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**Examining the Mediating Effect of Self-Esteem in the Relation Between Emotion
Crafting and Depressive Symptoms**

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Abstract

Relatively few studies within the emotion regulation literature have focused on the proactive aspect of emotion regulation and its role in psychopathology. Furthermore, little is known about the underlying mechanisms in this relation. This cross-sectional study aimed to examine the relation between emotion crafting (characterised by proactive behaviour aimed at generating positive emotions) and depressive symptoms, with global and contingent self-esteem as potential mediators. In total, 119 university students ($M = 22.36$, $SD = 1.58$, range 18 - 25; 82.35% female) completed online questionnaires concerning the study variables. Results indicated that emotion crafting and global self-esteem were significant predictors of depressive symptoms, while contingent self-esteem was not. Furthermore, higher emotion crafting was associated with lower levels of depressive symptoms via higher levels of global self-esteem. These results add to the literature on the regulation of positive emotions, indicating that generating positive emotions may be one of the key processes in protecting individuals from ill-being, by enhancing their self-esteem.

Keywords: emotion crafting, emotion regulation, self-esteem, contingent self-esteem, depressive symptoms

In higher education, mental health has been a topic of growing concern (Kecojevic et al., 2020; Son et al., 2020). University years seem to be the prime time for the development of first depressive episodes (Allart-van Dam et al., 2003), and researchers have noticed an increase in the number of university students seeking student health services (Andrews & Wilding, 2004).

One explanation for students' need for health services is that most students are in the stage of "emerging adulthood", which is defined by feeling neither like a teenager nor like an adult (Arnett, 2000). This stage is characterised by multiple transitions, such as gaining financial autonomy (Arnett, 2001) romantic relationship commitment, and identity development through exploration (Arnett, 2000; Meeus et al., 1999). Such increased freedom and self-reliance engender feelings of separation, loneliness, and failure, which can contribute to the development of depression (Nelson & Barrey, 2005).

Besides increasing autonomy and associated difficulties, emerging adulthood is characterised by intense fluctuating emotions, highlighting the importance of adaptive emotion regulation during this challenging period (Zimmermann & Iwanski, 2014). Emotion regulation can be considered a predictor of emotional problems (Ford, et al., 2014), which can explain increased vulnerability to depression during emerging adulthood (MacLeod & Brownlie, 2014). Consequently, many psychological treatments for mental health disorders focus on emotion regulation (Gross, 2015).

Because students are going through multiple life changes (Arnett, 2001) and are more vulnerable to the development of mental health disorders (MacLeod & Brownlie, 2014), research on the mental health of university students is imperative. Despite emotion regulation being important for emerging adults (Zimmermann & Iwanski, 2014), regulation of positive emotions received little attention. Thus, this study focuses on emotion crafting: the proactive, positive-emotion-focused aspect of emotion regulation (van der Kaap-Deeder et al., 2021) and its relation to self-esteem and depressive symptoms of university students, in hopes of giving new insight for this vulnerable population.

Depression among Emerging Adults

Depression is a mental disorder characterised by symptoms such as sadness, fatigue (American Psychiatric Association, 2020), withdrawal, and changes in sleep and appetite (American Psychological Association, n.d.-a). Roughly 17% of the world's population is affected by depression at some point in life (American Psychiatric Association, 2020), and the turbulent ages of emerging adulthood, the mid-twenties, are the average age for its onset (Bland

et al., 1988; Sloan & Sandt, 2006). According to Ibrahim and colleagues (2013), on average, around 30% of undergraduates report high levels of depressive symptoms.

Depressive symptoms in university students were found to be associated with diverse maladaptive outcomes such as smartphone (Aker et al., 2017) and social media addiction (Haand & Shuwang, 2020), and impaired quality of life (Jenkins et al., 2020). Furthermore, depressive symptoms were associated with poorer academic performance and heightened probability of student dropout (Eisenberg et al., 2009). Most importantly, some of the most prominent depressive symptoms are suicidal ideation, attempt, and planning (American Psychiatric Association, 2013), which means depressive symptoms do not only put student well-being in jeopardy but put their whole life at risk.

