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Narrative Identity in Female Patients with Remitted Bipolar Disorder:

A Negative Past and a Foreshortened Future

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Abstract

The present study examined narrative identity and subjective well-being in outpatients with remitted bipolar disorder (BD) and a healthy control group. Fifteen female outpatients with remitted BD and 15 healthy control participants identified past and future chapters in their life stories, gave their age for the beginning and end of each chapter, rated emotional tone as well as positive and negative self-event connections associated with the chapters, and for future chapters rated the probability of the chapter. The BD patients reported less positive emotional tone and self-event connections for past chapters, but not for future chapters. However, the patients did describe fewer future chapters with shorter temporal projection into the future, and reported lower probability of future chapters. These characteristics of chapters were related to lower subjective well-being. The study suggests that a more negative narrative identity with a foreshortened future perspective may contribute to lower subjective well-being in patients with BD.

Keywords: Bipolar disorder; narrative identity; life story chapters; future thinking; subjective well-being

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Narrative Identity in Female Patients with Remitted Bipolar Disorder: A Negative Past and a Foreshortened Future

Bipolar Disorder (BD) is a recurrent and often chronic affective disorder characterized by episodes of depression with decreased mood and energy, and episodes of mania or hypomania with elevated mood or increased energy (APA, 2013). A central characteristic of BD is the marked variations in self-perception during affective episodes with low self-esteem during depression and high or inflated self-esteem during hypomania or mania.

BD generally onsets during adolescence or early adulthood and in almost all cases before the age of 25 (Begley et al., 2001) with significant implications for the person's developmental trajectory and quality of life. As adolescence is a crucial period for the formation of identity (Erikson, 1959), the onset of BD may lead to disturbances in self and identity (Leitan, 2016). Consistent with this, individuals suffering from BD are characterized by compartmentalized self-representations (Power, de Jong, & Lloyd, 2002), low self-esteem (Nilsson, Jørgensen, Craig, Straarup, & Licht, 2010), maladaptive self-schemas (Nilsson, Straarup, & Halvorsen, 2014), perceived stigmatization (Nilsson, Kugathasan, & Straarup, 2016), and a negative bias when processing self-related information (Molz Adams, Shapero, Pendergast, Alloy, & Abramson 2014). However, no previous studies have investigated narrative identity in individuals with BD and applying a narrative perspective to understanding BD may be beneficial since it allows analyses of how individuals with BD make sense of their past and anticipate their future.

The quality of life in patients with BD has been found to be substantially lower than in individuals without a psychiatric disorder, even when concurrent symptomatology is accounted for (Michalak, Murray, Young, & Lam, 2008). While reduction of symptoms is typically the focus of treatment, quality of life is another important parameter of recovery (Michalak et al., 2008). Since

narrative identity is related to well-being in healthy groups (see Adler, Lodi-Smith, Philippe, & Houle, 2016 for a review), examining narrative identity in relation to well-being in patients with BD may offer insights into the identity processes involved in functional recovery.

In the present study, we examined characteristics of narrative identity in patients suffering from BD compared to a healthy control group. In addition, we examined whether characteristics of narrative identity were related to subjective well-being. Below, the concept of narrative identity is explained and studies on the relation between narrative identity and subjective well-being are reviewed. We then outline the predictions for the present study, drawing on studies examining associations between BD, the self, autobiographical memory, and future thinking.

Narrative identity

Narrative theories emphasize the personal narrative as a central component in the construction of meaning and identity (McAdams & Pals, 2006). Identity in the narrative perspective takes the form of a story of the self, first constructed in adolescence when individuals begin to interpret their past leading to the perception of the present and giving rise to anticipations of the future (Habermas & Bluck, 2000; McAdams, 2001).

In the construction of life stories, individuals selectively recruit events from their lives that they perceive as important to who they are and how their lives were shaped (Habermas & Bluck, 2000). Important periods from their lives are used as chapters in their life stories and such chapters include knowledge of the people, places, and activities associated with the periods (Brown, Hansen, Lee, Vanderveen, & Conrad, 2012; Conway, 2005; McAdams, 2001; Thomsen, 2009). Chapters are evaluated emotionally leading to positive and negative emotional tones in life stories (McAdams, 2001; Thomsen, Olesen, Schnieber, & Tønnesvang, 2014). Through reasoning about the meaning of chapters, individuals construct links between chapters and their selves, also termed self-event connections (Habermas & Bluck, 2000; Pasupathi, Mansour, & Brubaker, 2007). Self-

event connections reflect individuals' reasoning about what the chapters show about them as persons and may be both positive and negative (Lilgendahl & McAdams, 2011). For example, a depression may be interpreted as showing that one is a weak person or it may, in retrospect, be interpreted in ways that are more positive, such as yielding more accurate self-knowledge that allowed one to accept that life will not be easy.

