Patient-Initiated Brief Admission for Individuals with Emotional Instability and Self-Harm: An Evaluation of Psychiatric Symptoms and Health-Related Quality of Life

Joachim Eckerström, RN, MSc², Andrea Carlborg, MD, PhD, MBA, Lena Flyckt, MD, PhD, and Nitya Jayaram-Lindström, PhD

Centre for Psychiatry Research, Department of Clinical Neuroscience, Karolinska Institutet & Stockholm Health Care Services, Region Stockholm, Stockholm, Sweden; Department of Health Sciences, The Swedish Red Cross University College, Stockholm, Sweden

ABSTRACT

Patient-initiated brief admission (PIBA) was developed for patients with emotional instability and self-harm, to cope with crises. The hypothesis was that psychiatric symptoms would decrease, and health-related quality of life (HRQoL) increase, after 1–3 days at hospital. One hundred and thirteen patients were recruited from a psychiatric clinic in Stockholm during 2016–2020. At admission and discharge, the patients completed the Hospital Anxiety and Depression Scale (HADS) and the EuroQoL-5 Dimension Questionnaire (EQ-5D). The patients also evaluated PIBA as a crisis intervention. A significant decrease in symptoms of anxiety and depression was found. HRQoL increased significantly assessed with EQ-5D and 95.2% of the participants found PIBA to be a constructive intervention.

ABBREVIATIONS: PIBA: Patient-Initiated Brief Admission; BPD: Borderline Personality Disorder; DBT: Dialectical Behaviour Therapy; EQ-5D: EuroQoL-5 Dimension Questionnaire; HADS: Hospital Anxiety and Depression Scale; HRQoL: Health-Related Quality of Life; VAS: Visual Analogue Scale

Introduction

Emotional instability is common in many psychiatric diagnoses such as anxiety and bipolar disorders and is the most noticeable manifestation of borderline personality disorder (BPD). The onset of these disorders usually occurs during adolescence or early adulthood (American Psychiatric Association, 2013). The core symptoms of emotional instability are unstable interpersonal relationships, disturbed self-image and impulsive behaviour (Gunderson et al., 2018).

In the general population, the prevalence of BPD varies between 0.7% and 5.9% (Cailhol et al., 2017), with a three-fold higher prevalence among women (American Psychiatric Association, 2013). The diagnosis is associated with significant mental and physical disability (Grant et al., 2008) and with greater impairments in work, social relationships and leisure activities compared with other chronic psychiatric disorders, such as major depressive disorder (Gunderson, 2011). High rates of self-harm and suicidal behaviours are characteristics of BPD, leading to extensive health care usage, including psychiatric in- and outpatient care and emergency hospital services (Chiesa et al., 2002). Among patients with BPD, the rates of attempted and completed suicide are 75% and 10%, respectively (Black et al., 2004). The reduction in life expectancy is 9 years for men and 13 years for women (Cailhol et al., 2017).

For patients at high risk of self-harm such as BPD, inpatient psychiatric care is often compulsory, which in turn may result in further increasing anxiety and self-harm (Holm et al., 2011). Difficulties meeting patients’ needs have been described by healthcare professionals (Betan et al., 2005; Cleary et al., 2002; Westwood & Baker, 2010). For instance, nurses often perceive the patient-nurse relationship as problematic instead of supportive (Dickens et al., 2016). It is therefore not uncommon for inpatient psychiatric care to result in conflicts between patients and their care providers, leading to negative effects on the ward environment and overall care process (Newton-Howes & Mullen, 2011). Coercive measures often raise ethics concerns, even when nurses find such measures necessary (Happell & Harrow, 2010). Physically restricting patients or denying their requests limits their sense of autonomy, and these actions have been shown to be the most important antecedents of violence and aggression in the psychiatric inpatient care setting (Papadopoulos et al., 2012). Psychiatric hospital staff have intense interactions with patients in crisis, which can lead to an environment in which staff have negative attitudes towards patients with BPD (Bodner et al., 2015) and the
patients perceive themselves as being shamed, ignored and denied their rights (Barr et al., 2020). Systematic reviews of healthcare professionals’ attitudes towards patients who self-harm show that negative attitudes are common (Karman et al., 2015; McHale & Felton, 2010; Saunders et al., 2012). Both patients and caregivers highlight the importance of safe inpatient care environments (Barr et al., 2020). An increased focus on individual motivation, participation and caring relationships is recommended to support recovery for patients in serious crises such as BPD (Ng et al., 2019).

To address negative attitudes and significantly improve inpatient care for patients with BPD, a new crisis intervention called brief patient-initiated brief admission (PIBA) has been developed. The purpose of PIBA is to provide a patient-initiated time-out for self-management in a safe environment during periods increased stress that could lead to a crisis (Helleman et al., 2014a). Additionally, it promotes constructive self-regulation of emotions and coping strategies and thereby prevents self-destructive behaviours and prolonged inpatient care. In previous qualitative studies, patients described PIBA as helpful for overcoming crises and the attitudes of healthcare professionals as positive (Eckerstrom et al., 2020; Helleman et al., 2014b; 2018). Healthcare professionals report that PIBA helps foster caring relationships and promotes mutual respect for each other’s competencies (Eckerstrom et al., 2019; Lindkvist et al., 2019). Previous studies on PIBA are predominantly of qualitative design focussing on patient and personnel’s experience of the intervention. However, there is a lack of studies to date, examining the occurrence of disease symptoms in these patients to help understand the profile of the patients who seek PIBA and its impact on their symptoms. The aim of this study was therefore to explore how this novel crisis intervention affect patients at high risk of self-harm, especially BPD, in terms of psychiatric symptoms and health-related quality of life. The research questions were as follows: Do symptoms of anxiety and depression change after the intervention? Does health-related quality of life (HRQoL) change after the intervention? Do patients perceive PIBA to be a constructive crisis intervention?

