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Pathogenic Beliefs among Patients with Personality Disorders

Varit Jintanachote, Tinakon Wongpakaran * and Nahathai Wongpakaran

Department of Psychiatry, Faculty of Medicine, Chiang Mai University, 110 Intawaroros Rd., T. Sriphum, A. Muang, Chiang Mai 50200, Thailand. VJ: varit.j@cmu.ac.th; NW: nahathai.wongpakaran@cmu.ac.th; TW: tinakon.w@cmu.ac.th

* Correspondence: TW: tinakon.w@cmu.ac.th; 110 Intawaroros Rd. Tambon Sriphoom, Amphur Mueng, Chiang Mai, Kingdom of Thailand, 50200; Tel.: +66-53-935422 (ext. 320); Fax: +66-53-935426

Abstract: *Background and Objectives*: Place the question addressed in a broad context and highlight the purpose of the study. *Materials and Methods*: Describe briefly the main methods or treatments applied, including the study population description. *Results*: Summarize the article's main findings. *Conclusions*: Indicate the main conclusions or interpretations. The abstract should be an objective representation of the article, it must not) results. Meanwhile, exclusion criterion is incomplete data in medical record. For the analysis of continuous variables, a General Linear Model (univariate) was employed, with the predictors included specific Personality Disorder. The outcome being the PB, and covariates encompassed age, sex, education, clinical diagnosis, and depression score. *Results:* Six personality disorders, namely Paranoid, Schizoid, Histrionic, Avoidant, Dependent, and Obsessive-Compulsive Personality Disorder, did not exhibit significant pathogenic beliefs. In contrast, the remaining four personality disorders demonstrated significant associations with specific pathogenic beliefs. *Conclusions:* While some personality disorders have specific beliefs, it's also common to have pathogenic beliefs that are not specific to their psychodynamic. It's essential to recognize specific pathogenic beliefs for each individual to be targeted for their psychotherapy.

Keywords: Pathogenic beliefs; Personality disorder; Control Mastery Therapy

1. Introduction

Personality disorder is characterized by a consistent pattern of internal experiences and behaviors that deviate from cultural norms, manifesting in thought patterns, emotional, interpersonal interactions, and impulsivity. This pattern is inflexible, pervasive across various situations, long-lasting, and begins in adolescence, leading to significant functional impairments [1]. This disorder can be observed in approximately 9% of the general population [2,3] and about a half of individuals diagnosed with mental disorders also have comorbid personality disorders [4]. Moreover, personality disorders serve as risk factors and comorbid disorder with other mental disorders, such as depressive disorders, anxiety disorders, substance abuse, suicide, mood disorders, impulsive disorders, and eating disorders [5]. There is a study indicating that 77% of patients diagnosed with Major Depressive Disorder also have comorbid personality disorders [6]. Additionally, individuals with personality disorders often exhibit poor insight into their condition (ego-syntonic) and don't recognize that their difficulties stem from their own personality. As a result, patients often do not seek treatment specifically for their personality issues unless they have sought help for another mental disorder first [5].

The Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5), classifies personality disorders into 3 clusters comprising a total of 10 distinct disorders. Firstly, Cluster A is characterized by odd behavior, encompassing Paranoid, Schizoid, and Schizotypal personality disorders. Secondly, Cluster B is characterized by difficulties in emotion regulation, encompassing Antisocial, Borderline, Histrionic, and Narcissistic personality disorders. Lastly, Cluster C is associated with anxiety and includes Avoidant, Dependent, and Obsessive-Compulsive personality disorders (OCPD). It is also possible to observe more than one personality disorder in a single individual [1].

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The treatment for personality disorders typically involves both pharmacological and psychological approaches. Pharmacological treatment typically focuses on managing symptoms and comorbid conditions such as mood disorders, anxiety, aggression, impulsivity, and psychosis to prepare patients for psychotherapy. Psychotherapy is the treatment of choice to enhance patients' personality, problem-solving skills, and adaptation [5].

