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# Emotion Crafting and Individuals' Life Satisfaction and Depressive Symptoms: The Mediating Role of Positive and Negative Affect

Bachelor's thesis in Psychology  
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## **Preface**

This bachelor thesis represents the final product of my three-year bachelor program in psychology at NTNU. I chose this project because I find the topic of emotion crafting and research in the field of positive emotion regulation very interesting and intriguing.

In the current bachelor thesis, both the literature review and writing of the paper were done independently, with guidance from my supervisor. The whole bachelor group, including me, participated in recruiting volunteers for the current study. My supervisor Jolene Van der Kaap-Deeder helped me a lot with supporting feedback, first on my research questions and then on my writing, all through the semester. I also received good help from Gulsen Guldeste, in discussing my ideas for the analyses and helping me understand mediation analysis better. Lastly, I want to thank them for all the help they have given me and for all that I have learned from this experience.

## Abstract

Emotion crafting refers to individuals' awareness of, and proactive behaviour towards, positive emotional experiences. The construct is related to emotion regulation and is associated with beneficial outcomes, such as higher levels of well-being and lower levels of ill-being. This study aimed to investigate the relation between emotion crafting and life satisfaction and depressive symptoms, and whether this relation was mediated by positive and negative affect. In total, 116 participants ( $M_{age} = 29.41$ ,  $SD = 11.87$ , 61% female) answered a digitally distributed baseline questionnaire that measured levels of general emotion crafting, positive and negative affect, life satisfaction, and depressive symptoms. Results showed that emotion crafting related to higher levels of life satisfaction and lower levels of depression symptoms, with the experience of higher positive affect and lower negative affect mediating these relations. Current findings replicated some of the earlier findings of emotion crafting and further contributed to the increasing literature on positive emotion regulation. The results also indicate the importance of understanding more about proactive emotion regulation and its possible influences on individuals well- and ill-being.

Depression is a common mental illness that afflicts about one in ten of the Norwegian population, especially young adults (Tesli, 2014). It is characterized by a prolonged feeling of sadness, loss of interest, and a decrease in energy (Tesli, 2014). Moreover, on a yearly basis, this type of psychopathology alone costs the Norwegian government about 1.5 billion NOK (Johannessen, 2022). Studies have also shown an increased prevalence of depression during the Covid-19 pandemic (Hawes et al., 2021). For this reason, a lot of research has been devoted to understanding the mechanisms behind depression, and how to reduce and prevent it in society. Earlier empirical work points toward the experience of positive emotions as more than just an indicator of well-being, but also a possible preventive factor for ill-being, such as depression (Silton et al., 2020). Additionally, positive emotional experience has also been linked to many positive outcomes, such as higher levels of life satisfaction, and other forms of well-being (Tugade & Fredrickson, 2007). Recent studies have also stressed the proactive and conscious processes that individuals undertake to achieve, maintain, and increase positive emotion. Such processes have been converged under the term “emotion crafting”, where recent research demonstrates its predictive value for ill- and well-being (van der Kaap-Deeder et al., 2022). What is less known are the underlying mechanisms that might govern the relation between emotion crafting and its association with the population’s well-being and ill-being, such as life satisfaction and depressive symptoms. Hence, this study aims to examine whether emotion crafting relates to life satisfaction and depressive symptoms, in addition, to explore the possible mediation effect of affect on this relationship.

### **The Importance of Emotion Regulation in Ill- and Well-being**

Emotions can be understood as mental, behavioural, and social processes that have functioned as solutions to adaptive problems throughout human evolution (Gross, 1999). Despite emotions being a product of evolution, this does not imply that they are appropriate to the situations we face today. Indeed, if one looks into the causes of human dysfunction, psychopathology, and suffering, research points to emotion as a common determinant (Gross, 1999). Emotions can lead to behaviour that causes suffering both for ourselves and others, such as deceitful liaisons, aggressiveness, or hasty business decisions. This is where emotion regulation comes into play, and refers to the “the processes by which we influence which emotions we have, when we have them, and how we experience and express them”(Gross, 2002, p. 2). Research has mostly studied emotion regulation strategies aiming to reduce the impact of negative emotion-eliciting events. The use of adaptive emotion regulation strategies such as reappraisal (cognitive reframing of an event to reduce the experience of a negative emotion) has been linked to several beneficial outcomes, including higher subjective well-



being and improved social and cognitive functioning (Diener & Larsen, 1993; Gross, 2002; Gross & John, 2003). Impairments in emotion regulation or the use of maladaptive strategies, however, are associated with lesser well-being and the development and maintenance of symptoms of psychopathology like depression, by hindering individuals to effectively deal with emotional situations (Aldao & Nolen-Hoeksema, 2012).