Materials and methods

Design

A naturalistic study with repeated measures (pre- and post-test) was conducted in a psychiatric clinic with the aim of assessing how symptoms of anxiety, depression and HRQoL change after PIBA, in patients in crisis with heightened risk of self-harm.

Patient-initiated brief admission

PIBA is a crisis intervention involving patient-controlled admissions to psychiatric inpatient care (Eckerstrom et al., 2019). The aim is to increase the patient’s coping skills, reduce anxiety and suicidal thoughts during crises. This type of care involves the establishment of a designated room in a psychiatric inpatient ward that a patient can use after signing a contract. The contract is agreed upon during a discussion held with the patient, a nurse from inpatient care and the regular outpatient treatment partner (i.e., psychologist or specialist nurse), see Table 1. The individual goal of PIBA is formulated for each patient and written down in their PIBA contract. Admission to PIBA is self-referral and initiated by the patient, through a phone call. The duration of PIBA is short; for this specific patient population, it is between 1–3 days, with a maximum of three uses per month. The contract has a duration of 1 year and is evaluated annually together with the patient to avoid possible misuse. In this specific model, the ward nurse is responsible for admission and discharge. Coercive measures are not allowed during PIBA. Patients with a PIBA contract have the possibility to access the regular services available at the care facility, but this is not mandatory. The approach by healthcare providers shall be characterised by warmth and acceptance towards the patient’s current situation and psychiatric status, which align with the validation levels used in dialectical behaviour therapy (DBT) (Linehan, 1993). All healthcare professionals in the wards have received training on the content and desired treatment behaviour of PIBA, before implementation. Each ward has two specialist nurses who are responsible for the intervention in the ward. They received monthly supervision from the PIBA project manager. This new form of care was developed with inspiration from Helleman et al. (2014b) and was implemented in a clinical setting in Stockholm, Sweden, in 2015.

Participants

Two psychiatric outpatient units and two psychiatric hospital wards in Stockholm specialised in BPD and anxiety disorders were initially involved. During the intervention period of 4 years (2016–2020), a reorganisation took place, and four additional outpatient units were included. By minimising the exclusion criteria and only involving adult psychiatric in- and outpatient units specialised in BPD, our patient sample is considered representative of the patient population at such wards. One of the units had two patient rooms that were dedicated to PIBA, and the other ward had one room designated for PIBA. The inclusion criteria were as follows: (1) clinical history and current symptomatology of emotional instability (primarily problems with emotion regulation and impulse control) and a history of self-harm and (2) at least one previous period of inpatient care. Of the 145 patients who had PIBA contracts during the intervention period, 113 (78%) gave informed oral and written consent to participate in the study see Table 2. The research project was approved by the Regional Ethics Committee of Stockholm, Sweden (Dnr 2016/671-31/5). This study followed the ethics standards of the World Medical Association’s Declaration of Helsinki (2013).

Data collection

Upon arrival at the inpatient ward, a nurse welcomed the patients and provided them with the self-assessment forms...
Table 1. The PIBA contract had the following content.

| Section | Subject | Explaining text | Example of PIBA contract |
|---------|---------|-----------------|--------------------------|
| Part 1  | When to use PIBA | Goals of PIBA: In dialogue with healthcare professionals, the patient formulates goals that help him / her regain control of emotions, thoughts, and problems. | Prevent self-harm. |
|         |         | Indication for PIBA: For example, when symptoms of emotional instability and / or thoughts of self-harm cannot be controlled using other resources or coping mechanisms. | When thoughts of self-harm are too strong and difficult to manage by myself. |
|         |         | Regular admission instead: The patient writes down when he / she should use a regular admission instead and contact psychiatric emergency unit. | When I feel that I cannot take responsible over my own actions and am already in a crisis. |
| Part 2  | Structure of PIBA | Duration of PIBA: Between 1–3 days per admission. | |
|         |         | Max. admissions per month: Between 1–3 times. | |
|         |         | Contact information: Telephone number to the ward. | Phone number: |
|         |         | Ward rules: The patient confirms that he / she will read and will follow the ward rules, which for example include not to bring any sharp objects, drugs, and alcohol. | Yes |
|         |         | Action plan: What to do when PIBA is unavailable due to lack of vacancy. | Yes |
|         |         | Conditions for premature discharge: PIBA shall be interrupted if this contract is violated (for example, due to self-injury, alcohol, or drug use, aggressive behaviour, or suicide attempts). | I agree. |
| Part 3  | Care content of PIBA | Daily activities: The patient tries to maintain his / her daily activities (for example: family obligations, studies, work, and interests) and keep his or her outpatient therapy appointments whenever possible during PIBA. | |
|         |         | Relaxation strategies: The patient notes his / her individual relaxation strategies in the contract. | |
|         |         | Other individual agreements: If there are any additional individual adjustments, they will be noted here. | Want to borrow weighted blanket from the ward during PIBA. |
| Part 4  | Agreement | Signatures: If it is manually written on paper, the patient, specialist nurse from inpatient care, and healthcare professional from outpatient care sign the contract. | |
|         |         | Administration: Once the contract has been signed, it will be scanned into the electrical journal system. | The patient receives a copy of the contract. |

