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Do Chinese International Students’ Personalities Change During Cross-National Transitions?

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ABSTRACT

Perfectionism is a multidimensional personality construct salient for international students; they are known to be likely high achievers in their home country and face several acculturative challenges after crossing national borders. This study examined whether perfectionist types changed during cross-national transitions in a sample of 227 Chinese international students studying in the U.S. Individuals were classified into different types of perfectionists—adaptive, maladaptive, and non-perfectionists. Results indicated that 40% of the participants’ perfectionist types changed during their cross-national transition. After studying in the United States, more non-perfectionists became perfectionists than perfectionists that turned into non-perfectionist. Acculturative stress predicted the direction of shift; non-perfectionists who perceived higher levels of acculturative stress were more likely to change into maladaptive perfectionists than adaptive perfectionists.

Keywords: perfectionism, international students, acculturative stress, self-esteem, cross-national, psychological symptoms, longitudinal

Perfectionism has been a personality trait receiving increased attention in the psychology literature over the past decade. While there has been particular interest in the detrimental aspects of perfectionism, regarding its implications on both physical and mental health (e.g., Antony, Purdon, Huta, & Swinson, 1998), there have also emerged findings to suggest its adaptive features (Bieling, Israeli, & Antony, 2004). In a systematic review of the literature on perfectionism, Stoeber and Otto (2006) found evidence supporting both perfectionism's positive and negative nature. Thus far, there is an ample body of research that has established perfectionism as a complex construct, such that it can be either adaptive and/or maladaptive to an individual's well-being (Cox, Enns, & Clara, 2002).

There have been two main approaches used when studying perfectionism—a variable-centered approach and a person-centered approach; the former describes associations between variables, and the latter identifies groups of people who share similar characteristics. Traditional routes to exploring perfectionism have primarily concentrated on the multidimensionality of perfectionism and how these dimensions were related to psychopathology and negative behavioral consequences. While important findings have significantly contributed to the perfectionism literature using this multidimensional and variable-centered approach, a different perspective that emphasizes classifying individuals into different categories of perfectionist types (based on their combinations of scores on perfectionism dimensions) has been used more recently (Rice & Ashby, 2007). In other words, in addition to using the variable-centered approach (e.g., correlations, regression) that examines associations between dimensions of perfectionism and psychological variables, there has been an increasing tendency towards adapting this person-centered approach (e.g., cluster analysis) to study various types of perfectionists. For example, some studies not only have investigated the link between perfectionism and depressive mood, but also compared different types of perfectionists on their levels of depressive mood (e.g. Allen & Wang, 2014; Rice & Slaney, 2002).

Utilizing a person-centered approach allows for the examination of perfectionist types reminiscent of Hamachek's (1978) conceptualization of normal and neurotic perfectionists. To illustrate, normal or adaptive perfectionists have the tendency to set high standards that often motivates individuals to excel in their performances (Bieling, Israeli, Smith, & Antony, 2003). Whereas, for neurotic or maladaptive perfectionists, they not only strive for perfection, but also adhere rigidly to their standards with a tendency to engage in excessive critical self-evaluations (Shafran & Mansell, 2001). With the Almost Perfect Scale-Revised (APS-R; Slaney, Mobley, Trippi, Ashby, & Johnson, 1996), most studies have used cluster analysis to identify three groups regarding perfectionism type: adaptive,

maladaptive, and non-perfectionists (Rice & Slaney, 2002; Wang, Yuen, & Slaney, 2009), with the exception of a few studies that found four types (Wang, 2012; Wang, Slaney, & Rice, 2007). Overall, adaptive perfectionists reported higher self-esteem, more positive affect, and higher achievement; whereas, maladaptive perfectionists reported higher levels of depression and anxiety (Rice & Slaney, 2002).

