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The Relationship Between Depression and Different Types of Positive Future Goals Cross-sectionally  
and Over Time.

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### **Abstract**

This study investigates the relationship between different types of positive future goals and severity of depression. Positive future thinking (PFT) refers to positive cognitions about the future and is impaired in individuals with a major depressive disorder. Earlier research has shown that not all sorts of PFT are protective when it comes to suicidal behavior. In this study, it was hypothesized that patients with high levels of positive future goals related to intrapersonal goals score higher on the depression scale. Moreover, it was hypothesized that patients with high levels of intrapersonal positive future goals show less remission in depression scores. A total of 195 outpatients with a major depressive disorder generated as many positive future goals as possible and completed the IDS-SR depression questionnaire. After 4 to 6 months of treatment as usual, participants again completed the IDS-SR. Regression analyses were performed with depression scores and number of positive future goals per category, or with depression scores and proportion of positive future goals per category. Findings demonstrate that the types of positive future goals are differently associated with depression at the start of treatment. Patients with high levels of Work/education positive future goals have lower scores on the depression scale. Moreover, patients with high levels of Emotions/feelings positive future goals have higher scores on the depression scale.

No conclusions can be made about causality as there is no relationship found between positive future goals and depression over time. Since causality is not clear, it is difficult to formulate clinical implications. Further research is necessary to further investigate the found relationships and the direction of these relationships.

*Keywords:* Depression, parasuicide, Positive Future Thinking, Positive Future Goals, Intrapersonal goals.

## 1. Introduction

People who suffer from depression generally have a negative view about their future (Abramson, Alloy, & Metalsky, 1989). The hopelessness theory of Abramson and colleagues (1989) states that a possible cause of depressive symptoms is a negative expectation about the occurrence of highly valued outcomes or the expectation that the likelihood of occurrence of highly valued outcomes is not changeable by one's behavior. Hopelessness can be defined as the degree in which an individual is pessimistic about the future (O'Connor, Connery, & Cheyne, 2000).

A component of hopelessness is future-thinking (Bjärehed, Sarkohi, & Andersen, 2010). Future-thinking refers to cognitions about the future which can be divided into two separate dimensions of experience, namely, positive future thinking and negative future thinking (MacLeod, Byrne, & Valentin, 1996). MacLeod and colleagues (MacLeod & Byrne, 1996; MacLeod, Rose, & Williams, 1993) designed a task to measure future-thinking based on an adapted verbal fluency paradigm. In this so called Future-Thinking Task (FTT), participants have to generate things they are looking forward to and not looking forward to within several future time periods (1 week, 1 year, and 5-10 years). Studies which used the FTT found that people with a depressive disorder have reduced positive future thinking, whereas there is no difference in negative future thinking compared to non-depressed controls (Bjärehed, Sarkohi, & Andersson, 2010; MacLeod & Salaminiou, 2001). These findings suggest that impairments in the ability to visualize positive events in the future are involved in depression.

There are multiple explanations for reduced positive future-thinking observed in depression. It may be a cognitive bias in which individuals have difficulty accessing mental representations of future positive experiences, possibly because the representations are incongruent with their current mood (MacLeod & Salaminiou, 2001). In fact, Hepburn, Barnhofer, and Williams (2006) have found that mood significantly alters the ability to generate future events in non-depressed students. Students who were manipulated in feeling sad could less easily generate positive future thoughts. Furthermore, students who received a positive mood induction could less easily generate negative future thoughts. Another explanation is that reduced positive future-thinking is due to reduced capacity for pleasure (anhedonia; MacLeod & Salaminiou, 2001). However, in their study among depressed and non-depressed individuals, MacLeod and Salaminiou (2001) found that the lack of anticipated pleasure could not account for the inability for depressed patients to visualize positive events in the future. They did find a difference between depressed and non-depressed in their ability to gain pleasure from positive experiences, but this effect was overshadowed by the difference in the number of positive anticipated experiences they could generate (MacLeod & Salaminiou, 2001).

