The effectiveness of short-term dynamic/interpersonal group therapy on perfectionism; assessment of anxiety, depression and interpersonal problems

Shirzad Babaei, Mahmood Dehghani, Fahimeh Fathali Lavasani, Ahmad Ashouri, Leila Mohamadi

Department of Clinical Psychology, Faculty of Behavioral Sciences and Mental Health (Tehran Psychiatric Institute), Iran University of Medical Sciences, Tehran, Iran

ABSTRACT

Perfectionism is acknowledged as a core vulnerability and a perpetuating factor in several psychopathologies. The purpose of the present study was to investigate the effectiveness of short-term psychodynamic/interpersonal group psychotherapy for perfectionism and perfectionism-related distress such as anxiety, depression, and interpersonal problems. This study is a quasi-experimental study applying clinical trial method and contains pre-test, post-test, follow-up periods and control group. The study population included students and the sample consisted of 30 people with extreme perfectionism, who were assigned in two groups of 15 people, experimental and waiting list groups using randomized block design. Research instruments included Tehran Multidimensional Perfectionism Scale, Perfectionistic Self Presentation Scale, Perfectionistic Cognition Inventory, Beck Depression Inventory-II, Beck Anxiety Inventory and Inventory of Interpersonal Problems-32. In order to analyse the collected data, mixed analysis of variance and Repeated Measures Analysis of Variance were used in SPSS software version 22. The results show that the intervention in the experimental group compared to the waiting list group caused a clinically and statistically significant decrease in the mean scores. This result is observable and evident in all levels of perfectionism and psychological distress (anxiety, depression and interpersonal problems), except for the subscale of Non-Display of Imperfection from the Perfectionistic Self Presentation Scale. These results were preserved through the follow-up periods. These results show that short-term dynamic/interpersonal group therapy is effective in treating most of the components of perfectionism and concerning its effectiveness; it reduced psychological distress and showed that the components pertaining to perfectionism are factors of vulnerability in this regard.

Key words: Perfectionism; psychodynamic/interpersonal; group psychotherapy; effectiveness.

Correspondence: Mahmood Dehghani, Department of Clinical Psychology, School of Behavioral Sciences and Mental Health (Tehran Institute of Psychiatry), No. 1, Shahid Mansouri St., Niayesh St., Sattar Khan St., Postal code: 1445613111, Tehran, Iran.
Tel.: +98.9182884151.
E-mail: dehghani.m1399@gmail.com

Citation: Babaei, S., Dehghani, M., Lavasani, F. F., Ashouri, A., & Mohamadi, L. (2022). The effectiveness of short-term dynamic/interpersonal group therapy on perfectionism; assessment of anxiety, depression and interpersonal problems. *Research in Psychotherapy: Psychopathology, Process and Outcome, 25*(3), 327-338. doi: 10.4081/ripppo.2022.656

Acknowledgements: this article was derived from the doctoral dissertation of Mr. Sh. B, Department of Clinical Psychology, Faculty of Behavioral Sciences and Mental Health, Iran University of Medical Sciences. In the end, we would like to thank all the people who collaborated in this research. According to the author of the article, did not have any financial support.

Contributions: in this research, SB and LM were the therapist and co-therapist respectively in the group therapy. SB did the executive work related to the research from the initial negotiation process to the final evaluation. MD and FFL played a great role as treatment supervisors and clinical guides during the implementation of the research, as well as reading the research and helping in its editing. AA played a major role as a consultant for the statistical analysis of the research and its editing.

Conflict of interest: the authors declare no conflict of interest.

Ethical approval and consent: research ethics code (IR.IUMS.REC.260/1398) was received from the research centre of Iran University of Medical Sciences. Among the ethical considerations in this research was obtaining informed written consent from the participants to participate in the research and questionnaires, as well as using a code instead of using their names. It was explained to them that their information would remain confidential and that no one would have access to it and that their data would be analysed in a group. The control group was a waiting list group that did not receive any therapeutic intervention during the research period. From the beginning, a commitment was made that those who continue their cooperation until the end of the study will receive 8 sessions of 45 minutes of individual education-oriented therapy influenced by the comprehensive theory of perfectionistic behaviours.

Received for publication: 3 August 2022.
Revision received: 6 October 2022.
Accepted for publication: 2 November 2022.

Publisher's note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article or claim that may be made by its manufacturer is not guaranteed or endorsed by the publisher.

Licensee PAGEPress, Italy
Research in Psychotherapy:
Psychopathology, Process and Outcome 2022; 25:327-338
doi:10.4081/ripppo.2022.656

Introduction

A recent meta-analysis showed that the tendency toward perfectionism has increased over the past 30 years (Curran & Hill, 2019), and a study in this regard also in-

dicated that very high levels of perfectionism were typical among students (14%) and people with chronic diseases (Molnar *et al*., 2020).

The related terms for perfectionism found in the literature are *adaptive*, *normal*, or *healthy perfectionism*, which was initially referenced in an article written by Hamachek. He argued that perfectionism could have adaptive and positive qualities (Hamachek, 1978). However, according to the model and conceptualization developed by Hewitt, Flett, and Mikail (2017), what other researchers have called adaptive perfectionism is, in fact, a need for achievement or even a radical conscience and 'commander,' which can thus be a potentially valuable personality trait. However, the clinical experiences of patients seeking treatment for their perfectionism show that they have reached the point of frustration, dysfunction, and communication problems (Hewitt, Flett, Mikail, *et al*., 2017). According to this model, although individuals develop and use perfectionist behaviours to improve their relationships with others, such behaviours can lead to social disconnection(Hewitt, Flett, & Mikail, 2017). Perfectionist behaviours lead to a lack of intimacy and closeness with others and eventually to the belief of imperfection and defect in oneself and separation and isolation from others (Hewitt *et al*., 2020). Researchers indicate that perfectionism can appear as an underlying vulnerability factor or as a potential causative or perseverative factor in various disorders and problems, such as depression and suicide disorders (Bastiani *et al*., 1995; Flett *et al*., 2014), anxiety (Blatt *et al*., 1995; Hewitt *et al*., 2015), the problematic interpersonal relationships (Shahar *et al*., 2004). In addition, studies show that the characteristics of perfectionism interfere with treatment outcomes (Blatt *et al*., 1995), help-seeking attitudes, fear of psychotherapy (Hewitt *et al*., 2015), and adverse effects on the therapeutic alliance (Shahar *et al*., 2004). Consequently, although perfectionism can sometimes have some tangible benefits (such as a high level of success), perfectionism must also be understood in terms of its disadvantages and costs. Since perfectionism is a critical factor in all kinds of vulnerabilities due to its inconsistencies, careful consideration of perfectionism is necessary for diagnosing and treating disorders (Enns & Cox, 1999).

Patterson and colleagues have done a systematic review on the psychological effects of perfectionism and accompanying treatment from 2010 to 2020 (Patterson *et al*., 2021). The results showed that the treatment with the most prominent research and widely reported use is cognitive behavioural therapy, carried out in various individual, group, and Internet-based forms (Egan & Hine, 2008; Egan *et al*., 2011; Rozental *et al*., 2017). CBT involves behavioural strategies and challenging beliefs that maintain perfectionism (Egan *et al*., 2014).

On the other hand, many researchers argue that perfectionists are more likely to benefit from group therapy because this setting can activate their relationship dynamics more so than individual therapy, mainly when the approach is based on psychoanalytic principles and focuses on accessing emotion and challenging avoidance of anxiety and self-limitation defenses (Cheek *et al*., 2018; Fredtoft *et al*., 1996; Hewitt *et al*., 2018).