The Role of Emotion Crafting in Depressive Symptoms

Given the detrimental outcomes of depressive symptoms in university students, research has focused on determining their sources. According to Aldao and colleagues (2010), emotion regulation is connected to various indicators of psychopathology, and is a transdiagnostic factor that plays an important role in depressive symptoms. Emotion regulation can be defined as the processes through which individuals “influence which emotions they have, when they have them, and how they experience and express these emotions” (Gross 1998, p. 275). In other words, people can change the duration, intensity (Gross, 1998), and quality (Samson & Gross, 2012) of their emotional responses.

In previous studies, depressive symptoms correlated negatively with adaptive emotion regulation strategies (Garnefski & Kraaij, 2006; Omran, 2011; Yalçinkaya-Alkar, 2020), and even more strongly positively with maladaptive strategies (Aldao et al., 2010; Omran, 2011). There is plenty of research on emotion regulation, but studies that focus on the regulation of positive emotions are scarce. Previous studies found that positive emotion suppression positively correlated with depressive symptoms (Gloria & Steinhardt, 2014; Jimenez et al., 2010) and predicted depressive symptoms in non-clinical samples (Raes et al., 2012). Moreover, those diagnosed with depression had difficulties regulating positive emotions: they tended to downregulate, and only sometimes tried to upregulate them (Vanderlind et al., 2020). Despite the scarcity, previous research on the regulation of positive emotions seems to indicate its importance in depressive symptoms.

Seemingly an even greater knowledge gap exists on the relation between depressive symptoms and the generation of positive emotions. Emotion crafting is a recently coined term within emotion regulation that focuses on its proactive, instead of the reactive role (van der

Kaap-Deeder et al., 2021). The idea behind emotion crafting is that people do not only passively react to emotional stimuli, but also create and direct them (van der Kaap-Deeder et al., 2021). Consequently, emotion crafting is “proactive behaviour, referring to anticipatory, deliberate and self-initiated behaviour, aimed at increasing positive feelings” (van der Kaap-Deeder et al., 2021, p. 1).

Emotion crafting shares similarities with savouring: the perceived capacity to generate, intensify, and sustain positive emotions by focusing on past, present, and future positive experiences (Bryant & Veroff, 2006). According to the broaden-and-build theory (Fredrickson, 2001), while negative emotions narrow one’s thought-action repertoire, positive emotions broaden it. Furthermore, the broadened mindset and positive emotions influence one another, resulting in an “upward spiral” that enhances emotional well-being over time (Fredrickson, 2001, 2004; Fredrickson & Joiner, 2002). Previous research indicated that savouring could predict changes in depressive symptoms (Ford et al., 2016). Guided by these findings, it is possible that emotion crafting behaves in a similar manner.

Self-Esteem as an Underlying Mechanism

Despite the importance of emotion regulation in depressive symptoms, little is known about possible mechanisms in this relation. Previous studies showed that the perceived ability to modify emotions (Berking et al., 2012) and the perceived level of school connectedness (Zhao & Zhao, 2015) mediated the relation between emotion regulation and depressive symptoms. In this study, self-esteem was examined as a potential mediator.

Self-esteem is the degree to which individuals evaluate themselves positively (Gecas 1982; Rosenberg et al. 1995; Shibutani, 1988). Maintaining high self-esteem is important for the upkeep of mental health (American Psychological Association, n.d.-b), whereas low self-esteem is considered as a risk factor for psychopathology (Mann et al., 2004) and has been found to relate positively to a variety of mental health disorders, including depression (Orth et al., 2009).

Even though there are a plethora of self-esteem categorisations (Pyszczynski et al., 2004), Deci and Ryan (1995) differentiate between two important types of self-esteem: “true” and “contingent”. True self-esteem is a solid and stable sense of self, whereas contingent self-esteem describes feelings about the self that are “dependent on matching some standard of excellence or living up to some interpersonal or intrapsychic expectations” (Deci & Ryan, 1995, p. 32). Since contingent self-esteem is based on social comparison and fulfilling external

criteria, those who strive for continuous self-evaluation are more likely to have contingent than true self-esteem (Deci & Ryan, 1995).

True and contingent self-esteem are both high in success, but the differences emerge in the face of failure (Deci & Ryan, 1995): those with true self-esteem, while disliking the failure, will still see themselves positively, while those with contingent self-esteem will experience a plummet in self-esteem (Deci & Ryan, 1995). In other words, contingent self-esteem is marked with feelings of superiority in moments of success, which are replaced by feelings of worthlessness in moments of failure (Deci & Ryan, 1995). Thus, people with high contingent self-esteem continuously search for more success and use it as validation to feel worthy (Deci & Ryan, 1995; Kernis, 2003).

