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Individualized Psychotherapy: A Review

Bireyselleştirilmiş Psikoterapi: Bir Gözden Geçirme

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ABSTRACT

Although clinical psychology practitioners have to tailor their practice to their clients when conducting psychotherapy with clients, there is little empirically supported basis for doing so. For some time now, questions have been asked in clinical psychology about which psychotherapy is effective. These questions have accelerated studies focusing on various psychotherapy approaches that are examined whether they are effective for different psychological disorders. However, it is seen that the client side is missing in these studies. With the emergence of the evidence-based practice approach, an increasing number of studies in recent years have focused on the adaptation of psychotherapy practices according to client characteristics in the context of the "individualized psychotherapy" approach. Although this adaptation starts with pre-treatment decision-making, it also includes the selection and sequencing of techniques and the continuation of adaptations according to changes during the therapy process. In addition, the frequency of sessions in the therapy process, how and when to terminate psychotherapy are also important points in presenting psychotherapy specific to the client. In this literature review, various approaches and methods are presented on how to perform personalization at these important points and suggestions are made for future studies.
Keywords: Psychotherapy, evidence based practice, individualized psychotherapy

ÖZ

Klinik psikoloji uygulayıcıları, danışanlarla psikoterapi sürecini yürütürken uygulamalarını danışanlarına göre şekillendirmek durumunda kalsa da bunu yapmak için görgül olarak desteklenmiş çok az rehber vardır. Bir süredir klinik psikolojide hangi psikoterapinin etkili olduğuna ilişkin sorular sorulmaktadır. Bu sorular farklı psikolojik bozukluklar için etkili olup olmadığı incelenen çeşitli psikoterapi yaklaşımları odağındaki çalışmaları hızlandırmıştır. Ancak bu çalışmalarda danışan tarafının eksik kaldığı görülmektedir. Kanıta dayalı uygulama yaklaşımının da ortaya çıkmasıyla son yıllarda artan sayıda çalışma "bireyselleştirilmiş psikoterapi" yaklaşımı bağlamında psikoterapi uygulamalarının danışan özelliklerine göre uyarlanmasına odaklanmaktadır. Bu uyarlama, tedavi öncesi karar verme ile başlasa da tekniklerin seçilmesi, sıralanması, terapi süreci boyunca değişikliklere göre uyarlamaların devam etmesini de kapsamaktadır. Ayrıca, terapi sürecinde seansların sıklığı, sonlandırmanın nasıl ve ne zaman yapılacağı da psikoterapinin danışana özgü sunulmasında önemli noktalardır. Bu alan yazın derlemesinde, söz konusu önemli noktalarda kişiselleştirmenin nasıl yapılacağına ilişkin çeşitli yaklaşımlar ve yöntemler sunulmakta ve gelecekteki çalışmalar için önerilerde bulunulmaktadır.
Anahtar sözcükler: Psikoterapi, kanıta dayalı uygulama, bireyselleştirilmiş psikoterapi

Introduction

Psychological problems lead to high personal, economic, and social costs. Psychological interventions, of course, play an important role in reducing these costs (Holmes ve ark. 2018, Moore ve ark. 2020). Over the past 50 years, the field of clinical psychology witnessed studies on psychological interventions as well as discussions on whether they are effective. This debate started in 1936 when S. Rosenzweig, at the end of his study on whether psychotherapy worked or not, concluded with a statement known as the "Dodo Bird Verdict", which emphasized that he could not reach a conclusion about which therapy was effective: "Everybody competed, everybody won.". Subsequently, with studies (Eysenck 1952, Smith and Glass 1977) comparing many psychological interventions with different methods (e.g., meta-analysis, systematic review), the debate became about which psychotherapy was more effective. Considering the methodological deficiencies in these studies, such as comparing therapies applied to individuals with different psychological disorders (such as comparing samples with different qualities), the question "Which method works for whom and under which conditions?" has become more important; research methods with standardized and objective characteristics, such as randomized controlled trials (RCTs), became prominent. With the acceptance of Emprically Supported Treatments (EST) approach, RCTs have been used more frequently to determine whether interventions applied to certain clients under certain conditions have an effect (e.g., Beutler 1998, Elliot 1998). However, studies on the effects of certain

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treatments under certain conditions have been criticized for overemphasizing the study conditions and sterilizing the study and for the fact that scientific studies cannot represent real clinical settings in areas such as diagnostic features and application conditions. The debate in the field has given way to "Evidence Based Practice" (EBP), which argues that focusing on research findings is important, but limited, in finding the best intervention and that the therapist's clinical experience and client characteristics should also be included (APA 2006).