Although there is literature on theoretical speculation for environmental and temperamental factors that may contribute to the development of perfectionistic concepts (e.g., Kobori, Yamagata, & Kijima, 2005), and evidence that various types of perfectionists exist (Rice & Ashby, 2007; Rice & Slaney, 2002), there is relatively little information that focuses on the development and stability of these perfectionist types (i.e., adaptive/maladaptive). Specifically, questions such as, “how do people develop into or become a certain type of perfectionist and how stable are these types?” remain unanswered. Although we were unable to locate any studies that investigated the transition between perfectionist types, a few studies have examined changes in perfectionism across different points of time (Nilsson, Sundbom, & Hägglöf, 2008; O’Connor, Dixon, & Rasmussen, 2009; Rice & Aldea, 2006). Rice and Aldea (2006) examined the stability of perfectionism levels in college students over three time periods, each separated by 4-5 weeks; they found perfectionism levels to be relatively stable compared to depression scores. O’Connor et al. (2009) found perfectionism to be largely temporally stable over a 6-month period among adolescents in Scotland. Nilsson et al. (2008) examined eating disorder patients and found that after 8 years and then 16 years from initial eating disorder diagnoses, levels of perfectionism remained stable despite decreased eating disorder and psychiatric symptoms. Another study examined the natural development of two maladaptive forms of maladaptive perfectionism (socially-prescribed and self-critical) from 6th to 12th grade over seven time points, which yielded four distinct classes of developmental trajectories: high, low, increasing, and decreasing (Herman, Wang, Trotter, Reinke, & Ialongo, 2013), with approximately 20-30% of participants classified in the increasing and decreasing trajectories. In sum, the results of these studies support the general notion that perfectionism levels appear to be relatively stable over time with some instances of change.

Despite having findings of the relatively stable nature of perfectionism levels, there is also some available evidence to suggest that perfectionism may also be malleable in response to interventions (Arpin-Cribbie et al., 2008) and in treatment settings (Hawley, Ho, Zuroff, & Blatt, 2006). Several studies have shown that perfectionism levels decreased in response to treatment modalities, such as web-based Cognitive Behavioral Therapy interventions (Radhu, Daskalakis, Arpin-Cribbie, Irvine, & Ritvo, 2012), Coherence Therapy (Rice, Neimeyer, & Taylor, 2011), and other

psychotherapeutic treatments (Arpin-Cribbie et al., 2008; Hawley et al., 2006). In addition to the change of perfectionism levels, other logical questions to investigate are whether certain people are more prone to change from one perfectionist type to another and what factors are related to the change. In light of the importance of distinguishing adaptive and maladaptive perfectionists (Rice & Slaney, 2002; Stoeber & Otto, 2006), it seems critical to investigate whether perfectionist types are actually malleable, and if so, how. Overall, with mixed findings and an uncertain nature of how an individual can appropriate different types of perfectionism, it is still unclear on what conclusions can be made in regards to how perfectionism types vary as a function of the situations they face.

While there is evidence of the malleability of perfectionism, the specificity of how perfectionism changes due to situational factors, such as life transitions, is unknown. Particularly, one population that must face cross-national transitions are international students. Perfectionism is a highly relevant construct to international students, who are achievement-focused and experience challenges related to transitioning into a different country. In general terms, international students coming from Asian social contexts are more likely to have an upbringing centered on a culture that emphasizes collectivism and respect for family/community. Consequently, it is common for these students to arrive in the new country with an adherence to high standards of achievement and substantial pressure to excel due to expectations to bring honor to the family through success (Mori, 2000; Poyrazli, Arbona, Nora, McPherson, & Pisecco, 2002; Roysircar, 2004). With this mindset, such cultural expectations may increase the international students' perfectionistic tendencies regarding their academic achievement and college success, which in turn may also increase the levels of stress they experience (Nilsson, Butler, Shouse, & Joshi, 2008).

For international students, especially those who strive to succeed academically and socially, adjusting to college within this new setting of a different culture, language, and educational system can be challenging (Mori, 2000; Poyrazli et al., 2002; Roysircar, 2004). The transition, which includes acculturation to the United States, can be difficult; that is, adjusting to living in a different environment entails learning new rules for assimilating to what can be considered "normal" in the new country, and can thus add an extra burden on top of academic responsibilities. International students often face barriers during the initial transition connected to their academic life, social life, and psychological experiences (e.g., getting oriented to a new environment, transportation and communication, accommodation, and social interaction; Poyrazli & Grahame, 2007). As a result, these challenges due to life changes often lead to a wide array of acculturative stressors and psychological symptoms (see Zhang & Goodson, 2011).

