Pleasure Now, Pain Later: Positive Fantasies About the Future Predict Symptoms of Depression

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Abstract
Though common sense suggests that positive thinking shelters people from depression, the four studies reported here showed that this intuition needs to be qualified: Positive thinking in the form of fantasies about the future did indeed relate to decreased symptoms of depression when measured concurrently; however, positive fantasies predicted more depressive symptoms when measured longitudinally. The pattern of results was observed for different indicators of fantasies and depression, in adults and in schoolchildren, and for periods of up to 7 months (Studies 1–4). In college students, low academic success partially mediated the predictive relation between positive fantasies and symptoms of depression (Study 4). Results add to existing research on the problematic effects of positive fantasies on performance by suggesting that indulging in positive fantasies predicts problems in mental health.

The self-help author Rhonda Byrne (2008) offers the advice that "whatever big thing you are asking for, consider having the celebration *now* as though you have received it" (Day 352). People following this advice will find themselves positively fantasizing about an idealized future, which should benefit their momentary well-being. Indeed, self-reported frequency of and attitude toward positive daydreams and fantasies both relate to low depressive affect (Golding & Singer, 1983). Such positive daydreams and fantasies may pertain to immediate or long-term futures (Klinger, 1971; Oettingen, 2012), occur independently of people's present task or perceptual input (i.e., as task-unrelated thoughts; Schooler et al., 2011; Smallwood, 2013), and depict idealized future scenarios, such as finding harmony in a romantic relationship, satisfaction through a promotion, or reaching one's ideal weight (Oettingen & Mayer, 2002; Oettingen & Wadden, 1991). Though such fantasizing should relate to decreased symptoms of concurrent depression, it may have long-term costs. We thus examined the concurrent and predictive relationships between positive future fantasies and depressive symptoms.

Positive Thinking About the Future and Symptoms of Depression Over Time

Indulging in positive future fantasies may be a risk factor for depression because it saps energy and reduces success. Indeed, in contrast to positive expectations that are based on past performance, indulging in positive future fantasies has predicted low effort and little success in various life domains, such as academic achievement, interpersonal relations, and health (Kappes, Oettingen, & Mayer, 2012; Kappes, Sharma, & Oettingen, 2013; Oettingen & Mayer, 2002; Oettingen & Wadden, 1991; Taylor, Pham, Rivkin, & Armor, 1998). When experimentally induced, indulging led to low energy (measured by self-report or systolic blood pressure), which in turn mediated low effort and performance over time (Kappes

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& Oettingen, 2011). Rendering the future tangible, positive future fantasies impede the hard work necessary to reach success. Little success, in turn, can lead to symptoms of depression (Strauman, 2002). Therefore, the more positively people fantasize, the more they should become depressed over time.

This hypothesis concurs with research on the causes of depression. According to the cognitive approach (Beck, 1976; Clark, Beck, & Alford, 1999), depressed people focus on negative stimuli and interpret neutral stimuli in negative ways. These biases may remain dormant, but when a stressor is encountered, they are activated, and depression ensues. Given that positive fantasies predict low success, they may evoke stressors, and the activation of the dysfunctional schemas thus facilitates depressive symptoms. In line with this argument, positive thinking about the future that focused only on the individual him- or herself (e.g., being happy) predicted repeat suicide attempts beyond previous attempts and suicidal ideation (O'Connor, Smyth, & Williams, 2015). Though such intrapersonal positive thinking, when it occurred hours after a suicide attempt, related to low suicidal ideation, it predicted a higher likelihood of another suicide attempt over the subsequent 15 months.

The Present Research

Using semiprojective questionnaires and daily diaries, we examined the concurrent and longitudinal relations between positive future fantasies and symptoms of depression in adults (Studies 1, 3, and 4) and in children (Study 2). We then analyzed whether low academic performance mediated the relationship between positive fantasies and the development of depressive symptoms over time (Study 4).

Study 1: Positive Future Fantasies and Symptoms of Depression in College Students

Method

We examined the concurrent and longitudinal relations between positive future fantasies and symptoms of depression in 88 undergraduate students (22 male, 65 female; mean age = 19.01 years, SD = 1.01) of a large American university. One participant did not indicate gender and age. We replaced the missing values with the respective means of the sample. Students completed a measure of fantasies and a measure of depression in the laboratory at the beginning of the term (Time 1: February) and 4 weeks later (Time 2: March).