Patterson *et al*. (2021) also argue that people with perfectionistic styles respond more to psychodynamic and relational treatments than symptom-oriented group therapies (Cheek *et al*., 2018; Esposito *et al*., 2021). insignificantly, those meta-analytic studies have shown that other treatments, such as CBT, have indicated that the changes achieved are only in some cognitive characteristics of perfectionism, not in its more deeply rooted traits and relational features (Mikail *et al*., 2022). Group therapy with a psychodynamic orientation working on relational dynamics, stimulating and exploring emotions and feelings, creating group belonging, encourages a strong therapeutic alliance between the patient and the therapist, and this strongly increases the continuity and commitment of the therapy and also affects the results of the treatment (Hewitt, Flett, & Mikail, 2017).

Hewitt *et al*., during their 30 years of research work, have developed an empirically supported therapy, Dynamic-Relational Therapy, in which its formulation is derived from attachment theory, interpersonal theory, contemporary psychodynamic principles, and cognitive behavioural notions (Hewitt, Flett, & Mikail, 2017; Tasca *et al*., 2021). They have developed a comprehensive model of perfectionistic behaviour, which includes three intrapersonal and interpersonal components of perfectionistic traits, aspects of perfectionistic self-presentation, and perfectionistic information processing (Hewitt, Flett, & Mikail, 2017).

In their model, perfectionism consists of three separate dimensions: i) self-oriented perfectionism; ii) other-oriented perfectionism; iii) socially prescribed perfectionism. Self-oriented perfectionism is a motivational component that includes the individual's efforts to achieve the perfect self; other-oriented perfectionism is the propensity to have perfectionist standards for people who are very important to the individual. Socially prescribed perfectionism is a conception that includes perfectionistic or unrealistic standards imposed by others. Another component related to perfectionism is perfectionistic self-presentation. Perfectionist self-presentation is the interpersonal expression of personal absolute perfection, which includes three dimensions of Perfectionistic Self-Promotion, non-display of imperfection and non-disclosure of imperfection. Finally, information-processing element indicates the activation of an ideal self-schema reflected in Perfectionistic Automatic Thoughts (Hewitt, Flett, & Mikail, 2017).

Hewitt (2017) described perfectionism as a relational/personality style and believed that, like other types of personality dysfunctions, it stems from early relation experiences whose function is to receive a sense of security, sense of belonging, importance and value, as well as

repairing or correcting feelings of inadequacy, imperfection and weak self (p. 101).

In various studies, Hewitt *et al*. have confirmed the effectiveness and efficacy of this treatment on perfectionism and the various problems it instigates (Hewitt, Flett, Mikail, *et al*., 2017; Hewitt *et al*., 2018; Hewitt *et al*., 2015; Hewitt, Qiu, *et al*., 2020). They argue that group therapy approaches emphasize these components by focusing on a sense of security, coherence, and acceptance through interpretive interventions, intrapersonal and interpersonal dynamics and personality vulnerabilities underlying perfectionism, and encouragement and support to take interpersonal risks. Moreover, they can play a decisive role in fundamental changes in a person's experience of him/herself and others (Mikail *et al*., 2022). In their first study on the effectiveness of this treatment (Hewitt *et al*., 2015), they found a significant reduction in perfectionism scales. Although the scope of this finding was provisional and limited in size and scope, it encouraged more research in this area of study.

Hewitt *et al*. also believe that group psychotherapy, especially group psychotherapy based on psychoanalytic theory, can treat all the components of perfectionism affected by the critical relational components in the development of perfectionism, as well as the causal and maintaining factors of perfectionism (Flett & Hewitt, 2022; Hewitt, Flett, & Mikail, 2017).

In this study, we evaluated the effectiveness of short-term interpersonal dynamic group psychotherapy on perfectionism at the end of treatment and the effectiveness of treatment over time in one-month and four-month follow-up periods in our sample. The waiting list group was also compared with the treatment group to assess whether the changes were due to the therapeutic effect.

Materials and methods

Participants

The target population included volunteer students who declared their willingness to participate in the research through advertisements related to the research program. The sampling method was purposive and convenient. Inclusion criteria included an age range between 20 and 35 years, a minimum educational level of an associate degree, and not undergoing simultaneous psychiatric (pharmacological) and other psychological treatments. It should obtain a score of at least half the standard deviation above average in one of the Tehran Multidimensional Perfectionism Scale or Perfectionistic Self-Presentation Scale (a criterion to ensure severe perfectionism). The exclusion criteria included a diagnosis of a substance use disorder, symptoms of psychosis, severe personality disorders such as borderline personality disorder, schizotypal, antisocial and paranoid, neurological diseases (*e.g*., multiple sclerosis), and the absence of more than three sessions in the group therapy. The exclusion criteria were evaluated by Structured Clinical Interview for DSM-5 Disorders SCID-5-RV (Research Version) and *Structured Clinical Interview for DSM-5 Personality Disorders* (SCID-5-PD). Tehran Multidimensional Perfectionism Scale, Perfectionistic Self-Presentation Scale, Perfectionism Cognitions Inventory, Beck Anxiety Inventory, Beck Depression Inventory-II, and Inventory of Interpersonal Problems have been used in the pre-test, post-test, one-month, and four-month follow-up periods.

Research procedure

The present research is a quasi-experimental study applying the clinical trial method and randomized block design. It contains pre-test, post-test, one-month, four-month follow-up periods, and a control group. Research ethics code (IR.IUMS.REC.260/1398) was received from the research centre of Iran University of Medical Sciences. Using internet advertisements and posters, group therapy program for perfectionist individuals in the campus and counselling centre of Tehran University and Iran University was held. As indicated in Figure 1, 48 people were invited for a diagnostic interview for the *Diagnostic and Statistical Manual of Mental Disorders*, 5th edition (American Psychiatric Association, 2013; *DSM*-5) disorders and the evaluation of perfectionism tests to determine inclusion and exclusion criteria. This evaluation's results were considered the baseline evaluation of these tests for people subject to the inclusion criteria. Of these people, 12 did not meet the inclusion criteria, and six had the exclusion criteria. According to the existing protocols, the suitable number of samples for a short-term treatment group, especially a closed and homogeneous group, is

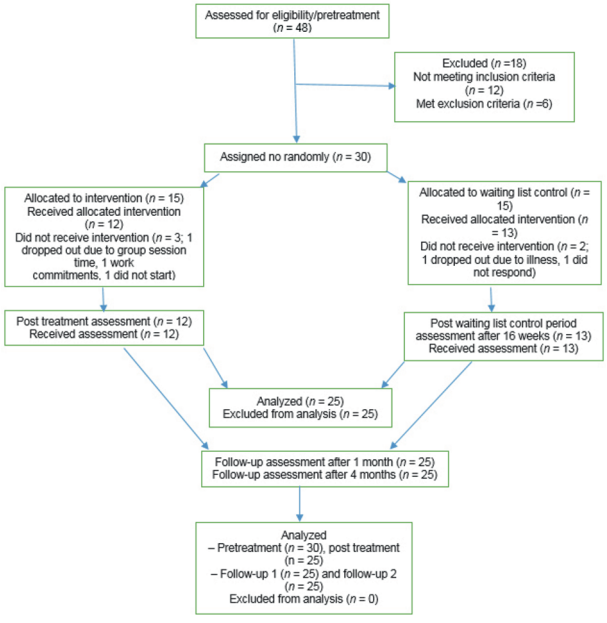

Figure 1. Study flow chart.

usually between 8 and 10 people(Hewitt, Flett, & Mikail, 2017). In order to take into consideration the possible dropouts during the research process, based on age, gender, level of perfectionism, and education, 15 people were placed in the experimental group, and 15 were put on the waiting list group using a randomized block design.