### **Positive Emotion Regulation**

Predominantly, studies on emotion regulation have focused on how people cope with negative events through different ways of regulating their negative emotions. Less attention, on the other hand, has been given to the study of positive emotions, and to the modification and maintenance of pleasant emotional experiences. This is not surprising, given the importance of regulating one's negative emotions to deal with daily challenges and maladaptive regulation being linked to psychopathology. However, Fredrickson's (1998) Broaden and Build theory contributes to the understanding of how also positive emotional experiences may foster well-being and reduce undesirable outcomes. The theory stipulates that negative emotion entail specific action tendencies that prepare the body and mind for fight or flight, through focusing and narrowing thoughts and actions. Conversely, the effect of positive emotions is hypothesized to prompt the opposite, widening the mindset to make a broader array of thoughts and actions more easily accessible. This broadening and flexibility of the mindset are then said to build personal resources and further increase individuals' resilience. Furthermore, the author propose that the broadened state of mind is made more obtainable through the active pursuit of positive emotions. To illustrate, Tugade and Fredrickson (2007) compared this pursuit of positive emotion to the gradual exercise of a muscle or skill. The more one practices the muscle the stronger it will get over time. Similarly, repeated exposure to and pursuit of positive emotional experiences will, in accordance with the theory, facilitate the attainment of this state of mind. In line with research on automatic behaviour, the authors point out how cultivating positive emotions to cope or increase one's happiness, may become automatized behaviour if repeated frequently and consistently (Tugade & Fredrickson, 2007). In this way, strategically utilizing positive emotions can over time and repetition become automatized, requiring less and less attention and effort to implement. This can be interpreted as that all individuals have the capacity to contribute to their well-being and illbeing, in addition to developing resilience, by utilizing positive emotion as a proactive coping mechanism. Their study did, however, found some individual differences with those scoring high on trait resilience being better at exploiting this skill (Tugade & Fredrickson, 2007).

In line with these findings, emerging research is showing promising associations between positive emotion regulation and desirable outcomes. People use an array of different strategies to increase or enhance their positive emotions. For instance, an individual might reminisce about a pleasant memory, in an attempt to maintain or produce a positive emotion (Bryant & Veroff, 2007). This and other approaches to increase one's own happiness can foster positive emotional experience and function as a tool for coping with negative experiences (Fredrickson et al., 2000). Moreover, regulation strategies that maintain or enhance positive emotion have been shown to not only prompt brief beneficial coping outcomes but also to have long-lasting benefits (Fredrickson & Joiner, 2002; Tugade & Fredrickson, 2007). Thus, one could argue that positive emotions contribute to both hedonic well-being, referring to subjective short-term experience of pleasure, as well as eudaimonic well-being, related to long term well-being and self-actualization and finding purpose in one's life.

### **Emotion Crafting**

Although these preliminary findings demonstrate a growing knowledge and interest in positive emotion regulation, there is still a lot more to be learned about how individuals themselves contribute to their emotional life. Humans have the capacity to proactively manage their emotions, in contrast to only reacting to them. Van der Kaap-Deeder and colleagues (2022) recently postulated a new theoretical construct called emotion crafting, to take this factor into account. It is defined as “proactive behaviour, referring to anticipatory, deliberate and self-initiated behaviour, aimed at increasing positive feelings.” (van der Kaap-Deeder et al., 2022, p. 6). As indicated in the definition, the construct emphasizes both the individual's awareness of positive emotion-inducing contexts, as well as the knowledge and will to act upon them. To illustrate, a person that has a high score in emotion crafting will, for instance, be aware of social situations that foster positive emotion (being with family), and proactively seek out such situations (spending more time with family) to intentionally increase one's positive emotions. The authors proposed that emotion crafting would effect similar outcomes as emotion regulation, but given the proactive nature of emotion, crafting would do so in a stronger fashion (van der Kaap-Deeder et al., 2022). In the original study, using a sample with over 300 Norwegian participants in the age group 18-70, the researchers succeeded in validating their emotion crafting scale (ECS), containing the two factors awareness and action. The action subscale was found to be significantly related to higher levels of positive affect, which in turn related to higher levels of life satisfaction and lower levels of internalizing symptoms. The awareness subscale was found to be positively related

to life satisfaction, however, the study was not able to find any significant mediation in this relation (van der Kaap-Deeder et al., 2022). Still, the result demonstrated how the proactive attainment of positive emotional experiences seems to relate to beneficial outcomes such as higher well-being and lesser ill-being.

There already exists some indirect evidence indicating the role of emotion crafting in individuals' optimal functioning. For instance, earlier research on job crafting has linked proactive behaviour in the workplace to increases in work engagement, performance, and satisfaction (Rudolph et al., 2017). Additionally, this type of initiated and intended direction of behaviour has been shown to induce well-being and decrease ill-being (Henricksen & Stephens, 2013; Lyubomirsky & Layous, 2013). Similar to emotion crafting, Bryant's (2003) theoretical model of savouring is concerned with how individuals obtain and maintain their positive emotional states. It suggests that some of the strategies people use to reach this goal are to attend to feelings of anticipation of upcoming positive events, appreciation of current positive events, or reminiscence of past pleasant experiences. All three are different strategies to the same mean, savouring a pleasant moment and achieving and maintaining a positive emotion.

Several studies support the claims of savouring theory in that it is efficient emotion regulation strategies, as well as having important influence on individuals' coping and well-being. Correlations studies have shown that individuals that tend to practice savouring beliefs experience increased subjective well-being, which is true for almost all ages (Bryant, 1989; Meehan et al., 1993). Other studies underpin these findings by presenting positive correlations between savouring and higher levels of well-being, optimism, inner locus of control, self-esteem, and overall life satisfaction (Bryant, 2003). Even more interesting, savouring is also found to correlate negatively with traits of psychopathology such as hopelessness and depression (Bryant, 2003). This could point to the importance of proactive positive emotion regulation in increasing beneficial outcomes such as individual well-being, as well as possibly playing a role in reducing negative outcomes such as psychopathology.