There are many models of psychotherapy such as Psychoanalytically orientated, Cognitive-analytic therapy, Dynamic-interpersonal therapy, and Schema therapy. In psychoanalytically oriented therapy, there are subtypes such as dynamic therapy, self-psychology, and control-mastery therapy. Control-mastery therapy focuses on pathogenic beliefs, and patient sought therapy with the goal of resolving their issues, with the therapist's assistance to challenge and disconfirm their unconscious beliefs. So, therapists work to identify pathogenic beliefs and subsequently minimize or disconfirm these beliefs throughout the therapeutic process [7].

A pathogenic belief is a thought pattern that arises from past traumatic experiences, which can be events that actually occurred, like physical abuse or neglect. It can also involve misinterpretations of events, such as a child believing they are responsible for their parents' divorce, even if the actual reason for the divorce is unrelated to the child. Children are prone to developing pathogenic beliefs due to their natural egocentrism, limited life experiences, and a thought system that may include notions of not being good enough. Events typically relate to significant individuals in the lives of children, such as their parents. Beliefs are developed as a means to prevent the recurrence of traumatic events and having a role for both the individual and others involved in that situation. Pathogenic beliefs exist on both conscious and unconscious levels. Pathogenic beliefs typically cause patients to experience significant discomfort [8]. For example, belief that “You are responsible for the feelings or behavior of others” or “You are a failure because you could not make parents or significant others happy”.

So, patients often attempt to disconfirm these beliefs, recognizing that they are incorrect. However, challenging these beliefs is not an easy task because without them, patients may fear facing traumatic events again [8].

To identify pathogenic beliefs, some patients may have conscious beliefs that they can articulate, while others may harbor unconscious beliefs that can be traced back through the history of traumatic events. A traumatic event must be severe enough, whether acute or chronic [8]. There is a method called the "Plan Formulation Method" designed to comprehend patients and devise a treatment plan by collecting Traumas, Obstructions, Goals (may be behavior, mood, thought or their skill), Tests, and Insights [9–11]. Currently, there is a tool designed for identifying pathogenic beliefs known as the Pathogenic Belief Scale (PBS), developed by the San Francisco Psychotherapy Research Group [10] and it has been translated into Thai by Wongpakaran Tinakon and Wongpakaran Nahathai [12].

Currently, it is observed that pathogenic beliefs are linked to the psychopathology of various mental disorders, including personality disorders [12].

While personality disorders exhibit variations in patterns of thought, mood, relationships, and impulsivity, it remains uncertain whether individuals with the same personality disorder share identical pathogenic beliefs. In a study conducted by Pattamanusorn et al., the focus was specifically on schizotypal personality disorder. The findings revealed that individuals with schizotypal personality disorder exhibited a higher prevalence of pathogenic beliefs compared to individuals with other personality disorders and those without personality disorders [13]. As of the current information available, it appears that there is no study conducted for other personality disorders. There are studies that explores the relationship between pathogenic beliefs and major depressive disorder [12], Nightmare disorder [14], agoraphobia [15], low self-esteem, pessimistic attitudes, emotional instability [16], submissive or hostile quadrant of interpersonal communication [12].

There are studies that examine core concepts similar to pathogenic beliefs, such as cognitive errors, maladaptive beliefs, and schemas. There is study of core beliefs in Cognitive-Behavioral Therapy (CBT) for personality disorders [17]. For OCPD, the schema is characterized by Unrelenting Standards, for Avoidant it is Emotional Inhibition, and for Borderline, it includes Dependence/Incompetence, Defectiveness/Shame, and Abandonment [18]. A study on Early Maladaptive Schemas (EMSs) indicates that each disorder tends to share common schemas specific to that disorder [19] and there is also a study that explores the transformation of EMSs into schema modes, providing valuable insights for clinical applications [20]. In a study on interpretational biases