When we look at the literature, we can see that there is indeed a need to investigate aspects such as the therapist's clinical experience and client characteristics from many perspectives. First of all, although many studies have been conducted to find effective treatments, it can be said that no consistent results have been obtained; in other words, it can be said that treatment has not gone much further than the Dodo Bird Verdict (i.e., not knowing exactly which therapy is better). Some studies have emphasized that psychological treatments have failed to find consistent differences between average effect sizes (Cuijpers et al. 2008, Gibbons et al. 2016, Wampold et al. 2017). With the increase in the number of RCTs, detailed therapeutic protocols tailored to DSM (Diagnostic and Statistical Manual of Mental Disorders-5 TR; APA, 2013) diagnoses and a large number of evidence-based psychotherapy practices (e.g., cognitive-behavioral therapy [CBT], interpersonal therapy [IPT], third wave psychotherapies) have emerged. Although the CBT approach is characterized as a well-established treatment that is supported to be effective for many psychological disorders (e.g., depression, anxiety disorders, etc.), it has not shown a meaningful advantage over third-wave psychotherapy approaches in recent RCTs or systematic review meta-analyses (Ost 2008, Hunot et al. 2013, Cougle et al. 2017, Wampold et al. 2017). Despite the rapidly growing list of evidence-based treatments for psychological disorders, the proportion representing the effectiveness of psychotherapy in the results of studies conducted in this field has not increased in recent years (Cuijpers 2017). To put it differently, the fact that the number of treatments shown to be effective increased does not indicate that psychotherapy has been always applied in a more effective and useful manner. Moreover, although an intervention method has been shown to be effective in studies, it is not clear exactly what exactly provides this effect and which mechanisms produce or mediate change (Kazdin et al. 2011).

Another point is that the complexity of psychological disorders poses challenges for clinical research and practice (Rodríguez 2018). It should be emphasized that psychological disorders are too complex to be fully covered by clinical guidelines; the same disorder is characterized by large differences between one individual and another (Cramer et al. 2010, Eaton et al. 2023). In recent studies, different symptoms of psychopathology have been examined, and it has been stated that even if individuals have the same diagnosis, their clinical manifestations differ according to various combinations of symptoms (Forbes et al. 2024, Olthof et al. 2023). It has also been stated that there are overlapping symptoms between diagnoses; for example, symptoms of major depressive disorder recur in different psychopathologies (Forbes et al. 2024). Focusing on a single diagnosis can lead to overlooking symptoms or associated factors that span multiple psychopathologies (Wilshire et al. 2021). Thus, the same evidence-based psychological intervention may be effective differently for two people with the same psychological disorder (DeRubeis et al. 2014). Treating people with comorbid comorbidities requires the use of multifocal guidelines, but for clinicians moving in this direction, it is almost impossible to find a manual on how to work with different guidelines when treating people with comorbid symptoms (Langer and Jensen-Doss 2018), leaving clinicians with personal inferences and intuition.