Previous research indicated that global and contingent self-esteem play an important role in student well-being: students high in academic-related contingent self-esteem were at a higher risk of an increase in depressive symptoms when facing high academic stress (Schöne et al., 2015). Furthermore, lower global and higher contingent self-esteem had a significant main (Lakey et al., 2014) and interactive effect (Bos et al., 2010; Lakey et al., 2014) on depressive symptoms in non-clinical adolescent and university student samples. Sargent and colleagues (2006) proposed that contingent self-esteem may be a stronger predictor of depressive symptoms than global self-esteem. However, while their study partly supported the statement, others countered it (Bos et al., 2010; Wouters et al., 2013). Finally, depressive symptoms and self-esteem affected one another, with self-esteem having a stronger impact on depressive symptoms than vice versa (Sowislo & Orth, 2013).

Besides its link with depressive symptoms, self-esteem also seemed to relate to emotion regulation strategies: global self-esteem correlated positively with adaptive, and negatively with maladaptive strategies (Yalçınkaya-Alkar, 2020). Furthermore, reappraisal of positive and suppression of negative emotions were associated positively with global self-esteem, while suppression of positive emotions was associated negatively (Nezlek & Kuppens, 2008). Finally, low self-esteem was positively associated with difficulties in emotion regulation (Gomez, 2018). However, there seems to be no research on the relation between emotion regulation and contingent self-esteem.

The Present Research

Previous research largely focused on the relation between emotion regulation and depressive symptomatology while disregarding an important emotion regulation component: the role of generating positive emotions.

Therefore, the first aim of this study was to examine the relation between emotion crafting and depressive symptoms among university students. Per theory and previous research, it was hypothesised that higher emotion crafting would be associated with a lower level of depressive symptoms.

The second aim of the study was to examine the potential mediating role of global and contingent self-esteem in the relation between emotion crafting and depressive symptoms. It was hypothesised that both global and contingent self-esteem would mediate this relation, with global self-esteem relating positively to emotion crafting and negatively to depressive symptoms and contingent self-esteem displaying an opposite pattern of relations.

Method

Participants

Of the original 258 study participants, 139 were excluded for several reasons. Those who completed less than 78% of the survey were excluded, as were individuals older than 25, and those who were not currently a student. Four participants completed the survey in Dutch, and two defined themselves as non-binary in terms of gender. Those participants were excluded to avoid small subgroup sizes.

The final sample of this study comprised 119 students aged 18 to 25 with a median age of 22 years ($SD = 1.58$), of which 98 were female, and 21 were male. Since this research was conducted internationally, the frequency per country can be seen in Table 1. The survey was completed in English by 83 participants, and by 36 in Hungarian, with all stating to have at least a good level of proficiency in the language.

While most participants claimed to be single (56.3%), 26.1% were having a partner but living separately/unmarried, and 17.6% were living with a partner/married. Over half of the participants were unemployed (53.8%), while 31.9% were working part-, and 14.3% full-time. Regarding the highest completed level of education, the sample was mostly split between those who graduated high school or its equivalent (41.2%), and those who obtained a bachelor's degree (49.6%). Others either completed vocational training (3.4%), obtained a master's degree (3.4%), or completed some other level of education (2.5%).

Table 1*Participant Frequencies per Country*

Language	Country	<i>n</i>	%
Hungarian			
	Hungary	35	97.2
	Denmark	1	2.8
	Total	36	100.0
English			
	Croatia	27	32.5
	Germany	12	14.5
	Greece	10	12.0
	The Netherlands	9	10.8
	Albania	4	4.8
	Denmark	4	4.8
	Hungary	3	3.6
	USA	3	3.6
	Indonesia	2	2.4
	Spain	2	2.4
	UK	2	2.4
	Austria	1	1.2
	Italy	1	1.2
	Macedonia	1	1.2
	Total	83	100.0

Procedure

This research employed a quantitative, cross-sectional correlational design, with non-probability sampling methods. Five Utrecht University master students collected data among a convenient sample of university students from multiple countries during November and December 2021. The survey was conducted online in Qualtrics, and participants were recruited through Facebook posts. The post shortly explained the purpose of the research, asked for participation, and the link to the survey was provided.