Most research on narrative identity has focused how individuals story their past. However, individuals can project themselves into the future and generate events that they believe will be an important part of their future life stories (e.g., Berntsen & Bohn, 2010; McAdams, 1993; Thomsen et al., 2014). Few studies have examined future chapters, but two studies indicate that individuals also construct chapters for their future (Dalgleish, Hill, Golden, Morant, & Dunn, 2011; Thomsen, Lind, & Pillemer, in press). Indeed, individuals may project themselves decades into the future through the construction of future chapters, which may include chapters on being a grandparent, retirement, and functional decline (Thomsen et al., in press).

Narrative identity and well-being

Narrative identity captures how individuals interpret identity salient parts of their past and future and may influence the processing of current life events contributing to emotional and cognitive reactions to these events and thus to well-being. For example, one study showed that individuals, who describe sequences where positive events transform into negative outcomes, also termed contamination sequences, report more depressive symptoms (Adler, Kissel, & McAdams, 2006). A recent review concluded that several aspects of narrative identity are related to well-being (Adler et al., 2016). A more positive emotional tone in life stories, redemption sequences as well as positive self-event connections and meaning are related to greater well-being, while contamination sequences, negative self-event connections, and meaning are related to lower well-being (see Adler et al., 2016 for a review; Banks & Salmon; 2013; Lilgendahl & McAdams, 2011;

Lilgendahl, McLean & Mansfield, 2013; McAdams, Reynolds, Lewis, Patten, & Bowman, 2001; Thomsen, Matthiesen, Frederiksen, Ingerslev, Zachariae, & Mehlsen, 2016). While these studies mostly use correlational design, some experimental studies suggest that the ways individuals recall and narrate identity-defining events may influence well-being, although more studies are needed before firm conclusions can be drawn (e.g., Cili & Stopa, 2014; Jennings & McLean, 2013).

Focusing especially on life story chapters, studies have found that positive emotional tone and positive meaning of past chapters are associated with higher subjective well-being and self-esteem as well as fewer symptoms of psychological disorders (Holm & Thomsen, under review; Steiner, Pillemer, & Thomsen, under review; Thomsen et al., in press). This is also the case for future chapters, although only one study has examined this (Thomsen et al., in press).

Narrative identity and bipolar disorder

Bipolar disorder is characterized by problems with the self and lower quality of life (Michalak et al., 2008; Molz Adams et al., 2014; Nilsson et al., 2010; Power et al., 2002). We suggest that examining narrative identity in individuals with BD may help understand this disorder and the low well-being experienced by individuals suffering from the disorder. While it is well-established that depression is associated with recalling more negative memories as well as recalling over-general memories (e.g., Clark & Teasdale, 1982; Williams et al., 2007), less is known about autobiographical memory and in particular narrative identity in BD. Hence, the present study is in some ways exploratory. Nevertheless, existing studies on the self, autobiographical memory, and future thinking in BD may help derive predictions for the present study and these are explained below.

Patients with BD report lower self-esteem and negatively biased self-referential processing (Molz Adams et al., 2014; Nilsson et al., 2010). In addition, studies on patients with depression (Dalgleish et al., 2011) and patients with schizophrenia (Allé et al., 2015; Holm, Thomsen, &

Bliksted, 2016) have found that patients describe their past life stories as more negative than controls. Although these psychiatric disorders are distinct from BD, they suggest the possibility that having a psychiatric disorder may be associated with a more negative narrative identity. A negative narrative identity here refers to selecting negative events as important to understanding who one is as a person and interpreting these events in negative ways, for example that they reveal negative aspects of one's personality. Based on these ideas, we expected that the patients in the present study would describe their past chapters as more negative and less positive compared to the control participants. We also expected that this would extend to more negative and less positive self-event connections.

We had similar expectations for future chapters, that is, we expected that the patients with BD would report more negative and less positive future chapters with more negative and less positive self-event connections compared to the controls. This was partly due to the general negativity of the self in this group (Molz Adams et al., 2014; Nilsson et al., 2010), and partly because the patients are probably well aware that their illness may continue to affect their lives.