Three members of the experimental sample dropped out before completing the intervention. One person did not come to the group, one left in the third session, and one left the group at the end of the seventh session. In the control group, one participant left the group in the fifth session in consultation with the therapist due to the necessity of psychiatric and individual treatment. Another participant avoided cooperation until the end of this process and left the group.

Confronting anxiety about self-presentation in a group situation (*i.e.*, in real-time) can be determinantal to high-level expectations about oneself and others. It can highlight difficulties in communication with others, making group psychotherapy highly challenging for perfectionists (Hewitt, Flett, & Mikail, 2017). For this reason, each participant received two prerequisite sessions and individual preparation to start treatment to facilitate the group process. Two preparatory and training sessions were used to enhance group participation and reduce perceived threats in the group setting. In the first session, in addition to the questionnaires, David Malan's (as cited in Pedder, 1979) *triangle of adaptation* and the *triangle of object relations* were used as tools for understanding the individuals' communication patterns, main defenses, distressing emotions, and attachment styles. The triangle of adaptation includes a person's attachment or communication needs, anxiety, or other significant emotions and defenses, as well as the interaction between these components. The triangle of object relations also includes the individual pattern of relationships related to the lived past concerning oneself and important others, current relationships with oneself and important others, and current therapeutic relationships with the therapist or group members. The second session focused on preparation before entering the group, including sharing an individual's case formulation with the patient, emphasizing that the patient's dynamics are likely to be a manifestation of their dynamics in group interactions and predictions of potential areas of tension and problems that are likely to arise for the patient (Hewitt, Flett, & Mikail, 2017). When the individual's dynamics and goals were satisfactorily covered, the therapist explained the group's rules and expectations to the participants orally and in written form. This process was aimed at creating and establishing adaptive group norms.

The group therapy sessions consisted of 16 weekly sessions for 90 minutes, which were conducted with two group leaders (therapist and co-therapist) with years of experience in psychoanalytic therapy. The intervention's internal validity was controlled by using the treatment protocol, the supervision of the supervisors, consultants, and the agreement between the evaluators. Moreover, in the 12th treatment session, face-to-face access to the group members was impossible due to the conditions after the COVID-19 pandemic and its simultaneity with nationwide quarantine. Therefore, in coordination with the supervisor and the counselor, the 12th to 16th sessions were held online via Skype.

According to their specific focus, group therapy sessions are divided into 4 phases, each with a dominant focus and purpose. There is 'engagement and pseudo attachment' in phases 1 (sessions 1 and 2); during this phase, the therapist tries to keep their level of anxiety manageable and to create opportunities to highlight the commonalities shared by different group members. The main goal of this first phase of group therapy was to create group cohesion. In the 'pattern interruption' phase 2 (Sessions 3 to 7), the therapists try to help the group members deepen their experiences and express their emotions with more challenging interventions. Resistance appeared at its highest level during this phase of treatment. However, the analysis of resistance in the group was one of the key parts of the treatment. In the 'self-redefinition/painful authenticity' as phases 3 (Sessions 8-14); during this phase of treatment, self-limiting patterns of communication and confrontation that once had a protective function were severely challenged, and group members reviewed and discussed their interactive patterns and attitudes toward themselves. These interventions were intended to assist group members in identifying and confronting unwanted parts of the self. In the process of «termination» as phases 4 (Sessions 15 and 16), the work was more about the coherence and internalization of significant and valuable experiences resulting from group therapy and that each member of the group could express the issues that were raised by the matter of loss, especially in the end of treatment. Finally, what was learned in the group could be applied to situations outside the group. Although group identity formation occurs coherently and progressively, the movement through these four phases is rarely unidirectional.

This treatment was carried out based on the existing protocol written by Professor Hewitt and his colleagues in a book specifically compiled in the field of perfectionism, 'Perfectionism: A relational approach to conceptualization, assessment, and treatment' (Hewitt, Flett, & Mikail, 2017).

Measures

Structured clinical interview for DSM-5 disorders SCID-5-RV (research version) - Persian translation

SCID-5-RV is a semi-Structured Clinical Interview for DSM-5 Disorders in the previous Structured Clinical Interview for DSM-IV Axis I. In the present study, the Persian and research version of the Structured Clinical Interview for DSM-5 Disorders (SCID-5-RV) was used, which was translated, and its psychometric properties

were examined by Mohammadkhani *et al*. (2020). Their results showed that the psychometric properties of the Persian version of this tool had an acceptable similarity (0.95 to 0.99). Its test-retest reliability was between 0.60 and 0.79, and Kappa was between 0.57 and 0.72. The agreement between the interviewer and psychiatric diagnoses was evaluated using the Kappa index, and the result was satisfactory.

Structured clinical interview for DSM-5 personality disorders (SCID-5-PD)

The SCID-5-PD is the upgraded adaptation of the previous Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II). The SCID-5-PD name reflects the elimination of the multiaxial system in DSM-5. Interview questions evaluate ten personality disorders: avoidant, dependent, obsessive-compulsive, paranoid, schizotypal, schizoid, histrionic, narcissistic, and antisocial (Bender *et al*., 2018) which were evaluated by the SCID-5-PD.

Tehran multidimensional perfectionism scale (TMPS)

The Tehran Multidimensional Perfectionism Scale is a 30-question test that measures the three dimensions of self-oriented perfectionism, other-oriented perfectionism, and social-oriented perfectionism on a 5-point Likert scale (score one to five). Besharat calculated the content validity of the Tehran multidimensional perfectionism scale using Kendall's coefficients of agreement for the dimensions of self-oriented perfectionism (0/80), other-oriented perfectionism (0/72), and community-oriented perfectionism (0/69). Test-retest correlation between the scores of 78 subjects on two occasions with an interval of 2 to 4 weeks has been reported for self-oriented perfectionism component r=0.85, for other-oriented perfectionism r=0/79 and community-oriented perfectionism, r=0/84. Also, the internal consistency of the Tehran perfectionism scale was calculated using Cronbach's alpha coefficient for all subjects (n=500) for the components of self-oriented perfectionism 0/90, other-oriented perfectionism 0/91, and societal perfectionism 0.81, which is a sign of satisfactory internal consistency (Besharat, 2007).

Perfectionistic self-presentation scale (PSPS)

This scale includes 27 items that assess three aspects of perfectionism: perfectionistic self-promotion, non-display of imperfection, and nondisclosure of imperfection. Hewitt and colleagues have reported good internal consistency in the subscales of this tool (Hewitt *et al*., 2003). The Persian version of this scale was implemented on 332 non-clinical adults(Babaei *et al*., under review). The internal consistency results with Cronbach's alpha method for the total score, perfectionistic self-promotion, non-display of imperfection, and imperfection nondisclosure were obtained as 0/94, 0/90, 0/89, and 0/74, respectively. The presence of specific patterns of correlation coefficients of subscales of this scale with TMPS, Depression Anxiety and Stress Scale (DASS), and Self-Compassion Scale (SCS) scales indicated good criterion validity.

