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Please cite the final published version:

Lind, M., Thomsen, D. K., Bøye, R., Heinskou, T., Simonsen, S. & Jørgensen, C. R. (2019). Personal and parents' life stories in patients with borderline personality disorder. *Scandinavian Journal of Psychology*. <https://doi.org/10.1111/sjop.12529>

Publication metadata

Title:	Personal and parents' life stories in patients with borderline personality disorder.
Author(s):	Lind, Majse; Thomsen, Dorthe Kirkegaard; Bøye, Rikke; Heinskou, Torben; Simonsen, Sebastian; Jørgensen, Carsten René
Journal:	Scandinavian Journal of Psychology
DOI/Link:	https://doi.org/10.1111/sjop.12529
Document version:	Accepted manuscript (post-print)

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Personal and Parents' Life Stories in Patients with Borderline Personality Disorder

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Acknowledgement: We would like to thank the staff at the Clinic for Personality Disorders at Aarhus University Hospital, Risskov and at Psychotherapeutic Center Stolpegaard for their help during the recruitment process. We thank the student helpers Annie Pedersen, Silje Sommer, Caspar Nielsen, and Anders Lunøe for transcribing the 60 life story interviews. Furthermore, we thank Aarhus BSS Research Price (2015) for financing the transcriptions. We thank Silje Sommer for her help with interrater reliability. The MSCEIT test was partly financed by the Danish test publisher Hogrefe. The authors are affiliated with Con Amore, which is funded by the Danish National Research Foundation (DNRF) Grant DNRF89.

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Abstract

Patients with borderline personality disorder (BPD) display disturbances in understanding self and others. We examined whether these disturbances extended to how patients described their personal and parents' life stories and to measures of identity, alexithymia, empathy, and emotional intelligence. Thirty BPD patients and thirty matched control participants described personal and parents' life stories and completed measures of identity disturbance, alexithymia, empathy, and emotional intelligence. Compared to the controls, patients with BPD described their personal and their parents' life stories more negatively and with fewer themes of agency and communion fulfillment. Patients and controls showed equally complex reasoning about their personal life stories, but patients displayed less complexity and more self-other confusion, when reasoning about their parents' stories. Patients also differed from controls on identity disturbance, alexithymia, and empathy. The results suggest that patients' storied understanding of themselves and others are disturbed and should be taken into account to better understand BPD.

Keywords: Borderline personality disorder; life stories; vicarious life stories; identity; self and other understanding

Introduction

Borderline personality disorder (BPD) is a severe psychiatric disorder characterized by identity disturbance, relational difficulties, affect instability, impulsivity, and self-harm (APA, 2013). Many theorists across clinical orientations agree that disturbances in understanding one's own and other people's minds underlie symptoms of BPD and emphasize the need to examine these disturbances in order to more fully comprehend the disorder (Bateman & Fonagy, 2016; Beeney, Hallquist, Ellison, & Levy, 2016; Bender & Skodol, 2007; Clarkin, Yeomans, & Kernberg, 2006; Dimaggio, Salvatore, Popolo, & Lysaker, 2012; Heard & Linehan, 1993; Jørgensen, 2010; Livesley, 2001).

The disturbances in understanding self and others characterizing BPD have been researched under different labels, such as “mentalization”, “theory of mind”, or “metacognition” (Bateman & Fonagy, 2016; Choi-Kain & Gunderson, 2008; Semerari et al., 2003). Many studies confirm that patients with BPD have difficulties in understanding themselves and other people. For example, they display poorer reflective functioning on the Adult Attachment Interview (Fischer-Kern et al., 2010; Fonagy et al., 1996; Levy et al., 2006). Studies also show that patients with BPD have disturbed identity (Jørgensen, 2009; Jørgensen et al., 2012; Wilkinson-Ryan, & Westen, 2000) and high alexithymia, which refers to difficulties recognizing and describing personal emotional states (Domes, et al., 2011; Joyce, Fujiwara, Cristall, Ruddy, & Ogrodniczuk, 2013; Webb & McMurrin, 2008; Zlotnick, Mattia, & Zimmerman, 2001). Other studies show that BPD is associated with lower empathy (Davis, 1983, Dziobek et al. 2011; Eisenberg et al., 1994; Harari, Shamay-Tsoory, Ravid, & Levkovitz, 2010; Jeung & Herpertz, 2014; New et al., 2012, Ritter et al., 2011). Although these studies use different terms, they all point to disturbances in self and other understanding in patients with BPD.

Storied understanding of self and others in BPD patients

Here, we examine whether disturbances in self and other understanding extend to life stories. Life stories are internalized stories of an individual's past, present, and future life (McAdams, 2001). By constructing life stories, individuals create temporally extended narratives of important events including reflections on how these events shaped identity (Pasupathi, Mansour, & Brubaker, 2007). Life stories integrate events with interpretations and contain phenomenologically rich first-person accounts of how individuals perceive their own and their close others' lives. Examining life stories allows analyses of disturbances in self and other understanding that have not been addressed in previous studies, where the test material was less personally significant, less experience-near, and did not capture temporally extended organization of self and other understanding (e.g., Domes et al., 2008; Franzen et al., 2011; Hertel, Schütz, & Lammers, 2009; Peter et al., 2013; Schilling et al., 2012), or focused on circumscribed aspects in the participants' lives, such as relationships with caregivers (i.e. AAI; Bakermans-Kranenburg & van Ijzendoorn, 2009; Main, Goldwyn, & Hesse, 2002). Researchers have found that BPD is associated with lack of coherent narratives (Bateman & Fonagy, 2016; Rasmussen et al., 2017; Semerari et al., 2003; 2014). In the present study, we examined the content and complexity of both personal and parents' life stories to extend the literature on narrative coherence and to illuminate both self and other understanding as constructed in narratives.