Hopelessness about the future is not only involved in depression but is also an important component of suicidal behavior. MacLeod et al. (1993) found, by using the FTT, that parasuicidal subjects showed a lack of anticipation of future positive events, but no increase of negative events compared to controls. This can possibly be due to the fact that most of the parasuicidal subjects also

met the criteria for depression and, therefore, the lack of positive events can result from the depression (MacLeod, Lee, & Mitchell, 1997). MacLeod et al. (1997) investigated this by examining parasuicidal subjects with and without a depression, and healthy controls. They found that parasuicidal subjects generated significantly less positive events and there was no difference in generating negative events compared to controls. This was the case in both depressed and non-depressed parasuicidal patients. Therefore, the reduced anticipation of positive thoughts appears to be an independent characteristic of parasuicide rather than the result of depression (MacLeod et al., 1997). Moreover, it is found that positive future thinking in parasuicide interacts with hopelessness independent from levels of depression (O'Connor et al., 2000) and that positive future thinking is a predictor of suicidal ideation beyond the effects of hopelessness (O'Connor, Fraser, Whyte, MacHale, & Masterton, 2008). Another study examined the effects of an intervention, called Manual Assisted Cognitive-Behavior Therapy (MACT), a brief cognitive oriented, problem focused intervention (MacLeod et al., 1998). Parasuicidal subjects either received MACT or treatment as usual (TAU). The group who received MACT showed a significant improvement in positive future-thinking whereas participants in the group receiving TAU showed no such improvement. The author's conclusion is that positive future-thinking may be (partly) influenced by a brief intervention (MacLeod et al., 1998). Therefore, these findings suggest that parasuicidal subjects generate less positive events compared to healthy controls independent of depression. In addition, Macleod and colleagues (1998) found a causal relationship between positive future thinking and parasuicidal in which the amount of positive thoughts increased after receiving a brief intervention.

O'Connor, Smyth, and Williams (2015) further examined the association between positive future thinking on the one hand and repeated suicidal behavior on the other hand. Positive future thoughts can have different themes and can be categorized in different categories. For example, individuals can have positive thoughts about their social life, thought about academic/job related achievements, finance, health of others, leisure/pleasure, and intrapersonal related thoughts. O'Connor and colleagues (2015) looked at the content of positive future thoughts in hospital-treated suicide attempters, using the FTT and by coding the contents of the positive future thoughts in seven categories<sup>1</sup>. Results showed that different types of positive future thoughts are differently related with suicide attempts over time. Low levels of Achievement and Financial positive future thinking and high levels of Intrapersonal positive future thinking were associated with suicide attempts after 15 months. More interesting, when the three predictors were entered in the multivariate analyses, high levels of Intrapersonal positive future thinking came out as a significant predictor of repeated suicide attempts over time, whereas Achievement and Financial positive future thinking rendered nonsignificant. Intrapersonal positive future thinking consists of thoughts related to the individual and no one else. Examples of intrapersonal thoughts include getting better, not being depressed, recovering, and being

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<sup>1</sup> Social/interpersonal, Achievement, Intrapersonal, Leisure/pleasure, Health of others, Financial and home, and Other.

more confident (O'Connor et al., 2015). Apparently, high levels of positive future thinking are not always protective in repeat suicide attempts over time (O'Connor et al., 2015). This was unexpected considering that high levels of positive future thinking buffer against life stress. Individuals who experienced high levels of stress and who could think of positive future events reported lower levels of hopelessness compared to individuals who could less think of positive future events (O'Connor, O'Connor, O'Connor, Smallwood, & Miles, 2004). Intrapersonal positive future thinking may be counterproductive, because participants developed beliefs during the study that their intrapersonal thoughts are not attainable because they are not achieved in the time of the study. This may aggravate a feeling of entrapment, disappointment, or hopelessness (O'Connor et al., 2015).

The overarching aim of this study was to investigate the association between different types of positive future goals depressed individuals can have on the one hand, and depression symptom severity on the other hand. As discussed above, previous research has shown that low levels of positive future thinking are associated with depression and parasuicide (Bjärehed, Sarkohi, & Andersson, 2010; MacLeod et al., 1997; MacLeod & Salaminiou, 2001; O'Connor et al., 2000; O'Connor et al., 2008). A recent study has found that not all types of positive future thinking are beneficial in parasuicide (O'Connor et al., 2015). It is relevant to investigate whether different types of positive future thoughts are differently associated with depression because it may influence therapy and could therefore be targeted in treatment.