Despite such concerns, there have been few longitudinal studies that document these life changes over time and their effects on international students' adjustment during their cross-national transitions. For example, Hechanova-Alampay, Beehr, Christiansen, and Van Horn (2002) found that international students' stress peaked after the first three months of entry when exams took place. The association between international students' acculturative adjustment and their level of general self-efficacy was significantly stronger during their initial months in the United States when compared to six months after coming to the host country. Other research suggests that various stressors, as well as individual differences, might differentially impact international students' transitions and adjustment at different times (Wang et al., 2012). Because perfectionism is associated with one's level of self-efficacy (LoCicero & Ashby, 2000) and anxiety (Rice & Slaney, 2002), the change of cultural environment could lead to the loss of self-efficacy and higher anxiety, and potentially impact one's perfectionist type and subsequently their psychological well-being.

The main purpose of this study is to examine the stability of perfectionist types during life transitions. Through examination of perfectionism among international students during their cross-national transition, we hope to make sense of these findings and apply them to help accommodate students' adjustment process. Specifically, the goals of our study are to address the following questions: (a) Do the perfectionist types of international students change during the course of cross-national transitions?; (b) How prevalent are perfectionist type changes in cross-national transitions?; (c) How are perfectionist types related to one's psychological well-being?; and (d) What factors are associated with the transitions of perfectionist types?

RESEARCH METHOD

Participants

The sample included 227 Chinese international students (133 women, 94 men), a subset of a larger 4-wave longitudinal study (Wang et al., 2012) that completed both Time 1 (pre-arrival) and Time 2 (first semester) surveys, which were two to three months apart. The majority of participants were pursuing graduate degrees (85%) and studying in a variety of fields (e.g., engineering, science, business, education) at various states across the United States. Participants' ages ranged from 18 to 34 with a mean of 24.4 years old. The majority of participants (80%) had no prior experience studying in the United States, and 52% had never been in the United States. Forty-three percent of participants indicated being from Mainland China and 57% from Taiwan. In this study, we used the term Chinese international students referring to the shared Chinese cultural heritage among these students from Mainland China and Taiwan.

Measures

Almost Perfect Scale-Revised (APS-R; Slaney et al., 1996). The APS-R is a 23-item scale assessing levels of perfectionism through three subscales: Standards, Order, and Discrepancy. The Standards and Discrepancy subscales are the two most essential characteristics of perfectionism and used in this study. The Standards subscale, a positive aspect of perfectionism, measures one's possession of high standards for achievement and performance. The Discrepancy subscale captures the negative aspects of perfectionism and refers to a tendency to feel that one is not meeting his/her standards. Items are rated on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Cronbach alphas ranged from .76 to .78 for Standards scores, and .85 to .86 for Discrepancy scores for Chinese and Taiwanese student samples (Wang, 2012; Yang, Liang, Zhang, & Wu, 2007). In this study, Cronbach alphas ranged from .76 to .81 for Standards scores, and .91 to .93 for Discrepancy scores.

Acculturative Stress Scale for International Students (ASSIS; Sandhu & Asrabadi, 1994). The ASSIS is a 36-item scale measuring the perceived level of acculturative stress that international students experience. The scale consists of items assessing perceived discrimination, homesickness, perceived hate, fear, stress due to change/culture shock, guilt, and other nonspecific concerns. Items are rated on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The composite score was used in this study and higher scores represent greater acculturative stress. Cronbach alpha for the total score was .94 (Wei, Liao, Heppner, Chao, & Ku, 2012) for a Chinese international student sample. The ASSIS was positively associated with depression and negatively associated with adjustment among international students (Wei et al., 2012). In this study, Cronbach alpha was .96 for ASSIS scores.

Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965). The RSES assesses one's positive evaluations of the self. It consists of ten items rated on a Likert scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*) with higher score representing higher self-esteem. The RSES has been translated into various languages and widely used among international populations. A study found the factor structure largely invariant across 53 nations (Schmitt & Allik, 2005). Cronbach alphas were .78 for Asian international students (Wei, Ku, Russell, Mallinckrodt, & Liao, 2008). The negative association between RSES and depressive symptoms provides support for the construct validity of RSES among Asian international students (Wei et al., 2008). In this study, Cronbach alphas ranged from .88 to .89 for RSES scores.

Brief Symptom Inventory-18 (BSI-18; Derogatis, 2000). The BSI-18 measures psychological distress using a 5-point Likert scale ranging from 0 (*not at all*) to 4 (*always*). The BSI-18 consists of 18 items measuring depression, anxiety, and somatization. The composite score was used in this study with higher scores representing greater levels of psychological distress. The coefficient alpha of the BSI-18 scores in a sample of Chinese international students was .88 (Wang & Mallinckrodt, 2006). The validity of the BSI-18 has been demonstrated through its strong correlations with other measures of psychological distress and adjustment difficulties with Chinese international students (Wang & Mallinckrodt, 2006). In this study, Cronbach alphas ranged from .93 to .95 for BSI-18 scores.

Procedure

Following IRB approval for recruitment procedures, participants were recruited through various channels (e.g., student associations, international student services offices, study abroad agencies, and word of mouth). Participants completed the online survey, which was presented in Chinese (simplified version for Mainland China students, and traditional version for Taiwanese students). Time-1 data were collected before students started their studies in the United States. Time-2 was about a month into their first semester. Participation incentives included brief study abroad informational guides developed by the researchers of this study as well as raffles for \$25 and \$50 gift cards.

RESULTS

Descriptive Analyses

The intercorrelations among study variables as well as their means, standard deviations, and Cronbach alphas are presented in Table 1. We compared the means of perfectionism dimensions, psychological distress, and self-esteem between Time-1 and Time-2. Results indicated that participants' Standards ($t = 2.71, p < .01$) and Discrepancy ($t = 5.85, p < .001$) scores increased; in addition, their psychological distress increased ($t = 5.08, p < .001$) and self-esteem decreased ($t = 3.91, p < .001$) over this time period.

Perfectionist Groups

Cluster analyses were conducted using the APS-R Standards and Discrepancy subscale scores, which are the two core dimensions of perfection, to identify perfectionists and non-perfectionists with Time-1 and Time-2 data, separately. Following the approach of some past studies (e.g., Gilman & Ashby, 2003; Wang, Slaney, & Rice, 2007), the Order subscale

which has been viewed as a less central aspect of perfectionism, was not included. A two-step procedure involving both hierarchical and nonhierarchical analyses was performed. We ran analyses with both 3 and 4-cluster solutions because most prior studies have identified three types of perfectionists but a few studies found four types. The 3-cluster solution across both time points yielded groups that mirrored the adaptive, maladaptive, and non-perfectionists in Hamachek’s (1978) theory and past empirical studies (e.g., Rice & Ashby, 2007; Rice & Slaney, 2002); however, the 4-cluster solutions were inconsistent across the two time points and less interpretable. Thus, for this study, the 3-cluster solution was selected; Standards and Discrepancy scores were used to determine the type of perfectionist for each cluster group (see Figure 1).

Table 1: Intercorrelations Among Study Variables

	1	2	3	4	5	6	7	8	M	SD	alpha
1. Standards (T1)									37.08	5.32	.76
2. Discrepancy (T1)	.18**								46.32	12.97	.91
3. Psych Symptoms (T1)	-.02	.34***							29.82	11.39	.93
4. Self-Esteem (T1)	.20**	-.61***	-.37***						31.29	4.93	.88
5. Standards (T2)	.63***	.11	-.04	.14*					37.93	5.70	.81
6. Discrepancy (T2)	.15*	.72***	.28***	-.45***	.24***				50.25	13.89	.93
7. Psych Symptoms (T2)	-.07	.23***	.56***	-.32***	.00	.35***			33.85	13.74	.95
8. Self-Esteem (T2)	.21**	-.48***	-.34***	.73***	.16*	-.54***	-.41***		30.34	4.99	.89
9. Acculturative Stress (T2)	-.02	.21**	.34***	-.30**	.04	.35***	.55***	-.44***	84.85	22.73	.96

Note. N = 227. * $p < .05$, ** $p < .01$, *** $p < .001$, two-tailed.