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within the framework of Cognitive Therapy (CT) for personality disorders, it was observed that individuals with Avoidant and Dependent Personality Disorders exhibit interpretational biases related to avoidant, self-critical, dependent, and negative emotional responses. They also display more guilt and fear of judgment responses, and lower levels of solution-focused responses. In contrast, individuals with borderline personality disorder demonstrate interpretational biases related to criticizing others, interpreting others as malevolent, low flexibility and acceptance, and a reduced inclination towards solution-focused responses. Interestingly, individuals with Obsessive-Compulsive Personality Disorder (OCPD) showed no specific relation to interpretational biases [21].

From the criteria outlined in DSM-5, each personality disorder seems to have a distinct "cognitive pattern" or "belief." For example, Paranoid Personality Disorder is characterized by a belief in a mistrustful and dangerous world, Narcissistic Personality Disorder involves a belief in entitlement over others, Avoidant Personality Disorder is associated with a belief in personal inadequacy, Dependent Personality Disorder is linked to a belief that self-trust is lacking, and Obsessive-Compulsive Personality Disorder (OCPD) is marked by a belief that self-worth is contingent on doing things correctly or in an organized manner. Meanwhile, there is uncertainty regarding the specific core cognitive patterns for disorders such as Borderline and Antisocial.

Since there is a lack of studies on pathogenic beliefs and personality disorders, with the exception of schizotypal personality disorder, our focus is on exploring the relationships between specific personality disorders and distinct pathogenic beliefs.

This study aims to investigate whether there is a relationship between Pathogenic Beliefs (PBs) and specific personality disorders, and whether these beliefs align with the criteria specified in the DSM for that personality disorder.

2. Materials and Methods

2.1

This study employed a retrospective cross-sectional design and was approved by the Institutional Review Board (IRB) of the Faculty of Medicine, Chiang Mai University

2.2. Patients and procedure

This study included 310 participants, comprising individuals receiving treatment at Psychotherapy and Personality Disorder Clinic and Education Center at Maharaj Nakorn Chiang Mai Hospital, Faculty of medicine, Chiang Mai University between 2007-2023. All participants signed written informed consent document and completed the Structured Clinical Interview for DSM-IV Axis II Disorders Questionnaire (SCID-II), Pathogenic belief scale (PBS) and Outcome Inventory – Depression (OI-Depression) in pre-treatment assessment. All participants were assessed and completed the questionnaires at the beginning of therapy.

Inclusion criteria involved being over 18 years old, receiving treatment at the Psychotherapy and Personality Disorder Clinic and Education Center at Maharaj Nakorn Chiang Mai Hospital, Faculty of Medicine, Chiang Mai University, having a diagnosis on Axis II (Personality disorder) by psychiatrist and SCID-II results, having a diagnosis on Axis I (Clinical disorders) by a psychiatrist, and possessing information on Pathogenic Beliefs (PBS) and OI-Depression results. Meanwhile, exclusion criterion is incomplete data in medical record.

2.3. Measurements

2.3.1. Structured Clinical Interview for DSM-IV Axis II Disorders Questionnaire (SCID-II)

This scale was developed by First and colleagues [22]. This scale evaluates personality across 12 subtypes, comprising a total of 119 items. Participants would select 'Yes' or 'No' based on their compatibility to those items, and the results would indicate the corresponding personality subtype they possessed. In this study. We utilized the Thai version of the scale, translated, and validated by Wongpakaran and colleagues [23]. The overall interrater reliability demonstrated good consistency across all studies. The Kappa value for the test, comparing the first and second raters in diagnosing

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each personality disorder, ranged from 0.70 to 0.90, with a mean of 0.81 for all personality disorders. The mean trait intraclass correlation coefficient score was 0.90, and the summed score was 0.83 [23].