Despite the emerging research on emotion crafting and the role of proactive pursuit of positive emotion, less is known about the mechanisms governing its relations to ill- and well-being. In the original study on emotion crafting positive affect was assessed as such a mechanism, and significantly mediate the relation between emotion crafting and different outcomes related to ill- and well-being, although only for the action subscale (van der Kaap-Deeder et al., 2022). In accordance with these findings, research on the broaden and build theory have also demonstrated how cultivating positive emotions induces well-being as well

as build personal resources to help cope with negative emotion-eliciting events (Tugade & Fredrickson, 2007). Results from Fredrickson's (2000) earlier study showed how experimental induced positive emotions, including joy (high activation) and contentment (low activation) produced a wider thought-action repertoire relative to a neutral state, and opposite to induced negative emotions. Later studies also demonstrated how cultivating positive emotions and achieving cognitive broadening produced an upwards spiral contributing to long term well-being and an increase in resilience to ill-being (Fredrickson & Joiner, 2002). Furthermore, Fredrickson's (2000) Undoing hypothesis stipulates that positive emotions, additionally to promoting well-being, also carry out a rebalancing, neutralising the effect of negative emotion. Testing this hypothesis, individuals were initially induced with cardiovascular reactivity by showing films eliciting fear. The results showed the individuals that later watched contentment-eliciting and comical films had a faster recovery, relative to individuals watching neutral or negative emotional film clips (Fredrickson et al., 2000). Put together, research findings seem to suggest that the relation between emotion crafting and outcomes in ill-being and well-being might be mediated by positive and negative affect.

### **The Present Study**

The role of positive emotion regulation and its relation to individuals' well-being and ill-being has become of rising interest. New research on emotion crafting has demonstrated how especially the proactive strive for positive emotional experience is related to higher levels of life satisfaction and lower levels of internalizing symptoms (van der Kaap-Deeder et al., 2022). However, the concept of emotion crafting is still a relatively new theoretical construct, and there is still more to be learned, especially about the possible mediating effects. Despite that earlier research on emotion crafting have shown positive affect to explain some of the variances in outcomes in well- and ill-being, little is known about negative affect in this relation (Datu & King, 2016; van der Kaap-Deeder et al., 2022). Building upon these findings, this study aims to examine the mediation of positive and negative affect, in the relation between emotion crafting and different outcomes in well- and ill-being, specifically life satisfaction and depressive symptoms. The first hypothesis is that emotion crafting is positively related to life satisfaction, especially via a high level of positive affect. The second hypothesis is that emotion crafting is negatively related to depressive symptoms, especially via a low level of negative affect

## **Method**

### **Participants**

The sample consisted of 116 adults, including 45 (39%) men and 71 (61%) women. Participants' age ranged between 18 and 62, with an average of 29 years ( $M = 29.41$ ,  $SD = 11.87$ ). With respect to the participants' education level, most people had completed upper secondary high school (42.2%) with completion of a bachelor's degree, or equivalent to it, on a near second (36.2%). Regarding the participants' present occupation or study, 66% were students, whereas 27% worked full time, 43% part-time and 30% did not work. Most of the respondents reported being single (40.5%) or married/cohabitant (36.2%), with others reporting having a boyfriend/girlfriend (21.6%) and a few being separated or divorced (1.7%). An overview of the participants' sociodemographic characteristics is portrayed in Table 1.

**Table 1**

*Sociodemographic Characteristics of the Respondents (N = 116)*

Background characteristics	<i>n</i>	%
<b>Gender</b>		
Female	71	61
Male	45	39
<b>Age</b>		
18-28 years	82	72
29-39 years	12	12
40-62 years	22	19
<b>Education level</b>		
Primary school	2	2
Vocational school	8	7
High school	49	42
Bachelor's degree	42	36
Master's degree	15	13
<b>Marital Status</b>		
Single	47	41
Boyfriend/Girlfriend	25	22
Married or Cohabitant	42	36
Separated/Divorced	2	2
<b>Employment</b>		
Full-time	31	27
Part-time	50	43

None	35	30
Student		
Yes	77	66
No	39	34

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## Procedure

The data collection part of the present study started in March 2022, as part of a bachelor project and a larger international research project concerning emotion crafting. Exclusion criteria for this study included individuals under 18, in addition to people suffering from psychiatric, developmental, or substance use disorder, or with substantial visual or hearing impairments. The study employed snowball and convenience sampling methods. Voluntary and eligible participants were recruited by ten psychology bachelor students following the “Bachelor project” course at the NTNU, by searching in their networks and through social media. Initially, all the bachelor students were supposed to recruit 14 participants each, making the planned sample size 140 participants. In the end, 122 participants were successfully recruited.

The study consisted of three separate parts, including home visits, data collection of the baseline questionnaire, and one week of daily assessments. During the home visits, participants received an information letter and were asked to sign an informed consent form before joining the study. Those who agreed to participate, received a link through their email to the online survey tool “Nettskjema” on March 12, as to fill out the baseline assessment. This took approximately 30-50 minutes to fill out. Due to a low response rate on March 12, the deadline for answering the baseline assessment was extended to the next day (Sunday, March 13) at 17.00. This resulted in a response rate of 95% (116 out of 122) which concluded the final sample. The last part of the data collection consisted of two daily assessments lasting for seven consecutive days. This study focused exclusively on the baseline assessment, hence that part has been omitted. The study was approved by the Norwegian Center of Research Data (NSD) (334714).