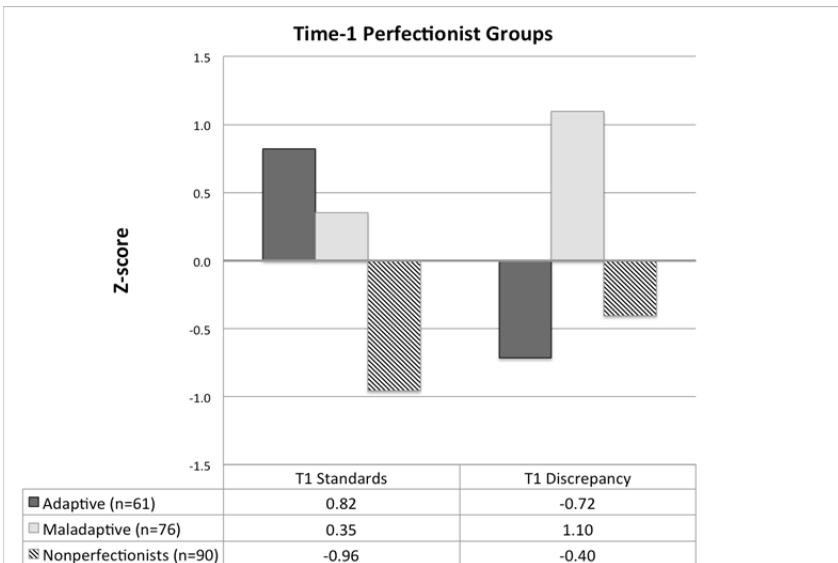
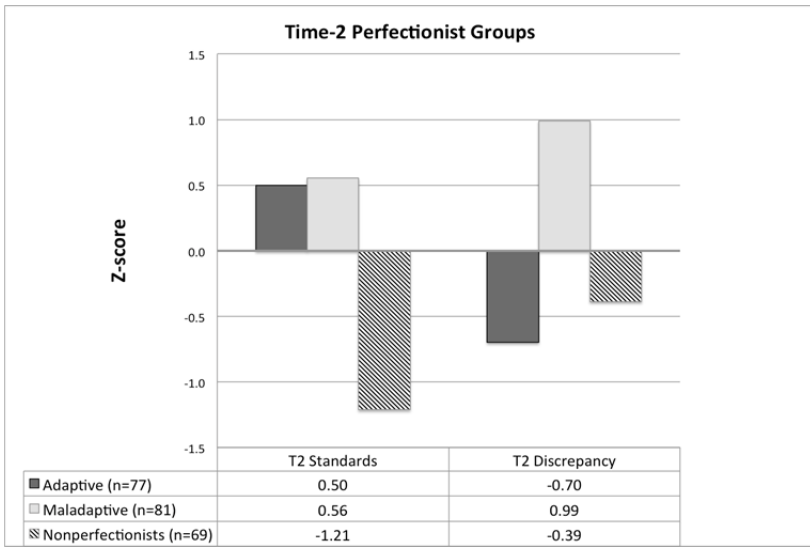


