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Different functions of emotion regulation in linking harmony seeking and rejection avoidance to life satisfaction and social support in Germany, Hong Kong, and Japan

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This study examined whether two facets of interdependence, harmony seeking and rejection avoidance, were differently related to life satisfaction and social support from friends across cultures through the differential use of emotion regulation strategies. Specifically, we propose that individuals who seek harmony and avoid rejection regulate emotions differently to achieve social adaptation in their sociocultural contexts. University students from Germany (n = 129), Hong Kong (n = 136), and Japan (n = 123) completed our online survey. Data were analysed through multigroup structural equation modelling. Across cultures, harmony seeking was positively while rejection avoidance was negatively related to indices of social functioning (life satisfaction or social support). For Germans, emotion regulation (more rumination, less reappraisal, more suppression) completely mediated the associations of rejection avoidance with life satisfaction. Germans may emotionally overreact when fearing rejection, which is reflected in using dysfunctional emotion regulation strategies. In contrast, rejection avoidance was only weakly related to emotional dysregulation among Hong Kong Chinese and Japanese who might be adapted to fearing exclusion due to living in low relational mobility societies. Our findings demonstrate cultural similarities and differences in the interplay of harmony seeking and rejection avoidance with emotion regulation, life satisfaction, and social support.

Keywords: culture, emotion regulation, harmony seeking, life satisfaction, rejection avoidance, social support.

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Social relations are critical for survival and socioemotional development (Fiske, 2014; see Holt-Lunstad, 2018, for a review). Individuals with stable and satisfying social relationships are happier, healthier, and live longer (Diener & Seligman, 2002; Holt-Lunstad, 2018). Due to the importance of social relationships for human life and the positive associations between social adaptation, life satisfaction, and other aspects of well-being, people are usually motivated to establish positive social relationships (Fiske, 2014). Yet, individuals might use different strategies for achieving social adaptation across cultural contexts.

Self-construals may help to explain how individuals aim to achieve social adaptation across cultures. According to Hashimoto and Yamagishi (2016), an interdependent self-construal comprises a set of psychological strategies that promote "adaptation in a collectively created and maintained social environment" (p. 286), whereas an independent self-construal includes strategies for "expanding relations with others who are not connected by strong ties" (p. 287). Individuals with an interdependent self-construal perceive themselves in relation to others and emphasize prevention goals, including self-effacement and accommodating others' wishes. Individuals with an independent self-construal perceive themselves as distinct from others and emphasize promotion goals, including autonomy and self-enhancement (Hashimoto & Yamagishi, 2016; Markus & Kitayama, 1991).

Hashimoto and Yamagishi (2013) proposed to distinguish between two core facets of interdependence: *harmony seeking* and *rejection avoidance*. Harmony seeking refers to the prototypical conceptualization of interdependence and describes the tendency to seek social harmony and meaningful relationships by accommodating others' wishes (Hashimoto & Yamagishi, 2013). Rejection avoidance, in turn, refers to an individual's sensitivity toward potential criticism and the fear of being ostracized (Hashimoto & Yamagishi, 2013). The psychological functions of these two aspects of interdependence are intriguing because seeking harmonious relationships and avoiding social rejection should be generally desirable because rejection is a painful

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experience in all cultures (Eisenberger & Lieberman, 2004; Fiske & Yamamoto, 2005) and satisfying social relationships are universally beneficial for well-being (Cohen & Wills, 1985).

Cultural comparisons reveal that individuals from East Asian cultures score *lower* in harmony seeking than individuals from Western cultures. Specifically, harmony seeking has been shown to be higher among US Americans (Hashimoto & Yamagishi, 2016) and Germans (Ishii & Eisen, 2018) compared to Japanese. These findings may seem counterintuitive, but the higher harmony seeking observed among Western samples might be explained by the comparatively loose and flexible nature of social relationships in Western cultural contexts. The high levels of relational mobility in many Western societies have been found to encourage promotion-focused behaviour (e.g., proactive interpersonal behaviour) in order to constantly attract attention from others (Li et al., 2015; Lou & Li, 2017; Yuki & Schug, 2020). In contrast, many East Asian cultures, like Hong Kong and Japan, are characterized by low relational mobility (Thomson et al., 2018), meaning that social networks are relatively fixed and stable. In such societies, one does not tend to form new relations with others frequently. In fact, establishing new relationships might be difficult given the stability of social networks (Hashimoto & Yamagishi, 2016). These social restraints are addressed by the second aspect of interdependence, which is rejection avoidance. Concerns about rejection and the loss of valuable social resources might be engendered in sociocultural environments with tightly knit social networks (e.g., East Asian cultures). Consistent with this assumption, Japanese were shown to be higher in rejection avoidance than US Americans (Hashimoto & Yamagishi, 2016) and Germans (Ishii & Eisen, 2018). The different levels of harmony seeking and rejection avoidance might indicate cultural differences in the adaptive functions of these two aspects of interdependence.

A culturally informed perspective on the psychological functions of harmony seeking and rejection avoidance may contribute to a better understanding of how individuals achieve social adaptation across cultures. The formation of social relationships is desirable since social resources predict higher well-being across cultures (Cohen & Wills, 1985; De Leersnyder et al., 2013). Research across Western and East Asian samples revealed that individuals who value and seek interpersonal harmony are more likely to pursue social support (Hashimoto & Gherghel, 2021) and report higher life satisfaction (Kwan et al., 1997). Thus, harmony seeking can be expected to be associated with more social support and higher life satisfaction by encouraging individuals to establish and deepen satisfying social relationships (Hashimoto & Yamagishi, 2013). In contrast, rejection avoidance is characterized by a high sensitivity to potential ostracism and emotional dysregulation, which has been linked to lower well-being and more social anxiety among Western individuals (Downey & Feldman, 1996; see Gao et al. [2017] for a meta-analysis). Yet, rejection avoidance might be normative and provide an adaptive advantage in low relational mobility contexts (e.g., East Asian cultures) where individuals are accustomed to fearing rejection from limited social networks. In line with this argument, Sato et al. (2014) proposed that sensitivity toward rejection might benefit social functioning among individuals from low relational mobility societies. Specifically, rejection avoidance may encourage prevention-focused behaviour to avoid social exclusion (e.g., accommodation; Li et al., 2015; Lou & Li, 2017).

In this study, we aim to examine whether and how harmony seeking and rejection avoidance relate to social support and life satisfaction across cultural contexts. Notably, Markus and Kitayama (2003) pointed out that the same cultural values (here: harmony seeking and rejection avoidance) might be practiced differently across cultures. We expect the social reality of a given society (e.g., level of relational mobility, cultural norms) to shape the social functions of harmony seeking and rejection avoidance. In particular, individuals might use different strategies to attain relational harmony or for dealing with rejection avoidance as cultures foster different views on what constitutes ideal social relationships (De Leersnyder et al., 2013; Wu et al., 2021). We focus here on emotion regulation, which provides individuals with strategies to navigate their social world (De Leersnyder et al., 2013).

The role of emotion regulation

Emotion regulation refers to "processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions" (Gross, 1998, p. 275). Effective emotion regulation is essential for social functioning (i.e., the ability to engage in gratifying relationships with others; Eldesouky & English, 2022) and the realization of social motives (e.g., the need to belong; Tamir, 2016). Thus, emotion regulation may function as a mediating mechanism through which individuals aim to reinforce aspects of interdependence (e.g., relational harmony). Notably, this mediating function of emotion regulation may differ across cultures. One reason is that individuals might use different emotion regulation strategies when seeking harmony and avoiding social rejection, depending on their cultural context. Further, specific emotion regulation strategies are known to differentially predict well-being and social functioning across cultures (see Ford & Mauss [2015] for a review).