## Measures

### *Emotion Crafting Scale*

The Emotion Crafting Scale (ECS) (van der Kaap-Deeder et al., 2022) was employed to assess participants’ awareness of, and proactive behaviour towards, positive emotional experiences, including one subscale on awareness (three items) (e.g., “I am aware of which people I feel good around”), and one subscale on action (seven items) (e.g., “I seek out

situations which make me feel good.”). Participants were asked to rate how much they agreed with each statement on a general basis on a five-point Likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree). Recent research by Van der Kaap-Deeder and colleagues (2022) demonstrated the scale's validity and reliability in a large representative Norwegian sample. The scale was also reliable in the current study ( $\alpha = .80$ ).

### ***Positive and Negative Affect Schedule***

Affect was assessed using the 20-item Positive and Negative Affect Schedule (PANAS) (Watson et al., 1988), considering both subscales measuring positive affect (Pressman et al., 2020) and negative affect (Berge et al., 2016). Items were rated on a five-point Likert-scale from 1 (Very little or not at all) to 5 (Extremely), indicating the extent to which they experienced each emotion in the present moment (e.g., “Nervous”, “Active”, “Excited”). Earlier research has demonstrated the PANAS to be a reliable and valid measure of affect (Watson et al., 1988), with both the positive and negative affect subscale demonstrating very good internal consistencies of, respectively,  $\alpha = .90$  and  $\alpha = .91$

### ***Satisfaction with Life Scale***

The Satisfaction with Life Scale (SWLS) (Diener et al., 1985) assesses the degree of life satisfaction with five items (e.g., “I am satisfied with my life”). Participants were asked to rate how much they agreed with the different items on a Likert scale ranging from 1 (Strongly disagree) to 7 (Strongly agree). Previous research found the SWLS to show strong reliability and validity (Moksnes et al., 2014). Also, in this study the scale was found to have an adequate reliability ( $\alpha = .89$ ).

### ***Hopkins Symptom Checklist-25***

The depressive symptoms subscale (15 items; e.g., “Feelings of worthlessness”) of the Hopkins Symptom Checklist-25 (HSCL) was employed to assess depressive symptoms (Derogatis et al., 1974). Participants were asked to rate how much of a nuisance or inconvenience different symptoms (e.g., “Cry easily”), have been for them the past 14 days, ranging from 1 (Not at all) to 4 (A lot) on a four-point Likert scale. Earlier research has demonstrated the scale to be reliable, ( $\alpha = .88$ ), and the current study showed excellent reliability ( $\alpha = .92$ ) (Lee et al., 2008).

### **Statistical Analyses**

All analyses were performed in IBM SPSS (version 27). First, reliabilities for all the scales and subscales were calculated. Second, a correlation analysis was run to examine the relation between the study variables. Third, to further examine the relations between the background variables on the outcome (and mediating) variables a multivariate analysis of

covariance (MANCOVA) was conducted. Wilk’s Lambda was used to interpret the results. Fourth, after looking into the effects of the background variables, the two main parallel multiple mediation analyses were run. The first one examining emotion crafting as a predictor of life satisfaction, and the second as a predictor for depressive symptoms, both through positive and negative affect. To test the significance of the indirect effects, a 95% bias-corrected confidence interval based on 10,000 bootstrap samples was used. To perform these analyses, an add-on package was downloaded to SPSS called PROCESS macro v4.0. The parallel multiple mediation analyses were run using Model 4 in the add-on package.

## Results

### Descriptive Statistics and Preliminary Analyses

An overview of descriptive statistics of and bivariate correlations among the study variables can be found in Table 2. There was a significant positive correlation between emotion crafting and positive affect, as well as between emotion crafting and life satisfaction. Emotion crafting also showed a significant negative correlation with negative affect and depressive symptoms. Furthermore, significant positive correlations were found between positive affect and life satisfaction, in addition to between negative affect and depressive symptoms. A significant negative correlation was found between positive affect and depressive symptoms.

**Table 2**

Variable	1.	2.	3.	4.	5.
1. Emotion Crafting	-				
2. Positive Affect	.27**	-			
3. Negative Affect	-.26**	.03	-		
4. Life Satisfaction	.24**	.32**	-.36**	-	
5. Depressive Symptoms	-.26**	-.18	.67**	-.53**	-
<i>M</i>	3.90	3.05	1.62	4.84	1.89
<i>SD</i>	0.51	0.75	0.65	1.18	0.61

*Note.* \* $p < .05$ , \*\* $p < .01$

A MANCOVA was conducted to test whether there were any significant relations between the background variables and the mediators (positive and negative affect) and the outcome variables (life satisfaction and depressive symptoms). In the MANCOVA, gender



and marital status were set as fixed factors, education, and age as covariates, and the mediators and outcome variables as dependent variables. Using Wilks' Lambda ( $\Lambda$ ), there was no statistically significant difference between gender,  $F(4, 104) = 1.53, p = .199$ , Wilks'  $\Lambda = .944$ , partial  $\eta^2 = .06$ ., or marital status,  $F(12, 276) = 1.63, p = .083$ , Wilks'  $\Lambda = .834$ , partial  $\eta^2 = .06$ ., on the combined dependent variables after controlling for education and age. Given these results, it was decided not to control for any background variables in the primary analysis.