(pre-test); the same forms were completed again at the time of discharge (post-test). The patients completed two self-rating scales: the EuroQoL-5 Dimension Questionnaire (EQ-5D) and Hospital Anxiety and Depression Scale (HADS). The EQ-5D is a widely used generic measure of health status (EuroQol Group, 1990). It contains five dimensions: mobility, self-care, usual activities, pain/discomfort, and anxiety/depression. The possible answer for each item has three levels (no problems, some problems, and extreme problems) and generate a Health State Index Score which range from less than 0 (where 0 is a health state equal to death) to 1 (perfect health) (EuroQol Research Foundation, 2018). The instrument also contains a self-rating of general health (Visual Analogue Scale [VAS], 1–100), where 100 is labelled “Best imaginable health state” and 0 is labelled “Worst imaginable health state”. The HADS consists of 14 questions divided into two subscales that measure symptoms of anxiety (HADS-A) and depressive symptoms (HADS-D). The response to each item is given on a scale from 0–3, with a total possible score of 21 per subscale. The higher the score is, the greater the symptom burden (Lisspers et al., 1997; Zigmond & Snaith, 1983). The cut-off scores for both subscales are 0–7 (non-cases), 8–10 (mild), 11–14 (moderate) and 15–21 (severe) (Snaith, 2003). Cronbach’s alpha for HADS-A is 0.83 and for HADS-D 0.82 (Bjelland et al., 2002). Before discharge, the patients assessed their experiences of PIBA in an evaluation form that asked about the constructiveness of the intervention, fulfilment of the stated goals, approach from staff and overall satisfaction. The question that assessed whether PIBA was a constructive intervention had a binary response (yes/no). Goal fulfillment was assessed with a yes/no question and VAS from 1–10 (1 = not at all, 10 = totally agree). The approach of the staff and overall patient satisfaction with PIBA were assessed with a VAS from 1–10. All completed self-rating scales and the evaluation forms were temporary stored by the ward nurses in an allocated safe storage at the clinic and later collected by the research coordinator.

**Data analysis**

The statistical analyses were performed with IBM SPSS Statistics version 26. Paired sample T-tests were used to compare pre- and post-intervention symptoms of anxiety,
depression, and HRQoL. This analytical method increases precision and helps reduce bias (Xu et al., 2017). For these analyses, an α level of <0.05 was considered statistically significant. Cohen’s $d$ was applied to evaluate the effect sizes of the significant results. Values of approximately 0.2 were considered small, 0.5 was considered medium, and 0.8 was considered large (Cohen, 1988). The mean and the median values were calculated for the goal fulfilment, approach by staff and overall satisfaction VAS scores. Missing data (MD) due to missing form or missing data in forms were reported in each table. More than four admissions were not included in the analysis due to the small number of participants (≤20).

Results

Among the 113 patients with PIBA contracts, 57% (n=64) used PIBA at least once during the study period. The following results are presented for each research question separately.

**Do symptoms of anxiety and depression change after the intervention?**

Paired-sample t-tests were conducted to compare symptoms of anxiety and depression before (pre-test) and after (post-test) the intervention. There was a significant reduction in the scores for both anxiety and depression, which are visualised in Figure 1 and reported in Table 3.

**Does health-related quality of life change after the intervention?**

The participants health state index score generated from EQ-5D-3L and their overall health status from EQ-5D VAS were both significantly higher at discharge (post-test) compared to admission (pre-test). The mean scores and 95% confidence intervals are visualised in Figure 2. The differences in mean, standard deviation, $p$ values and effect sizes are presented in Table 4. Each dimension of the EQ-5D-3L Index was also analysed separately in Table 5.

**Do patients perceive PIBA to be a constructive crisis intervention?**

The participants’ assessments of the constructiveness of PIBA, goal fulfilment, attitudes of staff, and overall satisfaction are displayed in Table 6.

**Discussion**

The main results of this study were that patients in crises with a high risk of self-harm experienced a significant reduction in the psychiatric symptoms of anxiety and depression and an increased HRQoL after PIBA. Additionally, a majority of the patients perceived PIBA to be a constructive crisis intervention. To our knowledge, this is the first quantitative study of PIBA with a short-term perspective, using pre- and post-tests of clinical symptoms and HRQoL in patients with emotional instability and self-harm; therefore, it contributes to unique and important knowledge about this intervention.

**Reduced symptoms of anxiety and depression**

There was a significant decrease in symptoms of anxiety and depression, as reflected in the HADS score, after the first admission, with a medium effect size. Significant reductions in the symptoms of both anxiety and depression were also observed after subsequent admissions. When combining the two subscales of the HADS, the results showed a large effect ($d=0.75$) on the total burden of psychiatric symptoms. This finding was confirmed in the analysis of the EQ-5D dimension “anxiety/depression”, with a large reduction ($d=0.72$) in symptoms. These self-rated results for 60 patients align with the results of a previous study in the same sample, which included 15 interviewed patients who reported that PIBA helped them.
overcome suicidal thoughts, depressive symptoms, and emotional distress (Eckerstrom et al., 2020). Healthcare professionals in outpatient units described PIBA as an useful complementary to psychotherapy, because PIBA has the same key components and can support the patients during increased anxiety (Arnold et al., 2021). The outpatient staff also experienced that PIBA lowered the patients' anxiety levels and helped them to manage acute crisis and inhibited maladaptive impulses. It was interesting to see how Figure 1 visualise a pattern regarding when patients choose to use PIBA. Which also emphasises with the outpatient staffs experience regarding how the anxiety level rises to severe, then the patients call the ward and during PIBA's short care period, the anxiety level reduces to mild and becomes manageable for the patient and ready for discharge. This admission process, where the patients decide themselves when to seek care, has potential to increase their insight of disease and further develop their coping skills.