In sum, it is possible to discuss the limitations of psychological intervention approaches based on a one-size-fits-all approach to diagnosis and intervention (Marchette and Weisz 2017). In contrast, a recent approach called as the personalized-psychotherapy goes beyond existing diagnostic systems that assume that individuals with the same diagnosis share the same pathological processes; in its simplest form, it is based on tailoring interventions to the individual (Hamburg and Collins 2010, Cohen and DeRubeis 2018). These approaches appear to be promising approaches for improving the effectiveness of psychotherapy and moving forward in the debate on evidence-based practice. In a recent study, when qualitative interviews with clients who received or are receiving psychotherapy were evaluated, it was stated that clients did not find this kind of psychotherapy useful, with the example of "I felt like I was being organized according to the treatment instead of the treatment being organized according to me". In other words, this approach points to a very important need in terms of client experience (Li et al. 2024). In parallel with this need, a meta-analysis examining the effect of individualized psychotherapy found that when individualized psychological care is applied, better results can be obtained than standard interventions (Nye et al. 2023). In several years ago, many studies have focused on this approach and new terms have been given: for example, Norcross and Cooper (2021) used the term "evidence-bespoke psychotherapy". In this context, the term " individualized psychotherapy" or "personalized psychotherapy" will be used in this study in parallel with the concepts of "individualized psychotherapy" and "tailoring", which are frequently used in other studies.