### **Primary Analyses**

Two parallel multiple mediation analyses were conducted to assess the mediating role of positive and negative affect on the relation between emotion crafting and first life satisfaction, and second depressive symptoms, see Table 3. When positive and negative affect were not included in the models (the total effect), emotion crafting significantly predicted life satisfaction,  $b = 0.55, 95\% \text{ CI}[0.14, 0.97], p = .009$ , and depressive symptoms,  $b = -0.31, 95\% \text{ CI}[-0.53, -0.10], p = .005$ . Furthermore, in both mediation analyses emotion crafting was a significant positive predictor of positive affect,  $b = 0.39, SE = .13, p = .004$ , as well as a significant negative predictor for negative affect,  $b = -0.32, SE = .11, p = .006$ . In the first mediation analysis, positive affect positively predicted life satisfaction,  $b = 0.50, SE = .14, p < .001$ , while negative affect negatively predicted life satisfaction,  $b = -0.64, SE = .16, p < .001$ . In the second mediation analysis, depressive symptoms were negatively predicted by positive affect,  $b = -0.15, SE = .06, p = .009$ ., and positively predicted by negative affect,  $b = 0.63, SE = .07, p < .001$ . The results of the first mediation analysis revealed a significant indirect effect of emotion crafting on life satisfaction through positive affect,  $b = 0.20, 95\% \text{ CI}[0.06, 0.38]$ , and negative affect,  $b = 0.21, 95\% \text{ CI}[0.05, 0.41]$ . The second parallel multiple mediation analysis also found a significant indirect effect of emotion crafting on depressive symptoms through negative affect,  $b = 0.20, 95\% \text{ CI}[-0.37, -0.06]$ , and via positive affect,  $b = -0.06, 95\% \text{ CI}[-0.16, -0.00]$ . Emotion crafting explained 7% of the variance in positive and negative affect,  $R^2 = .07$ . Meanwhile, 25% of the variance in life satisfaction and 49% of the variance in depressive symptoms was accounted for by positive and negative affect and emotion crafting,  $R^2 = .25$ .,  $R^2 = .49$ .

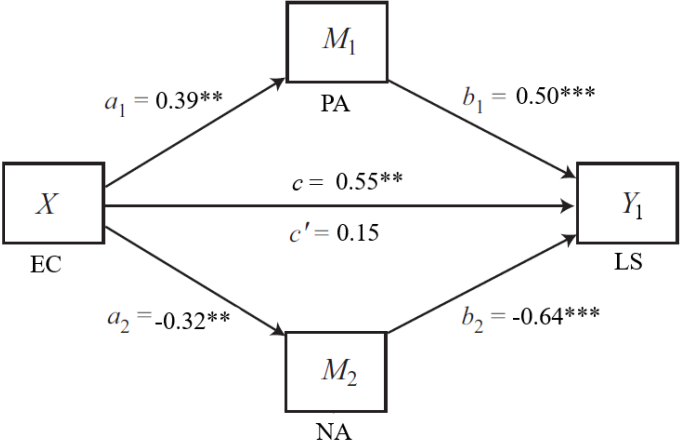
**Table 3***Mediating Role of Positive and Negative Affect in the Relations Between Emotion Crafting and Life Satisfaction and Depressive Symptoms*

		Outcome														
		M <sub>1</sub> (Positive Affect)						M <sub>2</sub> (Negative Affect)			Mediation model 1 Y <sub>1</sub> (Life Satisfaction)			Mediation model 2 Y <sub>2</sub> (Depressive Symptoms)		
Antecedent		<i>b</i>	<i>SE</i>	<i>p</i>		<i>b</i>	<i>SE</i>	<i>p</i>		<i>b</i>	<i>SE</i>	<i>p</i>		<i>b</i>	<i>SE</i>	<i>p</i>
X (EC)	a <sub>1</sub>	0.39	0.13	.004	a <sub>2</sub>	-0.32	0.11	.006	c'	0.15	0.20	.454	c'	-0.05	0.09	.571
	M <sub>1</sub>	-	-	-		-	-	-	b <sub>1</sub>	0.50	0.14	<.001	b <sub>1</sub>	-0.15	0.06	.009
	M <sub>2</sub>	-	-	-		-	-	-	b <sub>2</sub>	-0.64	0.16	<.001	b <sub>2</sub>	0.63	0.07	<.001
Constant	i <sub>M1</sub>	1.53	0.52	.004	i <sub>M2</sub>	2.88	0.45	<.001	i <sub>y</sub>	3.76	0.88	<.001	i <sub>y</sub>	1.53	0.38	<.001
		$R^2 = .07$			$R^2 = .07$			$R^2 = .25$			$R^2 = .49$					
		$F(1,114) = 8.81,$			$F(1,114) = 7.93,$			$F(3,112) = 12.08,$			$F(3,112) = 35.78,$					
		$p = .004$			$p = .006$			$p < .001$			$p < .001$					