Specifically, we aimed to analyze the content of positive future goals to study 1) what type of positive future goals are associated with depression cross-sectionally, and 2) what type of positive future goals are associated with changes in depression over time. This was done by using a semi-structured interview in which depressed patients generate positive future goals in relation of seven life-domain cues. We hypothesized that patients with high levels of positive future goals related to intrapersonal goals, such as health and physical well-being and emotional well-being, score higher on the depression scale and show less reduction in depression after four to six months receiving treatment as usual.

## **2. Method**

### *2.1 Participants*

Participants were patients of Altrecht's outpatient clinic located in Utrecht, The Netherlands. All participants who started with a depression treatment were included in the study and were recruited between April 2014 and April 2016. Some patients did not enter the study because of language barriers, not providing consent, a too severe mental health state, and low intelligence.

A total number of 195 patients formed the sample at baseline in the current study (85 male and 110 female). Their mean age was 40.43 years ( $SD = 10.23$ ; range = 23-63 years). The mean age of male patients was 42.08 years ( $SD = 10.10$ ), the mean age of female patients was 38.99 years ( $SD = 10.18$ ). The follow-up sample consisted of 45 patients (20 male and 25 female). Their mean age was

38.04 (SD = 18.30; range = 23-58 years). The mean age of the mean age of male patients was 42.45 (SD = 15.88), the mean age of female patients was 34.52 (SD = 19.62).

All patients met the DSM-IV-TR criteria for a Major Depressive Disorder (APA, 2007). Severity of the depression ranges from moderate to severe, with or without psychotic features. The course of depression in this study varied from a single episode to recurrent episodes and chronic depression. 23.6% has a comorbid diagnosis on As II. Additional socio-demographic information was obtained (Table 1).

Table 1. *Socio-demographic information of the baseline sample (n = 195) and the follow-up sample (n = 45).*

Highest completed education	% Baseline sample	% Follow-up sample
Primary school	9.2%	6.7%
LTS/LBO	9.7%	8.9%
Mavo/VMBO	16%	13.3%
MBO	35.9%	42.2%
Havo/VWO	9.7%	8.9%
HBO/University	15.4%	17.8%
Other	1.5%	2.2%
Social status	% Baseline sample	% Follow-up sample
Living with partner and children	39%	28.9%
Living with partner	18.5%	28.9%
Living with children	9.7%	6.6%
Living with someone else	9.7%	8.9%
Living alone	21.5%	26.7%

## 2.2 Measures

In the clinical setting, a self-report instrument and a semi-structured interview were conducted, as part of the so-called Specialized Depression Assessment (*Gespecialiseerde Depressie Assessment, GDA*). The measurements will be discussed in the order in which they were administered.

### 2.2.1 Dutch version of the Inventory of Depressive Symptomatology (*Zelfinvullijst Depressieve Symptomen, IDS-SR-NL 30*)

This is a self-report instrument about depressive symptoms developed by Rush, Gullion, Basco, Jarret, and Trivedi (1996). It contains 30 items. Participants can choose between four answers per item,

scored on a 0-3 scale with equivalent weightings per item. Total score ranges from 0-84. Total scores ranging from 0-13 are classified as “normal”. Total scores ranging from 14-25 are classified as “mild”. Total scores ranging from 26-38 are classified as “moderate”, total scores between 39 and 48 as “severe” and total scores between 49 and 84 as “extreme severe”. The IDS-SR has highly acceptable psychometric properties in a public sector psychiatric outpatient sample with Major Depressive Disorder (Trivedi et al., 2004). Trivedi et al. (2004) found an internal consistency of  $\alpha = .92$ , which can be classified as high, using a sample of out-patients with a major depressive disorder. Furthermore, the IDS-SR is highly sensitive to change (Rush, Carmody, & Reimitz, 2004).