Figure 1: Perfectionist Groups for Time-1 and Time-2



Each group represented a different combination of perfectionism dimensions (Figure 1). The two perfectionist groups had higher Standards scores than non-perfectionists. Adaptive perfectionists had a combination of high Standards and low Discrepancy scores, whereas maladaptive perfectionists had both high Standards and high Discrepancy scores. Non-perfectionists had low scores on both Standards and Discrepancy. We conducted ANOVA with Tukey HSD post hoc tests to compare these three groups at Time-1 on psychological distress and self-esteem (see Table 2). Maladaptive perfectionists ($M = 35.54$) reported significantly higher BSI scores [$F(2,226) = 18.85, p < .001$] than adaptive perfectionists ($M = 24.75$) and non-perfectionists ($M = 28.43$). All three groups significantly differed from each other on Self-esteem scores [$F(2,226) = 43.09, p < .001$], with adaptive perfectionists ($M = 35.06$) having the highest score, followed by non-perfectionists ($M = 31.22$), and then maladaptive perfectionists ($M = 28.34$) at Time-1. The characteristics of the three groups at Time-2 mirrored the ones at Time-1, with adaptive perfectionists having higher self-esteem [$F(2,226) = 10.64, p < .001$] and lower psychological distress [$F(2,226) = 31.90, p < .001$] than maladaptive perfectionists; and non-perfectionists' scores were in between these two groups. These group comparisons supported the adaptive/maladaptive natures of the perfectionist types. Interestingly, the prevalence of the groups were different across these two time points. In contrast to Time-1, Time-2 had more perfectionists (adaptive and maladaptive) and fewer non-perfectionists. Thus, the next step was to further examine the shifts of perfectionist types.

Table 2: Means and Standard Deviations by Perfectionists Types at Time-1 and Time-2

Time-1	Adaptive Perfectionists n = 61		Maladaptive Perfectionists n = 76		Non-Perfectionists n = 90			η^2
	M	SD	M	SD	M	SD	F	
Standards	41.76 ^a	3.02	39.22 ^b	3.56	32.09 ^c	3.33	177.03	.61
Discrepancy	37.01 ^a	8.46	60.11 ^b	7.71	40.99 ^c	8.84	158.94	.59
Psych. Symptoms	24.75 ^a	7.35	35.54 ^b	13.12	28.43 ^a	10.03	18.85	.14
Self-Esteem	35.06 ^a	3.47	28.34 ^b	4.62	31.22 ^c	4.30	43.09	.28

Time-2	Adaptive Perfectionists n = 77		Maladaptive Perfectionists n = 81		Non-Perfectionists n = 69			η^2
	M	SD	M	SD	M	SD	F	
Standards	40.78 ^a	3.23	41.10 ^a	3.46	31.03 ^b	3.60	201.00	.64
Discrepancy	40.56 ^a	8.92	64.02 ^b	8.34	44.90 ^c	10.46	144.51	.56
Psych. Symptoms	28.50 ^a	10.62	38.04 ^b	14.96	34.91 ^b	13.54	10.64	.09
Self-Esteem	33.33 ^a	4.12	27.72 ^b	5.15	30.10 ^c	3.78	31.90	.22
Acculturative Stress	76.06 ^a	21.26	93.39 ^b	22.34	84.62 ^c	21.23	12.65	.10

Note. Values with different superscripts indicate significant within-row differences between the clusters using Tukey HSD post hoc comparisons, significant at $p < .05$.

The transition matrices for Time-1 to Time-2 are presented in Table 3. Each off-diagonal unit in this table presents a particular trend of transition (*movers*). The values along the diagonal of the matrices indicate the stability of a specific perfectionism group (*stayers*). Several transitional patterns were noticeable. First, 40% of the participants shifted group membership over the course of this cross-national transition in the United States. The two perfectionist groups were more stable with 69% of participants remaining in the same perfectionist group from Time-1 to Time-2. In contrast, over half (52%) of the non-perfectionists at Time-1 moved into one of the perfectionist groups at Time-2.

Table 3: Perfectionist Type Transitions from Time-1 to Time-2

Time-1 Groups	Time-2 Groups			Total
	Adaptive Perfectionists	Maladaptive Perfectionists	Non-perfectionists	
	<i>Group membership (% groups shifting/remaining)</i>			
Adaptive Perfectionists	41 (67%)	11 (18%)	9 (15%)	61 (27%)
Maladaptive Perfectionists	6 (8%)	53 (70%)	17 (22%)	76 (33%)
Non-perfectionists	30 (33%)	17 (19%)	43 (48%)	90 (40%)
Total	77 (34%)	81 (36%)	69 (30%)	227

Note. Bold font indicates individuals that remain the same type from Time-1 to Time-2.