We asked patients with BPD and healthy controls to describe chapters in their own and their parents' life stories. We compared the life stories on emotional content, complexity of reasoning, and themes of agency and communion fulfillment. We selected these aspects of life stories because a recent review by Adler and colleagues (2016) indicates that they are

important to psychological well-being. Below, we review the relevant literature on personal life stories and life stories for other people.

Personal life stories

Constructing life stories is a complex process, where knowledge of extended periods in life (also termed chapters) and emotionally salient events (such as high points and low points) are integrated and interpreted through reasoning about relationships between events, periods, and selves (Habermas & Bluck, 2000; McAdams, 2008). Because chapters are central in creating the overall structure in life stories (McAdams, 2001; Thomsen, 2009) and are closely associated with aspects of the self (Thomsen, 2015; Thomsen & Pillemer, 2017b), we focus on chapters in the present study.

Life story chapters refer to important, temporally extended periods with perceived beginnings and endings that include information about the people, places, activities, and objects associated with that period, e.g. *“my time in primary school”* (Steiner, Pillemer, Thomsen, & Minigan, 2014; Thomsen, 2009). Chapters are appraised emotionally and thought of as positive and/or negative periods in life (Conway & Pleydell-Pearce, 2000). Through autobiographical reasoning causal connections between chapters and between chapters and the self are constructed. For example: *“I am really proud of myself because I remained firm on my decision. It would have been easier just to give in, but I did not. I became more confident in myself”*. Such causal connections support coherence and meaning in life stories (Habermas & Bluck, 2000). Importantly, the causal connections constructed through autobiographical reasoning are not always positive, sometimes individuals draw negative conclusions about themselves, as exemplified here *“I convinced myself and felt sure that I was a dispensable thing... that no one noticed me or protected me... I felt unimportant and it became worse and resulted in bad self-esteem”* (Banks & Salmon, 2013; Lilgendahl & McAdams, 2011; Thomsen et al., 2016).

Through the selection and interpretation of chapters, life stories come to evidence positive or negative emotional content that shape a positive or negative understanding of who one is as a person and whether good or bad things can be expected in the future. No previous studies have examined life stories in patients with BPD, but studies show a predominance of negative autobiographical memories in patients with BPD (Jørgensen et al., 2012; Renneberg, Theobald, Nobs, & Weisbod, 2005). Likewise, studies show that patients with BPD evaluate themselves more negatively than healthy control (Westen & Cohen, 1993). Hence, we expected that patients with BPD would describe their life stories more negatively compared to a control group.

Individuals differ in terms of complexity when they reason about their life stories, and individuals with more complex reasoning display better insight for emotions, thoughts, and behavioral patterns as well as more mature identity and optimism (McLean & Pratt, 2006; McLean & Thorne, 2003). Complex reasoning about causal connections includes integrating information in a nuanced way and providing highly insightful and elaborate explanations of how events are connected and how they led to changes in the self. At the other end of the spectrum, less complex reasoning tends to be vague and simplistic. For example, a participant elaborated in a simplistic and non-concrete way on how a chapter about leaving home influenced how she sees herself: *“Well, perhaps something about economy, but I am not really sure”*. No previous studies have examined complexity of reasoning about causal connections in life stories among patients with BPD. However, studies using the Adult Attachment Interview (AAI) (Bakermans-Kranenburg & van Ijzendoorn, 2009) show, that patients with BPD display more simplistic reflections when describing early memories and attachment relationships (Diamond et al., 2014; Levy et al., 2006). Therefore, we hypothesized that BPD patients would reason in less complex ways about causal connections in their personal life stories compared to a control group.

Themes in life stories also vary. Some life stories emphasize themes of agency: How the person achieved valued outcomes, conquered obstacles, and exercised control over circumstances. In general, agency themes refer to sequences of evaluations and interpretations emphasizing autonomy and empowerment of the individual. Other themes include caring for others and reaching out for love and capture the general theme of communion (e.g., McAdams, 1996; 2001). Communion encompasses themes in life stories focusing on intimacy, love, friendships, closeness, and caring towards others (McAdams et al., 1996). Thus, themes in life stories depict individuals' expression of their needs and how these needs were shaped, thwarted, or fulfilled and indicate whether individuals construct themselves as agentic and loveable or as powerless and unfit for love. Previous studies show that higher degree of agency and communion themes in life stories is related to better psychological functioning (e.g., Adler, 2012; Adler, Skalina, & McAdams, 2008; McAdams, Hoffman, Mansfield, & Day, 1996). Most relevant to the present study, Adler, Chin, Aiswarya, Kolisetty, & Oltmanns (2012) showed that participants with traits of BPD had lower levels of agency in their life stories compared to a control group. No difference was found for communion but participants with BPD traits had fewer themes of communion fulfillment compared to the control group. The findings of fewer themes of agency and communion fulfillment dovetails with descriptions of patients with BPD as dominated by impulses and lower autonomy rather than engaging in purposeful action and as living in tumultuous relationships (Bateman & Fonagy, 2016; Linehan, 1993; Masterson, 2000; Masterson & Rinsley, 1975; Ryle, 2001). Thus, we hypothesized that BPD patients would show fewer themes of agency and communion fulfillment in their life stories compared to the control group.

Parents' life stories

While most research on life stories have focused on personal life stories and how they support self-understanding, recent studies show that people also construct vicarious life stories for close others, such as parents and friends (Lind & Thomsen, 2017; McLean, 2016; Zaman & Fivush, 2013). Constructing life stories for other people is one aspect of gaining a better understanding of their minds, which helps make sense of and anticipate their behavior and emotions (Thomsen & Pillemer, 2017b). A broad array of literature suggests that individuals use their own mind to understand the minds of other individuals (Buckner & Carroll, 2007; Dimaggio et al., 2008; Bateman & Fonagy, 2016). Similarly, individuals may use their own life stories when constructing life stories for close others, an assumption supported by studies showing that personal life stories are related to how individuals describe close others' life stories (Thomsen & Pillemer, 2017a). Thus, the more positively individuals describe chapters and causal connections in their personal life stories, the more positively they also describe their parents' life stories (Lind & Thomsen, 2017). Themes of agency and communion show a similar pattern; the more a person describes themes of agency and communion in the personal life story, the more these themes also predominate in the description of a romantic partner's life story (Panattoni & Thomsen, 2018). The relationship between personal life stories and life stories for close others probably reflect dual processes where individuals use their own life stories to reflect on and understand the other person's life story, while at the same time using the other person's life story to reflect on and understand their own life story (Thomsen & Pillemer, 2017a). In this understanding, relations between personal and close others' life stories do not indicate unhealthy self-other confusion, but rather reflects the generally agreed upon notion, that individuals use their own minds to understand the minds of other individuals and viceversa.