**Increased health-related quality of life**

Participants' HRQoL increased significantly, with a large effect as measured by the EQ-5D VAS and a medium effect as measured by the EQ-5D Index. Similar findings were reported in a Swedish cohort study with 12 months of follow-up of PIBA with patients with anorexia nervosa, reporting a significant increase in HRQoL according to EQ-5D VAS (Strand et al., 2020). A qualitative interview study with anorexia nervosa patients with PIBA contracts showed that the intervention promoted healthy routines in daily life and provided motivational support (Strand et al., 2017), which could be some of the factors behind the increased HRQoL. The reduction of days in inpatient care, described in both the Norwegian study (Nyttingnes & Ruud, 2020) and the Swedish anorexia nervosa study (Strand et al., 2020), may to some extent be explained by the patients’ enhanced sense of security in their everyday lives by providing easy access to PIBA and the possibility of receiving help, when needed (Eckerstrom et al., 2020; Ellegaard et al., 2020; Strand et al., 2017). The analyses of each dimension in EQ-5D Index, showed that only the dimension “Anxiety/depression” was significantly decreased (except for "Usual Activities” in the third admittance to PIBA). This specific EQ-5D result was consistent with changes in Anxiety and Depression symptoms in HADS. Potential reasons for the absent effect on the dimensions “Mobility” and “Self-Care” could be due to low levels of symptom burden in these areas. Furthermore, they were not the primary indication for PIBA. The decrease in the dimension “Usual Activities” was not significant for first, second, and fourth admittance to PIBA. This could be an area of improvement and show a need to educate the healthcare professionals further about helping the patients with behaviour activation and help to self-help regarding getting started with their everyday activities.

**PIBA as a crisis intervention**

Almost all of the participants (95.2%) described PIBA as a constructive intervention. In a previous qualitative study focusing on nurses’ experiences of PIBA, the results demonstrated that the nurses perceived the PIBA contract as a common starting point for the patient and the healthcare personnel when defining the goal and length of stay prior to admission (Eckerstrom et al., 2019). This aspect of predetermination was described as one of the main factors leading to reduced conflicts between patients and nurses and fostering an environment of caring. A Danish study, including patients with different serious mental disorders, examined their experience of PIBA and addressed another key aspect of the intervention that was highly appreciated by patients (Ellegaard et al., 2020). The importance of receiving rapid help when psychiatric symptoms worsened. The results of this study also reported high ratings (M = 9.02 of 10) regarding the approach from staff, which aligns with previous studies.

![Figure 1. Clustered bar chart of mean of HADS score, pre-test vs. post-test.](image-url)
of PIBA in which a friendly and welcoming attitude on the part of healthcare professionals was described (Eckerstrom et al., 2020; Lindkvist et al., 2021). This is in contrast to experiences in regular inpatient care, where patients believed that they were being negatively judged by the carers (Barr et al., 2020). Patients who have experienced both PIBA and regular inpatient care describe the latter as old-fashioned, as patients must wait until they get worse to receive care and demonstrate their need for help by self-harm (Lindkvist et al., 2021). According to previous research on PIBA no increment in waiting lists to regular care was found, nor did the total need for inpatient care increase since PIBA to some extent replaced regular care for users (Strand et al., 2020; Westling et al., 2019). Based on this, our assumption is that PIBA is cost- and utilisation effective. The overall purpose of PIBA is to offer a time-out initiated by the patient in a safe environment when a crisis is imminent (Eckerstrom et al., 2019; Helleman et al., 2014a). The patients in the current study, where the majority had been diagnosed with a disorder that was previously viewed as “difficult to treat”, stated that PIBA fulfils its stated purpose.

### Limitations

The present naturalistic study had no control group, which affects the interpretation and generalisability of the results. These results may be viewed as preliminary with regard to the effects of PIBA. The timeframe of the pre- and post-measures was short and further measurement points would be desirable, to see how long the symptom reduction persists after discharge. There are some strengths of this study that deserve to be mentioned. These include a large number of study participants compared to other studies on PIBA, the heterogenous patient population that correspond to the clinical situation, the evaluation of the intervention in a real-world inpatient setting and few missing values on the self-rated scales pre- and post-intervention. The naturalistic design in the current study favours the external validity. The findings should therefore be fairly generalisable to similar contexts and healthcare organisations.

### Future directions

Since the completion of data collection, the Commissioner of Healthcare in Region Stockholm has decided to provide

### Table 3. Changes in symptoms of anxiety and depression, pre- versus post-test.

|        | Pre-test | Post-test | Change | t  | df  | p     | d    |
|--------|----------|-----------|--------|----|-----|-------|------|
|        | M ± SD   | M ± SD    | %      |    |     |       |      |
| 1st PIBA |          |           |        |    |     |       |      |
| HADS Anxiety | 15.0 ± 4.05 | 12.9 ± 4.81 | −14.0 | 5.40 | 59  | < .001 | 0.70 |
| Depression | 11.2 ± 4.28 | 9.45 ± 4.68 | −15.6 | 4.47 | 59  | < .001 | 0.58 |
| Total    | 26.2 ± 7.40 | 22.3 ± 8.77 | −14.9 | 5.84 | 59  | < .001 | 0.75 |
| 2nd PIBA |          |           |        |    |     |       |      |
| HADS Anxiety | 15.7 ± 3.95 | 14.2 ± 4.18 | −9.6  | 2.39 | 38  | < .001 | 0.64 |
| Depression | 11.5 ± 4.49 | 9.90 ± 4.98 | −13.9 | 2.62 | 38  | < .001 | 0.64 |
| Total    | 27.2 ± 7.62 | 24.1 ± 8.31 | −11.4 | 4.06 | 38  | < .001 | 0.65 |
| 3rd PIBA |          |           |        |    |     |       |      |
| HADS Anxiety | 15.8 ± 3.37 | 13.7 ± 4.74 | −13.3 | 3.60 | 31  | .001   | 0.64 |
| Depression | 10.7 ± 3.69 | 9.00 ± 4.59 | −15.9 | 3.11 | 31  | < .001 | 0.55 |
| Total    | 26.5 ± 6.26 | 22.7 ± 8.14 | −14.3 | 3.96 | 31  | < .001 | 0.70 |
| 4th PIBA |          |           |        |    |     |       |      |
| HADS Anxiety | 15.5 ± 3.16 | 13.6 ± 3.81 | −12.3 | 3.14 | 23  | < .001 | 0.74 |
| Depression | 10.3 ± 3.61 | 8.29 ± 3.45 | −19.5 | 3.65 | 23  | < .001 | 0.70 |
| Total    | 25.8 ± 5.70 | 21.9 ± 6.42 | −15.1 | 3.87 | 23  | < .001 | 0.70 |

