivism

The evidence for cross-cultural differences in the use of coping strategies and levels of social connectedness is grounded in the theory of cultural orientations (Triandis, 1995). Culture, which is defined as communal values, beliefs and ideas resulting from collective past experiences, can significantly influence an individual's view of themselves, behaviour and attitudes. Triandis (1995) identified two primary cultural orientations: individualism and collectivism. Individualism focuses on autonomy and prioritising the self, whereas collectivism focuses on the needs of the group and places those above the needs of the self (Triandis, 1995). Western countries tend to uphold individual orientations, whereas Eastern countries tend to uphold collective orientations (Triandis, 1995). For example, USA university students compared to Asian university students report significantly higher levels of individualism (Chiou, 2010; Oyserman, Coon, & Kemmelmeier, 2002), whilst Hong Kong university students compared to USA university students report significantly higher levels of collectivism (Hwang, Francesco, & Kessler, 2003; Oyserman et al., 2002). Furthermore, compared to Asian university students, Australian university students report significantly higher levels of individualism and lower levels of collectivism (Noordin & Jusoff, 2010; Teoh, Serang, & Lim, 1999). The degree of individualism or collectivism adopted by university students influences how students engage in social interactions and the strategies adopted to cope with stress (Lykes & Kemmelmeier, 2013; Yeh, Arora, & Wu, 2006). Based on this theory of cultural orientations, it is expected that in the present study Australian and USA university students will report similar experiences of coping, connectedness and the relationship to psychological distress. Predicted differences are expected to occur between Hong Kong university students and Australian and USA university students.

1.2. Academic Coping Strategies Across Cultures

Coping is broadly defined as the process used by individuals to manage internal and external demands and stressors (Lazarus & Folkman, 1984). The choice of strategies that university students' choose to deal with stressors is important as coping responses have been found to predict variability in psychological responses (e.g., distress) to stressful situations (Chang, 2001). Sullivan (2010) identified three distinct coping strategies used by university students in response to academic stressors; approach, avoidance and seeking support and refers to these as academic coping strategies. Approach coping refers to active and direct attempts to manage or fix the problem; avoidance coping refers to behavioural or cognitive avoidance, disengagement and distraction from the problem; while seeking support coping which can be either emotional or instrumental by seeking support from family, friends and other students (Sullivan, 2010). The coping strategy of seeking support from others is distinct from the concept of perceived social support, which relates to an individual's perception of available support rather than the active seeking of it (Wethington & Kesller, 1986). Cultural beliefs and values inherently affect the ways in which situational stressors are perceived and the coping strategies an individual uses to address these stressors. The theory of individualism and collectivism postulates that individuals high in collectivism are less inclined to disrupt group harmony and draw attention to themselves in order to seek help or vent emotions (Feng & Burleson, 2006). Therefore, according to the theory of individualism and collectivism depending on the cultural setting, certain coping strategies may be more or less appropriate than others (Chun et al., 2006). For example, individuals from cultures high in individualism tend to use approach strategies because they prefer to exercise control over the external environment. Whereas, individuals from cultures high in collectivism are more likely to use avoidance coping strategies to regulate their emotions and exercise secondary control over the problem by changing their thoughts or perceptions (Chun

et al., 2006; Kuo, 2011). Evidence from research with university students supports this notion with university students of Asian descent compared to Caucasian students are less likely to seek support from others as a means of coping (Chang, 2001; Feng & Burleson, 2006; Taylor et al., 2004). The present study extends previous research by comparing coping strategies used by students living in Australia, USA and Hong Kong, whilst also examining levels of individualism and collectivism.