Following previous research (Oettingen & Mayer, 2002; see also Kappes et al., 2012; Oettingen & Wadden,

1991), we used a semiprojective measure to assess the positivity of fantasies. This measure combines the advantages of projective (or operant; McClelland, 1980) tests with the strengths of questionnaire (or respondent) methods. Participants were asked to imagine themselves as the protagonists in 12 open-ended scenarios, to complete the scenarios in their mind, and to write their fantasies down. The scenarios were ambiguous, as they could either be ended positively or negatively. Four scenarios were related to achievement, 4 to interpersonal relations, and 4 to health. The following is an example of an achievement scenario:

> You're working on an important project. You know that you cannot meet the deadline and you have asked your client for an extension. You know that it is likely that he will grant you one.

> Now close your eyes and vividly imagine the following scenario:

> Today your client will let you know about his decision. While you are waiting in your office for him to call…

Participants wrote down their thoughts and images and rated them separately for positivity and for negativity (1 = *not at all*, 7 = *extremely*; Cronbach's αs > .60). Because the positive-fantasies scores and the negative-fantasies scores strongly correlated at both time points, rs > −.72, ps < .001, we subtracted the negative-fantasies scores from the positive-fantasies scores to obtain an overall positivity-of-fantasies score. The test-retest reliability (r) between Times 1 and 2 was .45 (p < .001).

Symptoms of depression were assessed using the Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977), a widely used 20-item measure of depressive symptomatology in the general population. Items pertain to depressed affect, positive affect, somatic and retarded activity, and interpersonal relations (e.g., "I was bothered by things that usually don't bother me"). Participants indicate how many days during the previous week they experienced each item (from 0, *less than 1 day*, to 3, *5–7 days*). Internal consistency was high at both time points (Cronbach's αs ≥ .90). The test-retest reliability (r) between Times 1 and 2 was .53 (p < .001).

We measured change in depressive symptoms by subtracting the symptoms measured at Time 1 from those measured at Time 2. Subtracting the baseline from the outcome measure is the most direct and unbiased assessment of individual change in an observational-study design (Fitzmaurice, Laird, & Ware, 2004; Rogosa, Brandt, & Zimowski, 1982). This measure may be applied if the

Table 1. Study 1: Descriptive Statistics and Raw Correlations Among Key Variables

		Correlations							
Variable	*M*	1	2	3	4	5	6	7	8
1. Age (years; *n* = 87)	19.01 (1.01)	—							
2. Positive fantasies: Time 1	3.51 (0.72)	.05	—						
3. Negative fantasies: Time 1	4.33 (0.71)	−.003	−.72***	—					
4. Positivity of fantasies: Time 1	−0.83 (1.33)	.03	.93***	−.93***	—				
5. Positive fantasies: Time 2 (*n* = 67)	3.52 (0.74)	.01	.50***	−.35**	.45***	—			
6. Negative fantasies: Time 2 (*n* = 67)	4.32 (0.78)	−.07	−.34**	.43***	−.41***	−.82***	—		
7. Positivity of fantasies: Time 2 (*n* = 67)	−0.80 (1.44)	.04	.44***	−.41***	.45***	.95***	−.96***	—	
8. Depressive symptoms: Time 1	17.69 (10.32)	−.18	−.27**	.29**	−.30*	−.18	.12	−.16	—
9. Depressive symptoms: Time 2 (*n* = 67)	17.01 (10.19)	−.33**	.14	−.16	.16	−.16	.15	−.16	.53***

Note: Standard deviations are given in parentheses. The full sample consisted of 88 participants; *n*s are given for variables for which all data were not available. At each time point, positive and negative fantasies were measured separately; the latter score was then subtracted from the former to obtain an overall positivity-of-fantasies score. Depressive symptoms were assessed using the Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977).
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

internal consistency of both the baseline and the outcome measure is high (Rogosa et al., 1982).[1]