2.3.2. Pathogenic belief scale (PBS)

PBS was developed by the San Francisco Psychotherapy Research Group (SFPRG) [10]. This scale is used to evaluate pathogenic beliefs in accordance with the Control Mastery Theory. The Thai version was adapted by Wongpakaran and colleague [12]. The original version of the scale consists of 54 items[16], but for this study, we utilized a shortened version. The shortened version of PBS (PBS-27) comprises 27 items, requiring respondents to indicate their agreement with each statement by choosing 'no' (1), 'uncertain' (2), or 'yes' (3). The shortening of PBS was carried out through Rasch analysis. This analysis identified that 27 out of the original 54 items met the criteria of the Rasch measurement model. These 27 items exhibited unidimensionality and substantial reliability for both persons and items, each exceeding 0.80. The test-retest reliability over a two-week interval, calculated by intraclass correlation coefficient, was 0.65 ($p < .001$), indicating moderate reliability [13].

2.3.3. Outcome Inventory – Depression (OI-Depression)

OI-Depression is a component of the Outcome Inventory-21 (OI-21), designed to assess the most frequently encountered mental illnesses, including depression, anxiety, somatization, and interpersonal difficulties. This scale prompts participants to indicate the frequency of their experiences, ranging from 'Never' to 'Almost always,' and assigns scores on a Likert scale from 0 to 4, respectively. The scale comprises 21 items, and the items specifically assessing depression are 2, 5, 14, 18, and 21. The study reported good to excellent Cronbach's alpha values for all subjects, indicating strong internal consistency, along with good test-retest reliability, concurrent validity, convergent validity, and discriminant validity. The area under the ROC curve was 0.89, suggesting a good diagnostic performance [24].

2.4. Statistical analysis

For demographic data, descriptive analysis methods, including mean, percentage, standard deviation, and variance, were employed. For the analysis of continuous variables, a General Linear Model (univariate) was employed, with the predictors included specific Personality Disorder (PD). The outcome being the Pathogenic Belief (PB) item, and covariates encompassed age, sex, education, clinical diagnosis, and depression score.

3. Results

Table 1 presents the characteristics of all 310 participants. Most of the participants in this study are female, accounting for 65.8%. The mean age of the participants is 39.06 years. The mean OI-Depression score is 13.39±5.45, out of a total possible score of 20. Most participants have attained a bachelor's degree level of educational and are single.

Table 1. Socio-demographic data

Variable	Mean ± SD or n (%)
Sex	
Female	204 (65.8)
Male	106 (34.2)
Age	39.06 ± 17.12
OI-Depression score	13.39 ± 5.45
Marital status	
Single	151 (47.0)
Married	46 (14.3)
Divorced	13 (4.0)

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Not identified	30 (9.3)
Missing	81 (25.2)
Level of education	
Primary school	3 (0.9)
Secondary school	27 (8.4)
Vocational school	2 (0.6)
Bachelor's degree	120 (37.4)
Above bachelor's degree	19 (5.9)
Not identified	10 (3.1)
Missing	140 (43.6)

Table 2 presents the psychiatric disorder and personality disorder data of participants. Most participants, 187 individuals (60.3%) have Major Depressive Disorder (MDD), followed by 85 individuals (27.6%) with Persistent Depressive Disorder (PDD). All personality disorders are represented in this study, with the majority being individuals with borderline personality disorder, comprising 214 individuals (70.40%).

Table 2. Psychiatric disorder and Personality disorder data

Variable	Mean ± SD or n (%)
Psychiatric disorder	
MDD	187 (60.3)
PDD	85 (27.6)
Adjustment disorder	9 (3.01)
Bipolar disorder	10 (3.4)
GAD	13 (4.2)
Panic disorder	8 (2.5)
Other	3 (1.1)
Personality disorder	
Paranoid	87 (28.62)
Schizoid	32 (10.53)
Schizotypal	54 (17.76)
Antisocial	42 (13.82)
Borderline	214 (70.40)
Histrionic	21 (6.91)
Narcissistic	67 (22.04)
Avoidant	101 (33.22)
Dependent	27 (8.88)
Obsessive-Compulsive	101 (33.22)