1.3. Campus Connectedness across Cultures

Social connectedness defined as an individual's experience of interpersonal closeness and belonging within their social network is associated with improved mental health and well-being (Hawkley & Cacioppo, 2010; Lee & Robbins, 1995). Understanding the influence of social connectedness in an academic context in relation to university students' mental well-being is important. Campus connectedness is the specific aspect of social connectedness relating to students' connectedness and feelings of belonging with their peers at university (Lee et al., 2002). Research into the phenomenon of campus connectedness among university students in USA found that high levels of campus connectedness was associated with a lower experience of stress (Lee et al., 2002). As no research to date has examined cross-cultural differences in campus connectedness among university students, the present study addresses this gap by comparing levels of campus connectedness between university students in Australia, USA and Hong Kong.

1.4. Academic Coping Strategies, Campus Connectedness and their Relationship to Psychological Distress

The prevalence of psychological distress in university samples highlights the importance of identifying and understanding adaptive behaviours which prevents and reduces such distress. In line with previous research, the present study measured psychological distress as the cumulative experience of depression, anxiety and stress (Hunt & Eisenberg, 2010; Stallman, 2010; Wong et al., 2006). Coping has been defined as the cognitive and behavioral approaches used to manage stressful life events and is related to mental health outcomes (Chang, 2001). Research has suggested that some coping strategies are more effective than others in reducing psychological distress. For example, Park and Adler (2003) found that higher avoidance coping predicted significantly lower psychological wellbeing, and approach coping predicted significantly higher psychological wellbeing. Research into seeking support as a coping strategy amongst USA university students (N = 64) found that seeking support coping resulted in significantly reduced negative psychological symptoms (Compas, Wagner, Slavin, & Vannatta, 1986).

Coping strategies, which are identified as adaptive amongst cultures high in individualism, are not necessarily adaptive in cultures high in collectivism (Kuo, 2011). Only a few studies have investigated cross-cultural differences in the relationship between coping strategies and mental health. For example, Chang (1996) examined the use of approach coping amongst Caucasian and Asian American university students (N = 674) and found that approach coping was significantly negatively related to pessimism for Caucasian students, and positively related to pessimism for Asian American students. Levels of pessimism were found to significantly predict depressive symptoms for all students, suggesting that approach coping was more adaptive for Caucasian students compared to Asian students. Similarly, in a subsequent study, Chang (2001) measured differences in the relationship between coping strategies and psychological adjustment (N = 94) among university students. The results indicated that Asian American students' use of avoidance coping did not result in significantly increased depression or decreased life satisfaction, whereas, Caucasian students using avoidance coping reported significant increased depression and decreased life satisfaction.

Whilst there are differences in levels of social connectedness between countries, it appears that high levels of social connectedness are adaptive for both individualist and collectivist countries. Roberts and Burleson's (2013) study examined differences in social connectedness between a sample of Caucasian and Hispanic female USA university students (N = 316). Caucasian students reported high in individualism and Hispanic students reported high in collectivism. The results found that lower levels of social connectedness predicted higher levels of depression and anxiety for both Caucasian and Hispanic participants (Roberts & Burleson, 2013). Lee et al. (2002) found that higher levels of campus connectedness predicted lower levels of perceived stress for male and female university students in USA. Lee et al. (2002) assessed the impact of independent versus interdependent self-construals on the relationship between campus connectedness and perceived stress. These self-construals can be seen to reflect individualistic versus collectivistic cultural orientations. The results found that the impact of campus connectedness on perceived stress was stronger for university students with an interdependent self-construal compared to those with an independent self-construal (Lee et al., 2002). Therefore it could be suggested that the effect of campus connectedness on psychological distress would be stronger for Hong Kong compared to Australian and USA university students, due to their expected elevated levels of collectivism.

1.5. Hypotheses

The present study aimed to increase our knowledge address limitations of previous research, which conducted cross-cultural comparisons of students within a single country. No study to date has measured cross-cultural differences in the effects of academic coping strategies and campus connectedness on psychological distress within the individualism and collectivism framework. It was predicted that:

H1. Australian and USA university students compared to Hong Kong university students would report significantly higher individualism and significantly lower collectivism.

H2. Australian and USA university students compared to Hong Kong university students would report significantly higher use of approach and support seeking coping strategies and campus connectedness and significantly lower use of avoidance coping.