Results

Participants who returned to fill in the CES-D at Time 2 (67 students; 76% of the sample) did not differ from those who completed the CES-D only at Time 1 in their baseline positivity-of-fantasies score, $F(1, 86) = 0.00$, $p = .99$; however, they differed in their baseline symptoms of depression, $F(1, 86) = 4.46$, $p < .05$, with participants who completed both parts of the study showing fewer symptoms ($M = 16.42$, $SD = 9.44$) than those who did not ($M = 21.76$, $SD = 12.09$). Between men and women, there was no difference in positivity of fantasies at Time 1 or Time 2, symptoms of depression at Time 1, or the change of symptoms over time, Fs < 2.56, ps > .11. However, symptoms of depression differed at Time 2, $F(1, 64) = 4.53$, $p < .04$, with women ($M = 18.31$, $SD = 10.05$) showing more symptoms than men ($M = 12.25$, $SD = 9.44$). Moreover, there was a negative correlation between age and symptoms of depression at both times, rs > −.32, ps < .01, with older participants showing fewer symptoms. Thus, we adjusted for gender and age in our correlational analyses. Mean values and raw correlation coefficients are shown in Table 1.

As expected, the more positively participants fantasized, the fewer symptoms of depression they showed at Time 1, $r = -.29$, $p < .02$, but the more symptoms they showed a month later, $r = .45$, $p < .001$ (see Table 2). The same patterns emerged when we analyzed the positive- and negative-fantasies scores separately (at Time 1: ps < .07; change between Times 1 and 2: ps ≤ .002).

Discussion

Though having more positive fantasies was related to fewer symptoms of depression when the two variables were measured concurrently, having more positive fantasies predicted a greater number of symptoms over time. In Study 2, we investigated whether this effect held for children and over a longer time period (7 months).

Study 2: Positive Future Fantasies and Symptoms of Depression in Schoolchildren

Method

Participants were 109 (44 boys, 65 girls) fourth- and fifth-grade children (*n*s = 47 and 62, respectively; mean age = 9.49 years, $SD = 0.63$). Participants completed the measures of fantasies and symptoms of depression in class, once at baseline (Time 1: November) and again 7 months later (Time 2: May).

We adapted the semiprojective measure of Study 1 to fit schoolchildren's fantasies; the 12 situations related to familiar situations of achievement, interpersonal relations, and health (e.g., "Imagine you are one of the last ones left in a spelling bee. You have been thinking that you would win, but now you realize that the remaining students are also good spellers. It is your turn and . . ."). After completing each scenario in writing, children rated the negativity versus positivity of their mental images in response to the scenario using a 5-point scale of smiley faces (1 = ☹, 5 = ☺, Cronbach's α = .71). The test-retest reliability (*r*) between Times 1 and 2 was .42 ($p < .001$).

Table 2. Correlations (*r*s) Between Positivity of Fantasies and Depressive Symptoms in Studies 1 Through 4

Depressive symptoms	Positivity of fantasies			
	Study 1 (CES-D)	Study 2 (CDI)	Study 3 (CES-D)	Study 4 (BDI)
Time 1	−.29*	−.29**	−.43***	−.33***
Increase from Time 1 to Time 2	.45***	.28**	.27*	.22**

Note: Depressive symptoms were assessed using the Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977) in Studies 1 and 3, the Children's Depression Inventory (CDI; Kovacs, 1992) in Study 2, and the Beck Depression Inventory (BDI; Beck, Steer, & Brown, 1996) in Study 4.
*$p \le .05$. **$p \le .01$. ***$p \le .001$.

To assess symptoms of depression, we used the Children's Depression Inventory (CDI; Kovacs, 1992), a 27-item standard self-report measure that reliably and validly assesses symptoms of depression in 8- to 17-year-olds. Children are given three statements, and they pick the one that best describes how they have been feeling during the past week. Statements pertain to negative mood, interpersonal problems, ineffectiveness, anhedonia, and negative self-esteem (e.g., "I never have fun at school"). Internal consistency was high (Cronbach's αs > .78). The test-retest reliability (*r*) between Times 1 and 2 was .56 ($p < .001$). Change in symptoms of depression was indexed by subtracting the symptoms measured at Time 1 from those measured at Time 2.

Results

Children who completed the CDI a second time after 7 months (105 children, 96% of the sample) did not differ from those who completed the CDI only at Time 1 in their baseline positivity of fantasies and symptoms of depression, all $F(1, 108)$s < 0.82, ps > .36. There was also no difference between boys and girls concerning fantasies and symptoms of depression at either of the two times, all *F*s < 0.46, ps > .49. Finally, we observed a significant positive correlation between age and positivity of fantasies at Time 1, $r = .24$, $p < .02$; therefore, in our correlational analyses, we adjusted for age. Mean values and raw correlation coefficients are shown in Table 3. As predicted, the more positive children's fantasies, the fewer symptoms of depression they showed at Time 1, $r = −.29$, $p = .003$, but the more symptoms of depression they showed 7 months later, $r = .28$, $p < .005$ (see Table 2).