Based on the ideas presented above, we hypothesized that patients with BPD would construct life stories for their parents that would be similar to their personal life stories. That

is, they would describe their parents' life stories as more negative, using less complex reasoning, and with fewer themes of agency and communion fulfillment compared to healthy controls. However, we also hypothesized that the BPD patients would show more self-other confusion when elaborating on parents' life stories compared to a control group. That is, although patients with BPD were hypothesized to show relations between personal and parents' life stories as found for healthy populations, we also expected that patients' personal thoughts and feelings would interfere with taking the parents' perspective, and that they would confuse their own thoughts and feelings with the parents' thoughts and feelings. Such self-other confusion was expected because BPD patients struggle with defining the psychological boundaries between self and others, especially in attachment relations (Beeney et al., 2015; De Bonis, De Boeck, Lida- Pulik, & Feline, 1995; Fonagy & Luyten, 2009) and in general have impaired understanding of other people (Bateman & Fonagy, 2016; Dimaggio et al., 2008).

The Present Study

The main goal of the present study was to examine how patients with BPD describe their personal and their parents' life stories compared to a control group. We hypothesized that compared to a control group, BPD patients would 1) identify more negative chapters and more negative causal connections in their personal and parents' life stories; 2) display less complex reasoning about causal connections in personal and parents' life stories; 3) include fewer themes of agency and communion fulfillment in both personal and parents' life stories; and 4) display more self-other confusion when reflecting on parents' life stories. We also attempted to replicate previous studies showing that patients with BPD have more identity disturbance, higher alexithymia, lower empathy, but unaffected emotional intelligence.

Methods

Participants

Thirty patients with a DSM-IV confirmed diagnosis of BPD. The patients participated in the study shortly after receiving the BPD diagnosis using the semi-structured SCID-II interview, carried out by trained clinical psychologists (First, Spitzer, Gibbon, & Williams, 1996). The patients were also screened for other personality disorders using SCID-II. One patient met criteria for antisocial personality disorder (301.7), two were diagnosed with histrionic personality disorder (301.50), two with obsessive-compulsive personality disorder (301.4), one with avoidant personality disorder (301.82), two with dependent personality disorder (301.6), and eight with other personality disorders (301.8). Exclusion criteria were organic brain-disorder or being influenced by alcohol or drugs at the day of testing. Age, gender, and level of education are reported in Table 1.

A control group of 30 participants was recruited using word of mouth to match the patient group on age, gender, and level of education (see Table 1). Exclusion criteria were a BPD diagnosis or a BPD profile on the SCID-II self-report questionnaire (First, Gibbon, Spitzer, Williams, & Benjamin, 1997), that is a threshold of 5 or more BPD symptoms (APA, 2013), having a parent or sibling with a BPD diagnosis, having organic brain-disorder, and being influenced by alcohol or drugs at the day of testing.

Materials

Life story interview: We used a method that was a mixture of semi-structured interviews and questionnaires. Participants were asked to describe chapters in their own and

their parents' life stories and rate these on questions of emotional valence and causal connections in a questionnaire, while elaborating on the questions orally.

One questionnaire addressed the participant's personal life story and one concerned the parent's life story. The two questionnaires were organized similarly and inspired by previous research (Lind & Thomsen, 2017; Thomsen & Pillemer, 2017a). The interviewer began the first part of the interview with the following instruction: *"This part of the study is about your life story. I want you to think about your whole life and identify life story chapters. Chapters are defined as periods in your life, which can last for months or even years. An example of a chapter could be: "my time in primary school". You will be asked to describe every chapter and note how old you were at the beginning and end of every chapter or if the chapter has not yet ended."* The participants were asked to identify and describe up to 10 chapters. For every chapter they were first asked to answer one question about the emotional valence of the chapter and then two questions about the emotional valence of the causal connections of the chapter 1) *"How would you describe this chapter emotionally?"* (rated on a 5-point scale with 1 = *"very negative"*, 2 = *"negative"*, 3 = *"mixed or neutral"*, 4 = *"positive"* and 5 = *"very positive"*), 2) *"Has this chapter influenced how you perceive yourself?"* (rated on a 5-point scale with 1 = *"yes, in a very negative way"*, 2 = *"yes, in a negative way"*, 3 = *"not at all"*, 4 = *"yes, in a positive way"* and 5 = *"yes, in a very positive way"*) and 3) *"Has this chapter influenced later life story chapters?"* (rated on a 5-point scale with 1 = *"yes, in a very negative way"*, 2 = *"yes, in a negative way"*, 3 = *"not at all"*, 4 = *"yes, in a positive way"* and 5 = *"yes, in a very positive way"*). After each question, the interviewer asked the participants to elaborate on their answers. The answers were recorded, transcribed, and coded for themes and complexity.

The second part of the interview concerned the parent's life story. First, the participants were asked to note what parent they had selected, the age of the parent, and for how long they

had known the parent. Furthermore, they were asked to answer two questions regarding the quality of the relationship: “*Do you feel, that you know your parent well?*”, rated on a 5-point scale from 1 = “*not at all*” to 5 = “*very well*” and: “*How would you characterize your relationship with your parent?*”, rated on a 5-point scale from 1 = “*very negative*” to 5 = “*very positive*”. The structure of the interview and the questionnaire was otherwise similar to the first part of the interview. However, they were asked to imagine how the parent would think about his/her life story when identifying chapters and answering questions about the emotional valence and causal connections for the chapters. After each chapter, the participants were asked to rate how sure he/she felt about his/her knowledge about each chapter using a 5-point scale, from 1 = “*very uncertain*” to 5 = “*very certain*”. Elaborations on the life story questions were recorded, transcribed and coded for complexity, themes, and self-other confusion.