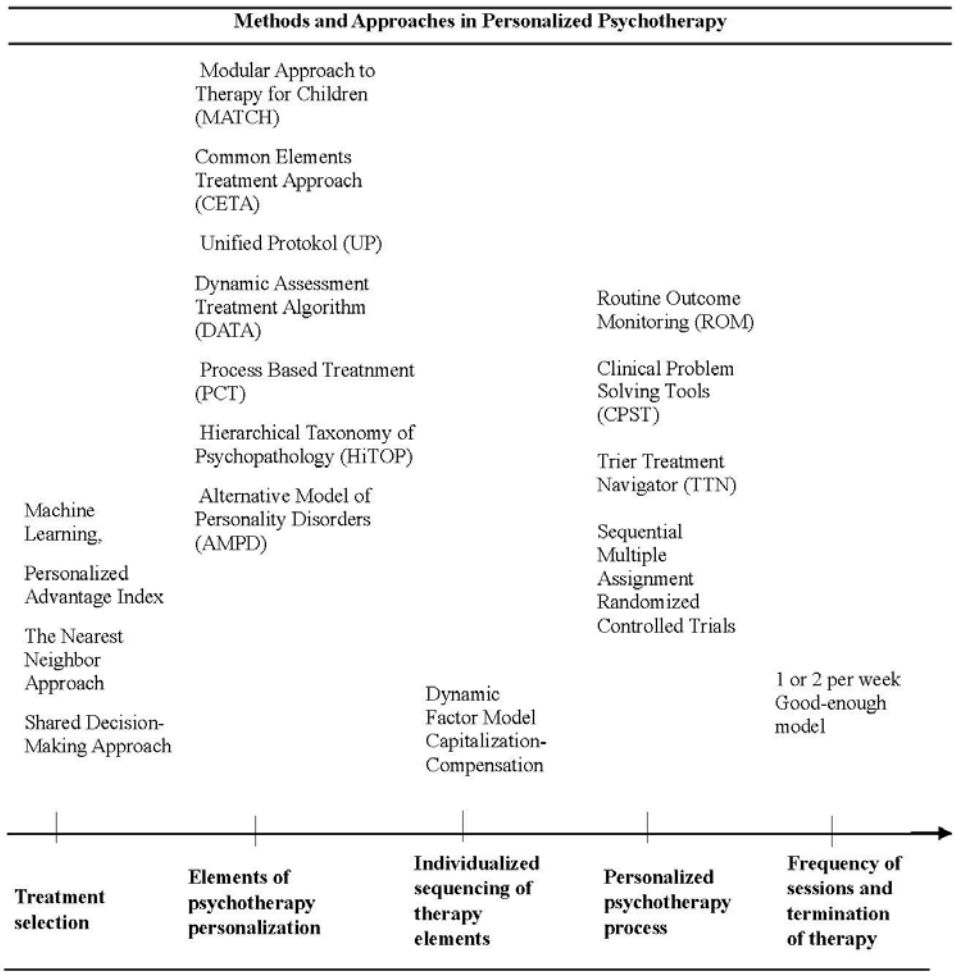

Figure 1. Methods and approaches for personalized psychotherapy

Even though the first thing that comes to mind in personalized psychotherapy approaches is to choose a treatment method that is appropriate for the clients, in fact, this is a process, and even if an approach that is thought to be appropriate for the client is somehow selected, new situations may arise during the therapy process that require the therapist to make decisions. For example, no clear guidelines exist on how clinicians should proceed when a client experiences an unexpected traumatic event in their life or suffers a loss while practicing a psychotherapy approach that is considered appropriate for the client. Similarly, when working with a therapy approach that is thought appropriate for the client and certain techniques that the client has difficulty with, critical questions arise, such as whether to continue until the client can do so or to switch to a different therapy approach, when and how. Many similar examples can be given; accordingly, this study is limited to discussing individual-specific treatment selection at the beginning of treatment. Individual-specific decisions will also need to be made at many points during the psychotherapy process, such as the choice of different techniques, the sequence of techniques, the frequency of therapy, and when and how to terminate the therapy. Thus, the aim of this review is to compile scientific studies on how, with which statistical methods, on what basis, and when psychotherapy should be individualized in terms of personalization and sequencing of therapeutic elements (e.g., techniques) in psychotherapy selection, changes in the treatment process, frequency, and termination of treatment. In this way, one of the main aims here is to raise awareness among clinicians and researchers in the national literature in the context of individualized psychotherapy, which has been on the agenda in the international literature in recent years and is expected to increase in the future (Norcross and Cooper 2021). In this context, studies that include an individualized psychotherapy approach before and during treatment will be presented under separate headings. A summary table of the methods and approaches introduced in the main headings of the following section is presented in Figure 1. This table was developed based on Stumpp and Sauer-Zavala's study on individualized psychotherapy (2022) with the addition of current information from the literature (Stumpp and Sauer-Zavala 2022).

Personalization of Therapy in Treatment Selection

The increase in research on effective psychotherapeutic approaches for specific disorders has been instrumental in the development of a list of empirically supported treatments. However, in these lists, where multiple treatments are recommended for a diagnosis, there is little guidance on how to choose the best approach for a client (Lutz et al. 2022). Although it is useful to seek the best disorder-specific treatment approach for symptom relief, this approach is associated with many challenges. The proliferation of effective protocols can make it difficult for clinicians to choose the best approach for a particular patient from the available alternatives; also, it is important to recognize that clients include not only the symptoms in question. Therefore, stating that treatment is effective based on overall outcomes is limited, given individual differences. In clinical practice, most therapists may already be tailoring their treatment to their clients idiosyncrtically, but they often do so intuitively and unstructured without any guidelines for this purpose (Lambert 2013, Perlis 2016, Langer and Jensen-Doss 2018, Lutz et al. 2022). Adding personal experience and intuition to the application of scientifically proven treatments is a waste of the efforts made so far for the sake of an evidence-based approach, i.e. recommendations based on scientific studies should be made instead of intuitive therapist judgment alone.

Both statistical methods and theoretical approaches have been developed to select individual-specific psychotherapy or intervention strategies. Most empirical methods for determining the best individual-specific treatment are based on multivariate predictive modeling (e.g., Cohen and DeRubeis 2018). Prominent methods in this context include Machine Learning (ML), Personalized Advantage Index (PAI), and Nearest Neighbors (NN) (Lutz et al. 2005, DeRubeis et al. 2014, Green et al. 2015). In this section, we provide information about the purposes of these methods and how they are applied. Futrhermore, studies on the "Shared Decision Making Process" will be included because what the client wants is as important as predicting what may be statistically good (Langer and Jensen-Doss 2018, Langer et al. 2021).