Discussion

Study 2 conceptually replicated the results of Study 1 in schoolchildren and over a longer time period. Having more positive fantasies about the future was again related to fewer symptoms of depression when the two variables were measured concurrently but to more symptoms over time. In Study 3, we tested whether positivity of fantasies during everyday life yielded similar results as responses to the semiprojective scenarios. We used a daily-diary method, as described by Iida, Shrout, Laurenceau, and Bolger (2012), hypothesizing that more positive fantasies generated in response to everyday situations would yield the same pattern of results concerning symptoms of depression as we observed in the first two studies.

Table 3. Study 2: Descriptive Statistics and Raw Correlations Among Key Variables

Variable	M	Correlations			
		1	2	3	4
1. Age (years)	9.49 (0.63)	—			
2. Positivity of fantasies: Time 1	3.72 (0.64)	.24*	—		
3. Positivity of fantasies: Time 2 (*n* = 105)	3.71 (0.53)	.03	.42***	—	
4. Depressive symptoms: Time 1	8.37 (6.41)	−.10	−.28**	−.12	—
5. Depressive symptoms: Time 2 (*n* = 105)	7.20 (5.17)	−.11	−.09	−.15	.56***

Note: Standard deviations are given in parentheses. The full sample consisted of 109 participants; *n*s are given for variables for which all data were not available. Depressive symptoms were assessed using the Children's Depression Inventory (CDI; Kovacs, 1992).
*$p \le .05$. **$p \le .01$. ***$p \le .001$.

Study 3: Fantasies in Everyday Life

Method

A total of 78 students (27 male, 51 female; mean age = 19.04 years, *SD* = 1.89) of a large American university participated. During the first 4 days of the week following the baseline assessment (Time 1: October), participants were randomly beeped eight times a day. After each beep, participants answered the following question: "How positive or negative were your thoughts and images?" (1 = *very negative*, 7 = *very positive*). The internal consistency of the 32 data points yielded a Cronbach's α of .83. As in Study 1, participants filled out the CES-D at Time 1 and again at Time 2 (April), which was 6 months later. Internal consistency was high at both time points (Cronbach's αs > .91). The test-retest reliability (*r*) between Times 1 and 2 was .38 (*p* < .01). We subtracted symptoms of depression measured at Time 1 from those measured at Time 2 to index change in depressive symptoms.

Results

Baseline symptoms of depression in participants who filled in the second questionnaire after 6 months (52 students; 67% of the sample) did not differ from symptoms of depression in those who completed the questionnaire only at Time 1, *F*(1, 76) = 0.15, *p* = .70, but the positivity of their fantasies did, *F*(1, 76) = 4.77, *p* = .03. Participants who did not fill in the final questionnaire rated their fantasies more positively (*M* = 4.38, *SD* = 0.49) than those who did (*M* = 4.10, *SD* = 0.55). There was no difference between men and women concerning fantasies, symptoms of depression at either time point, or change of symptoms, *F*s < 2.19, *p*s > .14. Mean values and raw correlation coefficients are shown in Table 4. As expected, the more positively participants fantasized over the course of the 4 days, the fewer symptoms of depression

they showed at Time 1, *r* = −.43, *p* < .001, but the more symptoms of depression they showed 6 months later, *r* = .27, *p* < .05 (see Table 2).

Discussion

Even when measured as responses to everyday life situations rather than to semiprojective scenarios, having more positive fantasies predicted fewer symptoms of depression when the two variables were measured concurrently, but having more positive fantasies predicted a greater number of symptoms 6 months later. In Study 4, we examined a potential pathway through which this longitudinal relation might operate: low academic success. As noted in the introduction, positivity of fantasies in students predicted low effort and low academic success (Kappes et al., 2012; Oettingen & Mayer, 2002), and in turn, low academic success has been observed to predict symptoms of depression (McCarty et al., 2008; Metalsky, Joiner, Hardin, & Abramson, 1993). We thus hypothesized that low effort and little academic success mediates the relationship between positivity of fantasies and a relative increase in symptoms of depression.