In what follows, we elucidate the potential differential function of emotion regulation for linking the two core facets of interdependence, i.e., harmony seeking and rejection avoidance, to life satisfaction and perceived social support across cultures. These two outcomes were selected because both constitute psychosocial resources indicative of good social functioning and are thought to be promoted through culturally appropriate experience and expression of emotions (Yoo & Miyamoto, 2018). We explicitly focus on perceived rather than actual social support since the former is a valid indicator of subjective well-being and has been measured in other studies on similar topics (e.g., Cui et al., 2022; Schunk et al., 2021). Further, we focus on three specific emotion regulation strategies (rumination, reappraisal, and suppression), each targeting distinct stages in the emotion generation process (attentional deployment, cognitive change, and response modulation respectively). Based on past research (e.g., Pfundmair et al., 2015; Sato et al., 2014; Thomson et al., 2018; Yuki & Schug, 2020), Table 1 summarizes our hypothesized assumptions for cultures that are higher and lower in relational mobility respectively.

Rumination. *Rumination* (i.e., repetitively and passively focusing on negative emotions and their possible causes and consequences; McRae & Gross, 2020; Nolen-Hoeksema et al., 2008) has been found to be more common among individuals from East Asian cultures (e.g., Hong Kong and Japan) compared to individuals from Western European cultures (e.g., Germany and Britain; Chang et al., 2010; Maxwell et al., 2005; Schunk et al., 2022). In East Asian contexts, as in Japan, ideal relationships are characterized by a feeling of interconnectedness and a motivation to adjust to others' expectations (Morling et al., 2002). Social norms require focusing on one's social context and one's own shortcomings to fulfil social demands (Kitayama et al., 1997). Hence, focusing on negative information through rumination and engaging in self-critical thinking might be promoted in East Asian cultures to maintain social relationships (Heine et al., 1999).

Accordingly, rumination was found to be a weaker predictor of undesirable outcomes (e.g., lower life satisfaction, less social support) among participants with an Asian (versus European) cultural background (Chang et al., 2010; Schunk et al., 2022). For Japanese, rumination was even shown to be unrelated to social support (Schunk et al., 2021). Studies among Western participants, however, found that rumination was related to various undesirable attributes, including pessimism and aggressive tendencies (Nolen-Hoeksema et al., 2008). These tendencies may reduce social support in a cultural context that emphasizes self-enhancement (Kitayama et al., 1997). Some of these negative social consequences may not apply in an East Asian cultural context due to the aforementioned emphasis on negative

Table 1
Hypothesized Differences between Individuals from Higher and Lower Relational Mobility Societies Based on Past Literature

	Individuals from Higher Relational Mobility Societies (e.g., Germany)	Individuals from Lower Relational Mobility Societies (e.g., Hong Kong, Japan)
Social networks	Social relationships are flexible; individuals have more choice to select relationships	Social relationships are fixed; individuals have less choice to actively establish or leave relationships
Adaptive behaviour	Self oriented, promotion focused	Other oriented, prevention focused
Harmony seeking (i.e., seeking harmony and meaningful relationships) is related to...		
Life satisfaction and perceived social support	Higher life satisfaction and more perceived social support	
Emotion regulation	Focusing on positive attributes Expressing emotions Reappraising emotional experiences to promote social adaptation	Focusing on negative experiences (ruminate) Suppressing negative emotions
Rejection avoidance (i.e., being sensitive toward and avoiding ostracism) is related to...		
Life satisfaction and perceived social support	Lower life satisfaction and less perceived social support due to feelings of anticipated rejection	Low or no decrease in life satisfaction and perceived social support due to normative fear of possible rejection
Emotion regulation	Dysfunctional emotion regulation	No or less dysfunctional emotion regulation

Note. Summary of assumed psychological differences between higher and lower relational mobility societies. The assumed psychological consequences of relational mobility are based on past findings (Pfundmair et al., 2015; Sato et al., 2014; Thomson et al., 2018; Yuki & Schug, 2020).

attributes of the self. For instance, self-esteem was shown to be a weaker predictor of life satisfaction in collectivistic (versus individualistic) nations (Diener & Diener, 2009). Rumination may entail some social benefits among East Asians by promoting adjustment to social requirements through critical self-reflection (Takano & Tanno, 2009). These factors suggest that rumination could serve as a strategy for achieving relational harmony in East Asian cultures. In contrast, it seems unlikely that harmony seeking would facilitate rumination among Western individuals due to social norms emphasizing self-enhancement (e.g., focusing on positive attributes of the self in social interactions; De Leersnyder et al., 2013; Kitayama et al., 1997).

Rejection avoidance, the fear of being ostracized, constitutes a motivation for emotion regulation to maintain social resources (Tamir, 2016). Despite the intention to prevent social exclusion, higher rejection avoidance has been linked to depression, anxiety, and loneliness (Gao et al., 2017), as individuals who are sensitive to rejection tend to overreact emotionally (Casini et al., 2022; Downey & Feldman, 1996). Indeed, cross-sectional (Casini et al., 2022; Pearson et al., 2010) and longitudinal (Pearson et al., 2011) studies among Western participants provide empirical support that individuals who are sensitive and anxious about social rejection engage in more dysfunctional emotion regulation, such as rumination. Individuals may brood about possible rejection scenarios and critically evaluate their relationships in fear of being ostracized. Rumination may then further damage social relationships. For instance, anxiety about being socially excluded has been linked to social withdrawal through the mediating effect of rumination among Western participants (Casini et al., 2022).

The function of rejection avoidance might differ across cultures with different levels of relational mobility. Being constantly sensitive to and worrying about social rejection might be an unnecessary investment of cognitive and emotional resources in Western societies where relational mobility is high and social relationships are easier to establish. In contrast to individuals from high relational mobility contexts, rejection avoidance might be normative and adaptive for individuals from low relational mobility contexts since establishing new relationships might be challenging (Sato et al., 2014). Thus, East Asian individuals might be less emotionally reactive to social exclusion and more likely to apply adaptive, compensatory strategies to prevent losing critical social resources (Hashimoto & Yamagishi, 2013; Sato et al., 2014). In East Asian cultures, ruminating and focusing on negative attributes of the self might function as a strategy for avoiding potential painful social rejection. For instance, Japanese schools promote critical self-reflection (*hansei*) during school hours to encourage self-improvement among students (Lewis, 1995).

Reappraisal. *Reappraisal* refers to reinterpreting an emotional situation to change its emotional impact (Gross & John, 2003) and has been associated with desirable outcomes (e.g., higher life satisfaction) across cultural groups (McRae & Gross, 2020; Schunk et al., 2022). Yet the function of reappraisal may differ across cultures due to different control beliefs that shape how individuals perceive themselves in relation to their environment. Whereas individuals from Western cultures tend to perceive their own self as fixed and the world as malleable, individuals from East Asian cultures are more likely to see the world as fixed and the self as malleable (De Leersnyder et al., 2013; Trommsdorff & Heikamp, 2013; Trommsdorff & Rothbaum, 2008). A view of the world as malleable encourages primary control (changing the environment to one's needs), but perceiving the self as malleable encourages secondary control (accommodating the self to the environment). Secondary control represents a social-oriented approach, optimal for individuals striving toward relatedness and social harmony (Trommsdorff & Heikamp, 2013; Trommsdorff & Rothbaum, 2008).