### 2.2.2 Measure to Elicit Positive Future Goals and Plans (MEPGAP).

This semi-structured interview is developed by Vincent, Boddana, and MacLeod (2004) for their study on ‘positive life goals and plans in parasuicide’. The MEPGAP elicits information about an individual’s ability to identify future positive life goals. First, participants are asked to generate as many goals for the coming year for 1 minute. This is an open-ended cue. Then, participants are asked to generate as many goals for 1 minute in relation to seven life-domain cues (see Table 2). The amount of goals is scored per life-domain. Goals generated in the open-ended cue are classified by the researcher to the other seven life-domains or in the category of “miscellaneous goals”. There are no psychometric features available.

Table 2. *Life-domains and descriptions of the MEPGAP (Vincent et al., 2004).*

Life-domain	Description
Goals for the coming year	Generate as many goals as possible for the coming year (open-ended cue)
Home life	Goals related to home life, including their family-life And situation at home
Work/education	Goals related to work and/or education
Money	Goals related to their financial situation
Close relationships	Goals related to close relationships, for example partner and/or children
Social life	Goals related to the social life, including contacts and activities with friends or family
Health/fitness	Goals related to health and physical well-being
Emotions/feelings	Goals related to feelings and emotional well-being. How you feel

### *2.3 Procedure*

Baseline data were collected at the beginning of treatment after the intake procedure was completed, using the Generalized Depression Assessment (GDA). Participants received a phone call from the researchers to explain the aim of the interview, after which the participant could voluntarily choose to participate in the study or not. Participants are informed that this is a standard interview for all patients who start treatment targeting a Major Depressive Disorder. At the beginning of the interview participants were informed and gave written informed consent. The GDA consists of two short semi-structured interviews and nine short questionnaires. The interview takes place at the clinic and lasts one to one and a half hour. Some exceptions were made when the questionnaires took too much energy and time from the patients. These patients could take some questionnaires home or a second appointment was made to complete the entire GDA. A report is made including all results. Results were shared with the clinician of the patient such that these could be incorporated in the treatment. For this study not all results gathered during the interview are used, only the IDS-SR and the MEPGAP. Participants received treatment as usual (TAU), such as individual or group Cognitive-Behavioral Therapy (CBT), individual Interpersonal Psychotherapy (IPT), pharmacotherapy, structural and motivational therapy, and/or Running therapy. After 4 to 6 months of treatment as usual, all participants were asked to fill in the IDS-SR questionnaire again online. Only 45 participants completed the questionnaire.

### *2.4 Statistical analyses*

Analyses were conducted with statistical software (SPSS 21; IBM SPSS). A series of linear regression analyses is conducted for each category of positive future goals. There are two ways to investigate the relationship between positive future goals and depression. In this study both ways are executed.

In the first series of statistical analyses, the total number of positive future goals per category and the IDS-SR total score at baseline are entered into the regression analysis. The types of goals that are yielded significant are entered in a multiple regression analysis to check how they are related to depression in the model. The same analyses are performed with IDS-SR total scores at 4-6 months follow-up. First, the IDS-SR total score at follow-up is entered as dependent variable, the total number of positive future goals per category and the IDS-SR total score at baseline are entered as independent variables. The IDS-SR total score at baseline is added in the analysis to control for the coherence between baseline and follow-up scores. Second, the types of goals that are yielded significant are entered in a multiple regression analysis to check how they are related to depression.

In the second series of statistical analyses, the proportion of positive future goals per category relative to the total number of goals and IDS-SR total score at baseline are entered into the regression analysis. It was expected that some patients with a major depressive disorder can more easily generate positive future goals in general than other patients. Hence, if the different types of goals are correlated with each other, it can be stated that if an individual has more goals in one category, this individual



also has more goals in other categories. Therefore, it was deemed relevant to explore the proportion of goals within each category, relative to the total number of goals participants were able to generate. The same analyses are performed with the proportions per category as the analyses that are described in the first series of statistical analyses with the number of goals per category.