We summed the questions for valence across chapters and divided by the number of chapters rated on this question for personal and parents' life stories separately, yielding two measures: valence for personal and parents' life stories (labeled “*valence chapter*” and “*valence chapter – parent*”) that each ranged from 1-5. We then summed the two questions on causal connections (questions 2 and 3) for all chapters for personal and parents' life stories separately and divided by the number of chapters rated, yielding two measures: Valence of causal connections in personal and parent's life stories (labeled “*causal connections*” and “*causal connections – parent*”), which each ranged from 1-10.

Questionnaires on other aspects of self- and other understanding:

The Self-Concept and Identity Measure (SCIM) (Kaufman, Cundiff & Crowell, 2014). The SCIM is a 27-items self-report questionnaire used to measure disturbed identity including three subscales (disturbed identity, consolidated identity, and lack of identity). Participants rate how much they agree or disagree with the items using 7 point scales ranging

from 1 = “*strongly disagree*” to 7 = “*strongly agree*”). The items for the subscale consolidated identity were reversed and a total score was calculated with higher scores indicating more identity disturbance (ranging from 27-189). The SCIM has been shown to possess good validity and test-retest reliability (Kaufman et al., 2014), also in the Danish version (Lind & Thomsen, 2017). The scale showed good internal reliability in the present study (Cronbach's alpha of 0.96).

Toronto Alexithymia Scale (TAS-20) (Bagby, Parker, & Taylor, 1994; Jørgensen, Zachariae, Skytthe, & Kyvik, 2007). TAS-20 is a 20 items self-report questionnaire examining the ability to recognize and describe personal emotional states and differentiate them from bodily sensations. Items are rated on 5-point Likert scales ranging from: 1 = “*strongly disagree*” to 5 = “*strongly agree*” with higher scores indicating higher levels of alexithymia (total scores from 20-100). The original version of TAS-20 (Bagby et al., 1994) as well as the Danish version (Jørgensen et al., 2007) have been shown to possess good validity and reliability and also showed good internal reliability in the present study (Cronbach's alpha of 0.90).

Empathy Quotient (EQ) (Baron-Cohen & Wheelwright, 2004). EQ is a 60 items self-report questionnaire where 40 items assess empathic abilities and 20 items are filler items. The items were rated using 4-point scales ranging from: 1 = “*strongly agree*” to 4 = “*strongly disagree*”. The ratings were scored according to established criteria yielding a range from 0-80, with higher scores indicating better empathy. The EQ has been shown to possess good validity and reliability (Baron-Cohen & Wheelwright, 2004; Lawrence, Shaw, Baker, Baron-Cohen, & David, 2004), also in the Danish version (Lind & Thomsen, 2017) and showed good internal reliability in the present study (Cronbach's alpha of 0.90).

Mayer–Salovey–Caruso Emotional Intelligence Test V2.0 (MSCEIT) (Mayer, Salovey, & Caruso, 2000). MSCEIT consists of 141 test items and takes approximately 40 minutes to

complete on a computer. MSCEIT is a frequently used measure of emotional intelligence (Mayer, Salovey, & Caruso, 2012). It consists of eight subtests, divided into four skill groups (i.e., *Perceiving Emotions*, *Using Emotions*, *Understanding Emotions*, and *Managing Emotions*). Higher scores indicate better emotional intelligence. MSCEIT has been shown to possess good validity and reliability (Palmer, Gignac, Manocha, & Stough, 2005; Brackett & Mayer, 2003; Karim & Weisz, 2010).

Depressive symptoms:

Beck's Depression Inventory-II (BDI-II) (Beck, Steer, & Brown, 1996) was included to assess depression. The BDI-II is a commonly used 21 items self-report questionnaire that measures the degree of different symptoms of depression within the past 2 weeks. The total score can range from 0 to 63 with a higher score indicating more depressive symptoms. The reliability and validity of the instrument have been repeatedly confirmed (Beck and Beamesderfer, 1974) and the scale also showed good internal reliability in the present study (Cronbach's alpha of 0.96).

Codings

Participants' elaborations on the life stories were recorded and transcribed. In order to assess complexity of reasoning, only elaborations on the questions addressing causal connections between chapters and causal connections between chapters and selves were coded, because these questions targeted reasoning. Themes of agency, communion, and communion fulfillment were coded based on all transcribed material for each chapter, because themes may emerge in both descriptions of chapters as well in reasoning about the causal connections for chapters. Self-other confusion was coded based on transcription of all parts of parents' life stories. Each chapter was examined for all five coding categories. For each code, we summed the ratings across chapters and divided it by the number of chapters described by the participants for personal and parents' life stories yielding nine measures:

Complexity, complexity-parent, agency, agency-parent, communion, communion-parent, communion fulfillment, communion fulfillment-parent, self-other confusion.

The first author trained a co-rater (who was blind to hypotheses and the status of the participants) in the use of the five coding categories. The co-rater and the first author then independently coded 13% of the life stories. Cohen's kappa revealed good interrater reliability between the two independent raters across all coding categories: agency, kappa = .74, $p < .001$, communion, kappa = .72, $p < .001$, communion fulfillment, kappa = .80, $p < .001$, complexity, kappa = .74, $p < .001$, and self-other confusion, kappa = .83, $p < .001$. Since the interrater reliability was good, the first author coded the remaining interviews.