On the first page of the online survey, the purpose of the study was explained, following the type of data collected. Potential participants were informed that their participation was

completely voluntary, that they were free to stop participating at any point without consequences, and that their data would be processed anonymously. Further, participants were informed that they could contact any of the involved researchers with questions or comments about the study, or if they felt like exposure to the study questions evoked unpleasant feelings. The page concluded with a tick box related to the participant consent statement that they read and were informed about the research, and that they wanted to participate in the study.

Instruments

Background Information

Participants were asked to indicate their age, gender, highest degree of education, marital and employment status, whether they were currently a student (and if so, which program), and their self-rated level of English (for the English version) or Hungarian (for the Hungarian version).

Emotion Crafting

Emotion crafting was measured with the general version of the Emotion Crafting Scale (ECS; van der Kaap-Deeder et al., 2021). The scale comprises 12 questions divided into three dimensions: *awareness* (4 items; e.g., “I know well who I feel good around”), *action* (4 items; e.g., “I seek out situations which make me feel good”), and *cognition* (4 items; e.g., “I deliberately think about things that make me feel good”). The total score is a mean of all item scores and can be calculated for each dimension, and for the whole scale. For the purpose of this study, only the total scale was taken into account. There is currently no information on the validity of this scale, but the total scale was found to have adequate reliability in this study ($\alpha = .82$).

Self-Esteem

Global Self-Esteem. To measure global self-esteem, the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) was used. The scale comprises 10 questions, such as “I take a positive attitude toward myself”. All questions were answered on a 4-point Likert scale, ranging from 0: “Strongly Agree” to 3: “Strongly Disagree”. The total score was calculated as a mean of all item scores, after recoding the items reversely scored. In previous research across 53 nations by Schmitt and Allik (2005), the mean value of internal reliability ($\alpha = .81$) was satisfactory, which can also be said for the reliability in the current study ($\alpha = .86$).

Contingent Self-Esteem. Contingent self-esteem was measured with the Contingent Self-Esteem Scale (CSES; Paradise & Kernis, 1999; see also Kernis & Goldman, 2006). The scale comprises 15 questions, such as “An important measure of my worth is how physically

attractive I am”. All questions were answered on a 5-point Likert scale, ranging from 1: “Not at All Like Me” to 5: “Very Much Like Me”. The total score was calculated as a mean of all item scores, after recoding the items that are reversely scored. Previous research indicated this scale has an acceptable internal consistency ($\alpha = .85$; Kernis & Goldman, 2006), which was replicated in the current study ($\alpha = .84$).

Depressive Symptoms

Depressive symptoms were measured with the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977). The scale comprises 20 questions, such as “I felt lonely”. All questions were answered on a 4-point Likert scale, ranging from 0: “Rarely or none of the time (less than 1 day)” to 3: “Most or all of the time (5-7 days)”. The total score was calculated as a mean of all item scores, after recoding the items that are reversely scored. The scale had a high internal consistency, both in Radloff’s (1977) validation, with Cronbach’s α ranging from .85 to .90, and in the present study ($\alpha = .90$).

Plan of Analyses

The obtained data were analysed in “*IBM SPSS Statistics 26*”. First, descriptives and Pearson correlations between variables were calculated. Furthermore, to examine the effects of the background variables on the outcome and mediating variables, a MANCOVA was conducted, followed by individual ANOVA. A forward hierarchical multiple linear regression was conducted to identify predictors of depressive symptoms. The mediation analysis was performed using a 4.0 version of the PROCESS tool by Hayes (2017).

Results

Preliminary Analyses

The descriptive statistics of, and correlations among variables can be found in Table 2. While global and contingent self-esteem were approximately symmetric, emotion crafting was moderately negatively skewed, while depressive symptoms showed moderate positive skewness. Moreover, all distributions were platykurtic. Furthermore, according to the Shapiro-Wilk test, nearly all variables deviated from the normal distribution. Thus, Spearman’s correlation was applied to examine correlations.

All intercorrelations were significant but one. Whereas its association with contingent self-esteem was not significant, emotion crafting correlated weakly and positively with global self-esteem, and weakly negatively with depressive symptoms. Global self-esteem was associated weakly and negatively with contingent self-esteem, and moderately negatively with

depressive symptoms. Contingent self-esteem, however, was related to depressive symptoms weakly and positively.