Yamaguchi (2001) suggests that accommodating to others can entail beneficial psychological consequences as "secondary control would be able to heighten one's psychological well-being if the individual values harmony with the environment" (p. 238). Reappraisal represents a form of secondary control through which individuals can adjust the self to social expectations (Morling & Evered, 2006). It might be reasonable to expect that individuals who value harmony are more likely to use reappraisal to attain social adaptation. As secondary control beliefs are more prevalent in East Asian cultures, this effect may be more pronounced among individuals from East Asian than Western contexts.

In contrast, rejection avoidance has been linked to less reappraisal in Western cultures (Casini et al., 2022). This finding is consistent with the assumption that rejection-avoidant individuals emotionally overreact and fail to adaptively regulate their emotions (Downey & Feldman, 1996). The emotional overreaction and dysregulation of emotions among Western individuals might result from fearing the anticipated social exclusion. However, in East Asian cultures characterized by low relational mobility, awareness and sensitivity toward potential dangers of social exclusion should be common. Here, individuals might be more likely to first of all adapt to the social context. Due to a higher endorsement of secondary control beliefs, East Asian individuals might be more likely and more attuned to using

reappraisal for adjusting the self to others, thus avoiding social rejection.

Suppression. In many East Asian cultural contexts, people are expected to hide individual needs and egocentric emotions to be considerate of their interaction partners (Schouten et al., 2020). Corresponding evidence shows that Japanese and Hong Kong Chinese (HKC) are more likely to regulate emotions through *suppression* (i.e., masking emotional expressions; Gross & John, 2003) compared to US Americans (Matsumoto, 2006; Soto et al., 2011). Interestingly, suppression has been frequently linked to adverse psychological consequences, such as lower life satisfaction and impaired social functioning, among Western participants (e.g., US-Americans, Germans), whereas weaker or no relationships were found among East Asian participants (e.g., Japanese, HKC; Butler et al., 2003; Schunk et al., 2022; Soto et al., 2011). Western European cultures value social relationships that allow individuals to act autonomously and follow their individual goals (De Leersnyder et al., 2013). The display of individual needs is encouraged to emphasize the uniqueness of each interaction partner (Kito, 2005). Sharing personal information on internal emotional states may thus benefit individuals from Western cultures by promoting closeness with each other (English & Eldesouky, 2020). As such, individuals from Western cultures might attain social harmony through an open expression of emotions instead of emotional suppression, as the latter may impair social relationships in Western cultural contexts. Supporting this assumption, a study comparing Belgian and Japanese couples found that suppression during a conflict was associated with worse conflict resolution among Belgians but was not among Japanese (Schouten et al., 2020). In contrast to Western cultures, social norms in East Asian contexts may promote the suppression of egocentric and potentially disruptive emotions to preserve social harmony (Tsai & Lu, 2018).

Further, suppression was shown to partially mediate the link between higher rejection sensitivity and more depressive symptoms among Australian participants (Gardner et al., 2020). The positive association between suppression and depression is no surprise considering the maladaptive function of suppression for social functioning and well-being in Western cultural contexts (Gross & John, 2003). Importantly, suppression appears to be more socially acceptable and unrelated to life satisfaction and social support in East Asian cultural contexts, like Hong Kong and Japan (Schunk et al., 2021). The Japanese proverb "nails that stick up get pounded down" illustrates that individuals from low relational mobility contexts might be particularly keen to keep a low profile by suppressing potentially disruptive (e.g., ego-focused) emotional expressions to avoid potential social exclusion (Hashimoto & Yamagishi, 2013). Although rejection avoidance may facilitate suppression across cultures, suppression might have no negative associations with well-being in East Asian contexts.

The purpose of this study

The aim of this study was to examine how harmony seeking and rejection avoidance relate to life satisfaction and social support across cultural contexts. Further, we explored whether harmony seeking and rejection avoidance were differently associated with emotion regulation strategies (rumination, reappraisal, suppression) across cultures and whether these strategies mediated a link with life satisfaction and social support respectively. Figure 1 summarizes the theoretical model.

We compared university students from Germany, Hong Kong, and Japan to enhance cultural variance and identify cultural differences or similarities among the selected samples. Germany is traditionally described as a Western and independent culture (Ford et al., 2015), whereas Hong Kong (Pfundmair et al., 2015) and Japan (Markus & Kitayama, 1991; Trommsdorff & Rothbaum, 2008) are often referred to as East Asian and interdependent cultural contexts. However, it is important to point out that certain aspects of interdependence were shown to be higher among individuals from Western cultures. For example, in a recent study, Germans reported lower levels of rejection avoidance but higher levels of harmony seeking than Japanese (Ishii & Eisen, 2018). This result underlines the importance of assessing the two aspects of interdependence separately. The three cultures further differ in their levels of relational mobility, with Germany being higher than Hong Kong and Japan (Thomson et al., 2018). The avoidance of social rejection might be particularly critical in the two East Asian cultures, where forming new relations is comparatively difficult. Notably, the psychological processes of HKC might be strongly affected by Western influences and differ from other East Asian individuals due to Hong Kong's history of British occupation and its role as an international financial centre (Maxwell et al., 2005). In contrast, Japan is an East Asian country that was isolated from Western influences for most of its history until the Meiji Restoration in 1868 (Matsumura & Benson, 2001). The diversity of these three cultures offers insights into cultural differences based on a comparison of two East Asian contexts and a less frequently examined Western culture (compared to frequently sampled USA).

We expected harmony seeking to be associated with higher life satisfaction and more social support across cultural groups (Hypothesis 1) since social relations are generally desirable and beneficial for well-being (Cohen &

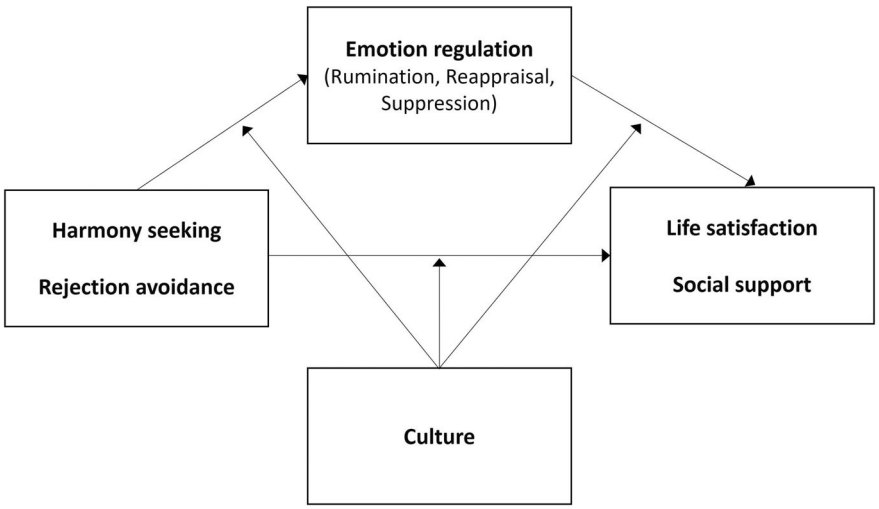

Figure 1 Theoretical model.