Perfectionism cognitions inventory (PCI)

The Perfectionism Cognitions Inventory (Flett *et al*., 1998) is a 25-item tool that measures automatic perfectionist thoughts on a 5-point Likert scale (Never=0 to Always=4). The psychometric properties of the scale of perfectionistic cognitions, including internal consistency and validity, have been confirmed in the sample of students and clinical populations in International research (Flett *et al*., 2004; Flett *et al*., 1998; Flett *et al*., 2007). In examining the psychometric properties of this scale, Besharat reported a Cronbach's alpha coefficient of 0/91, which is a sign of good internal consistency of the scale (Besharat, 2006). Also, the results of Pearson correlation coefficients showed a significant negative correlation between the subjects' scores in perfectionist cognitions with positive emotions and psychological well-being from 0/41 to 0/54 (P<0/001) and with depression, anxiety, negative emotions, and helplessness. Psychologically, there is a significant positive correlation from 0/47 to 0/63 (P<0/001). These results confirm the convergent and diagnostic validity of the scale of perfectionistic cognitions (Besharat, 2006, 2012). The results of exploratory factor analysis also confirmed a general factor for the scale of perfectionistic cognitions (Besharat, 2012).

Beck depression inventory-II (BDI-II)

Beck Depression Inventory-II (BDI-II) (developed by Beck in 1963 and revised in 1994) is a 21-item self-report instrument that evaluates the seriousness of depressive side effects and is commonly utilized in treatment evaluation studies. Higher BDI-II scores speak to more extreme depression (0 to 13=normal-minimal; 14 to 18=mild moderate; 19 to 29=moderate-severe; 30 to 63=extremely extreme) (Beck *et al*., 1996). Ghasemzadeh *et al*. have reported that the BDI-II has excellent test-retest quality (r=0/74) and internal consistency (coefficient alpha=a=0/87) and is correlated with the earlier BDI-IA (r=0/93) (Ghassemzadeh *et al*., 2005).

Beck anxiety inventory (BAI)

This list is designed to measure the level of anxiety and contains 21 items against which there are four options to choose from (Steer & Beck, 1997). The calculation of cross-class correlation between test and retest scores in the anxious Iranian population has shown that the reliability of this list is suitable for the Iranian population (r=0/83, P<0/001). Also, in determining the internal stability or correlation of the items, using Cronbach's alpha, the results indicate the high internal stability of this questionnaire (a=0/92). Also, the validity of the questionnaire

by comparing the clinical expert's quantitative assessment with the scores obtained from the subjects' performance shows good validity of this questionnaire (r=0/72, P<0/001) (Kaviani & Mousavi, 2008).

Inventory of interpersonal problems (IIP-32)

The short version of the Interpersonal Problems Inventory is a 32-question inventory and self-report instrument whose items are related to problems that people typically experience in interpersonal relationships. This form was designed by Barkham *et al*. (Barkham *et al*., 1996) as a short version of the original 127-question form (Horowitz *et al*., 1988) to use this tool in clinical services. Scale items are scored on a 5-point Likert scale from 0 (not at all) to 5 (extremely). In examining the validity and reliability of the Persian version of this tool, the results of exploratory factor analysis led to the extraction of six factors assertiveness and sociability, openness, caring, aggression, supportiveness, and Involvement and dependency. Cronbach's alpha coefficient for these factors was 0/83, 0/63, 0/60, 0/83, 0/71, 0/63, respectively, and 0/82 for the total score of this scale. The halving coefficient was 0/80, 0/70, 0/61, 0/88, 0/77, and 0/61, respectively, and the total score of this scale was 0/83 (n=384) (Fath *et al*., 2013).

Data analysis

In order to analyse the obtained data, SPSS version 22 software was used. A chi-square test was used to determine the similarity of groups in the variables of education, gender, and comorbid disorders. Then an independent *t*-test was used to determine the similarity of the two groups in the age variable and to compare the size of the variables and differences between groups. A mixed variance analysis was used to compare the size of the variables and the difference between the groups. Also, variance analysis with repeated measurements was used to examine the changes in the variables in each group.

Results

Table 1 presents the demographic characteristics of the participants. Demographic variables (education, gender, and comorbid disorders) were used to compare the treatment and control groups with the Chi-squared test. The independent T-test was used to check the similarity of the two groups in the age variable. Based on Table 1, there is no significant difference between the two experimental and control groups in any of the characteristics.

The results reported in Table 2 show the means and standard deviations of the MPS, PSPS, PCI, BDI-II, BAI, and IIP-32 in all four stages of the pre-test, post-test, one-month, and four-month follow-up in experimental and control groups. The result showed that in the experimental group, all scales (Except non-display of imperfection from PSPS, in which the mean scores of participants have increased in both experimental and control groups) have decreased compared to the pre-test phase.

Mixed variance analysis (within-subject factor and between-subject factor) was used to investigate the changes in the means of all scales in the pre-test, post-test, and one- and four-month follow-ups. Initially, the results of Mauchly's sphericity test to investigate the homogeneity of covariances showed the significance of this test for three subscales of the MPS, three subscales of the PSPS, the PCI, BAI, BDI-II, and IIP-32, indicating the significance of this test for all components, which indicates the non-homogeneity of covariances (P>0.05). For this reason, the Greenhouse Geisser test was used for mixed variance analysis.

Intra-subject changes on all scales were calculated using a mixed analysis of variance. The results are reported in Table 3 to evaluate the effectiveness of short-term interpersonal dynamic group psychotherapy in an experimental group. According to Tables 2 and 3, and emphasizing the obtained amount of *F*-value, it can be said

Table 1. Demographic data for pre-treatment, posttreatment, follow-up, treatment comparison and waitlist control groups.

Demographic	Treated group	Treatment *vs* control Waitlist control	Test of difference
N	12	13	
Age	29.8 (4.2)	28.7 (2.7)	t=0.75, P-value=0.08
GenderMen	5	6	χ^2=0.051, P-value=0.57
Women	7	7	
EducationBachelor	6	7	χ^2=0.03, P-value=0.84
Master	6	6	
Comorbid disorderAnxiety disorder	4	5	χ^2=0.68, P-value=0.16
Mood disorder	3	4	χ^2=0.50, P-value=0.47
Personality disorder	3	2	χ^2=0.35, P-value=0.27

Table 2. Means and standard deviations of the pre-treatment, post-treatment and follow up TMPS, PSPS, PCI, BDI-II, BAI and IIP-32.

Variable	Pre-treatment		Post-treatment		Follow-up1		Follow-up2	
	Treatment M(SD)	Control M(SD)	Treatment M(SD)	Control M(SD)	Treatment M(SD)	Control M(SD)	Treatment M(SD)	Control M(SD)
Perfectionism traits								
Self-oriented	56 (3.93)	54.30 (2.86)	42.16 (9.56)	54.07 (5.40)	43.66 (6.22)	55.23 (3.41)	43.50 (6.31)	54.84 (3.60)
Other-oriented	35.66 (2.60)	34.61 (0.96)	32.66 (4.43)	37.30 (0.48)	31.18 (4.75)	36.38 (0.96)	30.91 (4.81)	36.69 (0.48)
Socially prescribed	13.16 (1.94)	9.69 (0.48)	10.58 (2.02)	8.92 (0.86)	9.90 (2.98)	9.38 (0.50)	10.33 (2.70)	9.38 (0.50)
Perfectionism self-presentation								
Self-promotion	57.58 (7.02)	61.84 (3.60)	49.08 (5.03)	61.92 (4.73)	47.83 (6.10)	62 (4.35)	47 (6.78)	61.38 (4.61)
Non-display	31.41 (3.05)	25.30 (0.48)	45.91 (4.81)	59.23 (3.41)	45 (6.82)	59.92 (4.55)	44.75 (6.63)	60.61 (3.30)
Non-disclosure	36.08 (7.47)	32.84 (10.72)	21.75 (3.95)	31.84 (11.53)	21.25 (4.47)	32.23 (10.66)	20.91 (4.48)	32.53 (11.09)
Perfectionism cognitions	71.08 (16.48)	77.61 (3.81)	58.66 (13.24)	81.53 (4.55)	57.08 (16.11)	80.15 (5.12)	56.91 (15.93)	78.07 (6.17)
BDI-II	23 (7.21)	22.93 (7.72)	17.58 (7.76)	24.07 (7.68)	16.83 (8.06)	25.23 (7.68)	16.25 (8.10)	24.69 (7.04)
BAI	20.75 (9.54)	22.69 (1.10)	15.35 (6.28)	22.76 (5.62)	15.00 (6.18)	23.38 (2.81)	14.66 (6.24)	23.30 (2.18)
IIP-32	109.00 (10.02)	109.46 (10.97)	101.25 (10.08)	110.30 (11.19)	100.16 (9.98)	110.07 (11.49)	99.83 (10.35)	109.38 (11.30)