Table 3 shows the distribution of pathogenic beliefs based on personality disorders. In this study, PBS no. 8 (Disagreeing with others will result in contemptuous, angry, rejecting reactions) emerges as the most positively endorsed belief, with 107 participants (48.4%)

The PBS score was significantly associated with histrionic PD ($r = .251$, $p < .01$) and borderline PD ($r = .579$, $p < .001$), likewise the OI score was significantly associated only with borderline and histrionic PD ($r = .288$, $p < .01$, and $.122$, $p < .05$, respectively)

Table 3. The distribution of pathogenic beliefs based on personality disorders.

No.	Pathogenic beliefs	n (%)
1	You are a failure because You could not make parents or significant others happy	64 (29.6%)
2	You are fundamentally unlovable	36 (16.4%)

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3	You cannot achieve your goals because You lack self-control over emotions and impulses	69 (31.8%)
4	Others will hurt, abuse, humiliate, cheat, or manipulate you	93 (42.5%)
5	You should not/does not deserve to be happy because your family of origin was unhappy	33 (15.1%)
6	If you are relaxed and unworried You will be punished or something terrible will happen	54 (24.7%)
7	You deserve to be mistreated and therefore puts yourself in self-destructive or abusive situations/relationships	18 (8.4%)
8	Disagreeing with others will result in contemptuous, angry, rejecting reactions	107 (48.4%)
9	Expressing or experiencing an appropriate sense of pride means that you are self-aggrandizing or narcissistic	68 (31.2%)
10	You are different from other people, isolated from the rest of the world, and/or not part of any group or community	64 (29.4%)
11	By pursuing your interests and goals you are being selfish, uncaring, or ignoring the needs of others	77 (35.2%)
12	You are weak, helpless, and vulnerable to exploitation or trauma	83 (38.2%)
13	Others are superior or more competent than you are	66 (30.7%)
14	You are superior to others, entitled to special privileges, and is not bound by ordinary social conventions	21 (9.6%)
15	Your desire for emotional support and nurturance will not be met by others	47 (21.7%)
16	An imminent catastrophe will strike at any time and nothing can be done to prevent or avoid it	63 (29.2%)
17	Others will be attentive or affectionate only when You are suffering or unhappy	53 (24.3%)
18	You do not deserve to be taken seriously	28 (13.0%)
19	You are responsible for the feelings or behavior of others	88 (40.4%)
20	If you are not successful, you are worthless, and life is meaningless	82 (37.4%)
21	Your feelings, needs, or behaviors are overwhelming or alienating to others	41 (18.8%)
22	You do not deserve to be cared for and to feel protected	19 (8.8%)
23	You cannot challenge, criticize, disagree with others or assert Your own point of view because doing so could hurt or harm others	70 (32.3%)
24	You must surrender control to others	40 (18.3%)
25	Committing to a relationship means forever being trapped or stifled	70 (32.4%)
26	Gaining recognition or approval from other people is more important than developing a secure and true sense of self	59 (27.4%)
27	It is dangerous to express loving feelings	36 (16.8%)
Total score of PBS		

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Mean (SD)	7.20 (6.04)
Min - Max	0 - 25
Median (Interquartile range)	6 (9)

Table 4 displays the outcomes of our study. Six personality disorders, namely Paranoid, Schizoid, Histrionic, Avoidant, Dependent, and Obsessive-Compulsive Personality Disorder (OCPD), did not exhibit significant pathogenic beliefs. In contrast, the remaining four personality disorders demonstrated significant associations with specific pathogenic beliefs, as indicated in the table.

Table 4. Personality disorder predicting pathogenic beliefs, after controlling for confounding variables, including OI-depression scores.