### Figure 2. Error Bars of EQ-SD. Section A visualise the Mean and Error Bars of the Health State Index Value analysed from EQ-SD-3L and Section B shows the Overall Health Status from EQ-SD VAS.
### Table 4. Change in health-related quality of life, pre- versus post-test.

|    | 1st PIBA       | 2nd PIBA       | 3rd PIBA       | 4th PIBA       |
|----|----------------|----------------|----------------|----------------|
| n  | EQ-SD Index    | EQ-SD Index    | EQ-SD Index    | EQ-SD Index    |
| Pre-test | M ± SD          | Post-test | M ± SD          | Change % | t | df | p  | d  |
|       | 60  4          | 40  6          | 32  7          | 24  2          |
|       | 0.38 ± 0.26    | 0.36 ± 0.29    | 0.32 ± 0.26    | 0.37 ± 0.27    |
|       | 0.55 ± 0.31    | 0.50 ± 0.28    | 0.47 ± 0.29    | 0.52 ± 0.26    |
|       | 44.7           | 38.9           | 46.9           | 40.5           |
|       | −4.83          | −3.02          | −2.80          | −3.08          |
|       | 59             | 39             | 31             | 23             |
|       | < .001         | .004           | < .001         | .005           |
|       | 0.62           | 0.48           | 0.79           | 0.63           |

### Table 5. EQ-SD Dimensions, pre- versus post-test.

|    | 1st PIBA       | 2nd PIBA       | 3rd PIBA       | 4th PIBA       |
|----|----------------|----------------|----------------|----------------|
| n  | Mobility       | Self-care      | Usual activities | Pain/ discomfort |
| Pre-test | M ± SD          | Post-test | M ± SD          | Change % | t | df | p  | d  |
|       | 60  4          | 40  6          | 32  4          | 24  2          |
| Mobility | 1.10 ± 0.30    | 1.23 ± 0.48    | 1.25 ± 0.44    | 1.25 ± 0.40    |
|       | 1.13 ± 0.34    | 1.18 ± 0.39    | 1.16 ± 0.37    | 1.10 ± 0.30    |
|       | 2.73           | −4.01          | −7.2           | −4.55          |
|       | −0.81          | 1.16           | −1.14          | 1.43           |
|       | 59             | 39             | 31             | .004           |
|       | .419           | .263           | .160           | .86           |
| Self-care | 1.75 ± 0.60    | 2.13 ± 0.75    | 1.78 ± 0.69    | 2.04 ± 0.69    |
|       | 1.72 ± 0.64    | 1.88 ± 0.71    | 1.70 ± 0.56    | 2.04 ± 0.69    |
|       | −5.25          | −11.7          | −4.49          | −7.84          |
|       | 0.81           | 2.78           | 1.78           | 1.70           |
|       | 59             | 31             | 39             | 23             |
|       | .419           | .97           | .083           | .103           |
| Usual activities | 2.03 ± 0.74    | 2.03 ± 0.73    | 2.03 ± 0.70    | 2.04 ± 0.69    |
|       | 1.92 ± 0.67    | 1.93 ± 0.69    | 1.88 ± 0.71    | 1.88 ± 0.68    |
|       | −5.42          | −4.93          | −11.7          | −7.84          |
|       | 1.73           | 1.16           | 1.78           | 1.70           |
|       | 59             | 39             | 39             | 23             |
|       | .090           | .233           | .083           | .103           |
| Pain/discomfort | 2.65 ± 0.52    | 2.60 ± 0.59    | 2.69 ± 0.47    | 2.67 ± 0.48    |
|       | 2.35 ± 0.66    | 2.34 ± 0.65    | 2.34 ± 0.65    | 2.22 ± 0.51    |
|       | −9.62          | −9.62          | −9.62          | −17.2          |
|       | 2.36           | 2.78           | 2.98           | 4.41           |
|       | 39             | 31             | 39             | 23             |
|       | .023           | .009           | .023           | .006           |
| Anxiety/depression | 2.60 ± 0.59    | 2.69 ± 0.47    | 2.70 ± 0.52    | 2.70 ± 0.52    |
|       | 2.35 ± 0.66    | 2.34 ± 0.65    | 2.20 ± 0.61    | 2.20 ± 0.61    |
|       | −9.62          | −9.62          | −17.0          | −17.0          |
|       | 2.36           | 2.78           | 2.98           | 4.41           |
|       | 39             | 31             | 39             | 23             |
|       | .023           | .009           | .023           | .006           |
|       | .37           | .53           | .53           | .53           |