### 3. Results

#### 3.1 Data exploration

The different contents of positive future goals were slightly positive skewed. Skewness values ranged between 1.20 and 0.53, indicating that there were more low scores in the distribution. This means that more participants generated fewer goals. This was not surprising. The sample in this study consisted of depressed individuals, who have reduced positive future thinking compared to non-depressed individuals (MacLeod & Salaminiou, 2001). When the different categories of positive future goals were entered in the linear regression analyses with the IDS-SR total score as dependent variable, the residuals were approximately normally distributed and the variance of the residuals were constant. Moreover, the data also did not violate the other assumptions such as independent errors and normally distributed errors (Field, 2013). This was also true when the proportion positive future goals were entered in the analyses. Figure 1 shows the distribution and residuals of home life related positive future goals at baseline. Distributions of the other goals were alike. Outliers who were three standard deviations away from the mean were examined. Three outliers were detected, but there were no abnormalities found in these outliers, which is why they were not excluded from the data.

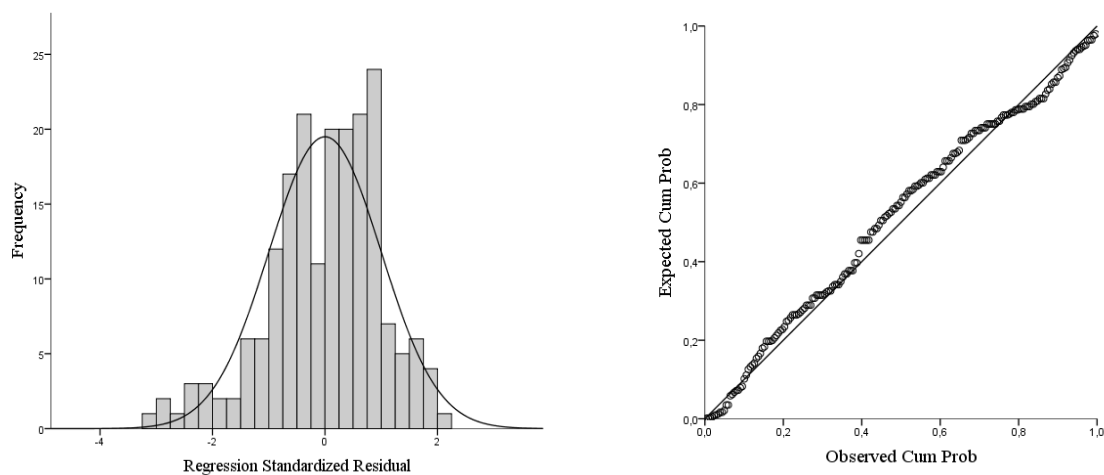


Figure 1. Histogram and normal P-P plot of regression standardized residuals of Home life positive future goals.

### 3.2 Sample characteristics

The mean score on the depression scale IDS-SR was 45.09 (SD = 13.55) at baseline which is classified as a severe depression. At 4 to 6 months follow-up the mean score on the IDS-SR was 38.04 (SD = 18.30) which is classified as a moderate depression. Depression scores at baseline differed significantly from depression scores after 4 to 6 months follow-up ( $t(44) = 2.36, p < .05$ ). This indicates that participants became less depressed after receiving 4 to 6 months treatment as usual. The total number of goals for all categories combined was not associated with depression scores at baseline ( $\beta = -.07, t(195) = -0.99, p = .32, CI = -0.74;-0.16$ ) and was not associated with depression at 4-6 months follow up ( $\beta = -.15, t(45) = -1.27, p = .21, CI = -1.13;0.26$ ).

The amount of positive future goals that were generated in total ranged from 0 to 34 goals. All types of goals are significantly correlated with each other (all  $ps < .01$ ) indicating that participants who generated more goals on one category also generated more goals on other categories. Besides conducting analyses with the number of goals per category, the proportion of goals per category is also used in the analyses. Means and standard deviations of the amount of positive goals generated per category and the proportions per category are shown in Table 3.

### 3.3 Number of positive future goals per category

Multiple single regression analyses were conducted with number of positive future goals per category as independent variable and ISD-SR total score at baseline as dependent variable. Two categories were significant, namely Work/education positive future goals ( $\beta = -.21, t(195) = -3.02, p < .01, CI = -3.71;-0.78$ ) and Money positive future goals ( $\beta = -.15, t(195) = -2.04, p < .05, CI = -3.97;-0.07$ ). This indicates that participants who can generate more goals related to Work/education and their financial situation at the beginning of treatment, show lower concurrent scores on the depression scale. The significant goals were entered into the multivariate linear regression as one model. Results showed that, when controlling for the shared variance between Work/education and Money goals, the number of Work/education related goals has an unique relationship with depression in the model ( $\beta = -.19, t(195) = -2.50, p < .05, CI = -3.50;-0.4$ ), whereas the number of Money related goals did not ( $\beta = -.09, t(195) = -1.18, p = .24, CI = -3.23;0.82$ ).