Type of personality disorder	PBS No.	PBS	Odds ratio	95% CI		P-value
				Lower	Upper	
Paranoid	-	-	-	-	-	-
Schizoid	-	-	-	-	-	-
Schizotypal	13	Others are superior or more competent than you are	1.50	.476	2.53	.005
	21	Your feelings, needs, or behaviors are overwhelming or alienating to others	1.94	1.03	2.85	<.001
Antisocial	21	Your feelings, needs, or behaviors are overwhelming or alienating to others	2.33	1.13	4.80	0.022
Borderline	2	You are fundamentally unlovable	3.62	1.10	5.93	0.005
	5	You should not/does not deserve to be happy because your family of origin was unhappy	3.02	1.15	7.93	0.025
Histrionic	-	-	-	-	-	-
Narcissistic	26	Gaining recognition or approval from other people is more important than developing a secure and true sense of self	2.33	1.13	4.80	0.022
Avoidant	-	-	-	-	-	-
Dependent	-	-	-	-	-	-
Obsessive-Compulsive	-	-	-	-	-	-

4. Discussion

This study represents the first attempt to explore the potential relationship between pathogenic beliefs and specific personality disorders, assessing whether these beliefs align with the criteria specified in the Diagnostic and statistical manual of mental disorders (DSM) for each respective personality disorder. The results indicated that only four personality disorders— schizotypal, antisocial, borderline, narcissistic- showed statistical significance in relation to any specific pathogenic beliefs.

We will now discuss the personality disorders that yielded significant results. Firstly, for schizotypal personality disorder, the identified cognitive patterns include paranoid, idea of reference, and magical thinking. Notably, significant pathogenic beliefs for this personality disorder included 'others are superior or more competent than you are' and 'your feelings, needs, or behaviors are

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overwhelming or alienating to others.'. These findings are consistent with prior research that has identified the same significant pathogenic belief items [13] and indicate that the pathogenic beliefs in schizotypal personality disorder are not solely linked to their cognitive style. These pathogenic beliefs may contribute to stress, leading to psychiatric symptoms and motivating individuals to seek therapy. Therapists must avoid stereotyped thinking about schizotypal individuals, recognizing that they may hold beliefs only on paranoid ideas, ideas of reference, and magical thinking. In reality, these individuals may also harbor other beliefs that are susceptible to various clinical disorders.

For antisocial personality disorder, which still has an uncertain cognitive or belief pattern. It's important to note that the lack of guilt or remorse is a key feature of antisocial personality disorder, and individuals with this disorder may engage in behavior that disregards the rights of others without feeling significant regret[25]. A study showed that individuals with antisocial personalities showed grandiosity and justification of violence schemas[26], or a belief that people are there to be taken[27].

On the contrary, the present study found significance for the pathogenic belief that 'your feelings, needs, or behaviors are overwhelming or alienating to others.' This pathogenic belief suggests that individuals with antisocial traits may be cognizant of the burden they place on others, even if they do not experience guilt for their actions. According to the control-mastery theory, individuals are driven by a motivation to attain acceptance and meaningful relationships. Any pathogenic beliefs held by those with antisocial traits might prompt them to pursue psychotherapy to challenge and disprove these distressing beliefs.

For borderline personality disorder, the dichotomous pattern of thought like "all or none" or "black and white" is generally recognized among these individuals. A related study using dysfunctional belief demonstrated that dependency, distrust, and the belief that one should act preemptively to avoid threat were observed individuals with among borderline personality[28]. A study comparing of early maladaptive schema between borderline and chronic depression found that maladaptive schemas regarding self-worth and interpersonal relationships appear to differentiate BDP and chronic depression: Whereas BPD was associated with fluctuating self-image and difficulties in interpersonal settings, chronic depression patients showed excessive focus on meeting the needs of others[29].

The pathogenic beliefs of 'you should not/do not deserve to be happy because your family of origin was unhappy' and 'you are fundamentally unlovable.' found in the present study seem to be consistent with the mentioned studies, they are aligned with the traumatic experiences and poor sense of self often associated with a borderline personality disorder. These beliefs are frequently linked with depression, a prevalent experience among individuals with borderline personality disorder.