H3. Across all universities, higher levels of avoidance coping and lower levels of approach coping, seeking support coping and campus connectedness would predict significantly higher psychological distress.

H4. Country (Hong Kong compared to Australia and USA combined) would moderate the effects of academic coping strategies and campus connectedness on psychological distress. More specifically:

1. Avoidance coping was expected to be more maladaptive (predict a greater increase in psychological distress) for Australian and USA university students compared to Hong Kong university students.
2. Approach and seeking support coping were expected to be more adaptive (predict a greater decrease in psychological distress) for Australian and USA university students compared to Hong Kong university students.
3. Campus connectedness was expected to be more predictive of psychological distress (predict a stronger negative association) for Hong Kong university students compared to Australian and USA university students.

2. Method

2.1. Participants

A total of 217 university students aged 18 to 59 (M = 22.26, SD = .39) participated in the current study, 86 Bond University students, 63 University of Hong Kong students and 68 University of Florida students. Inclusion criteria required participants to be aged 18 years and over and students who identified with a nationality other

than the country where the survey was completed and exclusion criteria of international students at the respective universities. All participants in the current study were fluent in English, therefore the survey was presented to all three universities in English to increase internal validity of the study.

2.2. Measures

2.2.1. Cultural Orientation Scale (COS; Triandis, & Gelfand, 1998). The COS is a 16-item self-report scale designed to measure the constructs of individualism and collectivism. Scores are obtained by summing the items for each subscale with higher scores indicating higher agreement with the cultural orientation.

2.2.2. Academic Coping Strategies Scale (ACSS; Sullivan, 2010*).* The ACSS is a 34-item self-report scale measuring three coping strategy subscales; approach, avoidance and seeking support. A total score for each subscale is calculated by summing each of the items, with higher scores indicating greater use of the coping strategy.

2.2.3. Campus Connectedness Scale (CCS: Lee, Keough, & Sexton, 2002). The CCS is a 14-item self-report scale designed to measure the degree of social connectedness experienced by individuals within a university context. Higher scores indicate higher levels of campus connectedness.

2.2.4. Depression Anxiety Stress Scales (DASS; Lovibond & Lovibond, 1995). The DASS is a 21-item self-report scale designed to measure the negative affective states of depression, anxiety and stress. A total score for the DASS was used in the present study to refer to psychological distress, with higher scores indicating greater distress.

3. Results

The data was cleaned prior to running the main analysis. The statistical assumptions were met and the internal consistency of the scales was adequate for each country's sample and overall. Means and standard deviations for each variable are presented in Table 1. Due to the nature of the international sample, the psychometric properties of the scales used in the present study have not been tested in each respective country. Therefore, reliability analyses were conducted to demonstrate the internal consistency of the scales in each country's sample and overall. Cronbach's alpha for each scale ranged from .70 to .94, well exceeded the recommended value of .40 by Tabacknick and Fidell (2013). This suggests that internal consistency was adequate both within each country and across the sample.

Table 1. Descriptive Statistics for Independent and Dependent Variables Across Countries.

Variable	Australia *(n = 86)*	USA *(n = 68)*	Hong Kong *(n = 63)*
	M (SD)	*M (SD)*	*M (SD)*
Individualism	46.71 (8.75)	47.22 (7.43)	48.60 (8.15)
Collectivism	52.28 (9.25)	50.63 (9.34)	50.67 (7.23)
Approach	57.51 (8.43)	57.84 (8.66)	56.33 (7.50)
Avoidance	27.22 (7.83)	27.68 (6.48)	28.24 (5.91)

Seeking Support	26.74 (5.26)	26.82 (6.69)	27.48 (5.56)
CC	61.80 (13.83)	62.56 (15.57)	58.52 (11.55)

***N* = 217. CC = Campus Connectedness.**

A one-way between-groups multivariate analysis of variance (MANOVA) was conducted to determine whether there were any differences in cultural orientations between the countries. Contrary to the hypothesis, the multivariate analysis revealed no significant main effect of country on individualism and collectivism, $F(4, 426) = 1.322$, $p = .261$, indicating that there were no differences between Australia, USA and Hong Kong students on individualism or collectivism. A second one-way between-groups MANOVA was conducted to determine whether there were any differences in the use of academic coping strategies and reported levels of campus connectedness between the countries. Contrary to the second hypothesis, the multivariate analysis revealed no significant main effect of country on academic coping strategies and campus connectedness, $F(10, 420) = 1.316$, $p = .219$ suggesting that they were equal across the countries.