For future chapters, we also examined subjective probability, that is, the belief that the chapter would actually occur. Di Simplicio and colleagues recently found that the BD phenotype in a non-clinical sample was associated with less certainty in positive future self-images (Di Simplicio, Holmes, & Rathbone, 2015). Based on this study and reasoning that the patients would be aware of their poor prognosis, we expected that if the BD patients described their future chapters as positive, they would perceive them as less probable.

Finally, we examined the number and temporal projection of future chapters. King et al. (2011) found that BD outpatients, when compared to controls, generated fewer episodic details for future events regardless of event valence, suggesting that the patients experienced difficulties simulating a future. Other studies have found that patients with schizophrenia have difficulties

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generating future events (e.g., D'Argembeau, Raffard, & van der Linden, 2008). Based on these studies, we expected that the patients with BD would identify fewer future chapters and that these would extend less into the future compared to the healthy controls.

Based on previous studies on relations between narrative identity and well-being (for a review see Adler et al., 2016), we also hypothesized that more positive and less negative chapters and more positive and less negative self-event connections would be related to better subjective well-being, and we explored relations between other aspects of narrative identity (number and temporal extension of future chapters as well as their probability) and subjective well-being.

Method

Participants

The patient group consisted of 15 female outpatients (age: M = 33.87 years, SD = 8.75) fulfilling ICD-10 criteria for Bipolar Disorder (WHO, 2011). They were recruited from the Ambulatory for Mania and Depression at Aarhus University Hospital Risskov, where a clinical psychologist (the 2nd author) confirmed diagnosis. Prior to the study, the participants had been diagnosed by a trained psychiatrist using SCAN interviews (Wing, Babor, Brugha, & Burke, 1990). Exclusion criteria were: (a) concurrent affective episode, (b) severe substance abuse, (c) severe comorbid disorder, i.e. personality disorders or schizophrenia. All participants were clinically remitted at the time of the study, which was also assessed through self-report measures of depression and mania (see Materials). Note that we use the term "remitted" to refer to the absence of affective episodes; the participants may, however, eventually suffer new affective episodes. Many participants (73.3%) had previously attempted suicide and 73.3% had been hospitalized due to their disorder. They had on average experienced 15 affective episodes and 13 participants had had an affective episode within the last three years. With respect to comorbidity, three out of the 15 had a comorbid diagnosis of attention deficit/hyperactivity disorder; two out of

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the 15 had a comorbid diagnosis of anxiety (generalized anxiety and agoraphobia) and 10 BD participants had no diagnosed comorbidity. With respect to sociodemographic variables, ten were single/never married, four were married/co-habiting, and one was divorced/separated. Five were currently studying, five were working part time, and five were unemployed. Additionally, eight had completed high school, two had completed a short higher education, and five had completed a long higher education.

The healthy control group consisted of 15 women (age: M = 32.80 years, SD = 7.09) from a non-clinical population matched for age. They were recruited by word of mouth. Exclusion criteria were: (a) self-reported diagnosis of personality disorder, schizophrenia, or BD, (b) self-reported parents' diagnosis of personality disorder, schizophrenia, or BD, and (c) that they met criteria for the presence of an affective episode (as assessed through self-report, see Materials). With respect to sociodemographic variables, two were single/never married and thirteen were married/co-habiting. One was currently studying, one was working part time, twelve were working full time, and one was unemployed. Eight of the control participants had completed a short higher education and seven had completed a long higher education.

There was no difference between BD patients and healthy controls in terms of age ($t(28) = 0.37$, $p = .72$). A Chi Square analysis showed significant differences on education, marital status, and current occupation (education $X^2(2) = 11.93$, $p < .05$; marital status $X^2(2) = 11.10$, $p < .05$; current occupation $X^2(4) = 20.67$, $p < .05$). More BD patients were single compared to the group of healthy controls. Additionally, the BD patients were less educated and none were working full time as opposed to eleven full-time workers in the control group.

Materials

Narrative identity. The participants completed a questionnaire where they were asked to describe up to ten past and ten future chapters (always in that order) (two participants wrote more

than ten past chapters adding additional descriptions to the back pages), give age at beginning and end of each chapter, and to rate chapters with regard to emotional tone, self-event connections, and subjective probability (only future chapters). They were given the following instruction (for past chapters):

Please think of your life story and identify periods of time comprising chapters in your life story. Chapters refer to periods of months or years. It is important that the chapters cover your entire life story. For each chapter please describe the main content of the chapter and answer the associated questions. Chapters need not have a clearly defined beginning or ending. You can include parallel chapters, i.e., chapters may refer to the same period in your life. You also may include chapters that are not yet finished. Some describe their life story in just a few chapters, others in many chapters. There is no right or wrong way to divide your life into chapters – it is up to you to decide how many chapters you include (based on Thomsen & Berntsen, 2008; Thomsen et al., 2014).