Wills, 1985; De Leersnyder et al., 2013). In line with previous findings among Western participants (Gao et al., 2017) and considering the potential adaptiveness of rejection sensitivity in a low relational mobility context (Sato et al., 2014), we predicted that rejection avoidance would be related to lower life satisfaction and less social support among Germans. In contrast, we expected weaker or no associations among HKC and Japanese (Hypothesis 2). Finally, we explored whether specific emotion regulation strategies (rumination, reappraisal, suppression) differentially mediated the associations of harmony seeking and rejection avoidance with life satisfaction and social support across cultural groups.

Method

Participants

The final sample consisted of 388 university students from Germany (GER; n = 129; M_{age} = 21.26 years, SD = 2.74; 70.5% female, 0.8% other), Hong Kong (HKC; n = 136; M_{age} = 19.94 years, SD = 1.44; 69.9% female, 0.7% other), and Japan (JAP; n = 123; M_{age} = 18.91 years, SD = 0.61; 32.5% female, 0.8% other). Participants were included when they replied to all items and were between 18 and 29 years old.

Procedure

We collected data online from November 2020 to January 2021 using the platform SoSci Survey (German and Japanese samples; https://www.soscisurvey.de/) and Qualtrics (Hong Kong sample; https://www.qualtrics.com/). Participants were recruited at the University of Konstanz, the Chinese University of Hong Kong, and Otemon Gakuin University. Additionally, the survey was advertised on the German website SurveyCircle (https://www.surveycircle.com/de/) to recruit participants from Germany. For compensation, participants received course credits or the chance to win a voucher at an online marketplace. Participants gave informed consent and voluntarily completed the survey. The survey was conducted as part of a larger cross-cultural project.

Measures

All scales were provided in German, Chinese, or Japanese using available language versions or translating (and back-translating) scales when necessary. Descriptive statistics per sample are presented in Table 2. The supplementary material includes detailed information on language versions and sample items (Table S1).

Harmony seeking and rejection avoidance. We used the scales by Hashimoto and Yamagishi (2016) to measure harmony seeking and rejection avoidance as core facets of interdependence (five items each; 1 = *strongly disagree*, 7 = *strongly agree*). The authors later developed two scales that measure aspects of independence (self-expression and distinctiveness of the self; Hashimoto & Yamagishi, 2016), but we focused here only on aspects of interdependence due to their expected social functions across cultures. Confirmatory factor analyses later suggested removing one item from the harmony seeking scale (see analysis section). Internal consistencies were acceptable for both harmony seeking (Cronbach's α = 0.68 [GER], 0.76 [HKC], 0.73 [JAP]) and rejection avoidance (α = 0.70 [GER], 0.75 [HKC], 0.75 [JAP]).

Table 2
Mean Scores and Standard Deviations of Scales per Sample

	Germany		Hong Kong		Japan		ANOVA	
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	*p*
Harmony seeking	6.21_a	0.65	5.34_b	0.85	5.35_b	0.94	48.15	<.001
Rejection avoidance	4.74_a	1.31	4.44_b	1.02	5.01_a	1.24	7.45	<.001
Rumination	3.55	0.77	3.39	0.72	3.53	0.81	1.73	.179
Reappraisal	4.73_a	1.00	4.39_b	0.87	4.67_a	0.93	5.26	.006
Suppression	3.59	1.09	3.61	1.31	3.82	1.10	1.44	.239
Life satisfaction	4.94_a	1.17	3.66_b	1.11	3.66_b	1.20	52.97	<.001
Social support	6.21_a	0.65	5.34_b	0.85	5.35_b	0.94	28.42	<.001

Note. $df1$ 2; $df2$ 358. Different subscripts indicate significant mean differences.

Emotion regulation. Rumination was assessed using five items from the Perseverative Thinking Questionnaire (PTQ; Ehring et al., 2011; 0 = *never*, 4 = *almost always*; one item was removed during the analysis, reducing the item number to four; α = 0.84 [GER], 0.81 [HKC], 0.79 [JAP]). We measured reappraisal (originally with six items, but one item was later removed; α = 0.81 [GER], 0.74 [HKC], 0.73 [JAP]) and suppression (four items; α = 0.77 [GER], 0.83 [HKC], 0.66 [JAP]) with the Emotion Regulation Questionnaire (ERQ; Gross & John, 2003; 1 = *strongly disagree*, 7 = *strongly agree*).

Life satisfaction. The Satisfaction With Life Scale (SWLS; five items; Diener et al., 1985) was applied to assess participants' evaluation of satisfaction with their life (1 = *strongly disagree*, 7 = *strongly agree*; α = 0.85 [GER], 0.85 [HKC], 0.86 [JAP]).

Perceived social support from friends. We measured social support from friends using four items from the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988; 1 = *strongly disagree*, 7 = *strongly agree*; α = 0.87 [GER], 0.90 [HKC], 0.86 [JAP]). We also collected data on social support from family but decided to remove this variable from our analysis to reduce the complexity of our model. Also, confirmatory factor analysis suggested that the two subscales should not be combined. Thus, we opted for the subscale measuring social support from friends because this construct seems theoretically more relevant for our research purposes and might be a more accurate indicator of social functioning. Interested readers can find a more complex version of our model, including perceived social support from family as an additional outcome on the Open Science Framework (OSF) (https://osf.io/2qf3v/).

Data processing and analytic strategies

We analysed the data with Mplus (version 8.7) using a robust MLMV estimation. Analysis scripts are publicly available on the OSF (https://osf.io/2qf3v/). First, multigroup confirmatory factor analyses (CFAs) were conducted to examine measurement invariance across cultural groups. After establishing a sufficient level of invariance, hypotheses were tested in a multigroup structural equation model (SEM). Specifically, the cultural generalizability of the model was examined by comparing an unrestricted model to a restricted model with constrained path coefficients across cultural groups. Cultural differences in specific regression paths were then identified using Wald tests. Culture was dummy-coded (0 = *Germany*, 1 = *Hong Kong*, 2 = *Japan*). A post hoc power analysis using the R package SemPower (Moshagen & Erdfelder, 2016) showed that the probability to reject our model (alpha = 0.05, N = 388, df = 1,247) when it is wrong (corresponding to RMSEA ≥ 0.050) was above 99%. For our structural model, we conducted a power analysis for a multiple regression model with five predictors (corresponding to the most complex regression in our model) with GPower 3.1.9.7 (Faul et al., 2009), which indicated a power of 92% for the detection of a medium effect (f^2 = 0.15; α = 0.05) in our smallest subsample (n = 123).