Complexity (0-2). Complexity was coded using a coding scale developed by McLean and Thorne (2003) and modified by McLean and Pratt (2006). High scores indicate more complexity in causal connections. The scale was originally a 0-3 scale but was simplified into a 0-2 scale in the present study in order to achieve an acceptable interrater reliability. A score of 0 indicates that the elaboration never becomes clear or might end up bizarre. One of our participants evidenced a vague elaboration in the following quote: "*Well, I just know it has affected me. My logic sense tells me*". A score of 1 included life lessons and meaning-making elaborations containing some insight. For example, one participant explains how a chapter led to a life lesson concerning economy: "*Well this was positive. I learned about economy, every month I threw up because I was starving and no one was able to help. Now I take care of my money*". Finally, a score of 2 was given to reasoning with nuanced insights and rated regardless of valence (positive and negative):

It is complex because my parents were extremely good at you know raising a child in a culturally correct way, you know, this is how you ought to behave. However, being emotionally available and providing me with security has not been a focus. So I have not learned how to be me, believe in myself or think of myself as valuable at all.

However, instead I have learned how to be a decent human being, learned how to take care of others, listen to others and also found an interest in architecture, which I have maintained today. It has also made me stronger in a way...however, 90% of the time I criticize myself for all the things I am not good at, guilt, shame and self-hate. The worthlessness that I feel has its starting point at that time.

Note that the coding of complexity captures nuances and elaborations of reasoning, but does not measure whether the insights gained through reasoning are applied by the individual to improve his/her life.

Agency (0-2). Agency was coded using a coding scale developed by Adler and colleagues (2012). In the present study, we simplified the scale into a 0-2 scale to achieve acceptable reliability, but retained the original structure. Thus, a score of 0 indicated a chapter with none or very little agency, a score of 1 indicated some degree of agency, and a score of 2 indicated a high degree of agency. One of our participants exemplifies a low score on agency by her passive reliance that things will sort themselves out later:

I also went to this person, and he told me, that I would settle down at the age of 21-23. At that age, I will figure out who I am, and what I want to do with my life... I have sort of relied upon his prediction.

Another of our participants evidenced a high score on agency:

...When I moved school, I think I got quite a strong self-image. It was a contrast, because now I really wanted to go out and prove everyone wrong, show that I was able to do stuff, and I wanted to be the best at everything because I had not experienced that at that point in my life. So I think it has influenced me in the way that I take control of things. Now I want to go out and conquer the world.

Communion (0-2). Communion was coded based on a coding scale developed by Adler and colleagues (2012). The scale was originally a 0-3 scale, but the scale was simplified to

range from 0-2 to obtain good interrater reliability, where a score of 0 indicated lack of communion motivation, a score of 1 indicated motivation towards communion, and a score of 2 indicated high motivation towards communion. The following quote exemplifies lack of communion motivation: *"I'm quite a lonely wolf. Also when it comes to friendships and stuff"*. Another participant demonstrates high communion motivation in the following quote concerning her relationship with her husband:

In many ways secure and stable, having developed together over time, seen different periods in each other's lives, seen each other grow with things. Succeed with things and also overcome periods in our lives that have strengthened our sense of togetherness. He is my most stable foundation. It's a person that has followed my development for 35 years...in that sense no one knows me better.

Communion fulfillment (0-2). This theme was only rated if a communion theme was identified (i.e. if communion was coded 1 or 2), because the purpose of the code is to distinguish between expressed communion needs that were either fulfilled or not fulfilled. The coding scale was developed by Adler and colleagues (2012) where a 0 indicated not having one's communion needs met, a score of 1 indicated that communion needs were being met to some degree, and a score of 2 indicated that communion needs were met to a very high degree. The following quote demonstrates a score of 0 on communion fulfillment: *"I was let down, I don't feel that I had a mum in that period of my life. I just felt like a piece in a puzzle. I was just there for her to get some extra money from the state"*. In contrast, a score of 2 indicated that the communal needs met to a high degree: *"She provides me with a deep security...I now have more focus on the intimate relations and it is really great... when I describe myself today I describe myself in relation to and with her"*.

Self-other confusion (0-1). This coding was developed for the present study (contact first author for a more detailed description). A score of 0 indicated no difficulties

distinguishing one's personal life story from the parent's life story. That is, the participant reasoned about the parent's thoughts, feelings and experiences without elaborating on personal thoughts and feelings in a way that interfered with taking the parent's perspective. A score of 1 indicated elaborations with self-other confusion. The following quote exemplifies an elaboration on a father's life story showing no self-other confusion:

Yes, I definitely think, that he would perceive this in a very positive way. He would focus on moving out from his parents and taking care of himself. He always says that you can overcome more than you think you can and especially more than your mother thinks you can. He says that a lot. He also had some challenges that made a big difference... He was deployed to Germany in order to clear mines, which he saw as a job needing a responsible and trustworthy person. That period contributed to some of his basic values like being responsible and trustworthy and definitely contributed a lot to personal and professional aspects in his life.

The following quote demonstrates self-other confusion. In contrast to the quote above, this participant's focus is on her own thoughts and feelings about moving. The participant struggle to elaborate on her mother's life story and after elaborating it is still unclear what the mother might think with respect to the chapter that is being elaborated on:

Well, I have moved 23 times in about 3 years, you know back and forth, back and forth... She was so interested in me getting help and that I was the one that needed help. I told her that there was nothing wrong with me... But if she was worried about me, why did you leave me, why did you go away, why did you leave me at home and stuff... I don't think that she can stand me... I'm so angry with her. She annoys me so much. It is really hard... because she is my mother. I love her but she pisses me of.

Procedure

This study was approved by the appropriate institutional review board. Clinicians at Aarhus University Hospital, Risikov and at Psychotherapeutic Center Stolpegaard, Copenhagen asked clients recently diagnosed with BPD (based on the SCID-II interview;

First, Spitzer, Gibbon, & Williams, 1996) to participate in the study. The patients received the diagnosis at the preliminary stage of a long-term therapeutic treatment program specialized in treating personality disorders. We did not record characteristics or number of clients who refused participation and hence do not report drop-out analyses. The first author contacted patients interested in participating by email or by phone and planned a testing session. Twenty patients from Aarhus University Hospital and ten patients from Psychotherapeutic Center Stolpegaard took part in the study. The patients received the questionnaires by mail (EQ, TAS-20, SCIM and BDI) and were asked to fill these out at home.