For future chapters they were given the following instruction: "*Please think about your future and identify chapters in your future life story. A chapter in your future life story refers to a period that you imagine you will experience in your future and that will become a part of your future life story*". The instructions then repeated the instructions for past chapters about describing and answering questions about future chapters; that chapters need not have clearly defined beginnings and ending; that chapters could run in parallel; and that they could identity few or many chapters (contact last author for detailed instructions).

The participants were then given space to briefly describe the content of each chapter and asked to give their age when the chapter began and ended (or give their best estimate for future chapters). Also, for each past and future chapter the participants rated the emotional tone on two questions measuring positivity and negativity respectively: "To what degree would you describe

the chapter as positive/negative?" answered on scales with 1 = not at all positive/negative to 5 = extremely positive/negative and they rated positive and negative self-event connections on two questions: "Do you feel that the chapter says something positive/negative about who you are as a person?" answered on scales with 1 = not at all to 5 = very much. For future chapters, participants were also asked to rate each chapter on subjective probability on the following question: "How likely do you think it is that this chapter will be a part of your future life?" answered on a scale with 1 = not at all likely to 5 = highly likely.

For the analyses, we calculated means for the positive and negative emotional tone, positive and negative self-event connections, and subjective probability, by adding the scores for each measure and dividing by the number of chapters for each participant, yielding four mean scores for past chapters and five mean scores for future chapters. Three BD participants reported having no future chapters and hence did not contribute to means for future chapters.

Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985). The scale measures global life satisfaction, which is a component of subjective well-being. The scale consists of five statements rated on 1 to 7 point scales, with higher scores reflecting greater life satisfaction. SWLS is widely used and shows excellent psychometric qualities (Diener et al., 1985), also in the Danish version (Mehlsen, Thomsen, Viidik, Olesen, & Zachariae, 2005). In the present study, SWLS showed good internal reliability (Cronbach's $\alpha = 0.93$).

Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988). The scale contains two ten-item mood scales constituted by lists of emotions and assessed on frequency within the past week using 1 to 5 point scales. PANAS is widely used and shows excellent psychometric qualities (Watson et al., 1988), also in the Danish version (Olesen, Thomsen, & O'Toole, 2015). In the present study, both PA and NA showed good internal reliability (Cronbach's αs = 0.89 and 0.81, respectively).

Major Depression Inventory (MDI; Bech, Rasmussen, Olsen, Noerholm, & Abildgaard, 2001). In order to assess for the presence of depressive episodes, MDI was completed by all participants. MDI is a standardized measure of depression corresponding to diagnostic criteria. It has previously been translated and used in a Danish version (Døssing et al., 2015). Participants answered 12 questions on the occurrence of depressive symptoms, such as sadness, decrease of self-esteem, and feelings of guilt, within the last two weeks with 0 indicating the symptom not being present and 5 indicating constant presence. MDI has shown good psychometric qualities (Bech et al., 2001). In the present study, MDI showed acceptable internal reliability (Cronbach's $\alpha = 0.64$). A participant score below 26 was required, as this is the recommended cut-off value (Bech et al., 2001).

The Altman Self-Rating Mania Scale (ASRM; Altman, Hedeker, Peterson, & Davis, 1997). In order to assess for the presence of manic episodes, ASRM was completed by all participants. The scale consists of five groups of five statements measuring the presence of manic symptoms, such as elevated mood, inflated self-esteem, and decreased need for sleep. The statements are rated from 0 (not present) to 4 (present, to a severe degree). It has previously been translated and used in a Danish version (Døssing et al., 2015). The ASRM has shown good psychometric qualities (Altman et al., 1997). In this study, ASRM showed acceptable levels of internal reliability (Cronbach's $\alpha = 0.74$). Only participants with a score of five or less were included.

Procedure

The patients agreeing to participate were given oral and written information about the study and asked to sign an informed consent. The patients were given the questionnaire at the ambulatory to complete at home or at the clinic. The control participants were given the questionnaire and asked to complete it in their own time. The questions were in the following, fixed order: Demographic variables, clinical variables (e.g., number of affective episodes, previous

hospitalization; only completed by the patients), depressive symptoms, mania symptoms, past chapters, future chapters, positive and negative affect, and life satisfaction. Upon return of the questionnaire, participants were compensated with a gift certificate of 150 DKK (20 US dollars).