A moderated hierarchical regression was conducted to determine the predictive weights of each academic coping strategy and campus connectedness on psychological distress. The continuous predictors were centered and entered in the regression in step one. The regression revealed that the academic coping strategies and campus connectedness in combination were significant predictors of psychological distress, $F(4, 212) = 24.211$, $p < .001$ and accounted for approximately 31% of variance. As predicted, higher scores on avoidance coping predicted significantly higher scores on psychological distress and higher scores on campus connectedness predicted significantly lower scores on psychological distress. Contrary to the hypothesis, approach coping and seeking support coping did not have a unique contribution to psychological distress. Country differences were predicted between Hong Kong and the other two countries therefore country was dummy coded as Hong Kong = 1 and Australia and USA = 0. Country was added into the regression in step two, $F(5, 211) = 19.360$, $p < .001$ however the addition of country did not predict psychological distress over and above the effects of academic coping and campus connectedness,

$\Delta F(1, 211) = .284$, $p = .595$. Interaction terms between country and each of the centered predictors; approach coping, avoidance coping, seeking support coping and campus connectedness, were entered into the regression in step three to determine whether the predictors' effects on psychological distress differed between Hong Kong and the other two countries. The overall regression remained significant after the addition of the interaction terms in step three, $F(9, 207) = 10.754$, $p < .001$, however the interactions did not have a unique contribution to psychological distress, $\Delta F(4, 207) = .311$, $p = .870$. Contrary to the hypothesis, the results suggest that the effects of the academic coping strategies and campus connectedness on psychological distress were the same for university students in Hong Kong compared to Australia and USA. Table 2 displays the unstandardised and standardised coefficients from step three of the regression.

Table 2. Hierarchical Regression Coefficients Predicting Psychological Distress.

	R	Adjusted R^2	ΔR^2	B	SEB	β
	.56***	.29	.00			
(Constant)				22.12***	2.66	
Approach				.08	.20	.04
Avoidance				.78***	.21	.28
Seeking Support				.45	.27	.14
Campus Connectedness				-.58***	.10	-.42
Country				-1.83	5.72	-.04

Country x Approach	-.29	.40	-.06
Country x Avoidance	-.19	.47	-.03
Country x Seeking Support	.29	.54	.08
Country x Campus Connectedness	-.17	.24	-.06

N = 217. * p < .05. ** p < .01. *** p < .001.

Due to this unexpected similarities in cultural orientations between the counties, a follow up analysis was conducted to determine whether individualism or collectivism interacted with the effects of the academic coping strategies and campus connectedness on psychological distress across all three counties. This would reveal whether individualist or collectivist orientations impacted on the adaptiveness of academic coping strategies and campus connectedness across the sample. Based on the theory of cultural orientations, it was expected that for individuals high in collectivism compared to low in collectivism, greater use of approach and seeking support coping strategies would result in greater psychological distress, greater use of avoidance coping would result in decreased psychological distress and campus connectedness would have a stronger negative relationship with psychological distress. The opposite was predicted for individuals high in individualism compared to low in individualism. A follow up hierarchical regression was conducted which included the academic coping strategies and campus connectedness as predictors of psychological distress in step one. Individualism and collectivism were centered and entered as continuous predictors into the regression in step two, $F(6, 210) = 16.646$, $p < .001$. Individualism and collectivism in combination did not have a unique contribute to psychological distress $\Delta F(2, 210) = 1.354$, $p = .260$. Interaction terms were created between each of the coping strategies and campus connectedness and both individualism and collectivism. The interactive effects of individualism were assessed in step three of the regression, $F(10, 206) = 10.002$, $p < .001$, and revealed no significant interaction between the predictors and individualism, $\Delta F(4, 06) = .347$, $p = .846$. The interactive effects of collectivism were assessed in step four of the regression, $F(14, 202) = 7.222$, $p < .001$, and revealed no significant interaction for any of the predictors with collectivism, $\Delta F(4, 202) = .509$, $p = .729$. Contrary to expectations, across all countries, neither individualist nor collectivist cultural orientations appeared to affect the relationship between the coping strategies and psychological distress. Table 3 displays the unstandardised and standardised coefficients from step four of the regression.