Table 2

Descriptive Statistics and Spearman Correlations Between the Study Variables (N = 108)

Variable	<i>C</i>	<i>SD</i>	<i>q</i>	<i>Skp</i>	<i>K</i>	<i>S-W</i>	1	2	3	4
1 EC	4.17	0.49	0.33	-0.50	-0.13	.97**	-			
2 GSE	2.70	0.51	0.30	0.07	0.14	.99	.38***	-		
3 CSE	3.60	0.56	0.43	-0.21	-0.77	.97**	-.03	-.27**	-	
4 DS	1.95	0.57	0.40	0.71	-0.08	.95***	-.31***	-.58***	.25**	-

Note. *C* = Median. *q* = Semi-interquartile range. *Skp* = Skewness. *K* = Kurtosis. *S-W* = Shapiro-Wilk test. EC = Emotion crafting. GSE = Global self-esteem. CSE = Contingent self-esteem. DS = Depressive symptoms.

p* < .01. *p* < .001.

To examine the relation between the background variables (survey language, gender, age, and level of completed education) and study variables, MANCOVA was applied. The analyses indicated that only the effect of gender on emotion crafting was significant [$F(1, 114) = 2.61, p = .04, \eta_p^2 = .09$]. Follow-up one-way ANOVA showed that women ($M = 4.16, SD = 0.48$) scored higher on emotion crafting than men [$M = 3.86, SD = 0.47; F(1, 117) = 6.30, p = .01$]. Consequently, further analyses were conducted while controlling for gender.

Primary Analyses

Hierarchical Regression

A forward hierarchical multiple linear regression was conducted to identify predictors of depressive symptoms. In the first step, gender was added. In the second step, emotion crafting was added, followed by global and contingent self-esteem in the third step of the analysis. At each step, variables were added to the model based on their *p*-values, with the threshold for inclusion being $p = .05$.

A total of 33% of variance of depressive symptoms was explained by the predictors from Table 3. In step 1, gender did not significantly relate to depressive symptoms. In step 2, emotion crafting emerged as a significant predictor, with higher emotion crafting relating to lower depressive symptoms [$F(1, 106) = 10.65, p = .001$]. In step 3, global self-esteem was included in the regression [$F(1, 160) = 39.57, p < .001$], with higher global self-esteem relating

to lower depressive symptoms. After the inclusion of global self-esteem in step 3, emotion crafting became a non-significant predictor.

Table 3

Results of a Hierarchical Regression Analysis Predicting Depressive Symptoms

Predictor	<i>B</i>	<i>SE B</i>	β	ΔR^2
Model 1				.09**
Emotion crafting	-0.36	.10	-.31***	
Model 2				.24***
Emotion crafting	-0.14	.09	-.12	
Global self-esteem	-0.59	.09	-.52***	

Note. Gender was controlled for in this analysis.

** $p < .01$. *** $p < .001$.

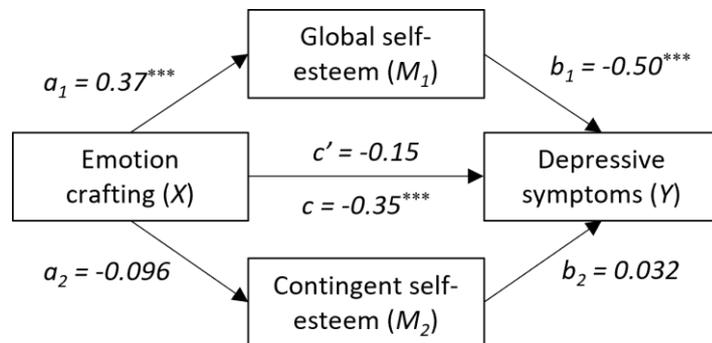
Mediation

To examine the mediating role of global and contingent self-esteem, mediation analysis was applied. The indirect effect of emotion crafting on depressive symptoms was tested using a Bootstrap technique with 5000 samples. In the analysis, emotion crafting was the independent variable, global and contingent self-esteem were the mediators, and depressive symptoms were the dependent variable. Additionally, gender was controlled for.