Results

Below, analyses comparing the patients and the controls with regard to symptoms of depression and mania are first reported. Then, analyses testing differences between the patients and the controls on narrative identity and subjective well-being are described. Lastly, correlations between measures of narrative identity and subjective well-being for the group as a whole are reported.

There were no differences between groups on current symptomatology and both groups scored low (see Table 1). Thus, it is reasonable to assume that the BD patients were asymptomatic at the time of questionnaire completion and that the results of the study reflect narrative identity and subjective well-being in remitted BD patients.

Group differences in narrative identity and subjective well-being

In terms of narrative identity, BD patients did not differ significantly from healthy controls on number of past chapters, but they rated their past chapters as less positive and more negative. Furthermore, the BD patients were less likely to construct positive self-event connections compared to the controls, but there was no significant difference on negative self-event connections in past chapters (see Table 1).

The BD patients generated fewer future chapters in their life story (see Table 1). Note that three of the 15 BD patients did not report any future chapters at all. One participant suffering from BD wrote "*This is something I cannot relate to*", and another "*I just want to be happy*". We also examined the projection of the self into the future by subtracting the participants' current ages from the highest given ages for future chapters. This measures the number of years the participants

projected themselves into the future. The BD patients projected themselves less far into the future compared to the controls. This was not surprising since the BD patients had fewer future chapters, but it clarifies that fewer chapters are not the result of longer chapters for the BD patients, rather it is the result of less projection of the self into the future. Note, however, that the patients on average projected themselves 13 years into the future, indicating that most of them were able to construct a personal future that was quite distant in time.

There were no significant differences for the emotional tone or self-event connections for future chapters, indicating that the BD patients and the controls have similar ideas about the emotional content of their future chapters, and how their future chapters reflect on them as persons (see Table 1). However, the BD participants reported significantly lower probability of their future chapters, suggesting that even though the BD patients and controls had similar emotional content in their future chapters, the BD patients did not believe that the chapters would occur as described.

Regarding subjective well-being, the BD group scored significantly lower than the healthy controls on satisfaction with life (see Table 1). There were no significant differences between groups on positive and negative affect.

Correlations between narrative identity and subjective well-being

To examine associations between narrative identity and subjective well-being, correlations between measures were calculated for the group as a whole (see Table 2).

With respect to past chapters, a more positive emotional tone of chapters was significantly related to higher life satisfaction and positive affect, while a more negative emotional tone of chapters was significantly related to lower life satisfaction and positive affect. Additionally, more positive self-event connections were related to higher life satisfaction and positive affect, and more negative self-event connections were related to lower life satisfaction and less positive affect. There were no significant correlations between number of past chapters and subjective

well-being.

With respect to future chapters, identifying more future chapters was significantly related to higher positive affect. For the emotional tone and self-event connections, the pattern was similar to past chapters, but generally weaker and non-significant. Thus, only positive self-event connections for future chapters was significantly related to positive affect. In addition, higher subjective probability for future chapters as well as longer temporal projection into the future were significantly related to more life satisfaction.

Discussion

The present study is the first to examine narrative identity in remitted patients with BD. Although the patients were not currently experiencing affective episodes, they described chapters in their past life stories as less positive and as reflecting less positive characteristics of them as persons. Surprisingly, the patients did not rate their future chapters as less positive and more negative compared to the control group, and they also did not interpret their future chapters as reflecting their characteristics in less positive or more negative ways. They did believe, however, that their future chapters were less likely to actually occur. Importantly, patients were less able to identify future chapters, to the degree that three patients did not identify any future chapters at all and the chapters patients did identify extended less far into the future compared to the control group.

Although remitted, the patients reported life satisfaction that was substantially below that of the control group. This is in line with a recent meta-analysis, which concluded that patients with BD suffer from poor quality of life (Michalak et al., 2008). But the other measures of subjective well-being, which refer to emotions within the last week, did not differ significantly between the groups, perhaps suggesting that global measures of subjective well-being are more affected in patients with BD.

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Higher life satisfaction and positive affect were generally related to a more positive narrative identity, especially for past chapters, and to more and more temporally extended future chapters. Negative affect showed few significant correlations, a finding we have no explanation for.

Below, we first discuss how the findings on narrative identity may help understand BD. We then discuss the relations between narrative identity and subjective well-being and the implications for understanding subjective well-being in BD. Finally, we acknowledge limitations and suggest avenues for future studies and implications for treatment of BD.