Table 3. *Hierarchical Regression Coefficients Predicting Psychological Distress.*

	R	Adjusted R^2	ΔR^2	*B*	*SEB*	β
	.58***	.29	.01			
(Constant)				20.33***	2.62	
Approach				-.06	.19	-.02
Avoidance				-.59***	.10	-.43
Seeking Support				.71	.20	.26
Campus Connectedness				.67***	.25	.20
Individualism				.17	.27	.07
Collectivism				.16	.24	.07
Individualism x Approach				-.01	.02	-.05
Individualism x Avoidance				-.02	.02	-.07
Individualism x Seek Support				.01	.03	.03
Individualism x Campus Connectedness				-.00	.01	-.02
Collectivism x Approach				.01	.02	.02
Collectivism x Avoidance				.02	.02	.08

Collectivism x Seek Support	-.03	.03	-.14
Collectivism x Campus Connectedness	.01	.01	.10

***N* = 217. * *p* < .05. ** *p* < .01. *** *p* < .001.**

4. Discussion

The present study aimed to increase the understanding of cross-cultural differences in academic coping strategies and campus connectedness and their effects on psychological distress in university students. Individualism and collectivism were measured to determine whether cross-cultural differences could be attributed to differences in cultural orientations. Hypothesis one predicting that Hong Kong university students compared to Australian and USA university students would report higher levels of collectivism and lower levels of individualism was not supported. This finding conflicts previous research which found USA and Australian university students to be higher in individualism and lower in collectivism compared to Hong Kong university students (Noordin & Jusoff, 2010; Oyserman et al., 2002). A potential explanation for this finding could be due to the measure of individualism and collectivism. The individualism subscale of the COS in the present study has been shown to have a significant positive correlation with measures of competitiveness and several of the items appear competitive in nature, for example 'winning is everything' and 'it is important that I do my job better than others' (Oyserman et al., 2002). Further, the collectivism subscale of the COS appears to reflect values of cooperation, for example, 'I feel good when I cooperate with others' (Triandis & Gelfand, 1998). Research has demonstrated differences between Chinese and USA university students on academic values of competitiveness and cooperation therefore it is plausible that the results reflect cross-cultural differences in academic values rather than cultural orientation (Tang, 1999). Further, Chinese university students are under a lot of pressure to obtain good grades and compete with their peers, therefore this factor could have also primed higher than expected levels of individualism for Hong Kong university students in an academic context.

Hypothesis two predicting that Hong Kong university students compared to Australian and USA university students would report higher utilisation of avoidance coping, lower utilisation of approach and seeking support coping and lower levels of campus connectedness was not supported. The results suggested that Australian, USA and Hong Kong university students are alike in their use of academic coping strategies and experience of campus connectedness. This finding conflicts previous research which found students of Asian background compared to Caucasian university students to report greater use of avoidance coping and lower use of approach and seeking support coping (Taylor et al., 2004) and lower levels of social connectedness (Lykes & Kemmelmeier, 2013).

Although the results in the present study revealed no cross-cultural differences, previous research attributed cross-cultural differences to varying levels of individualism and collectivism (Chun et al., 2006; Kuo, 2011) The present study found that Hong Kong university students compared to Australian and USA university students were alike in their reported levels of individualism and collectivism, therefore this may explain why they were no less likely to use approach and seeking support coping strategies and no more likely to use avoidance coping or report lower levels of campus connectedness.