Machine Learning (ML)

Machine Learning (ML) is the first of the methods presented to predict which treatment would benefit the client. Mohri et al. (2018) defined ML as "computational methods using experience to improve performance or make accurate predictions" (Mohri et al. 2018). In other words, ML is a method that uses data from previous studies. In fact, prediction has been used in clinical psychology research for many years using traditional statistical techniques. For instance, logistic regression analysis has been used in many studies and continues to be used. It is reported that traditional estimation methods can be used when assumptions and sample size requirements are met, the number of predictors is small (≤25), and nonlinear effects are weak (Yarkoni and Westfall 2017, Chekroud et al. 2021). When a large number of predictor variables are examined together, the ML approach can capture complex, interactive, or non-linear effects and provide good prediction rates (Friedman et al. 2010, Flach et al. 2012). Different prediction algorithms and methods are also discussed in the ML approach. One such approach is the Random Forest Approach, which is used in prediction studies for psychotherapy (DeRubeis et al. 2014, Green et al. 2015, Bronswijk et al. 2021).

The random forest algorithm is widely used for classification and regression functions and is known for its ability to handle complex data, reduce overfitting, and provide reliable predictions in different environments. This algorithm uses decision trees for prediction; decision trees start with a question (e.g., "Should I use ...?"). The logic of decision trees can be likened to a flowchart, where the goal is to facilitate a decision by examining whether certain conditions or properties are satisfied. Each decision tree is constructed by randomly dividing the dataset and creating a subset of relevant features. By nature, the proposed algorithm also provides a feature importance score that helps select relevant features. In summary, by randomly partitioning the dataset, many possible variables and combinations of variables can be evaluated. In other words, rather than selecting a few predictor variables based on theories, this method allows us to evaluate the predictive effects of many variables together. In this algorithm, the prediction is created by combining the output of multiple decision trees (Strobl et al. 2009, Petkovic et al. 2018, Watts et al. 2021).

Personalized Advantage Index (PAI)

In ML, factors affecting treatment responses are predicted using the random forest algorithm. Furthermore, the random forest algorithm has been used in studies to provide personalized treatment recommendations beyond the prediction of multiple factors for treatment and has been the basis of the "Personal Advantage Index (PAI)" approach. The PAI method was applied to create personalized treatment recommendations based on pre-treatment determinants and moderators (DeRubeis et al. 2014, Cohen and DeRubeis 2018).

Based on theoretical models and empirical findings, relevant pre-treatment client characteristics are pre-defined to discriminate between two or more treatment alternatives. In this definition phase, client characteristics or moderator variables that have the potential to be associated with the treatment effect are determined by the random forest method (DeRubeis et al. 2014). The variables determined to significantly interact with the treatment status (i.e., indicating differential treatment response) are then used to predict the outcome score for each treatment alternative for each client (DeRubeis et al. 2014, Deisenhofer et al. 2018). The PAI represents an absolute value created by subtracting the predicted outcome score for one treatment from the predicted treatment outcome in another; the differences between the predicted outcome scores for each treatment are shown in the PAI. The higher the size of the PAI, the greater the predicted advantage of one intervention over another; values close to zero indicate no advantage of one treatment over another (DeRubeis et al. 2014).

Bronswijk et al. (2021) used data from a randomized trial comparing cognitive therapy (Cognitive Therapy, n = 76) and interpersonal psychotherapy (Interpersonal Psychotherapy n = 75) for major depressive disorder (MDD) and used the PAI method to predict which treatment would be more effective for which client (Bronswijk et al. 2021). The dependent variable was depression severity, and a two-step machine learning method (random forest and cross-validation) was used to identify the best predictor of treatment effects. Following these methods, four variables were selected: number of life events in the past year, number of traumatic events in childhood, self-esteem, and parental alcohol abuse. From these variables, the backward elimination technique was used to select three variables that were present in at least 60% of the samples identified by the algorithm: parental alcohol abuse, number of life events in the past year, and number of childhood traumatic events as moderators. The results showed that individuals who had experienced two or more life events more recently were more likely to have lower depression scores in Cognitive Therapy (CT) than Interpersonal Psychotherapy (IP). Individuals who experienced one or more childhood traumatic events were predicted to have lower depression scores on CT than on CP (Bronswijk et al. 2021). In other words, CT may be more effective than IP for reducing depression among individuals who have recently experienced more than one life event or who have experienced childhood traumatic events.