First, following the paths a_1 and a_2 from Figure 1, emotion crafting was related to global [$t(116) = 4.23, p < .001$], but not to contingent self-esteem [$t(116) = -1.02, p = .31$]. Second, following paths b_1 and b_2 , global self-esteem was associated with depressive symptoms [$t(114) = -5.96, p < .001$], whereas contingent self-esteem was not [$t(114) = 0.40, p = .69$]. Third, following the c and c' paths, emotion crafting was significantly related to depressive symptoms with the mediators excluded from the model [$t(116) = -3.87, p < .001$], but the relation was not significant anymore when the two mediators were included in the regression [$t(114) = -1.84, p = .068$]. Finally, the indirect effect of emotion crafting on depressive symptoms was significant via global self-esteem [$b = -.22, SE = .058, 95\% CI(-0.34,-0.11), z = 3.45, p < .001$]. On the other hand, there was no significant indirect effect via contingent self-esteem [$b = -.004, SE = .012, 95\% CI(-0.037,0.016), z = 0.37, p = .71$]. Thus, global self-esteem fully mediated the relation between emotion crafting and depressive symptoms, with the full model explaining 35.15% of the variance of depressive symptoms.

Figure 1

The Mediating Effect of Global and Contingent Self-Esteem in the Relation between Emotion Crafting and Depressive Symptoms



Note. Presented effects are standardised regression coefficients.

$^{***} p < .001$.

Discussion

Prior research has shown that adaptive emotion regulation and self-esteem are key to understanding depressive symptoms (Bos et al., 2010; Yalçinkaya-Alkar, 2020) and that global self-esteem mediated the relation between emotion regulation strategies and depressive symptoms (Yalçinkaya-Alkar, 2020). Surprisingly, mechanisms between emotional functioning and depressive symptoms are under-researched, and little is known about the protective role of positive emotions. Drawing upon previous studies (Gloria & Steinhardt, 2014; Jimenez et al., 2010; Raes et al., 2012; Vanderlind et al., 2020), research on the role of generating positive emotions and its relation to depressive symptoms seems to be important. Thus, this study examined whether emotion crafting is related to depressive symptoms and whether their relation was mediated by self-esteem.

The first aim of this study was to examine the relation between emotion crafting and depressive symptoms, hypothesising a significant negative association. Results showed that emotion crafting was negatively associated with depressive symptoms, thus confirming the first hypothesis. The findings were comparable to those of Yalçinkaya-Alkar (2020), Garnefski and Kraaij (2006), and Omran (2011), who found that adaptive emotion regulation strategies related negatively to depressive symptoms. The broaden-and-build theory (Fredrickson, 2001, 2004) highlights how generating positive emotions broadens the thought-action repertoire and builds various resources. It is likely that psychological resources, which include resilience (Fredrickson, 2001), also comprise self-esteem. These resources might then mitigate the aftereffects of negative emotions (Fredrickson, 2001) and buffer the effect of negative emotions

on depressive symptoms (Riskind et al., 2013). Via this mechanism, emotion crafting may serve as a protective factor against depressive symptoms.

The second aim of this study was to examine the mediating effects of global and contingent self-esteem in the relation between emotion crafting and depressive symptoms. Per the proposal of Sargent and colleagues (2006), it was hypothesised that global self-esteem would be a significant predictor of depressive symptoms and mediate the relation. Furthermore, contingent self-esteem was hypothesised to be a significant predictor of depressive symptoms, and to mediate the relation beyond global self-esteem.

Results indicated that global self-esteem related negatively to depressive symptoms. Furthermore, global self-esteem fully mediated the relation between emotion crafting and depressive symptoms. Thus, the second hypothesis was confirmed. The results corroborated previous studies (Bos et al., 2010; Wouters et al., 2013; Yalçinkaya-Alkar, 2020) that reported a negative association between global self-esteem and depressive symptoms. Moreover, the fully mediating effect of global self-esteem supported the findings of Yalçinkaya-Alkar (2020), which suggested that global self-esteem fully mediated the relation between refocusing on planning (an adaptive emotion regulation strategy) and depressive symptoms. Emotion crafting partly focuses on seeking out experiences of bonding and social support, which may bring pleasure, happiness, and most importantly, feelings of connectedness. Satisfying this psychological need is the key to higher self-esteem (Moller et al., 2006), which may, in turn, serve as a shielding factor against depressive symptoms (Sowislo & Orth, 2013). However, further research is needed to draw conclusions about these relations.