Hypothesis three predicting that lower use of avoidance coping, higher use of approach and seeking support coping and higher levels of campus connectedness would predict decreased psychological distress across the three universities was partially supported. Avoidance coping and campus connectedness both predicted psychological distress in the expected direction, whereas approach coping and seeking support did not. The significant results reflect findings from previous research, which found that higher use of avoidance coping and lower levels of social connectedness resulted in poorer mental health outcomes (Park & Adler, 2003; Roberts & Burleson, 2013). The non-significant predictive weights of the use of approach coping and seeking support

coping on psychological distress for any of the universities conflict previous research which found the use of both of these coping strategies to result in decreased psychological distress (Kim, Sherman, & Taylor, 2008; Park & Adler, 2003). This is an important finding to note since approach coping and seeking support from others are generally promoted as adaptive ways to cope. Although non-significant, the results of the present study revealed a trend in the opposite direction suggesting that higher support seeking led to higher psychological distress. A potential explanation for this finding could be that the direction of causality between the two variables is opposite to what was proposed, with individuals who experience more psychological distress being more likely to ask others for help.

Hypothesis four predicting that country (Hong Kong compared to Australia and USA) would interact with academic coping strategies and campus connectedness to predict psychological distress was not supported. The results suggested that the effects of academic coping strategies and campus connectedness on psychological distress were equivalent for Australian and USA compared to Hong Kong university students. This finding conflicts with previous research, which found cross-cultural differences in the effectiveness of coping strategies on psychological distress (Chang, 2003). Contrary to expectations, avoidance coping and low campus connectedness was equally detrimental for Hong Kong compared to Australian and USA university students. The equivalent levels of individualism and collectivism for university students in all three countries may explain why the effects of academic coping strategies and campus connectedness on psychological distress were alike. However individual agreement with individualism or collectivism also did not alter the relationship between the academic coping strategies, campus connectedness and psychological distress. A trend of cross-cultural similarities is apparent in all the analyses suggesting that the present study revealed consistent results.

4.1. Limitations and Future Research

When interpreting the results it is important to note the limitations. Although presenting the survey in English for all three countries increased the internal validity of the study, Hong Kong participants were completing it in their second language whereas Australian and USA participants completed it in their first. Although students at the University of Hong Kong demonstrate a high proficiency of English, their birth language is Cantonese. It is possible that presenting the survey in English acted as a prime for a Westernised cultural identity (Yip, 2005).

Future research should assess whether individual and collective orientations are still relevant when classifying these particular Eastern and Western populations and whether agreement with either cultural orientation predicts differences in the use of academic coping strategies and levels of campus connectedness. The sample consisted of predominantly female private university students therefore reducing the generalisability of the findings. Future studies should aim to clarify the relationship between approach coping, seeking support coping and psychological distress, which are generally viewed as adaptive coping strategies.

4.2. Conclusions

This study revealed two important factors, which contributed significantly to psychological distress for university students in Australia, USA and Hong Kong. The results suggest that interventions which aim to decrease avoidance coping and increase campus connectedness would promote positive mental health outcomes for university students across all three countries. University campuses in Australia, USA and Hong Kong should emphasize a community environment to ensure that students do not feel isolated from their peers. Further, the study did not provide evidence that approach coping and seeking support coping were associated with reduced psychological distress for university students in Hong Kong or Australia and USA. Therefore universities should be cautious in their promotion of these coping strategies until further research is conducted. The unexpected similarities in cultural orientations between the countries are an important finding. Eastern

countries, especially ones such as Hong Kong where English is commonly spoken, are becoming increasingly Westernised, therefore it is important not to categorise cultures as discretely individualist or collectivist. The present study provides preliminary evidence for an increasingly universal academic experience and sheds light on an increasingly relevant topic of cross-cultural variation, setting the scene for future research into factors that influence mental health for university students across the globe.