For individuals with narcissistic personality disorder, the pathogenic belief that 'gaining recognition or approval from other people is more important than developing a secure and true sense of self' aligns with the cognitive pattern of grandiosity often observed in individuals with narcissistic traits[27,30]. It's important to recognize that pathogenic beliefs are unconsciously held distorted beliefs that individuals may unconsciously want to discard. According to the control-mastery theory, individuals with narcissistic personality disorder may hold onto these beliefs for maladaptive reasons, and the therapeutic process aims to facilitate their willingness to relinquish these beliefs with the assistance of therapists. A relevant study on control mastery therapy in narcissistic personality disorder demonstrated that, conversely, the patient experienced some guilt and sought the therapist's assistance in addressing it[31].

Many pathogenic beliefs are not explicitly tied to specific personality disorders or cognitive patterns. In contrast to these beliefs, pathogenic beliefs, as conceptualized by control-mastery theory, hold specific meanings and purposes. Pathogenic beliefs are unconscious convictions that individuals strive to challenge, either independently or with the assistance of others, such as therapists. This active effort to disprove these beliefs arises because they hinder individuals from achieving their life goals.

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In comparison, certain beliefs associated with behavior, such as the grandiose belief in antisocial personality, may not play a role in prompting individuals to challenge or disprove them. In such cases, these beliefs may not serve as pathogenic beliefs for the patients, as they may not actively obstruct the individuals' life objectives in the same way as other types of pathogenic beliefs.

Clinical implications

Control-mastery theory suggests that individuals possess an innate motivation to confront and resolve their problems. Maladaptive behaviors are frequently linked to underlying pathogenic beliefs, which tend to be predominantly unconscious and become targets for identification and removal. Despite the acknowledged limitations of utilizing a self-reporting pathogenic belief scale, its value lies in identifying pathogenic beliefs that surface at a conscious level. When combined with in-depth interviews, this approach serves as an assessment tool, assisting therapists and clinicians in gaining a comprehensive understanding of the patient's treatment plan.

In this study, it is essential to acknowledge several limitations. Firstly, as the data were derived from pre-treatment assessments, it's possible that certain unconscious pathogenic beliefs of patients might not have manifested at that point. Secondly, cultural factors may influence pathogenic beliefs, and the beliefs examined in this study originated from a Western context. This introduces the potential for cultural differences that may not align with the cultural background of the study sample. Thirdly, self-report questionnaires may fall short in revealing the unconscious aspects of pathogenic beliefs. Therefore, it is recommended to complement these quantitative measures with qualitative research methods to capture the nuanced and implicit dimensions of pathogenic beliefs. Lastly, participants were exclusively recruited from those seeking therapy, which may inadvertently exclude individuals with personality disorders who do not seek therapy. This could introduce a bias that might impact the generalizability of the study's findings.

5. Conclusions

While certain personality disorders exhibit specific beliefs, schemas, or cognitive styles, it's noteworthy that pathogenic beliefs, which impede a patient's life goals, may operate independently of these specific beliefs. Out of all the pathogenic beliefs examined, six have been identified as notably prevalent across four distinct personality disorders. Consequently, it is crucial for therapists to discern and acknowledge these specific pathogenic beliefs that are significantly associated with various personality disorders, as they represent focal points for targeted interventions in psychotherapy.

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Institutional Review Board Statement: The study was conducted according to the guidelines of the Declaration of Helsinki and approved by the Institutional Review Board (or Ethics Committee) of Faculty of Medicine, Chiang Mai University. Study code: PSY-2566-09467, certification number 135/2023 effective 4 April 2023.

Informed Consent Statement: All participants provided written informed consent to the study.

Data Availability Statement: The datasets used and/or analyzed during the current study are available from the corresponding author upon reasonable request.

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Conflicts of Interest: The authors declare no conflict of interest.

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