Study 4: Low Academic Success as Mediator

Method

Participants were 148 college students (52 male, 92 female, 4 did not specify gender and age; mean age = 20.04 years, *SD* = 1.20). We replaced the missing gender and age values with the respective mean of the sample. At baseline (Time 1: October), students completed the measures of fantasies and depression. Two months later (Time 2: December), participants answered items concerning study effort and completed the measure of depression a second time. Students completed all questions in class. Because

Table 4. Study 3: Descriptive Statistics and Raw Correlations Among Key Variables

		Correlations		
Variable	*M*	1	2	3
1. Age (years)	19.04 (1.89)	—		
2. Positivity of fantasies	4.19 (0.54)	.07	—	
3. Depressive symptoms: Time 1	20.78 (11.68)	.002	−.43***	—
4. Depressive symptoms: Time 2 (*n* = 52)	17.25 (10.79)	−.01	−.28*	.38**

Note: Standard deviations are given in parentheses. The full sample consisted of 78 participants; *n*s are given for variables for which all data were not available. Positivity of fantasies was assessed in everyday life during the week after Time 1. Depressive symptoms were assessed using the Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977).
*p ≤ .05. **p ≤ .01. ***p ≤ .001.

participants were undergraduate students, we measured effort and success in the academic domain. We recorded their official course grades for the midterm and final exams to determine change in academic success.

We used the same measure of positivity of fantasies as in Study 1; the internal consistency of the 12 stories was adequate (Cronbach's αs > .62). The positive- and the negative-fantasies scores strongly correlated, $r = −.81$, $p < .001$, and thus we combined them into a positivity-of-fantasies index. We also asked participants to rate their thoughts and images regarding the vividness of their fantasies on a 7-point scale (Cronbach's α = .81).

We measured study effort at Time 2 by asking participants to indicate how many hours per week they spent preparing for class since the past midterm exam and to rate how hard they prepared for class since the past midterm exam (the latter was rated on a 7-point scale from 1, *I did not try hard at all*, to 7, *I tried very hard*). Finally, we asked the following yes/no question: "Did you write one or more extra-credit papers or essays for your class since the past mid-term exam?" We combined answers to these three questions to create an index of study effort (Cronbach's α = .59). We also recorded participants' official midterm and final course grades, from 1 (F) to 13 (A+). As a measure of academic success, we used the improvement in course grades from midterm to final by subtracting midterm course grades from final grades.

The Beck Depression Inventory (BDI; Beck, Steer, & Brown, 1996) was used to measure symptoms of depression. The BDI is a 21-item standard inventory on which, for each item, participants pick one answer out of a group of four statements that best describes the way they have been feeling the past week (e.g., 0 = *I do not feel sad*, 1 = *I feel sad*, 2 = *I am sad all the time and I can't*

snap out of it, 3 = *I am so sad or unhappy that I can't stand it*). Questions pertain to somatic, affective, and cognitive dimensions of depression. Internal consistency was high at both time points (Cronbach's αs = .84 and .89, respectively). The test-retest reliability (r) between Times 1 and 2 was .59 ($p < .001$). We subtracted participants' BDI scores at Time 1 from their scores at Time 2 to assess change in depressive symptoms.

Results

There was no difference between men and women concerning fantasies, effort, academic success, and change in symptoms of depression, $F(1, 142)s < 0.53$, $ps > .47$. Men and women differed in their amount of symptoms of depression at both times, $F(1, 142)s > 6.08$, $ps < .02$, with women (Time 1: $M = 7.41$, $SD = 5.69$; Time 2: $M = 6.43$, $SD = 6.12$) showing more symptoms than men (Time 1: $M = 5.17$, $SD = 4.29$; Time 2: $M = 3.92$, $SD = 3.71$); accordingly, in our analyses, we adjusted for gender. Vividness of fantasies did not correlate with the positivity or negativity of participants' thoughts and images or with change in symptoms of depression. Mean values and raw correlation coefficients are shown in Table 5. As predicted, the more positive participants' fantasies were, the fewer symptoms of depression they showed at Time 1, $r = −.33$, $p < .001$, but the more symptoms they showed 2 months later, $r = .22$, $p < .01$ (see Table 2). The same pattern of results emerged when we analyzed the positive- and negative-fantasies scores separately ($ps < .03$).