5. References

[1] Anderson, C. A. (1999). Attributional style, depression, and loneliness: A cross-cultural comparison of American and Chinese students. *Personality and Social Psychology Bulletin*, *25*,482-499. doi: 10.1177/0146167299025004007

[2] Chang, E. C. (1996). Cultural differences in optimism, pessimism, and coping: Predictors of subsequent adjustment in Asian American and Caucasian American college students. *Journal of Counseling Psychology*, *43*(1), 113-123. doi: 10.1037/0022-0167.43.1.113

[3] Chang, E. C. (2001). A look at the coping strategies and styles of Asian Americans: Similar or different? In C. R. Synder (Ed.), Coping with stress: Effective people and processes (pp. 222-239). New York: Oxford University Press.

[4] Chiou, J. (2010). Horizontal and vertical individualism and collectivism among students in the United States, Taiwan, and Argentina. *The Journal of Social Psychology*, *141*, 667-678. doi: 10.1080/00224540109600580

[5] Chun, C., Moos, R. H., Cronkite, R. C. (2006). Culture: A fundamental context for the stress and coping paradigm. In P. T. P. Wong & L. C. J. Wong (Eds), *Handbook of Multicultural Perspectives on Stress and Coping.* New York, NY: Springer US, (pp 29-53). doi: 10.1007/0-387-26238-5_2

[6] Cozma, I. (2011). How are individualism and collectivism measured? *Romanian Journal of Applied Psychology*, *13*, 11-17.

[7] Crawford, J. R., & Henry, J. D. (2003). The Depression Anxiety Stress Scales (DASS): Normative data and latent structure in a large non-clinical sample. *British Journal of Clinical Psychology*, *42*, 111–121. doi: 10.1348/014466503321903544

[8] Dykstra, P. A. (2009). Older adult loneliness: myths and realities. *European Journal of Ageing*, *6*, 91-100. doi: 10.1007/s10433-009-0110-3

[9] Feng, B. & Burleson, B. R. (2006). Exploring the support seeking process across cultures: Toward an integrated analysis of similarities and differences. In M. P. Orbe, B. J. Allen, & L. A. Flores (Eds.), *The same and different: Acknowledging the diversity within and between cultural groups* (pp. 243-266). Washington, DC: National Communication Association.

[10] Gall, T. L., Evans, D. R., & Bellerose, S. (2000). Transition to first-year university: Patterns of change in adjustment across life domains and time. *Journal of Social and Clinical Psychology*, *19*, 544-567. doi: 10.1521/jscp.2000.19.4.544

[11] Hunt, J., & Eisenberg, D. (2010). Mental health problems and help-seeking behavior among college students. *Journal of Adolescent Health*, *46*, 3-10. doi: 10.1016/j.jadohealth.2009.08.008

[12] Hwang, A., Francesco, A. M., & Kessler, E. (2003). The relationship between individualism-collectivism, face, and feedback and learning processes in Hong Kong, Singapore, and the United States. *Journal of Cross-Cultural Psychology*, *34*, 72-91. doi: 10.1177/0022022102239156

[13] Kim, H. S., Sherman, D. K., & Taylor, S. E. (2008). Culture and social support, *American Psychologist, 63*, 518-526. doi: 10.1037/0003-066X

[14] Kuo, B. C. (2011). Culture's Consequences on Coping Theories, Evidences, and Dimensionalities. *Journal of Cross-Cultural Psychology*, *42*, 1084-1100.

[15] Lazarus, R. S., & Folkman, S. (1984). *Stress. Appraisal, and Coping*. Ney York, NY: Springer Publication Company.