Results

Cultural measurement invariance

We ran increasingly restrictive CFAs to examine configural invariance (no constraints), metric invariance (equal factor loadings), and scalar invariance (equal factor loadings and item intercepts; He et al., 2021) of the complete measurement model. Configural invariance was improved by adding 10 covariances between indicators and removing items with low loadings if their removal did not substantially reduce the number of indicators per factor (i.e., at least four indicators per factor to maintain reliability). We removed three items with low standardized loadings (<0.500) in the total sample: "When I'm faced with a stressful situation, I make myself think

about it in a way that helps me stay calm" (reappraisal), "I can't do anything else while thinking about my problems" (rumination), and "I feel good when I cooperate with others" (harmony seeking). The resulting configural model fit the data well, $\chi^2(1,209) = 1,385.41$, $p < .001$, root mean square error of approximation (RMSEA) = 0.034, comparative fit index (CFI) = 0.909, Tucker–Lewis Index (TLI) = 0.895, standardized root mean square residual (SRMR) = 0.076. After freeing five loadings (one loading for rejection avoidance, reappraisal, suppression, life satisfaction, and social support respectively), we established partial metric, $\Delta\chi^2(38) = 49.88$, $p = .094$, but not scalar invariance, $\Delta\chi^2(48) = 336.96$, $p < .001$. Scalar non-invariance might be due to culture-specific response styles (Ford et al., 2015). Importantly, the absence of scalar invariance is not a concern for our study since we are interested in comparing regression coefficients (and not latent means) across cultures, which is feasible with partial metric invariance. Therefore, we refrained from conducting mean-level comparisons. Our final measurement model had a good model fit and was used in all further analyses: $\chi^2(1,247) = 1,426.09$, $p < .001$, RMSEA = 0.033, CFI = 0.907, TLI = 0.896, SRMR = 0.079. Zero-order correlations between the latent factors for each culture are given in the supplementary material (Tables S2–S4).

Multigroup SEM

We ran a multigroup SEM that included the effects of harmony seeking and rejection avoidance on emotion regulation strategies and the effects of harmony seeking, rejection avoidance, and emotion regulation strategies on life satisfaction and social support (Figure 2). Further, the indirect effects of harmony seeking and rejection on life satisfaction and social support (i.e., the mediating effects of each emotion regulation strategy) were computed. The model fit the data well and indices were identical to those obtained for the final measurement model, $\chi^2(1,247) = 1,426.09$, $p < .001$, RMSEA = 0.033, CFI = 0.907, TLI = 0.896, SRMR = 0.079. Next, we examined the cultural generalizability of the model by constraining all regression paths to be equal across cultures. The restricted model yielded substantially declined fit indices, $\chi^2(1,279) = 1,484.02$, $p < .001$, RMSEA = 0.035, CFI = 0.894, TLI = 0.884, SRMR = 0.099, and was significantly worse than the unrestricted model, $\Delta\chi^2(32) = 94.02$, $p < .001$. Thus, it can be concluded that the model differs across cultures. We used Wald tests to draw contrasts between groups to identify which specific path coefficients differed among which cultural groups. Table 3 summarizes the results for the indirect effects.

Associations of emotion regulation with life satisfaction and social support. Across cultures, rumination was related to lower life satisfaction and unrelated to social support by friends. Higher reappraisal was related to higher life satisfaction among Germans and Japanese and, surprisingly, to lower life satisfaction among HKC ($p = .032$). Wald tests revealed that the path coefficients of all three cultural groups differed significantly from each other, $\chi^2_{\text{GER vs. HK}}(1) = 13.97$, $p < .001$, $\chi^2_{\text{GER vs. JAP}}(1) = 4.35$, $p = .037$, $\chi^2_{\text{HK vs. JAP}}(1) = 18.34$, $p < .001$. Further, reappraisal was linked to more social support among HKC and Japanese, but not among Germans who differed significantly from the other two groups, $\chi^2_{\text{GER vs. HKC}}(1) = 7.08$, $p = .008$, $\chi^2_{\text{GER vs. JAP}}(1) = 4.35$, $p = .037$. Finally, suppressing emotions was related to less social support across cultures and to lower life satisfaction only among Germans. The latter effect was significantly different from the non-significant effect among Japanese, $\chi^2(1) = 4.53$, $p = .033$.

Associations of harmony seeking with emotion regulation. As illustrated in Figure 2, harmony seeking was unrelated to rumination among Germans and related to less rumination among HKC and more rumination among Japanese. Wald tests indicated that the path coefficient for HKC was significantly different compared to the coefficient for Germans, $\chi^2(1) = 11.90$, $p = .001$, and Japanese, $\chi^2(1) = 21.19$, $p < .001$. Further, seeking harmony was related to higher reappraisal across cultures, with this relationship being significantly stronger among Japanese ($\beta = 0.54$) compared to HKC ($\beta = 0.22$), $\chi^2(1) = 7.74$, $p = .005$. Greater harmony seeking was associated with less suppression only among Germans, and this effect was significantly different from both HKC, $\chi^2(1) = 6.64$, $p = .010$, and Japanese, $\chi^2(1) = 17.21$, $p < .001$.

Associations of harmony seeking with life satisfaction and social support (Hypothesis 1). Supporting Hypothesis 1, we obtained significant total effects of harmony seeking, which predicted higher life satisfaction and more social support across cultural groups. Mediation analyses further elucidated these effects. We found similar direct effects, except for the Japanese sample, for whom harmony seeking was not directly related to life satisfaction ($p = .650$). Neither total nor direct effects differed significantly across cultures (Wald tests: $ps > .050$).

Indirect effects indicated that reappraisal completely mediated the positive link between harmony seeking and life satisfaction among Japanese, $\beta = 0.31$, 95% CI [0.14, 0.48]. Specifically, harmony seeking was related to higher life satisfaction through more use of reappraisal. Similarly, reappraisal partially mediated the link