To investigate what types of goals are associated with changes in depression over time, a series of single regression analyses were conducted with number of positive future goals per category as independent variable and ISD-SR total score at follow-up as dependent variable. IDS-SR scores at baseline were entered as independent variable to control for the coherence between baseline and follow-up scores. Not one type of positive future goals yielded as a significant predictor of change in depression over time. This indicates that positive future goals, when looking at the content of these goals, are not differently associated with changes over time.

Table 3. Means (SDs) of number of positive future goals per category and means (SDs) of proportions of positive future goals per category.

Content of goal	Number of goals	Proportions
Home life	1.64 (1.30)	0.13 (0.09)
Work/education	1.48 (1.28)	0.12 (0.08)
Money	0.94 (0.98)	0.08 (0.08)
Close relationships	1.46 (1.24)	0.11 (0.10)
Social life	1.32 (1.22)	0.11 (0.09)
Health/fitness	1.89 (1.30)	0.16 (0.11)
Emotions/feelings	2.69 (1.75)	0.27 (0.16)

### 3.4 Proportions of positive future goals per category

A series of single regression analyses were conducted with the proportions of number of positive future goals per category as independent variable and ISD-SR total score at baseline as dependent variable. Work/education related positive future goals ( $\beta = -.29$ ,  $t(195) = -4.16$ ,  $p < .001$ ,  $CI = -67.98$ ;  $-24.22$ ) and Emotions/feelings positive future goals ( $\beta = .25$ ,  $t(195) = 3.51$ ,  $p < .01$ ,  $CI = 8.56$ ;  $31.59$ ) emerged as significant predictors. High levels of work related goals were associated with lower depression scores at baseline. In addition, high levels of emotion related goals were associated with higher depression scores at baseline. These two predictors were entered into the multivariate analysis. Results showed that Work/education related goals ( $\beta = -.23$ ,  $t(195) = -3.27$ ,  $p < .001$ ,  $CI = -60.26$ ;  $-14.90$ ) as well as Emotions/feelings related goals ( $\beta = .17$ ,  $t(195) = 2.43$ ,  $p < .05$ ,  $CI = 2.72$ ;  $26.00$ ) were significant predictors of depression scores at baseline.

A series of single regression analyses is performed to investigate whether different types of positive future goals are associated with changes in depression over time. The proportions of number of positive future goals, IDS-SR total scores at baseline, and IDS-SR total scores at follow-up are entered into the regression. Not one type of positive future goals yielded as a significant predictor.

## 5. Discussion

The present study investigated the relationship between different types of positive future goals and severity of depression. Positive future thinking is impaired in individuals with a major depressive disorder (Bjärehed et al., 2010; MacLeod & Salaminiou, 2001) and it was found that high levels of positive future thinking can serve as a buffer against stress (O'Connor et al., 2004). But O'Connor and colleagues (2015) found that high levels of intrapersonal positive future thinking results in a higher risk of more suicide attempts after 15 months. Intrapersonal thoughts consist of thoughts related to the

individual and no one else, such as getting better, not being depressed, and being healthy (O'Connor et al., 2015). In this study, it was hypothesized that patients with high levels of positive future goals related to intrapersonal goals, such as Health/fitness and Emotions/feelings positive future goals, score higher on the depression scale. Moreover, it was hypothesized that patients with high levels of intrapersonal positive future goals show less reduction on the depression scale after four to six months receiving treatment as usual.

The findings show that the total amount of positive future goals an individual can generate is not associated with the total score on the depression scale at baseline and is not associated with depression scores after four to six months follow-up, which is not in line with previous research. This may be explained due to restriction in range. The sample used in this study may show less variation in severity of depression compared to a more heterogeneous group. These results may differ from those found in a more heterogeneous group. This needs to be further investigated.