Narrative identity and bipolar disorder

Consistent with the hypotheses, the BD patients had less positive and more negative past chapters compared to controls and they were less inclined to make positive self-event connections. This pattern is similar to findings for other psychiatric groups, such as patients with depression (Dalgleish et al., 2011) and patients with schizophrenia (Allé et al., 2015; Holm et al., 2016; Raffard et al., 2010). It is also consistent with studies finding relations between positive narrative identity and well-being in healthy samples (see Adler et al., 2016 for a review). This may suggest that a negative narrative identity is a general marker of poor psychological health. However, it is important to note that the patients in the present study were remitted and that the less positive narrative identity thus does not reflect current symptomatology.

The less positive narrative identity in patients with BD compared to healthy controls may reflect that patients experience more negative events but also that they have more negatively biased interpretations of events. The majority of the BD patients in the present study had had depressive episodes, attempted suicide, and experienced hospitalizations and these highly negative events are characteristic of BD patients (Goodwin & Jamison, 2007; Merikangas et al., 2011). Also, suffering from BD may interfere with typical positive life experiences such as holding a job,

having children, or being in a committed relationship (Lim, Nathan, O'Brien-Malone, & Williams, 2004; Inder, Crowe, Moor, Luty, Carter, & Joyce, 2008), which is also evident in the present sample. Thus, suffering from BD may affect life events such that the construction of a positive narrative identity becomes too much of a stretch. However, the emotional tone and the positivity of self-event connections are not simply a matter of what actually happened but also of interpretation and selection (McAdams et al., 2001). Previous research suggests that it is possible to make positive interpretations of negative events - a phenomenon referred to as redemption, which is related to greater well-being (Adler et al., 2016; McAdams et al., 2001). The BD patients in the present study reported less positive self-event connections; that is, they were less likely to believe that past chapters showed something positive about them as persons. Hence, it is possible that the less positive narrative identities found in the patients with BD reflect both the actual occurrence of more negative and fewer positive life events as well as more negatively biased interpretations.

Contrary to past chapters and to expectations, the BD patients did not construct future chapters with a less positive and a more negative emotional tone. This raises the question of why patients with BD constructed their personal future as positive, given that they described their past as more negative compared to controls and are probably aware that their illness may continue to affect their lives. While very few studies have examined the emotional qualities of future life stories, one study also did not find any differences in emotional tone in future chapters between depressed and healthy participants (Dalgleish et al., 2011). It is possible that psychiatric patients, like healthy individuals, use their goals and culturally shared knowledge of typical lives to construct future events (Berntsen & Bohn, 2010; D'Argembeau, & Mathy, 2011). Studies indicate that individuals with remitted depression show biased cognitive processes when in a sad mood (Scher, Ingram, & Segal, 2005), and future studies should use mood inductions to examine

whether present mood may also affect future life story chapters in individuals with remitted BD. Even though the BD patients did not describe their future as less positive, they lacked the belief that they would be able to make this hoped-for future unfold. This finding is supported by interview studies of patients with BD, where they report lack of belief in managing their lives and in achieving their goals (Inder et al., 2008; Lim et al., 2004) and by another recent study, where participants with the BD phenotype showed less confidence in positive future self-images (Di Simplicio et al., 2015). Statements in the BD participants' descriptions of chapters also support this notion. One BD participant wrote: *"Can I even get an education, become a good wife and am I suitable for having children?"* while a control participant described her future: *"I'm going to enjoy life with my husband and our children, all the while prioritizing my career as well"*.

The BD patients generated fewer future chapters with less temporal projection of the self. Three of the BD patients were unable to generate any future chapters at all. Research regarding future simulation in BD patients has generally been neglected, but the sparse literature in this field is in line with the present findings (e.g., King et al., 2011). Also other clinical groups, for example patients with schizophrenia, display difficulties with generating future events (D'Argembeau et al., 2008). The reasons for the foreshortened future are unknown. Executive functioning has been found to be related to the generation of future events (D'Argembeu, Ortoleva, Jumentier, & van der Linden, 2010) and since patients with BD have poorer executive functions (for a review see Cullen et al., 2016), this may explain why they have difficulties identifying future chapters in their life stories. In addition, the shorter, or for some patients lack of, personal future may reflect difficulties in establishing self-continuity in patients with BD. Given their many affective episodes accompanied by dramatic changes in perception of the self and a more unpredictable life, creating a sense of a continuous self that extends far into the future may be difficult. In a different line of research, Chandler, Lalonde, Sokol, & Hallett (2003) found that lacking the sense of personal