### Table 6. Patients’ assessment of PIBA as a crisis intervention.

|    | 1st PIBA       | 2nd PIBA       | 3rd PIBA       | 4th PIBA       |
|----|----------------|----------------|----------------|----------------|
| Duration of days | Yes, n (%) | No, n (%) | Yes, n (%) | No, n (%) |
| One day, n (%) | 14 (21.9) | 8 (14.1) | 4 (11.1) | 2 (8.0) |
| Two days, n (%) | 9 (14.1) | 15 (25.0) | 9 (25.0) | 6 (24.0) |
| Three days, n (%) | 41 (64.1) | 23 (50.0) | 23 (63.9) | 17 (68.0) |
| Total, n (%) | 64 (100) | 46 (100) | 36 (100) | 25 (100) |
| MD, n | 0 | 0 | 0 | 1 |
| Days, M | 2.42 | 2.33 | 2.53 | 2.60 |
| PIBA is a constructive intervention | Yes, n (%) | No, n (%) | Yes, n (%) | No, n (%) |
| Yes, n (%) | 59 (95.2) | 3 (4.8) | 58 (90.6) | 4 (9.4) |
| No, n (%) | 43 (93.5) | 3 (6.5) | 40 (87.0) | 6 (13.0) |
| Total, n (%) | 62 (100) | 6 (1.8) | 61 (100) | 6 (1.8) |
| MD, n | 2 | 0 | 2 | 0 |
| Goal of PIBA fulfilled | Yes, n (%) | No, n (%) | Yes, n (%) | No, n (%) |
| Yes, n (%) | 59 (95.2) | 3 (4.8) | 58 (90.6) | 4 (9.4) |
| No, n (%) | 43 (93.5) | 3 (6.5) | 40 (87.0) | 6 (13.0) |
| Total, n (%) | 62 (100) | 6 (1.8) | 61 (100) | 6 (1.8) |
| MD, n | 2 | 0 | 2 | 0 |
| Goal of PIBA fulfilled, VAS, 1 = low, 10 = high | n | MD, n | M | Mdn |
| n | 61 | 3 | 8.31 | 9.00 |
| MD, n | 43 | 3 | 8.14 | 9.00 |
| M | 32 | 4 | 8.19 | 8.00 |
| Mdn | 25 | 1 | 7.76 | 9.00 |
| Approach from staff, VAS, 1 = low, 10 = high | n | MD, n | M | Mdn |
| n | 60 | 4 | 8.31 | 9.02 |
| MD, n | 44 | 2 | 8.73 | 9.03 |
| M | 35 | 1 | 9.12 | 9.00 |
| Mdn | 25 | 1 | 10.0 | 10.0 |
| Overall satisfaction with PIBA, VAS, 1 = low, 10 = high | n | MD, n | M | Mdn |
| n | 60 | 4 | 8.75 | 10.0 |
| MD, n | 44 | 2 | 9.02 | 10.0 |
| M | 35 | 1 | 9.03 | 10.0 |
| Mdn | 25 | 1 | 8.92 | 10.0 |
all patients with serious psychiatric conditions access to this intervention. Therefore, studies in the near future with pragmatic designs will be able to evaluate the effect of this intervention in larger and more diverse patient populations, providing the opportunity to also test the reproducibility of the current results. Pragmatic intervention study designs such as stepped wedge cluster randomised controlled trial (Hemming et al., 2015) in which clusters (e.g., wards or clinics) are randomly and sequentially crossed over from control to exposed, would also be useful. Such a design can be a robust option for evaluating healthcare service interventions on a broader scale when randomised recruitment on an individual level is not possible. Regarding future research, it would be important to evaluate the health economics aspects of PIBA for patients with emotional instability and self-harm.

Similar crisis interventions are also available for other patient groups, e.g., schizophrenia and anorexia nervosa. There is a need for consolidation, which means, to analyse the similarities and differences, with the aim to further development and optimisation of the key nursing activities within the interventions. One step to further refine the intervention is to shed some light on the interventions’ name. The previous labels have not fully reflected the purpose and content of the intervention. For example, ‘self-admission’ which only focuses on the patients themselves being admitted, ‘patient-controlled admission’ addresses that the patient are in control over the admission, which is not correct, because it is a collaboration between the patient and the caregiver, and lastly ‘brief admission’ which only highlights that the admission is of a short duration. The authors of this study have reflected on appropriate naming and therefore, for the first time, uses the term ‘patient-initiated brief admission,’ which includes both that the patient as the initiator to the admission and that the care period is of short duration. Hopefully may this new name contribute and inspire to further development of the intervention.

Conclusions

There is an urgent need to improve psychiatric inpatient care for patients with BPD. This novel crisis intervention involves a short, patient-controlled admission into psychiatric care with the aim of increasing coping skills, reducing anxiety and suicidal thoughts during crises. The study results report decreased symptoms of anxiety and depression and increased HRQoL, after PIBA. Most of the participants reported that PIBA was a constructive crisis intervention. Future studies utilising larger samples, additional clinically meaningful outcomes, longer follow-up of patients and the inclusion of diverse patient populations with severe psychiatric diagnoses are needed.

Acknowledgements

We generously thank the participants for their time and for sharing their personal experiences of PIBA.

Author’s contributions

All authors planned and agreed on the study design together, when the research plan was established. JE coordinated the data collection in cooperation with the psychiatric wards. JE analysed and interpreted the data in continuous dialogue with NJL, AC and LF. All authors read, revised and approved the final manuscript.

Declaration of interests

No competing interest to report.

Ethics approval and content to participate

The research project was approved by the Regional Ethics Committee of Stockholm, Sweden (no. 2016/671-31/5). All participants were informed and provided informed content.