Table 3. Results of mixed analysis of variance on the MPS, PSPS, PCI, BDI-II, BAI and IIP-32 to examine intra-subject changes.

Mauchly's test		Source of changes	Sum of squares	d.f	Mean of squares	F	Eta squared
W	P						
0.03	0.001	Main effect of SO	753.22	1.73	433.26	48.25**	0/67
		SO*Group	828.74	1.73	476.70	53.08**	0.69
		Error	359.05	39.98	8.98	---	---
0.11	0.001	Main effect of OO	38.17	1.71	22.25	3.60*	0.14
		OO*Group	180.51	1.71	105.20	17.05**	0.43
		Error	232.87	37.74	6.19	---	---
0.08	0.001	Main effect of SP	55.57	1.97	28.20	11.82**	0.35
		SP*Group	32.99	1.97	16.74	7.02**	0.24
		Error	103.39	43.34	2.38	---	---
0.11	0.001	Main effect of PSP	460.78	1.48	309.61	19.82**	0.46
		PSP*Group	434.14	1.48	291.71	18.68**	0.45
		Error	534.51	34.22	15.61	---	---
0.10	0.001	Main effect of NDI1	10973.28	1.51	7221.95	541.94**	0.96
		NDI1*Group	2047.44	1.51	1347.50	101.11**	0.81
		Error	465.70	34.94	13.32	---	---
0.01	0.001	Main effect of NDI2	1112.69	1.25	889.83	41.65**	0.64
		NDI2*Group	942.61	1.25	753.82	35.28**	0.60
		Error	614.44	28.76	21.36	---	---
0.04	0.001	Main Effect of PCI	474.45	1.38	486.69	7.80**	0.25
		PCI*Group	1187.33	1.38	856.80	13.74**	0.37
		Error	1986.50	31.87	62.32	---	---
0.23	0.001	Main effect of BDI-II	96.47	1.73	55.70	**31.390	0.57
		BDI-II *Group	298.55	1.73	172.39	**97.43	0.80
		Error	70.66	39.83	1.77	---	---
0.483	0.008	Main effect of BAI	132.51	1.98	66.80	56.020* *	0.70
		BAI *Group	183.91	1.98	92.83	77.75**	0.77
		Error	54.40	45.56	1.046	---	---
0994	0.045	Main effect of IIP-32	385.52	2.34	164.66	**106.50	0.822
		IIP-32 *Group	451.28	2.34	192.75	**124.66	0.844
		Error	83.25	53.48	1.54	---	---

that the trend in changing mean scores of the experimental group is decreasing. A closer look at the differences between the measurement levels using Bonferroni's post hoc test showed that in the experimental group for all three subscales of TMPS (including self-oriented perfectionism, other-oriented perfectionism, and socially prescribed perfectionism), all three subscales of PSPS (perfectionist self-promotion, nondisclosure of imperfection and non-display of imperfection), PCI, BDI-II. BAI and IIP-32, there was a significant difference between the pre-test and post-test scores and the one and four-month follow-up. Therefore, the treatment outcomes have been maintained until the follow-up stage (except for the non-display of imperfection, which has increased significantly in the experimental and control groups). In the control group (except for the non-display of imperfection), no significant difference was observed between the scales' scores in the four measurement levels.

Inter-subject changes were calculated using a mixed analysis of variance. The results are reported in Table 4 to evaluate the effectiveness of short-term interpersonal dynamic group psychotherapy and compare it with the control group. According to Table 4 and emphasizing the obtained *F*-value, there was a significant difference between the experimental and control groups in TMPS, PSPS, PCI, and BAI, and no significant difference was observed between the experimental and control groups in BDI-II and IIP-32.

Discussion

According to the results reported in the past section, short-term dynamic/interpersonal group therapy caused significant changes in all the components of perfectionism (except the subscale of non-display of imperfection) and psychological distress. This particular outcome was also preserved in the follow-up period. This finding is consistent with the results of various studies by Hewitt *et al*. (Hewitt, Mikail, *et al*., 2020; Hewitt *et al*., 2015; Hewitt, Qiu, *et al*., 2020; Hewitt, Smith, *et al*., 2020) on the effectiveness of short-term dynamic/interpersonal group therapy on perfectionism. For example, in their comprehensive study on the effectiveness of group therapy on perfectionism at the University of British Columbia, they concluded that all the dimensions of perfectionism showed a significant change after the treatment and throughout the 4-month follow-up period (Hewitt *et al*., 2015).

The interpersonal psychodynamics theory (Hewitt,

Table 4. Results of mixed analysis of variance on MPS, PSPS, PCI, BDI-II, BAI and IIP-32 to examine inter-subject differences.

Subscales	Source of changes	Sum of squares	d.f	Mean of squares	F	Eta squared
SO	Group main effect	1712.06	1	1712.06	25.37**	0.52
	Error	1551.97	23	67.47	---	---
OO	Group main effect	311.22	1	311.22	12.11**	0.35
	Error	565.18	23	25.69	---	---
SP	Group main effect	56.53	1	56.53	7.95*	0.26
	Error	156.45	23	7.11	---	---
PSP	Group main effect	3251.46	1	3251.46	35.43**	0.61
	Error	2110.67	23	91.76	---	---
NDI1	Group main effect	2251.88	1	2251.88	36.69**	0.61
	Error	1411.46	23	61.36	---	---
NDI2	Group main effect	1354.05	1	1354.05	4.86*	0.17
	Error	279.60	23	279.60	---	---
PCI	Group main effect	8458.40	1	8458.40	19.88**	0.46
	Error	9781.83	23	425.29	---	---
BDI-II	Group main effect	849.33	1	849.33	3.80	0.142
	Error	5132.16	23	223.13	---	---
BAI	Group main effect	1081.24	1	1081.24	9.96**	0.30
	Error	2495.79	23	108.51	---	---
IIP-32	Group main effect	1243.28	1	1243.28	2.72	0.106
	Error	10484.57	23	455.85	---	---

SO, self-oriented perfectionism; OO, other-oriented perfectionism; SP, socially prescribed perfectionism; PSP, perfectionistic self-promotion; NDI1, non-display of imperfection; NDI2, non-disclosure of imperfection; PCI, perfectionistic cognition inventory. **P<0.01, *P<0.05.