persistence through time distinguished clearly between suicidal and non-suicidal patients. BD is generally associated with substantial suicide risks and in the present sample 73.3% had attempted suicide. However, based on the present study, we cannot assess whether the fewer and less likely positive future chapters described by the participants with BD reflect suicidal thoughts or the expectations that more negative chapters may unfold instead of the hoped-for positive future chapters. From a theoretical and clinical perspective, further investigations concerning the ability to project the self into the future and suicidal thoughts, intentions, and behavior is warranted (see also MacLeod & Conway, 2007).

The lack of difference in emotional qualities and the lower number and shorter projection for future chapters is in contrast to another study, where Holmes and colleagues (2011) investigated imagery of future events in BD patients compared to controls. They found that BD patients reported higher vividness of negative future scenarios alongside higher levels of intrusive imagery of future events and a higher proportion of negative future events. This suggests that BD patients do not have fewer images of future events and that their future thinking is more negative. However, the present study examined future thinking in a life story perspective, focusing on more abstract memory structures and it is possible that the patients are reluctant to construct a negative future narrative identity, while at the same time being disturbed by intrusive images of specific negative future events.

Narrative identity and subjective well-being

Consistent with previous studies, it was found that positive emotional tone and positive self-event connections were related to greater subjective well-being, especially for past chapters (Adler et al., 2016; Banks & Salmon, 2013; Lilgendahl & McAdams, 2011; Lilgendahl, McLean & Mansfield, 2013; McAdams et al., 2001; Thomsen et al., 2016).

Research on relations between future events and well-being is generally sparse, but a positive view of the future has been associated with better subjective well-being. For example, MacLeod & Conway (2007) found that less positive, episodic future thinking was associated with low well-being for both a non-clinical group and a parasuicidal group. Other studies indicate that the emotional qualities of future events may be less closely associated with well-being compared to past events (Dalgleish et al., 2011; Thomsen et al., in press). The emotional qualities of future chapters also did not distinguish between the patients and the controls. It is possible that future chapters affect subjective well-being less, because individuals know that the very distant future represented in chapters is uncertain. But it is also possible that current levels of subjective well-being affect the construction of future chapters less than the construction of past chapters, because other processes are involved in the construction of the future. For example, culturally shared knowledge of the typical life may influence the identification of future chapters more than past chapters (Berntsen & Bohn, 2010).

More temporally extended future chapters and more future chapters were also related to higher positive affect. A previous study with healthy samples found no significant correlations between subjective well-being and number or temporal extension of future chapters (Thomsen et al., in press). It is thus possible that the relations do not reflect a general association between future chapters and subjective well-being, but rather reflect specific circumstances in individuals who suffer from BD (and perhaps other severe psychiatric disorders). While a less temporally extended personal future may reflect benign individual differences in healthy samples, it could, in combination with low subjective probability, reflect problems with self-continuity in clinical samples.

The BD group and the control group generally differed on measures of narrative identity that were related to subjective well-being and this could suggest that the less positive narrative identity

and impaired future projection may contribute to lower subjective well-being in the BD group. However, the study is correlational and although some studies support the idea that narrating important life events may impact well-being (e.g., Jennings & McLean, 2013; Pennebaker & Seagal, 1999; Steiner, Pillemer, & Thomsen, under review), affect also influences memory recall and interpretations (Bower, 1981). Thus, the correlations could reflect that positive emotions lead to the construction of more positive life stories. Future studies need to examine experimentally whether shaping narrative identity through intervention can improve well-being.

Limitations and perspectives

It is important to acknowledge some limitations of the present study. First, the sample consisted exclusively of women and was very small, meaning that estimates of effects are more uncertain. Thus, the study should be replicated with larger and more diverse samples. Second, the questionnaires were given in fixed order because we reasoned that participants would share more of their life stories if they had first "warmed up" sharing other personal details. But it is possible that the order of the questionnaires may have affected the results. Third, the patients and the controls were not matched on marital status, education, and occupational status and we cannot exclude the possibility that these variables play a role for the differences in narrative identity and subjective well-being. Note, however, that these differences in sociodemographic variables probably reflect consequences of suffering from BD that cannot easily be disentangled from the disorder itself. Fourth, as acknowledged throughout the paper, some of the findings for narrative identity are similar to findings seen for other clinical groups, and the present study cannot decide whether the differences between the patient and the control groups are specific to BD or reflect psychiatric illness more generally. Future studies comparing different clinical groups on narrative identity are needed to examine this. Fifth, the study relied exclusively on self-ratings of narrative identity targeting positive/negative narrative identity. While the finding is theoretically and

clinically relevant, future studies should delve more deeply into the content of narrative identity in patients with BD to unpack themes and meanings underlying the negativity.