Positivity of fantasies predicted low academic success, $β = −0.23$, $t(145) = 2.87$, $p = .005$, and low effort, $β = −0.16$, $t(145) = 2.00$, $p < .05$. Using a bootstrap procedure to test for mediation (Preacher & Hayes, 2008), we

Table 5. Study 4: Descriptive Statistics and Raw Correlations Among Key Variables

Variable	M	Correlations							
		1	2	3	4	5	6	7	8
1. Age (years; $n = 144$)	20.04 (1.20)	—							
2. Positive fantasies: Time 1	3.74 (0.79)	−.02	—						
3. Negative fantasies: Time 1	3.94 (0.74)	−.15	−.81***	—					
4. Vividness of fantasies: Time 1	4.65 (0.84)	−.13	.12	.10	—				
5. Positivity of fantasies: Time 1	−0.20 (1.45)	.07	.95***	−.95***	.02	—			
6. Effort spent studying: Time 2	0.02 (0.72)	−.14	−.15	.16*	.17*	−.17*	—		
7. Academic success: Time 2	0.16 (2.49)	−.03	−.22**	.22**	−.11	−.23**	.38***	—	
8. Depressive symptoms: Time 1	6.88 (5.88)	−.11	−.29***	.35***	.13	−.34***	.20*	.17*	—
9. Depressive symptoms: Time 2	5.70 (5.69)	−.08	−.13	.16	.04	−.15	.18*	.01	.59***

Note: Standard deviations are given in parentheses. The full sample consisted of 148 participants; ns are given for variables for which all data were not available. At Time 1, positive and negative fantasies were measured separately; the latter score was then subtracted from the former to obtain an overall positivity-of-fantasies score. Depressive symptoms were assessed using the Beck Depression Inventory (BDI; Beck, Steer, & Brown, 1996).
*$p ≤ .05$. **$p ≤ .01$. ***$p ≤ .001$.

observed that positivity of fantasies indirectly predicted change in symptoms of depression through low academic success, 95% confidence interval (CI) = [0.006, 0.46]. In addition, positivity of fantasies indirectly predicted low academic success through low study effort, 95% CI = [−0.24, −0.02]. Low academic success, in turn, predicted higher symptoms of depression over 2 months, $\beta = -0.17$, $t(145) = 2.13$, $p < .04$.

Discussion

Again, having more positive fantasies was correlated with fewer symptoms of depression when the two variables were measured concurrently, but more positive fantasies predicted a greater number of symptoms over time. Study 4 adds to the previous three studies by showing that low academic success partially, but significantly ($p < .05$), mediated the relationship between positivity of fantasies and change in symptoms of depression. Elucidating the role of the amount of effort students invested in studying, we found that low study effort partially, but significantly ($p < .05$), mediated the relation between positive fantasies and low academic success.

General Discussion

Across four studies, we found that having more positive fantasies was related to fewer symptoms of depression when the two variables were measured concurrently, but having more positive fantasies predicted a greater number of symptoms over time. These results appeared in adults and children, for various measures of fantasies (semiprojective and daily diary), symptoms of depression (BDI, CDI, CES-D), and time periods between measurements (1 month to 7 months; Table 2). As hypothesized, low academic success mediated the predictive relation between positivity of fantasies and symptoms of depression over time (Study 4).

By showing a beneficial relation between positivity of fantasies and concurrent symptoms of depression, these findings are consistent with past work on positive thinking (Caprara et al., 2012; Golding & Singer, 1983). They are, at least at first sight, counterintuitive regarding the harmful relationship between positivity of fantasies and change of depressive symptoms over time. However, in line with findings that positive fantasies decrease energy and predict low effort and little success for up to 2 years (Kappes & Oettingen, 2011; Kappes et al., 2012; Oettingen & Mayer, 2002), our results showed that individuals with positive fantasies invested low effort in studying, which predicted low academic success and, in turn, symptoms of depression.

Because the harmful relationship between positive fantasies and symptoms of depression held up for up to

7 months (Study 2), we speculate that positive fantasies may affect people's long-term mental health and personal development. In addition, by using semiprojective and daily-diary measures, we tapped into people's free thoughts and images about the future as they unfolded in their everyday lives. Experiencing these thoughts as pleasurable in the here and now seems to have costs later on.