Flett, & Mikail, 2017) states that perfectionist individuals, due to the lack of accordance and simultaneity between their needs and the responses of the important figures in their life during developmental period, form an insecure attachment and an incoherent self. In order to compensate for the injured self as well as to fulfil the communication needs, individuals unconsciously try to be perfect or appear perfect so that others will take care of them. That is, they do not expose and express their shortcomings, mistakes and defects in their interactions (Chen *et al*., 2015). They believe that through their perfection they can satisfy the need to be important to others, to be accepted, to belong, not to be abandoned or rejected and not to be ridiculed and so on they can positively change their inner and outer world (Mikail *et al*., 2022; Nepon *et al*., 2011). They experience a considerable dissimilarity between the real self and the ideal self, and as a result, they are prone to experience perfectionistic automatic thoughts and information processing (Flett *et al*., 1998). The characteristic dimensions of perfectionism, since they are intrinsic, can direct other levels of perfectionism, including interpersonal behaviours, perfectionist self-expression and perfectionist cognition.

According to the previous researches in this field, perfectionist individuals are probably cognizant of their perfectionism, but they are not deeply aware of its communicative nature (Flett & Hewitt, 2022; Hewitt, Flett, & Mikail, 2017). Therefore, in group therapy sessions and through the interventions related to the experience and expression of emotions, an opportunity will arise to evaluate and revise the traits of perfectionism, perfectionistic self-presentation behaviours (except for the component of non-display of imperfection) and belief in the necessity of perfection by a set of therapeutic modifying reactions and responses.

In relation to perfectionistic self-presentation, the homogeneous group reduces the feeling of shame to weaken the non-display and non-disclosure of imperfection(Hewitt, Flett, Mikail, *et al*., 2017). The component of non-display of imperfection includes disapproval of undesirable identity (such as being weak and incomplete) by hiding one's negative aspects (Hewitt, Flett, & Mikail, 2017). Previous research in this field show that for people with a high level of perfectionism, personal disclosure is a frustrating and stressful act; Because these people are disposed to experience high physiological arousal in their relationships, especially in public, and it shows their strong need to avoid verbal expression and divulgence of their shortcomings (Hewitt *et al*., 2008; Hewitt, Qiu, *et al*., 2020). Based on researches, perfectionist individuals are more inclined to receive information rather than to experience interpersonal interactions or explore emotions (Malivoire *et al*., 2019; Stoeber & Yang, 2010).

This therapy, especially because of its character as a group therapy and its emphasis on the verbal expression of emotions and experiences related to perfectionism (Hewitt, Flett, & Mikail, 2017; Mikail *et al*., 2022), encouraged more verbal disclosure in perfectionist individuals, but when it comes to showing and living their inadequacies, these people tend to be conservative in upholding this image of themselves; That is, if the deficiencies and weaknesses of these people are not recognizable to others, they can take care of their complete and perfect image and avoid being identified as a person with imperfection.

Another notable finding of present study was that the component of non-display of imperfection in both the experimental group and the control group showed a significant increase, which was also maintained in the follow-up period. According to the study of Shahar *et al*. (2004) and Hewitt *et al*. (Hewitt, 2020) we can conclude that the quality of the network of interpersonal and social relationships outside the therapeutic environment plays a mediating role between interpersonal aspects of perfectionism and treatment outcome. Group therapy sessions being held online after the 11th session due to the COVID-19 pandemic and the subsequent restriction in social interactions can justify this issue that to a great extent the treatment was not effective for all the components of perfectionism (such as the component of non-display of imperfection); But following to the fact that there was an increase in this component in both treatment and control groups, this result can be affected by conditions outside the treatment. There may even be more time to address this issue in longer-term treatments because people with extreme levels of this dimension perceive any situation demanding an action as a risk and see themselves as vulnerable in such situations and predict their experience as shame and humiliation. Clinical experiences with these people have also shown that the emotion of shame is one of the most important and fundamental emotions in these people (Ashby *et al*., 2006; Schalkwijk *et al*., 2019).

Regarding the psychological distress related to perfectionism, Goya Arce and Polo, in their research on the evaluation of the social disconnection model of perfectionism (Goya Arce & Polo, 2017), concluded that although perfectionism is an ineffective solution to the experience of inner turmoil and meeting the interpersonal and self-oriented needs, in fact, due to interpersonal problems and the social disconnection it creates, it leads to specific distress, including depression, anxiety, interpersonal problems, and even suicidal behaviours. In this regard, perfectionism is explained as the key triggering mechanism in communication problems and other psychological symptoms and distress. For this reason, when the various dimensions of perfectionism is targeted in a therapy that emphasizes the relational foundations of human behaviour and the relational precursors of perfectionism, especially the individual's need for social connection, sense of security and trust, a capacity will be provided in order to adopt more adaptive strategies, and in addition, it also reduces interpersonal problems and social disconnection (Hewitt, Flett, & Mikail, 2017; Hewitt *et al*., 2018).

Hewitt and his colleagues also concluded that changes in various levels of perfectionism not only affect concurrent and simultaneous symptoms, but also show continuous and unceasing reduction in different levels of distress (Hewitt *et al*., 1995; Hewitt *et al*., 2015; Mikail *et al*., 2022). This effect is due to fundamental changes in the relationship between perfectionists with others and with themselves (Mikail *et al*., 2022). For example, Hawley and his colleagues in evaluation of changes in perfectionistic attitudes and its effect on depression concluded that stable and continuous changes in depression could be predicted by modifications in perfectionism (Hawley *et al*., 2006). Several studies conducted by Hewitt and his colleagues on the group therapy of perfectionistic people indicate that the most suitable therapy for the treatment of perfectionistic behaviours is perhaps interpersonal psychodynamic group therapy approach (Hewitt, Flett, & Mikail, 2017; Hewitt, Smith, *et al*., 2020; Miller *et al*., 2017). Because in group therapy people demonstrate more dynamics; Especially, The structure of this approach is based on psychoanalytical principles and focuses on self-constraining defenses, and the examination of this process in individuals is done through the spirit of the group therapy process, 'shared discovery' and not by therapist's evaluation or judgment of the patient, and actually by the clients themselves (Hewitt, Flett, & Mikail, 2017; Hewitt, Qiu, *et al*., 2020).

Another important point in this study was that people with a strong other-oriented perfectionism tendency might initially appear to be progressing therapeutically. However, regarding the relational style they embrace, their therapeutic progress is in danger due to their inability to understand others' limitations. As stated earlier, during the treatment, they appeared very critical and judgmental, even in relation to the therapists, and with these resistances, they blocked the way to therapeutic alliance. People who left the group early had this strong tendency toward other-oriented perfectionism, and one of the most important and salient points about this study on perfectionists was the commitment of most of the group members to completing the treatment process.

These findings indicate that perfectionism traits and other intrapersonal and interpersonal components act as vulnerability factors since short-term psychodynamic/interpersonal group therapy targets the expressiveness of perfectionism's interpersonal, intrapsychic, and behavioural manifestations. The focus on the reconstruction of fundamental relational and interpersonal problems of perfectionism can have therapeutic effects on perfectionism and its various dimensions and also, to a large extent, restores the vulnerable factors related to it, such as depression, anxiety, and interpersonal problems (Blatt *et al*., 2010). While group therapies focus on reducing symptoms, such as cognitive behavioural therapy, they focus more on the cognitive and behavioural mechanisms of perfectionism, which are more in response to daily pressures and their collaborative interactions with pre-existing trait orientations towards perfectionism (Stoeber, 2018). Therefore, the relational nature of psychodynamic therapy and its focus on what is assumed in the analytic tradition to intervene in behaviours is one of the advantages of this therapy (Mikail *et al*., 2022).