To better understand the nature and outcome of individuals transitioning across perfectionism groups, we examined the shifts between specific perfectionist types. We focused only on the transitions of Time-1 non-perfectionists into one of the two perfectionist groups at Time-2 due to the small cell sizes of the other types of transitions. Multinomial logistic regression was conducted to determine if acculturative stress at Time-2 distinguished whether the non-perfectionists transitioned into adaptive or maladaptive perfectionists. The results indicated that among the non-

perfectionists at Time-1, those who transitioned into maladaptive perfectionists (*Acculturative Stress Mean* = 95.08) at Time-2 reported significantly higher scores on Acculturative Stress (*Wald* = 10.09, *p* = .001) than those who transitioned into adaptive perfectionists (*Acculturative Stress Mean* = 71.70). Those who remained as non-perfectionists (*Acculturative Stress Mean* = 83.37) at Time-2 reported Acculturative Stress scores that were higher than those who shifted into adaptive perfectionists and lower than those who shifted into maladaptive perfectionists. In short, non-perfectionists who experience higher acculturative stress during cross-cultural transitions were more likely to turn into maladaptive perfectionists than adaptive perfectionists (or remain non-perfectionists).

DISCUSSION AND CONCLUSIONS

This is the first study that examined the stability of perfectionist types over the course of cross-national transitions. Using cluster analyses, we obtained three groups of perfectionist types (i.e., adaptive perfectionists, maladaptive perfectionists, and non-perfectionists) at both Time-1 (i.e., pre-arrival) and Time-2 (i.e., first semester), which were consistent with the previous perfectionism literature (Hamachek, 1978; Rice & Slaney, 2002). Therefore, results from this study provided additional evidence for the existence of the three groups of perfectionists among Chinese international students.

Results also indicated that perfectionist types were malleable during short periods when the cross-national transitions occurred. More specifically, a considerable number of international students' (40%) perfectionist types changed over the course of their transition into the U.S. This aligns with previous research (Herman et al., 2013) suggesting that perfectionism can be malleable during these higher stress situations (i.e., adjusting to a new country). A possible reason for some individuals' perfectionism type changes could be due to certain individual or environmental factors that distinguish the two groups of international students. Interestingly, there were more non-perfectionist students who became perfectionists after studying in the United States. than perfectionists who became non-perfectionists. Particularly, about half of the non-perfectionists (52%) turned into either adaptive perfectionists or maladaptive perfectionists after the first semester of their studies in the U.S. In contrast, adaptive and maladaptive perfectionists were relatively more stable with 69% of them remaining the same perfectionist type. It appears that the cross-national transition of international students is closely associated with non-perfectionists turning into perfectionists, but not the reverse. With high standards as a core aspect of perfectionists, a possible explanation is that these non-perfectionist students raised their standards

after coming to the United States. During the cross-national transition, international students may perceive higher standards and unfamiliar expectations from the new environment (e.g., American classroom culture) for themselves along with the need to use new skills (e.g., English proficiency; Moores & Popadiuk, 2011). Challenges in the new environment could raise the effort levels needed to survive and achieve compared to when these international students were in their home country (Swagler & Ellis). Consequently, many previously classified non-perfectionists may now have to significantly raise their standards to reach achievement levels in the new environment (i.e., United States) that could be considered comparable to their achievement levels back in their home country. Another explanation for the increased standards might be that when studying in their home country, it was relatively easier to achieve academically and students might not have considered their standards as very high. However, as the ceiling becomes higher in a more challenging environment, they perhaps realize that their standards need to be set higher (Hung & Hyun, 2010). However, further replication and examinations of the results from this study are needed.

In our study, perceived acculturative stress predicted the direction of shift among those initially classified as non-perfectionists. Those non-perfectionists who perceived higher levels of acculturative stress were more likely to change into maladaptive perfectionists. This trend implies that under more stressful new environments, individuals are more likely to experience lower self-efficacy (Hechanova-Alampay et al. 2002), and thus perceive higher discrepancy and feel less adequate as students (features characteristic of maladaptive perfectionists). In our study, not only are the maladaptive and adaptive natures of perfectionists associated with the level of acculturative stress experienced, but they are also reflected in their self-esteem and psychological distress. That is, maladaptive perfectionists reported lower self-esteem and more psychological distress compared to adaptive perfectionists. Although this study provides interesting findings, it also raises several questions. Are those changes in perfectionist types stable over time, or just temporary reactions to the cross-cultural transition?