Because the studies were correlational, we cannot infer that positive fantasies cause long-term depression, and we cannot conclusively exclude effects of regression to the mean. However, previous research has shown that positive fantasies (vs. negative fantasies, questioning fantasies, factual thoughts, and irrelevant thoughts) cause low energy and effort (Kappes & Oettingen, 2011; Kappes et al., 2013). Inducing positive fantasies may indeed produce depressive symptoms by encouraging people to enjoy their success prematurely in their minds, thus lowering energy and effort. Furthermore, we assume that it is the positive-fantasies measure that predicts relative increases in depressive symptoms. However, it may also be that the negative-fantasies measure predicts relative decreases in depressive symptoms. In all four studies, the mean values of symptoms of depression were similar at Times 1 and 2, and thus we speculate that both processes were responsible for our results. Future research may focus on the conditions under which one process as opposed to the other will emerge and prevail (e.g., stressors absent or present; feedback positive or negative).

Our seemingly counterintuitive findings are in line with research showing that positive intrapersonal thinking (focusing on one's own person) correlated with low suicidal ideation right after a suicide attempt but predicted an increased likelihood of another suicide attempt over the subsequent 15 months (O'Connor et al., 2015). Further, focusing on happiness rather than symptoms of depression, Cheng, Fung, and Chan (2009) found that elderly people who anticipated their future self as more happy were actually less happy later on. The individuals seeing their future as happy may not have arranged for the inevitable declines when getting older, thus feeling more disappointed once such declines occurred. Similarly, Lang, Weiss, Gerstorf, and Wagner (2013) showed in the elderly that forecasts of future happiness predicted decreases in health and longevity. In younger adults, Sweeny, Reynold, Falkenstein, Andrews, and Dooley (2015) found that law students who foresaw a positive outcome while waiting for their results on the bar exam were more devastated when they failed and less happy when they received good news. In light of bad news, they were also less inclined to improve their standing.

Research on avoidant coping further supports the present findings. Avoidant coping relates to low depressive affect concurrently but predicts high depressive affect over time (Holahan, Moos, Holahan, Brennan, &

Schutte, 2005). When people deny, minimize, or avoid stressors, they may be lured into exerting little effort and through low success may become depressed. Thus, positive fantasies as well as avoidant coping allow individuals to evade problems—but only until reality hits. People can use their positive fantasies, however, to prepare for reality when they mentally contrast their positive fantasies with reflections on real-life obstacles (Oettingen, Pak, & Schnetter, 2001). Then, positive future fantasies reveal how the obstacles can be overcome. Consequently, such mental contrasting spurs effort and successful performance (see reviews by Oettingen, 2012, 2014). By complementing positive future fantasies with a clear sense of reality, mental contrasting leads people to exert effort and reach success, and thus symptoms of depression should be prevented or mitigated.

In sum, positive future fantasies can be both a risk and a protective factor for symptoms of depression. When people indulge in them, such fantasies can be seen as a protective factor dampening depressive symptoms in the short term; however, such covering over comes at the expense of low effort and success, which renders positive fantasies a risk factor in the long term. Finally, positive fantasies should become a protective factor even in the long run, when people mentally contrast them with reality and thus actively pursue their goals. It is not surprising, then, that people who cannot anticipate positive future outcomes become depressed (MacLeod & Salaminiou, 2001; Miranda, Fontes, & Marroquin, 2008) and vulnerable to depressive rumination (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008). Researchers designing interventions to ward off depression and ease its course may want to carefully consider how to balance positive future dreams with thoughts about reality and whether the aim is momentary alleviation of depression or long-term prevention and recovery.

Conclusion

Our results shed a differentiated light on the power of positive thinking. Though indulging in more positive future fantasies relates to lower concurrent symptoms of depression, longitudinally it predicts more symptoms. Low effort in and little success at mastering everyday life qualify as a potential mechanism of this long-term relationship. The modern era is marked by a push for ever-positive thinking (Held, 2008), and the self-help market fueled by a reliance on such positive thinking is a $9.6 billion industry that continues to grow (Marketdata Enterprises, 2015). Our findings raise questions of how costly this market may be for people's long-term well-being and for society as a whole.

Note

1. All four studies fulfilled this prerequisite (Cronbach's αs = .78–.92).

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