The findings do show different relationships between positive future goals and depression as a function of the content of such goals at baseline. In line with the findings of O'Connor et al. (2015), in the final model, individuals with high levels of Work/education positive future goals (e.g. getting a job, doing voluntary work, and finishing their education) had lower scores on the depression scale at baseline. This is found when looking at the total number of goals per category, as well as looking at the proportions of goals per category. Possibly high levels of such thinking may serve as a buffer against depression. Patients who are more involved in work and education may look beyond their depression. It may be that having goals related to work or education gives patients hope, something visible to pursue, and a daily schedule.

As expected, when looking only at the proportions of positive future goals per category, it is found that high levels of Emotions/feelings positive future goals (e.g. getting better, being more confident, being happy, and not being depressed), were associated with higher levels of depression at baseline. This extends previous research on positive future thinking as it demonstrates that different types of positive future goals are differently associated with depression and, moreover, that positive future goals are not always protective because high levels of Emotions/feelings positive future goals may contribute to higher depression scores. A possible explanation for this relationship may be that participants see their Emotions/feelings positive future goals as unattainable, which may result in feelings of entrapment (O'Connor et al., 2015).

Against expectations, no types of positive future goals are associated with changes in depression over time. This indicates that different types of positive future goals do not generalize over time to depression. There are two possible explanations for the fact that the current study does not find a relationship between positive future goals and changes in depression whilst the study of O'Connor and colleagues (2015) did find a relationship. First, both studies used a different method for assessing positive future thoughts. Whereas this study used positive future goals, O'Connor and colleagues (2015) used the Future-Thinking Task (FTT) in which participants have to generate things

they are looking forward to, as noted in the introduction. These thoughts may differ in their content from positive future goals, resulting in different research questions. Second, it may be due to the fact that both studies used a different sample. O'Connor and colleagues (2015) used a sample of patients with suicide attempters with various clinical disorders. The current study used patients with a major depressive disorder of which a part may have suicidal ideation. Therefore, it is necessary to investigate whether the relationship found over time in the study of O'Connor and colleagues (2015), which is not found in the current study, is exclusive for patients with parasuicide. This may be investigated by used a design with four groups: 1) patients with a depressive disorder and suicide attempts, 2) patients with a depressive disorder, 3) patients with suicide attempts without a depressive disorder, and 4) a control group.

It is important to note that the current results do not show causality between positive future goals and severity of depression, because there is no association found over time. It is not certain whether positive future goals lead to severity of depression. It may also be that there is a third factor involved that moderate the relationship between goals and depression, such as the attainability or unattainability of the goals. Future research could look at the level of feasibility of the goals assessed by participants and whether the goals are achieved or not in the time of the study.

A last possibility is that severity of depression leads to certain positive future goals. It may not be surprising that patients who are more depressed have more goals about getting better. Just like it may not be surprising that patients who are less depressed can more easily set goals about work and education. Given that there is no relationship found between positive future goals and depression over time, the latter possibility may be the most plausible. This could be investigated by assessing positive future goals at various time points.

Since causality between positive future goals and depression is not clear, is it difficult to formulate clinical implications. More research must be done to identify the relationship between the two variables. Yet, it is important to include the findings in treatment in some way. As mentioned earlier, Work/education positive future goals may give patients hope for the future beyond the depressive disorder. It may be good to pay attention to these kind of goals in therapy, although more research is necessary to know how this can be realized.

A limitation in the current study is that not every participant received the same amount of treatment in the 4 to 6 months follow-up. There were participants who had to wait some weeks before treatment started, whilst other participants could start treatment immediately. Moreover, some participants received more treatment than others. Future research should take this into account.

In conclusion, this is the first study that looks at positive future goals and depression in terms of the content of such goals. Findings demonstrate that the types of positive future goals are not equally associated with depression in terms of strength. Moreover, the types of positive future goals are differently associated with depression scores at the start of treatment. High levels of Work/education positive future goals are associated with lower depression scores. More interesting,

high levels of Emotions/feelings positive future goals are associated with higher depression scores. This suggests that positive future goals may not always be protective. However, no conclusions can be made about causality as there is no relationship found over time. Future research is necessary to further investigate the found relationships and the direction of these relationships.

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