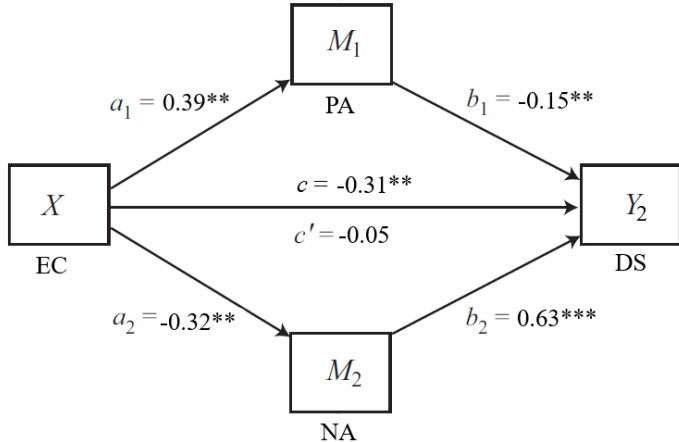
*Note.* X = predictor, Y = outcome, M = mediator, EC = emotion crafting. Coefficients shown are unstandardized path coefficients (*b*) with standard errors (*SE*). The a-paths demonstrate the relation between emotion crafting and positive and, respectively, negative affect; the b-paths are the relation between positive affect and negative affect and, respectively, life satisfaction and depressive symptoms; the c'-paths are the relation between emotion crafting and, respectively, life satisfaction and depressive symptoms when the b-paths is taken into account; The

bootstrap confidence intervals of the indirect effect of X on Y<sub>2</sub> through M<sub>1</sub> was [-0.158, -0.001], and therefore this confidence interval also indicates a significant effect. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

**Figure 1.**



**Figure 2.**



*Note.* The mediating effect of affect in the relationship between emotion crafting and life satisfaction and depressive symptoms. All presented effects are unstandardized; a<sub>n</sub> is the effect of emotion crafting on, respectively, positive affect and negative affect; b<sub>n</sub> is the effect of respectively, positive affect and negative affect on life satisfaction (figure 1) and depressive symptoms (figure 2); c is the total effect of emotion crafting on Y<sub>n</sub>; c' is the direct effect of emotion crafting on Y<sub>n</sub>.; \* $p < .05$ ., \*\* $p < .01$ ., \*\*\* $p < .001$ .

## Discussion

### Summary and Interpretation of Results

Positive emotions have been shown to have beneficial impacts on individuals' well-being, in addition, to protecting against and reducing the impact of negative emotion (Bryant, 2003; Cohn et al., 2009). Recently, the role of the proactive pursuit of positive emotions has become of rising interest, demonstrating promising relations to beneficial outcomes. Studies suggest that owing to the proactive nature of emotion crafting, its effect on outcomes of well-being and ill-being will be stronger than that of regular reactive emotion regulation (van der Kaap-Deeder et al., 2022). Still, studies on emotion crafting are sparse, and further investigations of its underlying mechanisms and relations to well-being and ill-being are needed. Building on the recent research of Van der Kaap-Deeder and colleagues (2022) on emotion crafting, this paper chose to examine positive and negative affect as mediators in the relation between emotion crafting and respectively, life satisfaction and, depressive symptoms, as indicators of well-being and ill-being. The analyses found that both positive and negative affect mediated the relation between, first emotion crafting and life satisfaction, and second between emotion crafting and depressive symptoms.

### *Emotion Crafting and Life Satisfaction*

In line with the first hypothesis, results showed that positive affect significantly mediated the relation between emotion crafting and life satisfaction. The findings support earlier research on positive emotion regulation and its positive association with coping, optimism, and life satisfaction (Tugade & Fredrickson, 2007). In addition, the results are also in line with earlier research on emotion crafting, as a predictor of life satisfaction via positive affect (van der Kaap-Deeder et al., 2022). As previously mentioned, however, Van der Kaap-Deeder and colleagues (2022) study only found positive affect to mediate the relation between the action subscale of emotion crafting and life satisfaction. Contrary to their study the present analyses did not examine the individual subscales, but assessed the total score of emotion crafting comprising both subscales. This might have influenced the results given that the total score of emotion crafting is calculated from seven items from the action subscale and only three items from the awareness subscale. Thus, the present findings can be a result of a larger item loading in favour of the action subscale. The differences could also originate from methodological differences, such as the sample, where the mean age was higher in the validation sample than in the current sample (van der Kaap-Deeder et al., 2022). In addition, the original study on emotion crafting conducted its data collection during the Covid-19 pandemic, which might have influenced people's capability to consider or prioritize reflecting

on positive emotion-eliciting contexts. Even though future research will gain more insight by exploring these differences more, this study supports the main trend that emotion crafting relates to life satisfaction via positive affect (Datu & King, 2016; van der Kaap-Deeder et al., 2022).