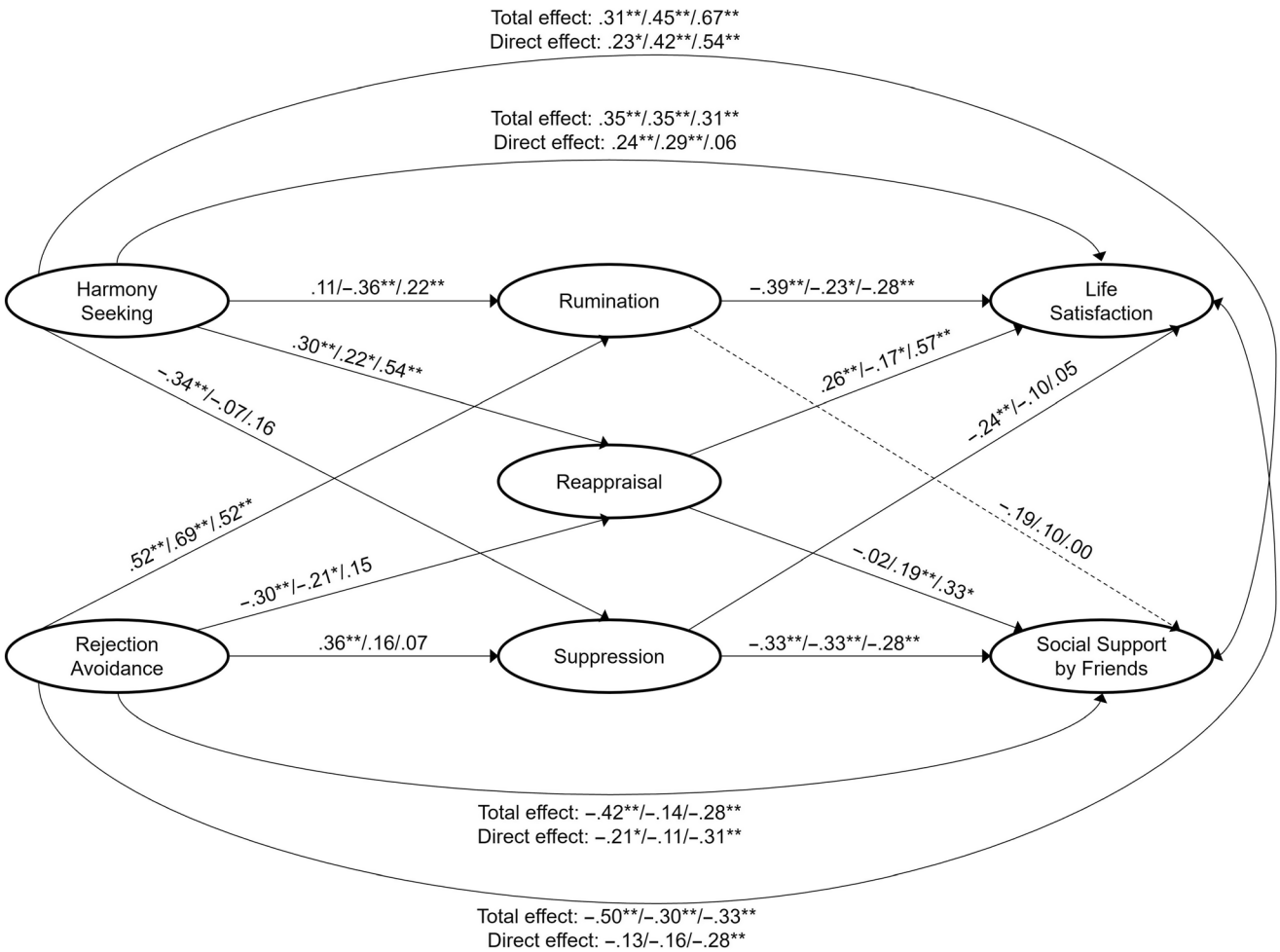

Figure 2 Multigroup structural equation model. Standardized regression coefficients are given per cultural group in alphabetical order (German/Hong Kong Chinese/Japanese). Dashed lines indicate paths that were non-significant across cultures. Circles represent latent variables. For clarity, indicators of latent variables and correlations between variables are not displayed in the figure. The model yielded the following correlations: harmony seeking with rejection avoidance (0.20*/0.50**/0.45**), rumination with reappraisal (0.10/−0.06/0.11), rumination with suppression (0.04/0.21*/−0.01), reappraisal with suppression (−0.20*/0.01/0.30*), and life satisfaction with social support by friends (0.36**/0.34**/0.14). *$p < .05$. **$p < .01$.

between harmony seeking and social support in the Japanese sample, $\beta = 0.18$, 95% CI [0.03, 0.33]. Finally, we obtained indirect effects for Germans, with harmony seeking being related to higher life satisfaction through increased reappraisal, $\beta = 0.08$, 95% CI [0.01, 0.15], and less suppression, $\beta = 0.08$, 95% CI [0.02, 0.14], and related to more social support through less suppression, $\beta = 0.11$, 95% CI [0.04, 0.18]. We found no indirect effects for HKC.

Associations of rejection avoidance with emotion regulation. Higher rejection avoidance was related to more rumination across cultural groups. The regression coefficient for HKC ($\beta = 0.69$) was significantly stronger compared to Germans and Japanese (both $\beta = 0.52$), $\chi^2(1) = 5.77$, $p = .016$ and $\chi^2(1) = 4.42$, $p = .036$ respectively. Further, rejection avoidance was associated with less reappraisal among Germans and HKC but unrelated among Japanese. The difference between Japanese and the two other cultural groups was significant, $^2_{\text{GER vs. JAP}}(1) = 7.80$, $p = .005$, $\chi^2_{\text{HKC vs. JAP}}(1) = 6.01$, $p = .014$. Fearing rejection was related to more suppression among Germans, with Germans differing significantly from Japanese, $\chi^2(1) = 6.18$, $p = .013$.

Associations of rejection avoidance with life satisfaction and social support (Hypothesis 2). The total effects of rejection avoidance indicated that fearing social rejection was related to lower life satisfaction across cultural groups and less perceived social support

Table 3
Summary of Indirect Effects per Culture

	Germany		Hong Kong		Japan	
	β	95% CI	β	95% CI	β	95% CI
IV Harmony seeking						
HS → Rumination → LS	−0.04	[−0.11, 0.02]	0.08	[−0.01, 0.17]	−0.06	[−0.13, 0.001]
HS → Reappraisal → LS	**0.08**	**[0.01, 0.15]**	−0.04	[−0.08, 0.01]	**0.31**	**[0.14, 0.48]**
HS → Suppression → LS	**0.08**	**[0.02, 0.14]**	0.01	[−0.02, 0.03]	0.01	[−0.02, 0.04]
HS → Rumination → SS	−0.02	[−0.06, 0.02]	−0.03	[−0.11, 0.04]	0.00	[−0.05, 0.05]
HS → Reappraisal → SS	−0.01	[−0.05, 0.04]	0.04	[−0.003, 0.08]	**0.18**	**[0.03, 0.33]**
HS → Suppression → SS	**0.11**	**[0.04, 0.18]**	0.02	[−0.04, 0.09]	−0.05	[−0.11, 0.02]
IV Rejection avoidance						
RA → Rumination → LS	**−0.20**	**[−0.30, −0.11]**	−0.16	[−0.32, 0.01]	**−0.15**	**[−0.25, −0.04]**
RA → Reappraisal → LS	**−0.08**	**[−0.14, −0.01]**	0.04	[−0.01, 0.08]	0.09	[−0.02, 0.20]
RA → Suppression → LS	**−0.09**	**[−0.15, −0.02]**	−0.02	[−0.05, 0.02]	0.00	[−0.01, 0.02]
RA → Rumination → SS	−0.10	[−0.21, 0.02]	0.07	[−0.08, 0.21]	0.00	[−0.12, 0.12]
RA → Reappraisal → SS	0.01	[−0.04, 0.05]	−0.04	[−0.09, 0.01]	0.05	[−0.03, 0.13]
RA → Suppression → SS	**−0.12**	**[−0.18, −0.06]**	−0.05	[−0.15, 0.04]	−0.02	[−0.08, 0.04]

Note. Significant indirect effects are bold. IV Independent variable; HS Harmony seeking; RA Rejection avoidance; LS Life satisfaction; SS Social support.

among Germans and Japanese. The total effect of rejection avoidance on social support was non-significant among HKC (p = .158) but not statistically different from the other two cultures (ps > .500). Similarly, we obtained direct effects of rejection avoidance on social support among Germans and Japanese but not among HKC (p = .475). Further, higher rejection avoidance was directly related to lower life satisfaction only among Japanese. Even though the total effects of rejection avoidance on life satisfaction and social support were the strongest in the German sample (β = −0.50 and −0.41 respectively), neither total nor direct effects differed significantly across cultures (Wald tests: ps > .200). Thus, Hypothesis 2 (assuming effects among Germans and no or weaker effects among HKC and Japanese) was only partly supported concerning the predicted and obtained findings among Germans.

An inspection of the indirect effects revealed that rumination, β = −0.20, 95% CI [−0.30, −0.11], reappraisal, β = −0.08, 95% CI [−0.14, −0.01], and suppression, β = −0.09, 95% CI [−0.15, −0.02], together completely mediated the negative link between rejection avoidance and life satisfaction in the German sample. Specifically, among Germans, fearing rejection was related to lower life satisfaction through more rumination, less reappraisal, and more suppression. Similarly, for Germans, we obtained an indirect effect of rejection avoidance on less social support through higher suppression, β = −0.12, 95% CI [−0.18, −0.06]. Finally, we found an indirect effect of rejection avoidance on life satisfaction through increased rumination among Japanese, β = −0.15, 95% CI [−0.25, −0.04]. We found no indirect effects among HKC, despite the significant total effect found for rejection avoidance on life satisfaction and the absence of a direct effect (an indirect effect through rumination was marginally significant at p = .068).