However, contingent self-esteem was neither a significant predictor of depressive symptoms nor a mediator of the relation between emotion crafting and depressive symptoms. Thus, the third hypothesis was rejected. These findings countered those of Wouters and colleagues (2013), in which contingent self-esteem was associated with depressive symptoms. This disparity may be a result of sample characteristics, such as participants' cultural background. Whereas participants of Wouters and colleagues (2013) were only from Belgium, the participants of the current study were from various countries and from both individualistic and collectivistic backgrounds. Cultural values are likely to affect self-worth since they convey what constitutes being a good member of a culture (Park et al., 2006). Thus, further research is needed to determine whether culture influences this relation. Furthermore, the lack of a mediating effect of contingent self-esteem was not in line with theoretical expectations.

Drawing upon the self-determination theory (Deci & Ryan, 1995; Moller et al., 2006), true self-esteem is developed via autonomous action, experiences of self-efficacy, and feelings of connection to others. It is likely that engaging in activities that foster positive emotions comprises those criteria and thus, emotion crafting would be expected to play a fundamental role in developing integrated, instead of contingent self-esteem, which may then protect from depressive symptoms. However, Bos and colleagues (2010) and Wouters and colleagues (2013) found contingent self-esteem to be a significant predictor of depressive symptoms only when global self-esteem was not taken into account, suggesting that, in depressive symptoms, the level of self-esteem is more relevant than its contingency. Further, Sargent and colleagues (2006) found that self-esteem that was contingent on external sources (e.g., appearance) was a predictor of depressive symptoms, but self-esteem that was contingent on internal sources (e.g., virtue) was not. Thus, instead of only determining the level of contingent self-esteem, it may be relevant to also distinguish between its sources.

Strengths and Limitations

This study had several strengths. First, the study is important for psychological research since it is one of the first to shed light on the relation between generating positive emotions, depressive symptoms, and self-esteem. Second, this study included reliable and standardised instruments for measuring the study variables. Third, the participants came from diverse cultural backgrounds, increasing the generalisability of the findings.

However, this study did not come without limitations. First, this study employed a cross-sectional design, meaning it is not possible to draw causal conclusions. Second, the sampling was convenient, small, and many participants did not participate in their language since the survey only supported three languages. Third, participants were from various countries and cultural backgrounds, which may have affected the relations between the study variables. In sum, the nature of this sample makes it non-representative of the population of students in emerging adulthood, and it is not possible to draw generalized conclusions about the relation of these variables in this population.

Future Directions

The findings of this study open possibilities for future research. First, the current study focused on emotion crafting in general. Promising results encourage future studies to examine the relations more deeply by focusing on the subscales of emotion crafting (action, awareness, and cognition). Furthermore, it may be fruitful to examine the relations between emotion

crafting, depressive symptoms, and the degree to which self-esteem is contingent on external sources.

Second, the non-significant association of contingent self-esteem and depressive symptoms raised questions about the effects of cultural values. Thus, future research may examine whether contingent self-esteem is a more significant predictor of depressive symptoms in collectivistic than in individualistic cultures.

Third, the current study focused on emerging adults. However, these study variables are not limited to emerging adulthood. Further studies may focus on replicating findings in other life stages and examining age differences in the relations between variables. Furthermore, longitudinal studies may give more insight into emotion crafting and its changes throughout the lifetime.

Finally, given the cross-sectional design and a non-probability sampling method, this study is limited in the generalisation of results. It would be useful to employ experimental designs to manipulate emotion crafting and determine its effect on self-esteem and depressive symptoms.

Conclusion and Practical Implications

Present findings have practical relevance, pointing to the importance of self-esteem and the capacity to generate positive emotions in protecting students in emerging adulthood from depressive symptoms. These findings suggest that interventions aimed at enhancing emotion crafting in students with higher depressive symptoms may be beneficial in the prevention of further development of psychopathology.

To conclude, this study was one of the first to focus on the protective role of self-esteem and emotion crafting in depressive symptoms in university students. While both global self-esteem and emotion crafting were negatively associated with depressive symptoms, contingent self-esteem was neither associated with depressive symptoms nor mediated the relation between emotion crafting and depressive symptoms. However, the relation was fully mediated by global self-esteem.

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