LIMITATIONS AND FUTURE DIRECTIONS

There are a number of limitations of this study that are important to note along with several directions for future research. First, although the sample size for this study was adequate to address certain questions, the numbers of shifts between perfectionists (adaptive to maladaptive or vice versa) as well as perfectionists into non-perfectionists were too small to examine factors associated with these shifts. It would be particularly useful to further examine these shifts through intervention/treatment studies to better understand factors that facilitate individuals shifting out of maladaptive

perfectionists into adaptive perfectionists or non-perfectionists. Second, the classification of perfectionists was based on scores compared with other participants at each time-point. Conceptually, the classification is relative to individuals and the context (before and after studying in the U.S.). Thus, as a way to examine more absolute change, it would be helpful to develop cutoff criteria scores to classify types of perfectionists among Asian students. Third, we cannot conclude that perfectionism change is solely due to the cross-national transition itself because in addition to the cross-national transition, other factors are associated with beginning a new degree of study in a new country, such as a shift in academic level (e.g., from undergraduate to graduate school). Fourth, this study focuses on Chinese international students, thus generalizability to other populations is limited. Future studies may examine the malleability of perfectionist types with different ethnic/cultural and age groups as well as under different types of life transitions (e.g., career transitions, becoming parents, and relationship/marital status changes). Finally, this study only examined the malleability of perfectionist types within a two to three month cross-national transition period prior to and shortly after they began their studies. It would be worthwhile to track participants' perfectionism for longer periods of time to examine whether the non-perfectionists who became perfectionists during the initial cross-national transition continue to stay as perfectionists or turn back into non-perfectionists after a few years later. In other words, it would be interesting to examine whether the shifts of perfectionist types are temporary, stable, or permanent.

IMPLICATIONS

Findings from this study provide a few practical implications. First, when counseling or advising international students on their cross-national adjustment process, it would be helpful to examine the changes of perfectionistic standards and discrepancy before and after their studies in the United States. It would also be helpful to assess which type of perfectionists students are and whether that has changed compared to their status in their home country. The assessment process could be through initiating conversations regarding the adaptive and maladaptive dimensions of perfectionism or asking the students to complete a perfectionism scale. Another important point is to explore how changes in perfectionism type relate to the acculturation experiences. If students are struggling with feelings that they are inadequate, counselors or advisors can help them examine whether these feelings existed prior to their studies in the U.S. If not, they can further explore factors that have changed during the cross-national transition and how these factors might have influenced their self-perception.

These changes in standards and discrepancy could be related to encountering challenges while adjusting to a new environment. Therefore, it would be useful to examine challenges that international students have experienced studying abroad. If the students feel that they are not as good as other peers in the new country or that they are never good enough (i.e., high discrepancy), a few strategies might be helpful. One strategy is to help the international students conceptualize achieving in a new environment as a developmental process with a learning curve as opposed to having discrepant/deficient perception of themselves (Yoon & Portman, 2004). For example, writing in a second language involves developing complex skills, which should improve with practice and experience. Thus, especially for international students in disciplines where English is highly integral to their academic achievement (e.g., business, humanities, social sciences), it would be helpful for students to know that it is inappropriate to compare themselves with native English writers who have practiced writing in English for the majority of their lives. Another emphasis in practical counseling or advising settings would be to encourage these international students to focus on their own improvement rather than to compare themselves with other domestic students.

Overall, to help international students deal with acculturative stress, especially in a setting that highly emphasizes academic performance, it would be beneficial to introduce the role of perfectionism. Educating students on the adaptive and maladaptive nature of perfectionism could also help them focus on lowering their sense of discrepancy instead of their standards. Through this perspective, students may closely monitor the possible negative influences of perfectionism on their psychological well-being.

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