Discussion

This study examined associations of harmony seeking and rejection avoidance, two core facets of interdependence, with life satisfaction and perceived social support among university students from Germany, Hong Kong, and Japan. We further explored the mediating role of specific emotion regulation strategies in these relationships. Using a multigroup structural equation modelling approach, we found that seeking harmony was related to higher life satisfaction and more social support from friends across cultures, thus supporting Hypothesis 1. Hypothesis 2, assuming no or weaker associations of rejection avoidance with life satisfaction and social support among HKC and Japanese, was not supported. In line with our expectations, rejection avoidance was related to lower life satisfaction and less social support among Germans, with the former effect being entirely mediated through dysfunctional emotion regulation. Unexpectedly, rejection avoidance was similarly associated with lower life satisfaction among HKC and Japanese as well as with less social support among Japanese. Our analyses yielded distinct mediating effects through emotion regulation across cultural groups,

suggesting that emotion regulation may serve as a culture-specific mechanism for attaining social adaptation.

Although harmony seeking was related to higher life satisfaction and more social support across cultures, these relationships were characterized by different indirect effects through emotion regulation. In other words, depending on their cultural membership, individuals who valued harmony with others were more likely to use specific emotion regulation strategies, which, in turn, were differently associated with life satisfaction and social support. For instance, harmony seeking was related to more reappraisal across cultural groups. Reappraisal, in turn, mediated a positive link between harmony seeking and life satisfaction for Germans and Japanese and a positive link with social support for Japanese. The indirect effect through reappraisal was especially strong for Japanese; our results indicated that reappraisal completely accounted for the positive link between harmony seeking and life satisfaction in the Japanese sample. This suggests that Japanese with high levels of harmony seeking might benefit from using reappraisal in particular. Harmony seeking may engender reappraisal to adjust oneself to social expectations, which is consistent with the assumption that Japanese culture emphasizes secondary control due to viewing the self as malleable and the world as fixed (De Leersnyder et al., 2013; Trommsdorff & Heikamp, 2013). This indirect effect through reappraisal was not found for HKC. Even though harmony seeking was related to more reappraisal across cultures, we found an unexpected negative link between reappraisal and life satisfaction among HKC. This result contradicts previous research that found a positive association between reappraisal and life satisfaction for HKC (Schunk et al., 2021). Notably, the respective zero-order correlation between reappraisal and life satisfaction was non-significant among HKC (see Table S3 in the supplementary material), suggesting that the negative relationship between reappraisal and life satisfaction only emerges when including, and thereby controlling for, the additional variables in our SEM.

Intriguingly, higher harmony seeking predicted more rumination among Japanese and less rumination among HKC and was unrelated to rumination among Germans. The positive link between harmony seeking and rumination in the Japanese sample fits with past research, suggesting that Japanese may engage in self-critical thinking to promote social adjustment and maintain harmonious relationships (Heine et al., 1999; Schunk et al., 2021). In contrast, focusing on negative information about the self is presumed to be less desirable in a Western cultural context due to social norms that promote self-enhancement (Heine et al., 1999; Salvador et al., 2021). The negative link between harmony seeking and rumination for HKC would be in line with this Western interpretation. Interestingly, a non-significant zero-order correlation for HKC again suggests that this relationship only emerges when the other variables in our SEM are accounted for (see Table S3 in the supplementary material). Moreover, consistent with past research (Schunk et al., 2021), rumination was related to lower life satisfaction across cultures. In contrast, rumination was unrelated to social support from friends. The different findings for these two outcomes suggest that rumination might be less consequential for individuals' social resources compared to their life satisfaction.

A negative association of harmony seeking with expressive suppression was found only among Germans, and lower suppression partially mediated the positive link of harmony seeking with life satisfaction and social support by friends. Openly expressing and sharing one's emotions is encouraged in Western cultures to display one's individuality and to promote closeness with others (English & Eldesouky, 2020; Kito, 2005). Due to these social expectations, harmony seeking may discourage the suppression of emotions among Germans. In contrast, one might expect harmony seeking to promote suppression in East Asian samples due to an emphasis on restraining emotional expressions (Soto et al., 2011). Despite a significantly positive zero-order correlation between harmony seeking and suppression in the Japanese sample, suppression was neither positively nor negatively related to harmony seeking (or rejection avoidance) among HKC and Japanese in the SEM. This result seems to contradict previous findings linking suppression to interpersonal harmony among Chinese (Wei et al., 2013). It also opposes the common assumption of an interdependent self-construal facilitating the masking of emotional expressions (Matsumoto et al., 2008; Tsai & Lu, 2018). It might be conceivable that suppression of emotions is not regarded as normative for building harmonious relationships among East Asian university students. Specifically, recent changes in cultural values toward individualism and independence may allow for emotional self-expression in close friendships (e.g., Ogihara, 2017). Alternatively, methodological issues, such as the reference group effect (Heine et al., 2002), may have affected participants' self-ratings. Suppression is more normative and typical for East Asians. This could make it more difficult for participants to actively remember and report suppression in a survey. We also did not distinguish among specific emotion types, although individuals might differ in their tendency to suppress distinct emotions (e.g., anger, shame, happiness).

Our SEM revealed that suppression was associated with lower life satisfaction only among Germans and less perceived social support from friends across cultures. The latter finding is intriguing as previous studies

found suppression to be unrelated to social support among East Asians (Schunk et al., 2021). The discrepancy might be explained by the fact that we specifically measured social support by friends, whereas other studies usually assessed social support from various sources. In fact, post hoc analyses showed that social support from *family* was unrelated to suppression among HKC and Japanese but negatively related to suppression among Germans (see output file on the OSF at https://osf.io/2qf3v/). These results emphasize the differential role of social support provided by friends versus family (e.g., Xia et al., 2022). Nevertheless, the finding about social support from friends is interesting because it suggests (contrary to common expectations) that suppressing emotions does not benefit social relationships among East Asians. Instead, open expression of emotions may indicate close and trusting social relationships even among university students from East Asian cultural contexts.

As for rejection avoidance, being sensitive to social rejection has been linked to more depressive symptoms, anxiety, and loneliness in research among Western individuals (see Gao et al. [2017] for a meta-analysis). We expand previous findings by showing that greater rejection avoidance was related to lower life satisfaction and less social support by friends among Germans, and these relationships were largely accounted for by the mediating effects of emotion regulation. In particular, dysfunctional emotion regulation completely mediated the negative link between rejection avoidance and life satisfaction in the German sample. That is, among Germans, rejection avoidance was related to more rumination, less reappraisal, and more suppression, and these strategies, in turn, were linked to lower life satisfaction. Similarly, higher rejection avoidance was indirectly related to less social support through higher suppression. These patterns are in line with previous studies conducted among Western participants that demonstrated the mediating role of dysfunctional emotion regulation (e.g., rumination, suppression) in associations of rejection sensitivity with greater social withdrawal (Casini et al., 2022) and internalizing symptoms (Gardner et al., 2020). Contrary to the intention of preventing ostracism, being sensitive to social rejection may function as a self-fulfilling prophecy as individuals emotionally overreact and initiate dysfunctional emotional regulation that further diminishes life satisfaction and compromises social relationships (Casini et al., 2022; Downey & Feldman, 1996). Further, being constantly sensitive to social rejection might be an unnecessary investment of cognitive and emotional resources in societies where relational mobility is higher (e.g., Germany).