If the findings from the present study are replicated, they may suggest possible improvements in clinical practice. Current evidence-based treatments for BD include psychopharmacological treatments, group psychoeducation, interpersonal and social rhythm therapy, family-focused therapy, and cognitive behavioral therapy (Geddes & Miklowitz, 2013). In interpersonal and social rhythm therapy, there is a focus on the loss of a healthy self (Frank, 2005), but generally there is no emphasis on narrative identity in current psychological treatments. It may be worth examining whether targeting the process of constructing narrative identity could improve functional recovery in this patient group, as narrative interventions have been found beneficial in other groups (Lysaker & Lysaker, 2011) and shifts in narrative identity have been found to predict improvement in therapy (Adler, 2012). Narrative interventions may emphasize more positive interpretations of what chapters tell about the patient's characteristics or support the integration of chapters lending themselves to more positive self-event connections. In addition, narrative interventions could focus on how patients construct their personal future and help them construct positive, but realistic, future chapters as well as support belief in and develop skills important for turning the chapter into reality.

Conclusion

The patients with BD had less positive and more negative past chapters and thought that the chapters reflected less positive personal characteristics. The BD patients also generated fewer future chapters with less confidence of the realization of the chapter and shorter temporal projection of the self into the future. These characteristics of narrative identity were also related to lower subjective well-being, opening the possibility that narrative identity may play a role for functional recovery among patients with BD.

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Table 1

Differences between patients with bipolar disorder (BD) and healthy controls on past and future chapters, subjective well-being, and symptoms of depression and mania

	BD patients *M* (*SD*)	Controls *M* (*SD*)	*t*	*d*
Major Depression Inventory	6.47 (3.93)	5.67 (3.44)	0.59	0.22
Altman Self-Rating Mania Scale	1.40 (1.84)	1.93 (1.71)	0.82	0.30
Satisfaction With Life Scale	17.67 (5.37)	29.67 (4.15)	6.85***	2.50
Positive affect	33.53 (7.12)	37.53 (4.44)	1.85	0.67
Negative affect	16.13 (3.09)	16.80 (5.83)	0.39	0.14
Number of past chapters	7.33 (2.72)	8.00 (1.81)	0.79	0.29
Past chapters, positive	3.04 (0.60)	3.90 (0.47)	4.37***	1.60
Past chapters, negative	2.87 (0.49)	2.15 (0.43)	4.30***	1.56
Past chapters, positive self-event	3.21 (0.52)	3.71 (0.36)	3.03**	1.12
Past chapters, negative self-event	2.20 (0.71)	1.86 (0.58)	1.39	0.52
Number of future chapters	2.33 (2.26)	4.01 (1.67)	2.39*	0.88
Future chapters, positive	4.20 (0.53)	4.40 (0.55)	0.97	0.37
Future chapters, negative	1.59 (0.58)	1.72 (0.62)	0.53	0.22
Future chapters, positive self-event	3.83 (0.72)	4.29 (0.56)	1.88	0.71
Future chapters, negative self-event	1.46 (0.65)	1.57 (0.59)	0.49	0.18
Future chapters, subjective probability	3.59 (0.77)	4.37 (0.53)	3.12*	1.18
Future chapters, temporal projection	13.42 (14.43)	40.86 (25.07)	3.34***	1.34

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 2

Correlations between past and future chapters and subjective well-being

	Satisfaction with life	Positive affect	Negative affect
Number of past chapters	.07	.22	-.02
Past chapters, positive	.62**	.52**	.15
Past chapters, negative	-.67**	-.44*	-.12
Past chapters, positive self-event	.54**	.53**	-.13
Past chapter, negative self-event	-.59**	-.49**	.00
Number of future chapters	.35	.39*	-.24
Future chapters, positive	.21	.25	.26
Future chapters, negative	-.08	.03	.26
Future chapters, positive self-event	.27	.45*	.26
Future chapters, negative self-event	-.26	-.32	.05
Future chapters, subjective probability	.41*	.18	.11
Future chapters, temporal projection	.57**	.37	-.23

* $p < .05$; ** $p < .01$