Consent for publication

Not applicable.

Funding

This work was founded by the Swedish Research Council (grant number 2015-02446).

Data availability statement

Data will not be made available. The ethical approval included data analysis on group level, not share individual data.

ORCID

Joachim Eckerström http://orcid.org/0000-0001-8468-6457
Andreas Carlborg http://orcid.org/0000-0001-9719-3045
Lena Flyckt http://orcid.org/0000-0003-2680-0340
Nitya Jayaram-Lindström http://orcid.org/0000-0002-2678-3782

References

American Psychiatric Association (2013). Diagnostic and statistical manual of mental disorders: DSM-5. American Psychiatric Association.
Arnold, A., Wardig, R., & Hultsjo, S. (2021). Brief admission for patients with self-harm from the perspective of outpatient healthcare professionals. Issues in Mental Health Nursing, 1–9. Advance online publication. https://doi.org/10.1080/01612840.2021.1956657
Barr, K. R., Jewell, M., Townsend, M. L., & Grenyer, B. F. S. (2020). Living with personality disorder and seeking mental health treatment: Patients and family members reflect on their experiences. Borderline Personality Disorder and Emotion Dysregulation, 7, 21. https://doi.org/10.1186/s40479-020-00136-4
Betan, E., Heim, A. K., Zittel Conklin, C., & Westen, D. (2005). Countertransference phenomena and personality pathology in clinical practice: An empirical investigation. The American Journal of Psychiatry, 162(5), 890–898. https://doi.org/10.1176/appi.ajp.162.5.890
Bjelland, I., Dahl, A. A., Haug, T. T., & Neckermann, D. (2002). The validity of the Hospital Anxiety and Depression Scale. An updated literature review. Journal of Psychosomatic Research, 52(2), 69–77. https://doi.org/10.1016/S0022-3999(01)00296-3
Black, D. W., Blum, N., Pfohl, B., & Hale, N. (2004). Suicidal behavior in borderline personality disorder: Prevalence, risk factors, prediction, and prevention. *Journal of Personality Disorders, 18*(3), 226–239. https://doi.org/10.1521/pedi.18.3.226.35445

Bedner, E., Cohen-Fridel, S., Mazliah, M., Segal, M., Grinshpoon, A., Fischel, T., & Lancu, I. (2015). The attitudes of psychiatric hospital staff toward hospitalization and treatment of patients with borderline personality disorder. *BMC Psychiatry, 15*, 2. https://doi.org/10.1186/s12888-014-0380-y

Cailhol, L., Pelletier, E., Rochette, L., Laporte, L., David, P., Villeneuve, E., Paris, J., & Lesage, A. (2017). Prevalence, mortality, and health care use among patients with cluster B personality disorders clinically diagnosed in Quebec: A provincial cohort study, 2001-2012. *Canadian Journal of Psychiatry. Revue Canadienne de Psychiatrie, 62*(5), 336–342. https://doi.org/10.1177/0706743717700818

Chiesa, M., Fonagy, P., Holmes, J., Drahorad, C., & Harrison-Hall, A. (2019). The attitudes and experiences of mental health staff regarding clients with a borderline personality disorder. *International Journal of Mental Health Nursing, 29*(13–14), 2397–2409. https://doi.org/10.1111/jpm.12171

Dickens, G. L., Lamont, E., & Gray, S. (2016). Mental health nurses’ attitudes, behaviour, experience and knowledge regarding adults with a diagnosis of borderline personality disorder: Systematic, integrative literature review. *Journal of Clinical Nursing, 25*(13–14), 1848–1875. https://doi.org/10.1111/jocn.13202

Ellegaard, T., Bliksted, V., Mehlsen, M., & Lomborg, K. (2020). Feeling safe with patient-controlled admissions: A grounded theory study of the mental health patients’ experiences. *Journal of Clinical Nursing, 29*(13–14), 2397–2409. https://doi.org/10.1111/jocn.15252

EuroQol Group. (1990). EuroQol—a new facility for the measurement of health-related quality of life. *Health Policy, 16*(3), 199–208. https://www.ncbi.nlm.nih.gov/pubmed/10109801

EuroQol Research Foundation. (2018). EQ-5D-3L user guide. EuroQol Research Foundation.

Grant, B. F., Chou, S. P., Goldstein, R. B., Huang, B., Stinson, F. S., Hsu, C. Y., & Grant, B. F. (2014). Health, substance use, and health-related quality of life among adults with borderline personality disorder: Results from the National Epidemiologic Survey on Alcohol and Related Conditions. *The Journal of Clinical Psychiatry, 75*(6), 625–632. https://doi.org/10.4088/jcp.v75n0602

Helleman, M., Goossens, P. J., Kaasenbrood, A., & van Achterberg, T. (2014a). Evidence base and components of brief admission as an intervention for patients with borderline personality disorder: A review of the literature. *Perspectives in Psychiatric Care, 50*(1), 65–75. https://doi.org/10.1111/jpc.12027

Helleman, M., Goossens, P. J., Kaasenbrood, A., & van Achterberg, T. (2014b). Experiences of patients with borderline personality disorder with the brief admission intervention: A phenomenological study. *International Journal of Mental Health Nursing, 23*(5), 442–450. https://doi.org/10.1111/imp.12074

Karman, P., Kool, N., Poslavsky, I. E., & van Meijel, B. (2015). Nurses’ attitudes towards self-harm: A literature review. *Journal of Psychiatric and Mental Health Nursing, 22*(1), 65–75. https://doi.org/10.1111/jpm.12171