[16] Lee, R. M., & Robbins, S. B. (1995). Measuring belongingness: The Social Connectedness and the Social Assurance scales. *Journal of Counseling Psychology*, *42*, 232. doi: 10.1037/0022-0167.42.2.232

[17] Lee, R. M., Keough, K. A., & Sexton, J. D. (2002). Social connectedness, social appraisal, and perceived stress in college women and men. *Journal of Counseling & Development*, *80*, 355-361. doi:10.1002/j.1556-6678.2002.tb00200.x

[18] Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour research and therapy*, *33*, 335-343. doi: 10.1016/0005-7967(94)00075-U

[19] Lykes, V. A., & Kemmelmeier, M. (2013). What predicts loneliness? Cultural difference between individualistic and collectivistic societies in Europe. *Journal of Cross-Cultural Psychology*, *45*, 468-490. doi: 10.1177/0022022113509881

[20] Oyserman, D., Coon, H. M., Kemmelmeier, M. (2002). Rethinking individualism and collectivism: Evaluation of theoretical assumptions in meta-analyses. *Psychological Bulletin, 128*, 3-72. doi: 10.1037/0033-2909.128.1.3

[21] Park, C. L., & Adler, N. E. (2003). Coping styles as a predictor of health and well-being across the first year of medical school. *Health Psychology*, *22*, 627-631. doi: 10.1037/0278-6133.22.6.627

[22] Roberts, N. A., & Burleson, M. H. (2013). Processes linking cultural ingroup bonds and mental health: the roles of social connection and emotion regulation. *Frontiers in psychology*, *4*, 52-70. doi: 10.3389%2Ffpsyg.2013.00052

[23] Stallman, H. M. (2010). Psychological distress in university students: A comparison with general population data. *Australian Psychologist*, *45*, 249-257. doi: 10.1080/00050067.2010.482109

[24] Struthers, C. W., Perry, R. P., & Menec, V. H. (2000). An examination of the relationship among academic stress, coping, motivation, and performance in college. *Research in Higher Education, 41*, 581-592. doi: 10.1023/A:1007094931292

[25] Tang, S. (1999). Cooperation or competition: A comparison of US and Chinese college students. *The Journal of psychology*, *133*, 413-423. doi: 10.1080/00223989909599752

[26] Taylor, S. E., Sherman, D. K., Kim, H. S., Jarcho, J., Takagi, K., & Dunagan, M. S. (2004). Culture and social support: Who seeks it and why? *Journal of Personality and Social Psychology*, *87*, 354-362. doi: 10.1037/0022-3514.87.3.354

[27] Teoh, H. Y., Serang, D. P., & Lim, C. C. (1999). Individualism-collectivism cultural differences affecting perceptions of unethical practices: Some evidence from Australian and Indonesian accounting students. *Teaching Business Ethics*, *3*, 137- 153. doi: 10.1023/A:1009832018849

[28] Triandis, H. C., & Gelfand, M. J. (1998). Converging measurement of horizontal and vertical individualism and collectivism. *Journal of Personality and Social Psychology*, *74*, 118-128. doi: 10.1037/0022-3514.74.1.118

[29] Triandis, H. C. (1995). Individualism and Collectivism. Boulder, CO: Westview Press.

[30] Wethington, E., & Kessler, R. C. (1986). Perceived support, received support, and adjustment to stressful life events. *Journal of Health and Social behavior*, 78-89. doi:10.2307/2136504

[31] Wong, J. G., Cheung, E., Chan, K. K., Ma, K. K., & Tang, S. W. (2006). Web-based survey of depression, anxiety and stress in first-year tertiary education students in Hong Kong. *Australian and New Zealand Journal of Psychiatry*, *40*, 777-782. doi: 10.1111/j.1440-1614.2006.01883.x

[32] Yeh, C. J., Arora, A. K., & Wu, K. A. (2006). A new theoretical model of collectivistic coping. In *Handbook of multicultural perspectives on stress and coping* (pp. 55-72). Springer: USA. doi: 10.1007/0-387-26238-5_3

[33] Yip, T. (2005). Sources of situational variation in ethnic identity and psychological well-being: A palm pilot study of Chinese American students. *Personality and Social Psychology Bulletin*, *31*, 1603-1616. doi: 10.1177/0146167205277094