The testing session lasted approximately 2,5 hours and took place in an office at the hospital, where the first author led the testing. The patient first completed the emotional intelligence test (MSCEIT) on a computer and followed by the life story interview, starting with the participant's personal life story and ending with the parent's life story. Finally, the patients received 150 Danish kroner for participating in the study.

The procedure was almost identical for the control group. Again, we did not report characteristics or number of potential participants who refused participation and hence do not report drop-out analyses. Those that decided to participate were tested at Aarhus University or in an office near the participant's home. The control participants also received 150 Danish kroner for participating in the study.

Statistical analyses

Chi-squared tests were conducted to examine whether the patients and the controls differed significantly in the parent figure selected. A series of independent t-tests were conducted in order to examine differences between the BPD group and the control group on personal life stories, parents' life stories, identity disturbance, alexithymia, empathy, emotional intelligence, and depressive symptoms. To test whether the differences between the patients and the control participants could be explained by depressive symptoms, we ran a

series of hierarchical multiple regression analyses. We entered group (patient versus control) at the first step, depressive symptoms at the second step, and each of the life story variables and the other measures of self and other understanding as outcome variables.

Results

Below, we first present analyses with respect to group differences in basic life story characteristics (number of chapters, number of words in the life stories) and parent characteristics (parent figure, relationship quality). We then report our main analyses on differences between patients and controls with respect to life stories. Finally, we report analyses on measures of other aspects of self and other understanding (identity disturbance, alexithymia, empathy, and emotional intelligence) and depressive symptoms.

Group differences in basic life story characteristics and parent characteristics

Independent t-tests found no significant differences between BPD patients and controls with respect to number of chapters identified in the personal life stories (see Table 2).

Likewise, no differences were found between BPD patients and controls in number of chapters in parents' life stories. However, BPD patients used more words elaborating on personal life stories compared to the controls. There was no significant difference regarding words used when elaborating on parents' life stories (see Table 2).

We then examined whether the patients and the controls differed significantly in the parent figure selected. In the BPD group, 66.7% chose mother's life story and 33.3% chose father's life story. In the control group, 73.3% chose mother's life story and 26.7% chose father's life story, and the difference was not significant, $\chi^2(1) = .32, p > .05$. BPD patients rated the quality of their relationship to the parents significantly lower compared to the control group (see Table 2). Furthermore, they rated their overall knowledge of the parents as lower compared to the control group and felt less confident with respect to their knowledge

of the parents' chapters compared to the control group (see Table 2).

Group differences in life story valence, complexity, and themes

As expected, independent t-tests showed that patients with BPD described their personal life stories with more negative emotional content, more negative causal connections, and including fewer themes of agency and communion fulfillment compared to the control group (see Table 3). However, the patients did not reason about their personal life stories in ways that were less complex than the control participants.

The pattern was very similar for parents' life stories. The BPD group rated their parents' chapters and causal connections as more negative, and included fewer themes of agency and communion fulfillment compared to the control group. Furthermore, communion motivation was lower in parents' life stories. As expected, patients displayed less complexity when reasoning about their parents' life stories and were also more likely to show self-other confusion when elaborating on their parents' life stories compared to the control group.

Group differences in other measures of self and other understanding and depression

Consistent with previous studies, independent t-tests showed that patients with BPD scored significantly higher on identity disturbance and alexithymia, but scored lower on empathy compared to the control group. No difference was found for emotional intelligence.

We examined group differences in depressive symptoms and found that the BPD group scored significantly higher compared to the control group. The patients generally scored in the range indicating that many of them may have comorbid depression (Beck et al., 1996).

Our results comparing BPD patients with controls may thus be explained by the difference in depressive symptoms. Hence, we ran a series of hierarchical multiple regression to examine whether controlling for depressive symptoms would render group difference for

life story variables and other measures of self and other understanding non-significant.

The regression analyses showed that except for empathy and communion in parents' life stories, depressive symptoms did not explain the differences between the two groups (contact first author for detailed analyses). Thus, the findings cannot be explained by comorbid depression.

Discussion

Patients with BPD constructed life stories emphasizing negative events and interpretations and with fewer themes of agency and communion fulfillment compared to the control group. This pattern was found for both their own life stories and their parents' life stories, suggesting that patients with BPD understand both themselves and their parents as persons who change negatively as a result of life events, are shaped by external forces rather than by their own agency, and who struggle with needs of communion. Surprisingly, compared to the controls, patients with BPD did not reason in less complex ways when describing their own life stories, only when they described their parents' life stories, suggesting that their narrative understanding of close others may be less complex. BPD patients also showed more self-other confusion when reflecting on parents' life stories, supporting the notion that patients may have difficulties with constructing life stories for parents. Replicating previous studies, BPD patients showed more identity disturbance, higher alexithymia, and lower empathy indicating disturbances in several aspects of self and other understanding. No differences were found on the emotional intelligence test, possibly, because this test is based on less personally significant material, where BPD patients usually perform well (Domes et al., 2008; Franzen et al., 2011; Schilling et al., 2012). Finally, the patients showed significantly more depressive symptoms relative to the control participants evidencing psychological problems that go beyond disturbances in self and other understanding.

Below, we discuss the results for personal life stories and for parents' life stories.

Because the present study does not provide information on whether the descriptions of parents' life stories were accurate reflections of the parents' own way of telling their life story, we consider in some detail the different possible explanations for the results on parents' life stories.