The results also showed negative affect to significantly mediate the relation between emotion crafting and life satisfaction. This points to an important feature of emotion crafting, which is not only associated with well-being (e.g., life satisfaction) via high levels of positive emotions, but also through low levels of negative emotions. These findings are in accordance with Fredrickson and colleagues (2000) “undoing” hypothesis, which postulates that positive emotional experiences can correct or undo the effects of negative emotions. The theoretical reasoning behind these findings is that the conscious and proactive pursuit of positive emotions may facilitate the obtainment of positive affect, as well as counteract the effect of negative affect, which will relate to higher life satisfaction. However, due to the restrictions of the current study design, it is not possible to establish causality in this relation. Future studies will therefore benefit from using longitudinal and mixed designs to further examine these associations, including the relation between positive and negative affect. Still, the study confirmed that emotion crafting relates to life satisfaction also via low levels of negative affect. Together, emotion crafting via positive and negative affect explained 25% of the variance in self-reported life satisfaction, pointing to affect as a credible mechanism of emotion crafting.

### ***Emotion Crafting and Depressive Symptoms***

Another aim of the study was to assess the relation between emotion crafting and depressive symptoms, to further understand the underlying mechanisms of emotion crafting in regard to psychopathology. There already exist some research pointing to the role of positive emotion regulation in mitigating and preventing depressive symptoms, in addition to reduce relapse in psychotherapy (Carl et al., 2013; Santos et al., 2013). Confirming the second hypothesis, emotion crafting was found to be negatively related to depression symptoms, especially via low levels of negative affect. This supports earlier findings demonstrating the negative relation between emotion crafting and internalizing symptoms, of which depressive symptoms were one of the subscales (van der Kaap-Deeder et al., 2022). Research on savouring beliefs also contributes to underpin the current findings, showing positive emotion regulation to be negatively correlated to hopelessness and depression (Bryant, 2003; Bryant & Veroff, 2007). However, one should keep in mind that the use of self-report measures to map depression symptoms can be susceptible to biases, especially owing to the private nature of

the topic. Furthermore, using participants from the bachelor students' social groups might have prevented some of the participants to report the severity of their symptoms. Even though the respondents are ensured their anonymity they might still fear that their friend on the research team handling the data could recognize their responses.

The analysis also showed positive affect to mediate the relation between emotion crafting and depressive symptoms. This effect was considerably smaller than that of negative affect in the same relation, but still significant. Thus the intentional and proactive pursuit of positive emotions seems to be associated with less self-reported depression, also via higher levels of positive affect. These findings are in accordance with the broaden and build theory, arguing that positive emotions protect individuals from harmful influence of negative affective experiences (Fredrickson et al., 2000). In addition to underpinning findings that positive affect exhibits a protective effect on depression (Riskind et al., 2013). Greenglass and Fiksenbaum (2009) work on proactive coping provides further support for the current finding, showing positive affect to significantly mediate the relation between proactive coping and depression.

In reasoning with the undoing hypothesis, the smaller impact of positive affect in the relation between emotion crafting and depressive symptoms relative to that of negative affect, may be a result of positive emotions being primarily beneficial during or after the presence of negative emotion-electing events (Fredrickson & Losada, 2005, as cited in Fredrickson, 1998; Riskind et al., 2013). It is possible that by investigating individuals engaging in emotion crafting after an initial induced negative event, the result of the present analysis would show a larger effect of positive affect, in the relation between emotion crafting and depressive symptoms. This claim is supported by Riskind (2013), who found trait positive affect to exert a protective effect on depression symptoms by buffering against the impact of trait negative affect, but only in the presence of trait negative affect. Similar, additional research has shown how positive affect did not exert the same beneficial health outcomes in the absence of stress (negative emotions) (Folkman & Moskowitz, 2000). Thus, maybe positive affect alone does not execute a large alleviation of depressive symptoms but has a protective power during and after experiencing negative emotions.

Depression is associated with frequent use of emotion regulation strategies that decrease positive emotions (e.g., dampening), as opposed to those increasing positive emotions (e.g., positive rumination or savouring) (Vanderlind et al., 2021). Perhaps by regularly and proactively pursuing positive emotions, individuals suffering from depressive symptoms will experience induced positive emotion, which can counteract this tendency and

reduce the severity of the symptoms. Earlier findings by Hurley and Kwon (2011) support this idea, showing that individuals that practised momentary positive emotion regulation strategies (e.g., expressing positive emotions) reported less depression symptoms after only two weeks. Elevated attention to positive stimuli is postulated to be one of the psychological mechanisms in which positive emotion regulation strategies mitigates depressive symptoms (Carl et al., 2013; Joormann & Stanton, 2016). As mentioned, the current study only examined associations between the variables and mediation effects, future studies would therefore benefit from looking into the temporal and causal relationships between emotion crafting and symptoms of psychopathology.

### **Strengths and Limitations**

The current study had several important strengths, including a feasible and affordable sampling method and research design, a high response rate, and reliable instruments. However, there were also limitations. First, as a result of the present analyses being a part of a cross-sectional study it did not assess temporal relations on which one can base causal conclusions (Solem, 2015). Yet, the mediation analyses employed were able to explain some of the variance in the relation between emotion crafting and the mediators and outcome variables. A second important limitation of the study was the similarities between some of the assessed concepts. For example, negative affect is often portrayed as a main symptom of depression, making it difficult to determine whether one is assessing two separate concept or a specific facet of a main concept (Dunn et al., 2020). Other studies have also suggested that positive and negative affect function as two poles of the same concept, rather than two individual variables (Anderson & Hope, 2008; Diener, 1984, p. 125). However, research is inconsistent in regard to the orthogonality of these concepts, and by using well-constructed valid instruments the related concepts were examined individually (Anderson & Hope, 2008).