This research had some limitations, such as the fact that the sample was selected from students so the generalizability of the results to other populations was restricted. The use of a self-report questionnaire as an evaluation criterion may have caused the reported results to be greatly influenced by the mindset of the study participants. Due to the outbreak of the COVID-19 in the second half of the treatment, face-to-face sessions were transformed to online sessions. This circumstance can have an impact on the research process and group therapy implementation method as well as meetings atmosphere. Future researches can benefit from samples consisted of other societies, especially clinical population, people without academic education, children and adolescents population and their families and different cultural groups, where overlaps and cultural differences are also investigated. For follow-up period, more extended time can be considered to evaluate the stability of treatment changes.

Conclusions

In general, therapeutic and clinical work with perfectionistic individuals represents an effort to understand and bring to the world a special narrative that serves the need to develop perfectionism and provides insight into the role that perfectionism now plays in creating a sense of interpersonal security and belonging in a person's life (Hewitt, Flett, & Mikail, 2017). Although it has been argued in various studies that perfectionist behaviour treatment may require long-term therapy focused on in-depth interventions (Patterson *et al*., 2021), this may certainly be the case for some individuals. However, this study shows that a short-term group therapy approach of 16 sessions can produce clinically significant changes in various components of perfectionism. These findings are consistent with similar psychodynamic therapies that work on underlying mechanisms (Blatt *et al*., 2006; Tasca *et al*., 2021). Although research has placed great emphasis on the relational components of perfectionism, it is only in recent years that this emphasis has entered the treatment process influenced by Hewitt and colleagues. Blatt *et al*. (2006) state that lasting therapeutic changes become apparent when personality vulnerabilities are treated - instead of focusing solely on symptoms. Overall, the findings of this study are encouraging in showing clinically important effects in reducing perfectionistic behaviours and significant changes in the individuals being treated.

References

Ashby, J. S., Rice, K. G., & Martin, J. L. (2006). Perfectionism, shame, and depressive symptoms. *Journal of Counseling & Development*, *84*(2), 148-156.

Barkham, M., Hardy, G. E., & Startup, M. (1996). The IIP-32: A short version of the Inventory of Interpersonal Problems. *British Journal of Clinical Psychology*, *35*(1), 21-35.

Bastiani, A. M., Rao, R., Weltzin, T., & Kaye, W. H. (1995). Perfectionism in anorexia nervosa. *International Journal of Eating Disorders*, *17*(2), 147-152.

Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *Beck depression inventory (BDI-II)* (Vol. 10). Pearson London, UK.

Bender, D. S., Skodol, A. E., First, M. B., & Oldham, J. (2018). Structured clinical interview for the DSM-5® alternative model for personality disorders (SCID-5-AMPD) module I level of personality functioning scale. *Washington, DC: APPI.*

Besharat, M. A. (2006). Investigating the psychometric properties of the Perfectionist Cognitions Scale. *Research report of Tehran University*.

Besharat, M. A. (2007). Development and validation of the Tehran Multidimensional Perfectionism Scale. *Psychological Research*.

Besharat, M. A. (2012). Investigating the validity and factor structure of the Perfectionist Cognitions Scale. *Research report of Tehran University*.

Blatt, S. J., Auerbach, J., Zuroff, D. C., & Shahar, G. (2006). Evaluating efficacy, effectiveness, and mutative factors in psychodynamic psychotherapies. In *PDM Task Force, Psychodynamic diagnostic manual* (pp. 537-572).

Blatt, S. J., Quinlan, D. M., Pilkonis, P. A., & Shea, M. T. (1995). Impact of perfectionism and need for approval on the brief treatment of depression: the National Institute of Mental Health Treatment of Depression Collaborative Research Program revisited. *Journal of Consulting and Clinical Psychology*, *63*(1), 125.

Blatt, S. J., Zuroff, D. C., Hawley, L. L., & Auerbach, J. S. (2010). Predictors of sustained therapeutic change. *Psychotherapy research*, *20*(1), 37-54.

Cheek, J., Kealy, D., Hewitt, P. L., Mikail, S. F., Flett, G. L., Ko, A., & Jia, M. (2018). Addressing the complexity of perfectionism in clinical practice. *Psychodynamic Psychiatry*, *46*(4), 457-489.

Chen, C., Hewitt, P. L., & Flett, G. L. (2015). Preoccupied attachment, need to belong, shame, and interpersonal perfectionism: An investigation of the perfectionism social disconnection model. *Personality and Individual Differences*, *76*, 177-182.

Curran, T., & Hill, A. P. (2019). Perfectionism is increasing over time: A meta-analysis of birth cohort differences from 1989 to 2016. *Psychological bulletin*, *145*(4), 410.

Egan, S. J., & Hine, P. (2008). Cognitive behavioural treatment of perfectionism: A single case experimental design series. *Behaviour Change*, *25*(4), 245-258.

Egan, S. J., van Noort, E., Chee, A., Kane, R. T., Hoiles, K. J., Shafran, R., & Wade, T. D. (2014). A randomised controlled trial of face to face *versus* pure online self-help cognitive behavioural treatment for perfectionism. *Behaviour research and therapy*, *63*, 107-113.

Egan, S. J., Wade, T. D., & Shafran, R. (2011). Perfectionism as a transdiagnostic process: A clinical review. *Clinical psychology review*, *31*(2), 203-212.

Enns, M. W., & Cox, B. J. (1999). Perfectionism and depression symptom severity in major depressive disorder. *Behaviour Research and Therapy*, *37*(8), 783-794.

Esposito, G., Karterud, S., & Freda, M. F. (2021). Mentalizing underachievement in group counseling: Analyzing the relationship between members' reflective functioning and counselors' interventions. *Psychological Services*, *18*(1), 73.

Fath, N., Azad Fallah, P., Tabatabaei, R.-z., Kazem, S., & Rahimi, C. (2013). Validity and reliability of the inventory of interpersonal problems (IIP-32). *Journal of Clinical Psychology*, *5*(3), 69-80.

Flett, G. L., Greene, A., & Hewitt, P. L. (2004). Dimensions of perfectionism and anxiety sensitivity. *Journal of Rational-Emotive and Cognitive-Behavior Therapy*, *22*(1), 39-57.

Flett, G. L., & Hewitt, P. L. (2022). *Perfectionism in childhood and adolescence: A developmental approach*. American Psychological Association.

Flett, G. L., Hewitt, P. L., Blankstein, K. R., & Gray, L. (1998). Psychological distress and the frequency of perfectionistic thinking. *Journal of Personality and Social Psychology*, *75*(5), 1363.

Flett, G. L., Hewitt, P. L., & Heisel, M. J. (2014). The destructiveness of perfectionism revisited: Implications for the assessment of suicide risk and the prevention of suicide. *Review of General Psychology*, *18*(3), 156-172.

Flett, G. L., Hewitt, P. L., Whelan, T., & Martin, T. R. (2007). The Perfectionism Cognitions Inventory: Psychometric properties and associations with distress and deficits in cognitive self-management. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, *25*(4), 255-277.

Fredtoft, T., Poulsen, S., Bauer, M., & Malm, M. (1996). Dependency and perfectionism: Short-term dynamic group psychotherapy for university students. *Psychodynamic Counselling*, *2*(4), 476-497.