BPD and personal life stories

One possible reason that patients with BPD evidence a more negative self-understanding in their personal life stories may be that they have experienced a higher number of negative life events that are incorporated into their life stories. Supporting this idea, studies show that many patients with BPD have experienced physical, sexual, and emotional abuse (Fonagy et al., 1996; Lewis & Grenyer, 2009; Sansone & Sansone, 2009; Zanarini, Dubo, Lewis, & Williams, 1997). However, it is important to emphasize that life stories are not mere copies of life events. Life stories emerge based on selection, organization, and interpretation of events and several studies show that negative events may be interpreted as having changed the self in positive ways, also termed redemption narratives (Adler, Kissel, & McAdams, 2006; Adler et al., 2016). Thus, when patients with BPD construct more negative life stories compared to controls, this also reflects a process where they fail to achieve positive meaning from negative events. It is possible that this difficulty stems from their parents not providing them with more adaptive life story models, as they described their parents' life stories in similar ways, a point we will return to later in the discussion.

To our surprise, the BPD patients did not have significantly less complex causal connection in their personal life stories compared to the control group. However, although they did not reason about their life stories in less complex ways, their reasoning did not help them construct a healthy identity or a sense of agency and positive meaning. It is possible that the patients' reasoning was characterized by pseudo mentalization, that is, complex but inconsistent reasoning, disconnected from aspects of outer reality (Fonagy & Bateman, 2016). Such pseudo reasoning would prevent patients from applying the lessons and insights

achieved through reasoning, which may over time contribute to the poor sense of agency and disturbed identity experienced by the patients.

The patients' life stories revealed that they understood themselves as less agentic and as struggling with unmet needs for communion. Although this, like the more negative life stories, may reflect real events in patients' lives, it could also indicate that patients do not reason about events in their lives in ways that allow them to construct themselves as agentic and lovable, possibly because they lack more adaptive life story models from their parents. Once a negative life story with low sense of agency and communion fulfillment is constructed, it may become a self-fulfilling prophecy that guides actions and interpretations in ways that uphold this self-understanding. Such a life story could contribute to maintaining the characteristic symptoms of BPD, such as relationship difficulties ("I am not lovable") and self-harm ("I cannot change the situation").

BPD and parents' life stories

The way patients with BPD described their parents' life stories was very similar to the way they described their personal life stories. It is of course possible that we see this pattern of results because patients with BPD and their parents experienced similar life events. Thus, like patients with BPD lead lives with many traumatic events and malfunctioning relationships, this is also the case for their parents (Sansone & Sansone, 2009). It is also possible that the similar patterns found in personal and parents' life stories derive from similar ways of reasoning about the past. Many studies show that children learn how to remember and interpret the past through interaction with their parents (Fivush, Bohanek, Zaman, 2011; Fivush, Habermas, Waters, & Zaman, 2011; Sales & Fivush, 2005). Parents' elaborations with their children, for example about previous family vacations, scaffold children's remembering and interpretation of events. It is thus possible that the parents to the patients shared events with them in ways that emphasize negative changes in the self, low sense of agency, and lack of communion fulfillment and that this negative scaffolding may

seep through to how patients now story their own lives. For example, a mother may share a story about the time her husband left her and emphasize how this destroyed her sense of self-worth and elaborate on how she is always let down by the people she trusts. If stories with similar themes are shared often enough this may become the dominant way the child can interpret himself/herself and his/her life (McLean, 2016).

Patients with BPD more often lost sight of the parents' perspective when reflecting on the parents' life stories, which could also explain the similar patterns in the life stories. Similarities between personal and close others' life stories are also found among healthy samples and may reflect that individuals use their personal life stories to understand and interpret their close others' lives and vice versa (Lind & Thomsen, 2017; Panattoni & Thomsen, 2018; Thomsen & Pillemer, 2017a). In the present study, it was not possible to distinguish between similarity due to self-other confusion and similarity due to normal processes involved in understanding a close other's life story. Future studies should examine to what extent the results for parents' life stories are due to self-other confusion.

In any case, the results suggest that patients with BPD not only story themselves as powerless and thwarted in their efforts at finding love, they also story their parents in that way. If this is also the case for other significant persons, patients with BPD are caught in a world inhabited by unlovable and powerless people, making it all the more difficult for patients to see how they could possibly change for the better. For example, if the patient also perceives his/her therapist as powerless and as a person with thwarted communion needs it may be difficult to genuinely trust the therapist and the treatment. This could lead to dropout, which is a serious problem among BPD patients (see Jørgensen et al., 2009).

Patients with BPD displayed lower complexity when reasoning about their parents' life stories. This could be due to lack of knowledge, since BPD patients stated that they had less knowledge about their parents' and their life stories and also felt less confident about their knowledge compared to the control group. In addition, BPD patients rated the relationship

with their parents more negatively compared to the control group. Some patients expressed reluctance when reasoning about their parents' life stories because of many complicated, negative emotions towards their parents, which could also explain the low complexity of reasoning. Furthermore, insecure attachment styles are prevalent among BPD patients (Fonagy et al., 1996) and may also explain the low complexity of reasoning. However, the finding may also reflect that the parents of the patients with BPD are actually less complex in their reasoning style. This idea is consistent with studies showing that BPD patients' families are often characterized by poor reflective functioning (Fonagy & Bateman, 2008; Fonagy & Luyten, 2009; Schacht et al., 2013). If the present results reflect a general problem with constructing complex life stories for close others, patients may lack an important source of knowledge in understanding and anticipating those other individuals' emotions and behaviors, thus contributing to the relational difficulties experienced by this group. It follows from this reasoning that theories of impaired self and other understanding in BPD may be extended to include impaired narrative understanding of others (Allen, 2013; Semerari et al., 2014).

One important point is whether the less adaptive life stories described by patients with BPD are merely an epiphenomenon resulting from problems with more basic processes involved in self and other understanding (e.g. poor mentalization and empathy) or whether the patients' problematic life stories play a role in maintaining their difficulties. We speculate that life stories may play a role in maintaining some of the symptoms experienced by this group of patients, because life stories shape the way they understand the present and anticipate the future. For example, life stories characterized by negative meaning-making, absence of agency, and lack of communion fulfillment may color how an ongoing romantic relationship is perceived, such that events and interpretations inconsistent with the dominant themes and meaning go unnoticed, leading to interpretations of low agency and communion fulfillment that may elicit self-harm and relationship break-up.