Sato et al. (2014) suggested that rejection avoidance might provide an adaptive advantage for individuals from low relational mobility contexts (e.g., East Asian cultures). Individuals from tightly knit societies should be used to fearing social rejection and might have developed adequate strategies for preventing exclusion from limited social networks. Accordingly, we assumed weaker or no relationships of rejection avoidance with life satisfaction and social support among HKC and Japanese. Yet, contrary to our hypothesis, rejection avoidance was related to lower life satisfaction among HKC and Japanese and to less social support by friends among Japanese. The strength of these relationships did not differ significantly across cultural groups. But even though the total effects of rejection avoidance on both outcomes were similar across cultures, the underlying mechanisms seemed to differ. In the German sample, the effects of rejection avoidance were primarily explained by the use of dysfunctional emotion regulation strategies, whereas the effects of rejection avoidance represented largely direct effects for HKC and Japanese. Specifically, we obtained no indirect effect for HKC and only one indirect effect for Japanese, with rejection avoidance being related to lower life satisfaction through increased rumination. Among Germans, rejection avoidance related not only to more rumination—a relationship that was found across cultures and seems natural because individuals may tend to brood about possible rejection scenarios in an attempt to prevent rejection—but also to lower reappraisal and more suppression. Thus, although rejection avoidance was associated with worse psychological outcomes in all three cultures, emotion regulation may play a different role in these relationships.

Taken together, the German pattern indicates a disability in regulating emotions effectively when fearing rejection, which may then negatively affect psychosocial outcomes. In contrast, the findings for HKC and Japanese do not suggest that emotional dysregulation accounts for the negative consequences of rejection avoidance. Perhaps this is the case because East Asians are used to fearing exclusion from critical social networks, which enables them to practice adaptive emotion regulation. Notably, although HKC and Japanese might sometimes choose the same regulation strategies as Germans, the adaptiveness of these strategies might differ. For instance, rejection avoidance was related to increased rumination across cultures, with the strongest effect among HKC. Despite the strong association between rejection avoidance and rumination among HKC, rumination did not mediate a link with life satisfaction or social support in that sample. Further, the direct effects of rejection avoidance on life satisfaction and social support among HKC and Japanese might be due to other, unmeasured variables. It is particularly noteworthy that we found not a single indirect effect through emotion regulation for either rejection avoidance

or harmony seeking in the Hong Kong sample, suggesting that interdependent cultural values may be less likely to shape emotion regulation and subsequent psychosocial consequences in this culture. Future studies might shed more light on the culture-specific effects of harmony seeking and rejection avoidance across cultural contexts by testing additional mediators.

Limitations and future directions

The cross-sectional nature of our study restricts the interpretation and generalization of our findings. Future studies may apply experimental (e.g., priming aspects of an interdependent or independent self-construal) or longitudinal designs (e.g., panel studies) to test how aspects of self-construal shape emotion regulation across cultural contexts. In particular, future research may sample individuals from other and less represented cultures to go beyond the common East–West dichotomy (e.g., Vignoles et al., 2016). Further, self-report questionnaires were used in this study, which are prone to biases and might be limited in their capacity to capture individuals' emotion regulation accurately, especially when comparing individuals across cultures (Heine et al., 2002). Studies may benefit from using physiological or behavioural measures for assessing emotional suppression or expression. External validity might be increased through experience-sampling methods that facilitate examining situation-specific emotion regulation and go beyond habitual emotion regulation. Future research may also assess various sources of social support and investigate emotion regulation strategies related to situation selection and modification since these strategies affect emotions earlier in the emotion generation process.

Except for the measurement of rumination, which accounts for regulating negative emotions, we examined habitual emotion regulation strategies without differentiating between specific emotion types. Cross-cultural research recently emphasized the importance of addressing the specific emotions which are regulated. Cultural differences in emotion regulation's associations with well-being and social functioning have been observed when distinguishing between emotional valences (positive vs. negative; Schunk et al., 2022) and social engagement of emotions (socially engaging vs. disengaging; Schouten et al., 2020). Examining the regulation of distinct emotions may provide valuable insights into the sociocultural functions of emotion regulation.

Notably, we based our theoretical assumptions on cultural differences in relational mobility without measuring relational mobility directly. Instead, we relied on previous data on relational mobility across cultures (Thomson et al., 2018). Future research should assess the perceived relational mobility of participants to investigate whether relational mobility moderates the associations of harmony seeking and rejection avoidance with psychological outcomes (e.g., emotion regulation, social support, and life satisfaction).

In addition to studying aspects of interdependence, it might be worthwhile to examine how aspects of independence relate to emotion regulation across cultures (e.g., self-expression, distinctiveness of the self; Hashimoto & Yamagishi, 2016). Although most researchers acknowledge the need to distinguish between more than two dimensions for assessing interdependence and independence, they remain divided on this issue, with different conceptualizations and operationalizations being used (e.g., Hashimoto & Yamagishi, 2016; Vignoles et al., 2016). It seems necessary to arrive at some sort of consensus for describing and measuring aspects of self-construal to enhance comprehension and comparability among studies.

Importantly, we collected data during the COVID-19 pandemic. The stress that may have been caused by the pandemic and social distancing measures might have affected the emotional experiences and social behaviour of participants. Emotion regulation and social support have been identified as potential resources for coping successfully with the pandemic (Saltzman et al., 2020; Szkody et al., 2021; Yu et al., 2020), but social distancing measures may impede social functioning and hinder the maintenance of social relationships. Notably, cultures may facilitate different strategies to cope with the situation (Bond, 2021; Yan et al., 2020), and some social relationships might be less or even positively affected by social distancing measures. For instance, a study among Japanese individuals suggested that satisfaction with family increased during the COVID-19 pandemic as a possible side effect of spending more time at home (Suppasri et al., 2021). Future research may examine in more detail how the pandemic shaped emotional experiences and social relationships across cultures.

Conclusion

This study demonstrated cultural similarities and differences in associations of harmony seeking and rejection avoidance with life satisfaction and social support across cultural contexts. It also indicated the distinct mediating functions of emotion regulation strategies. We added to past research by distinguishing harmony seeking and rejection avoidance as core facets of interdependence, suggesting that their associations with life satisfaction and social support are often accounted for by different emotion regulation strategies. Particularly, dysfunctional emotion regulation (more rumination, less reappraisal, more suppression) completely mediated the negative relationships of rejection avoidance with life satisfaction in the German sample. Future studies may use

experimental or longitudinal designs, assess other aspects of self-construal, and measure the regulation of distinct emotions to further unpack the functions of emotion regulation for social adaptation in cultural contexts.

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Conflict of Interest

We have no conflicts of interest to disclose.

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Author Contributions

Fabian Schunk: Conceptualization; data curation; formal analysis; investigation; project administration; writing original draft. **Natalie Wong:** Conceptualization; investigation; writing review and editing. **Gen Nakao:** Conceptualization; investigation; writing review and editing. **Gisela Trommsdorff:** Conceptualization; supervision; writing review and editing.

Data Availability Statement

The dataset underlying this study is available on request from the corresponding author.

Research Materials Statement

Research materials are available from the corresponding author upon reasonable request.

Pre-Registration Statement

This study was not pre registered.

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