Another conceptual limitation of the study lay in the possible differential perception of the assessed concepts. Research show that positive emotions can be differently valued and perceived across cultures, with individualistic countries like the United States valuing maximation of positive emotion and minimizing negative emotion, contrary to collectivistic cultures such as Japan which value the balance between emotions (Miyamoto & Ryff, 2011). Accordingly, in Norway, positive emotions can be argued to be more highly valued than negative emotions, which might have led the participants to feel obligated to answer more positively to those statements.

The study also suffered from some methodological limitations. First, the study employed snowball and convenience sampling methods which are non-probability methods

vulnerable to volunteer bias (individuals who are willing to partake may vary from those who do not) and selection bias (selecting individuals who share one's own characteristics or views), both effecting the sample representativeness (Dollinger & Leong, 1993; Tripepi et al., 2010). Yet, these sampling methods are highly effective and easy to implement, facilitating the recruitment of a larger sample. Despite the mentioned risk of having the under grads recruit volunteers from their own social networks, friends and acquaintances are probably more inclined to partake in a week-long study without compensation. That said, from a larger perspective, the study's hypotheses were tested on a relatively small homogeneous sample (mostly students), limiting the results' generalizability. Future studies could benefit from using a randomized sampling method, with a better distribution of the background variables in a larger sample. There were also a few technological difficulties (e.g., wrong email address or the email going into the junk-folder) which has hindered participation of some participants.

Another limitation of the study is the use of self-report survey, which rely on the assumption that short answers on a scale are able to capture individuals' true subjective experience. However, the Liker scale answering method limits possible depth and context, in addition to being prone to response biases such as answering naturally, affirmative or what they perceive as socially desirable (Langdridge et al., 2006, pp. 41-50 & 71-82). For example, affect-estimates measures one's emotional experience in the moment which is highly vulnerable to contextual influence such as blood sugar levels. In addition, as earlier mentioned appearing happy and successful might be considered desirable, influencing how the participant respond, even though anonymity can help reduce this effect. Despite these shortcomings, self-report surveys are often highly effective measurements with good reliability and have the advantage of being affordable, easily distributed, and filled out, making them suitable for a large array of research and larger-sized samples. Another, substantial advantage of the study was the use of validated and reliable instruments assessing the different study variables, including the PANAS, SWLS, and HSCL-25 scales. However, The ECs scales is a relatively new measure of a novel concept, where more research is needed to confidently state its validity and reliability.

### **Implications for Practice and Further Research**

The current results demonstrate the relation between emotion crafting and both life satisfaction and depressive symptoms, mediated by positive and negative affect. These findings contribute to the large body of research on positive emotion regulation and its beneficial impact, as well as underpin theories such as broaden and build theory, the undoing hypothesis and replicating the result from earlier research on emotion crafting. Furthermore,



the positive relation between emotion crafting and life satisfaction via lower levels of negative affect, and especially higher levels of positive affect exhibit promising implications for theory of the indices of well-being. In addition, the negative relation between emotion crafting and depressive symptoms via higher levels of positive affect, and particular lower levels of negative affect also has exciting potential for preventive purposes and clinical settings. For example, interventions for depression and internalizing symptoms could concentrate more on how to make individuals reflect on what makes them happy and produce positive experiences, as well as helping them proactively seek them out in everyday life.

Future multimethod and longitudinal research are needed to further explore the relations between emotion crafting, affect, life satisfaction, and depressive symptoms. This will help assess and replicate the current observed relation and help gain more diverse insight to determine the assumed causality. As previously mentioned, future studies would also benefit from employing a sampling method that better ensures the sample size, diversity, and representability, such as randomized sampling. Using double-blinded intervention studies with control groups could also reduce possible biases and better confirm the effects. Owing to the result of earlier findings, showing that the practice and perception of positive emotion might differ among groups such as gender, age, and culture, it is suggested that future research also examines these differences closer (Miyamoto & Ryff, 2011). As for the relation between emotion crafting and life satisfaction, future research into the differential effect of the subscales of emotion crafting could be interesting, especially given the divergence between them in the original study (van der Kaap-Deeder et al., 2022). Moving forwards, further scientific exploration of emotion crafting would be helpful, especially focusing on its effect or mediating relation to depression or other symptoms of psychopathology.

## **Conclusion**

In conclusion, the study found emotion crafting to relate to higher levels of life satisfaction and lower levels of depressive symptoms, via the experience of higher positive affect and lower negative affect. The results further support previous theory and research demonstrating the relation between emotion crafting and beneficial outcomes for individual well- and ill-being. Furthermore, the significant indirect effect of positive and negative affect helps gain more insight into the mechanisms of the novel concept of emotion crafting. The negative relation between emotion crafting and depressive symptoms also contributes to underpinning studies on the cultivation of positive emotions and its possible preventive and mitigating effects on symptoms of psychopathology. Taken together, the findings may have several important implications for social policy, intervention programs and other clinical

settings. Hopefully, the present research can help elucidate, and inspire further interest in the intentional and proactive role of emotion crafting, and its beneficial relation to well-being and possible preventative effect on ill-being. Future studies would benefit from utilizing longitudinal research design on a larger more representative sample to better explore possible causal relations between emotion crafting and different outcomes of well- and ill-being.

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