Limitations and future directions

There are several limitations of the study. First, the study is correlational and we cannot determine cause-effect relations between BPD, personal life stories, parents' life stories, and the other measures examining self and other understanding. Second, future studies should examine life stories among patients with other disorders to determine the specificity of the findings. In addition, the patients scored high on depressive symptoms indicating that they may also suffer from other Axis 1 disorders and comorbidity should be taken into account in a future study. Third, we did not find group differences in complexity in the personal life story and it may be argued that this was because the scale was too simplistic to capture the nuances distinguishing the two groups. However, we did not find a ceiling-effect, which suggests that the control group could have performed better and thus outperformed the BPD group, which they did not. Fourth, future studies may assess the correspondence between real life events and patients' personal and vicarious life stories. That is, personal and vicarious life stories may reflect how lives were actually lived, but may also reflect the patient's interpretation of these lives. Both assumptions probably hold some truth. It is difficult to tease these two factors apart based on the design of this study. One way to examine the accuracy of patients' vicarious life stories of parents could be to also collect parents' elaborations on their life stories and compare the correspondence between the stories. Fifth, since BPD is characterized by emotional instability future studies should examine how stable these findings are for example by repeating the life story interviews several times over a longer period. A recent study showed that BPD patients' personal life stories increased significantly in agency after 12 months of therapy compared with a control group but many other life story characteristics remained unchanged (Lind et al., 2018).

Conclusion and perspectives

In conclusion, examining life stories in patients with BPD provided a first-person perspective on how this group understands their own and their parents' lives. The study revealed that they understand both themselves and their parents as people who lead lives

where events lead to negative outcomes and changes in the self, with little agency and where they do not get their needs for communion fulfilled. While BPD patients' did not reason about their personal life stories in less complex ways compared to the controls, their reasoning was less complex for their parents' life stories and they were more likely to show self-other confusion when elaborating on parents' life stories. This suggests that they have difficulties in constructing life stories for close others, which could play a role in their impaired understanding of close others' emotions and behaviors. Life stories may contribute to maintaining symptoms since the dominance of negative meaning-making, low agency, and poor communion fulfillment could shape the patients' understanding of their present and future.

The study also contributes to the growing focus on using theories of healthy personality to understand disordered personality (e.g., Adler et al., 2012), a focus that is in line with conceptualizations of personality disorder as dimensional rather than categorical (Trull & Durrett, 2005). Specifically, the present study highlight that the way individuals with personality disorder perceive the life stories of close others may be as disturbed as their own life stories. Given the widespread assumption that mental representations of self and close others are intertwined (e.g., Aron, Aron, Tudor, & Nelson, 1991; Bowlby, 1973; Yeomans et al., 2002), this should not be surprising. However, more research on the different levels of personality, ranging from traits, to goals, to life stories needs to be conducted to examine BPD patients' traits, goals, and life stories; but also how they perceive the traits, goals, and life stories of close others (Thomsen & Pillemer, 2017a).

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Table 1

Demographic information about the BPD and control group

Variable	Patients	Controls	Statistical analyses
Age (<i>M, SD</i>)	29.50 (9.81)	29.47 (11.50)	$t(58) = .01, p > .05$
Gender (% of females)	93.3	93.3	$t(58) = .01, p > .05$
Level of education (%):			$\chi^2(4) = 0.00, p > .05$
Primary school	23.2	23.2	
High school	40.1	40.1	
Professional degree	16.7	16.7	
Bachelor degree	13.3	13.3	
Master degree	6.7	6.7	

Table 2

Group differences in basic life story characteristics and parent characteristics

Variable	Patient		Controls		t	d
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Number of chapters	7.23	1.79	6.50	1.76	1.60	.411
Number of words	5451.83	4149.28	3523.13	2503.36	2.18*	.563
Number of chapters parent	4.33	1.83	4.40	1.38	-.16	.043
Number of words parent	1593.53	784.59	1726.33	1200.89	-.51	.131
Quality of relationship	3.00	1.14	4.60	.62	-6.73**	1.744
Knowledge of parent	3.73	1.17	4.80	.41	4.71**	1.221
Confidence in parent's life story	3.54	.82	3.93	.46	-2.24*	.587

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

Table 3

Group differences in personal and parents' life stories, and self and other understanding measures

Variable	Patients		Controls		<i>t</i>	<i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Valence	2.78	.55	3.91	.37	-9.38**	2.41
Causal connections	5.99	1.17	8.20	.71	-8.83**	2.28
Complexity	2.79	.48	2.98	.66	-1.33	.33
Agency	.71	.35	1.67	.28	-11.75**	3.03
Communion	1.63	.36	1.73	.28	-1.27	.31
Com.fulfillment	.67	.40	1.46	.40	-7.63**	1.97
Valence - parent	2.93	.64	3.68	.60	-4.71**	1.21
Causal connections- parent	6.18	1.16	7.57	1.08	-4.81**	1.24
Complexity- parent	2.19	.60	2.69	.53	-3.37**	.88
Agency- parent	.68	.51	1.58	.42	-7.49**	1.93
Communion- parent	1.36	.46	1.68	.31	-3.12*	.79
Com.fulfillment- parent	.62	.55	1.46	.44	-6.50**	1.69
Self and other confusion	.26	.29	.03	.08	4.09**	1.08
Identity disturbance	109.97	27.99	49.20	14.12	10.58**	2.74
Alexithymia	56.90	13.16	33.60	7.80	8.31**	2.15
Empathy	40.70	14.20	54.00	8.78	-4.37**	1.13
Emotional intelligence	108.59	11.14	107.73	13.06	.27	.07
Depressive symptoms	25.97	15.00	3.83	3.70	7.84**	2.03

* $p < .05$ ** $p < .001$