Lindkvist, R.-M., Landgren, K., Liljedahl, S. I., Daukantaitė, D., Helleman, M., & Westling, S. (2019). Predictable, collaborative and safe: Healthcare provider experiences of introducing brief admissions by self-referral for self-harming and suicidal persons with a history of extensive psychiatric inpatient care. *Issues in Mental Health Nursing, 40*(7), 548–556. https://doi.org/10.1080/01612840.2019.1585497

McHale, J., & Felton, A. (2010). Self-harm: What’s the problem? A systematic review of correlates and themes. *BMJ (Clinical Research ed.), 340*, c350. https://doi.org/10.1136/bmj.c350

Newton-Howes, G., & Mullen, R. (2011). Coercion in psychiatric care: Systematic review of correlates and themes. *Psychiatric Services (Washington, D.C.), 62*(5), 465–470. https://doi.org/10.1176/ps.62.s5.ps6205_0465

Ng, F. Y. Y., Townsend, M. L., Miller, C. E., Jewell, M., & Grenyer, B. F. S. (2019). The lived experience of recovery in borderline personality disorder: A qualitative study. *Borderline Personality Disorder and Emotion Dysregulation, 6*(1), 10. https://doi.org/10.1186/s40479-019-0107-2

Newton-Howes, G., & Mullen, R. (2011). Coercion in psychiatric care: Systematic review of correlates and themes. *Psychiatric Services (Washington, D.C.), 62*(5), 465–470. https://doi.org/10.1176/ps.62.s5.ps6205_0465

Ng, F. Y. Y., Townsend, M. L., Miller, C. E., Jewell, M., & Grenyer, B. F. S. (2019). The lived experience of recovery in borderline personality disorder: A qualitative study. *Borderline Personality Disorder and Emotion Dysregulation, 6*(1), 10. https://doi.org/10.1186/s40479-019-0107-2

Nyttinen, O., & Ruud, T. (2020). When patients decide the admission—a four year pre-post study of changes in admissions and inpatient days following patient controlled admission contracts. *BMJ Health Services Research, 20*(1), 229. https://doi.org/10.1186/s12913-020-05101-z

Perseius, K. I. (2020). Brief admission for patients with emotional disturbance: Systematic review of correlates and themes. *Perspectives in Psychiatric Care, 56*(8), 732–740. https://doi.org/10.1111/jpc.13201

Saha, T. D., Smith, S. M., Dawson, D. A., Pulay, A. J., Pickering, M. J., & Wilk, M. J. (2014). The antecedents of violence and aggression within psychiatric inpatient care. *Journal of Personality Disorders, 28*(3), 226–239. https://doi.org/10.1521/pedi.2015.28.3.226

Stekelenburg, J., Verheul, J., Deppe, J., & VONDRY, K. (2020). The attitudes and experiences of mental health staff regarding clients with a borderline personality disorder. *International Journal of Mental Health Nursing, 29*(5), 962–971. https://doi.org/10.1111/inm.12736
Saunders, K. E., Hawton, K., Fortune, S., & Farrell, S. (2012). Attitudes and knowledge of clinical staff regarding people who self-harm: A systematic review. *Journal of Affective Disorders, 139*(3), 205–216. https://doi.org/10.1016/j.jad.2011.08.024

Snaith, R. P. (2003). The hospital anxiety and depression scale. *Health and Quality of Life Outcomes, 1*, 29. https://doi.org/10.1186/1477-7525-1-29

Strand, M., Bulik, C. M., Gustafsson, S. A., von Hausswolff-Juhlin, Y., & Welch, E. (2020). Self-admission to inpatient treatment in anorexia nervosa: Impact on healthcare utilization, eating disorder morbidity, and quality of life. *International Journal of Eating Disorders, 53*(10), 1685–1695. https://doi.org/10.1002/eat.23346

Strand, M., Bulik, C. M., von Hausswolff-Juhlin, Y., & Gustafsson, S. A. (2017). Self-admission to inpatient treatment for patients with anorexia nervosa: The patient’s perspective. *International Journal of Eating Disorders, 50*(4), 398–405. https://doi.org/10.1002/eat.22659

Westling, S., Daukantaite, D., Liljedahl, S. I., Oh, Y., Westrin, A., Flyckt, L., & Helleman, M. (2019). Effect of brief admission to hospital by self-referral for individuals who self-harm and are at risk of suicide: A randomized clinical trial. *JAMA Network Open, 2*(6), e195463. https://doi.org/10.1001/jamanetworkopen.2019.5463

Westwood, L., & Baker, J. (2010). Attitudes and perceptions of mental health nurses towards borderline personality disorder clients in acute mental health settings: A review of the literature. *Journal of Psychiatric and Mental Health Nursing, 17*(7), 657–662. https://doi.org/10.1111/j.1365-2850.2010.01579.x

World Medical Association. (2013). World Medical Association Declaration of Helsinki: Ethical principles for medical research involving human subjects. *Journal of the American Medical Association, 310*(20), 2191–2194. https://doi.org/10.1001/jama.2013.281053

Xu, M., Fralick, D., Zheng, J. Z., Wang, B., Tu, X. M., & Feng, C. (2017). The differences and similarities between two-sample T-test and paired T-test. *Shanghai Archives of Psychiatry, 29*(3), 184–188. https://doi.org/10.11919/j.issn.1002-0829.217070

Zigmond, A. S., & Snaith, R. P. (1983). The hospital anxiety and depression scale. *Acta Psychiatrica Scandinavica, 67*(6), 361–370. https://www.ncbi.nlm.nih.gov/pubmed/6880820 https://doi.org/10.1111/j.1600-0447.1983.tb09716.x