Ghassemzadeh, H., Mojtabai, R., Karamghadiri, N., & Ebrahimkhani, N. (2005). Psychometric properties of a Persian-language version of the Beck Depression Inventory-Second edition: BDI-II-PERSIAN. *Depression and Anxiety*, *21*(4), 185-192.

Goya Arce, A. B., & Polo, A. J. (2017). A test of the perfectionism social disconnection model among ethnic minority youth. *Journal of Abnormal Child Psychology*, *45*(6), 1181-1193.

Hamachek, D. E. (1978). Psychodynamics of normal and neurotic perfectionism. *Psychology: A Journal of Human Behavior*.

Hawley, L. L., Ho, M.-H. R., Zuroff, D. C., & Blatt, S. J. (2006). The relationship of perfectionism, depression, and therapeutic alliance during treatment for depression: latent difference score analysis. *Journal of Consulting and Clinical Psychology*, *74*(5), 930.

Hewitt, P. L. (2020). Perfecting, belonging, and repairing: A dynamic-relational approach to perfectionism. *Canadian Psychology/Psychologie Canadienne*, *61*(2), 101.

Hewitt, P. L., Flett, G. L., & Endler, N. S. (1995). Perfectionism, coping, and depression symptomatology in a clinical sample. *Clinical Psychology & Psychotherapy*, *2*(1), 47-58.

Hewitt, P. L., Flett, G. L., & Mikail, S. F. (2017). *Perfectionism: A relational approach to conceptualization, assessment, and treatment*. Guilford Publications.

Hewitt, P. L., Flett, G. L., Mikail, S. F., Kealy, D., & Zhang, L. C. (2017). Perfectionism in the therapeutic context: The perfectionism social disconnection model. In *The psychology of perfectionism* (pp. 306-330). Routledge.

Hewitt, P. L., Flett, G. L., Sherry, S. B., Habke, M., Parkin, M.,

Lam, R. W., McMurtry, B., Ediger, E., Fairlie, P., & Stein, M. B. (2003). The interpersonal expression of perfection: perfectionistic self-presentation and psychological distress. *Journal of Personality and Social Psychology*, *84*(6), 1303.

Hewitt, P. L., Habke, A. M., Lee-Baggley, D. L., Sherry, S. B., & Flett, G. L. (2008). The impact of perfectionistic self-presentation on the cognitive, affective, and physiological experience of a clinical interview. *Psychiatry*, *71*(2), 93-122.

Hewitt, P. L., Mikail, S. F., Dang, S. S., Kealy, D., & Flett, G. L. (2020). Dynamic-relational treatment of perfectionism: An illustrative case study. *Journal of Clinical Psychology*, *76*(11), 2028-2040.

Hewitt, P. L., Mikail, S. F., Flett, G. L., & Dang, S. S. (2018). Specific formulation feedback in dynamic-relational group psychotherapy of perfectionism. *Psychotherapy*, *55*(2), 179.

Hewitt, P. L., Mikail, S. F., Flett, G. L., Tasca, G. A., Flynn, C. A., Deng, X., Kaldas, J., & Chen, C. (2015). Psychodynamic/interpersonal group psychotherapy for perfectionism: Evaluating the effectiveness of a short-term treatment. *Psychotherapy*, *52*(2), 205.

Hewitt, P. L., Qiu, T., Flynn, C. A., Flett, G. L., Wiebe, S. A., Tasca, G. A., & Mikail, S. F. (2020). Dynamic-relational group treatment for perfectionism: Informant ratings of patient change. *Psychotherapy*, *57*(2), 197.

Hewitt, P. L., Smith, M. M., Deng, X., Chen, C., Ko, A., Flett, G. L., & Paterson, R. J. (2020). The perniciousness of perfectionism in group therapy for depression: A test of the perfectionism social disconnection model. *Psychotherapy*, *57*(2), 206.

Horowitz, L. M., Rosenberg, S. E., Baer, B. A., Ureño, G., & Villaseñor, V. S. (1988). Inventory of interpersonal problems: psychometric properties and clinical applications. *Journal of Consulting and Clinical Psychology*, *56*(6), 885.

Kaviani, H., & Mousavi, A. (2008). Psychometric properties of the Persian version of Beck Anxiety Inventory (BAI). *Tehran University Medical Journal*.

Malivoire, B. L., Kuo, J. R., & Antony, M. M. (2019). An examination of emotion dysregulation in maladaptive perfectionism. *Clinical Psychology Review*, *71*, 39-50.

Mikail, S. F., Hewitt, P. L., Flett, G. L., & Ge, S. (2022). Group dynamic-relational therapy for perfectionism. *Research in Psychotherapy: Psychopathology, Process and Outcome*.

Miller, R., Hilsenroth, M. J., & Hewitt, P. L. (2017). Perfectionism and therapeutic alliance: a review of the clinical research. *Research in Psychotherapy: Psychopathology, Process, and Outcome*, *20*(1).

Mohammadkhani, P., Forouzan, A. S., Hooshyari, Z., & Abasi, I. (2020). Psychometric properties of Persian version of structured clinical interview for DSM-5-research version (SCID-5-RV): a diagnostic accuracy study. *Iranian Journal of Psychiatry and Behavioral Sciences*, *14*(2).

Molnar, D. S., Sirois, F. M., Flett, G. L., & Sadava, S. (2020). A person-oriented approach to multidimensional perfectionism: Perfectionism profiles in health and well-being. *Journal of Psychoeducational Assessment*, *38*(1), 127-142.

Nepon, T., Flett, G. L., Hewitt, P. L., & Molnar, D. S. (2011). Perfectionism, negative social feedback, and interpersonal rumination in depression and social anxiety. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement*, *43*(4), 297.

Patterson, H., Firebaugh, C. M., Zolnikov, T. R., Wardlow, R., Morgan, S. M., & Gordon, B. (2021). A systematic review on the psychological effects of perfectionism and accompanying treatment. *Psychology*, *12*(1), 1-24.

Rozental, A., Wade, T., Egan, S., Kothari, R., Allcott-Watson, H., Carlbring, P., & Andersson, G. (2017). Is the devil in the detail? A randomized controlled trial of guided Internet-based CBT for perfectionism. 51st Annual Convention for Behavioral and Cognitive Therapies Convention, San Diego, USA, November 16-19, 2017,

Schalkwijk, F., Van Someren, E. J., & Wassing, R. (2019). A clinical interpretation of shame regulation in maladaptive perfectionism. *Personality and Individual Differences*, *138*, 19-23.

Shahar, G., Blatt, S. J., Zuroff, D. C., Krupnick, J. L., & Sotsky, S. M. (2004). Perfectionism impedes social relations and response to brief treatment for depression. *Journal of Social and Clinical Psychology*, *23*(2), 140.

Steer, R. A., & Beck, A. T. (1997). Beck anxiety inventory. In C. P. Zalaquett & R. J. Wood (Eds.), *Evaluating stress: A book of resources* (pp. 23-40). Lanham, MD: Scarecrow Education.

Stoeber, J. (2018). The psychology of perfectionism: Critical issues, open questions, and future directions. In J. Stoeber (Ed.), *The psychology of perfectionism: Theory, research, applications* (pp. 333–352). London: Routledge/Taylor & Francis Group.

Stoeber, J., & Yang, H. (2010). Perfectionism and emotional reactions to perfect and flawed achievements: Satisfaction and pride only when perfect. *Personality and Individual Differences*, *49*(3), 246-251.

Tasca, G. A., Mikail, S. F., & Hewitt, P. L. (2021). *Group therapy theory and group psychodynamic-interpersonal psychotherapy stages of development*. American Psychological Association.