In another study (Senger et al. 2021), in addition to the aim of predicting more advantageous treatments for clients with persistent somatic symptoms, the researchers examined the effects of treatments by assigning participants to recommended/non-recommended treatment groups according to the recommendation obtained from the study. In this study, the moderator variables were first determined using a machine learning approach, and the prediction of which of the Cognitive-Behavioral Treatment (CBT)/ Emotion Regulation Training and Completed CBT treatments would be more advantageous for the determined moderator variable was made. CBT was recommended as an intervention for female participants with high functioning who experienced fewer traumatic events during early childhood. At the end of each treatment, two analyses were conducted for each client: the actual values in symptom severity and the predicted symptom severity for each treatment. The difference between these two values was calculated to determine the PAI for a particular client. For example, if a person was assigned to CBT and at the end of the treatment, their symptom severity was 30 (actual prediction) and the predicted symptom severity in the other treatment was 20 (counter prediction); the PAI was +10, meaning that the other treatment would have been more advantageous. This indicates that the patient did not receive the recommended treatment.

In other studies, this method showed that CBT is more advantageous against antidepressant medication for depression (DeRubeis et al. 2014), interpersonal therapy against cognitive therapy (Huibers et al. 2015), and CBT applications are more advantageous against Psychodynamic Therapy (Cohen et al. 2020). Again, in a study involving clients with depression, it was investigated whether integrating CBT with a problem-solving-oriented approach or motivational interviewing approach would yield better treatment results, and the integration of problem-solving and CBT was found to be more advantageous (Delgadillo and Duhne 2020). Another example can be given from a study on whether CBT or Eye Movement Desensitization and Reprocessing (EMDR) intervention is advantageous for clients with Posttraumatic Stress Disorder (Deisenhofer et al. 2018). In this study, impaired functioning, age, gender, and employment status were significant predictors of treatment-specific outcomes in CBT, whereas initial impairment and prescription antidepressant medication were significant predictors of treatment-specific outcomes. An important finding of the study was that CBT was found to be more advantageous than EMDR intervention (Deisenhofer et al. 2018).

Nearest Neighbors Approach (Nearest Neighbors-NN)

Similar to PAI, the "Nearest Neighbors (NN)" approach aims to select the most appropriate treatment according to the client's characteristics and reduce the number of clients who do not benefit from the treatment. This

approach defines treatment predictions by identifying homogeneous subsamples of similar clients who have been treated before (Beutler 2001, Lutz et al. 2005, 2006). The NN approach originated from avalanche research; the risk of an avalanche occurring on a particular day is calculated by selecting 30 days that are most similar to the temperature and pressure values of avalanche days (Brabec and Meister 2001). Lutz et al. (2005) adapted this method to predict psychotherapy treatment response (Lutz et al. 2005). The treatment responses of new clients were estimated based on the treatment responses of previously treated clients with similar characteristics. The similarity between previously treated patients and new patients was calculated by the distance (Euclidean distances) between the scores of relevant predictor variables (Lutz et al. 2005, 2006).

Lutz et al.'s (2006) used the NN approach to predict the most appropriate treatment among different treatment protocols (e.g., CBT, CP) for each client. For each variable predicting treatment outcome (e.g., emotional distress score), the distance between participants was calculated. For each of the 618 clients, the 30 most similar clients from the CT group (CT homogeneous subsample) and the 30 most similar clients from the CBT group (CBT homogeneous subsample) were identified. The treatment improvement curve (variability in measurements across sessions) was calculated for each client using the treatment responses of both homogeneous CBT and CT subsamples, and the curves were compared to predict which treatment would be more appropriate for each client. However, we did not examine whether the predictions were realized by administering treatment to the clients according to the predictions.

The approaches mentioned up to this point examine which therapy method may be better for each client by examining client characteristics through various methods; however, they did not include the opinions or preferences of the clients in this examination. However, clients' preferences cannot be ignored when focusing on treatment selection.

Shared Decision Making (SDM)

In the literature, the Shared Decision-Making (SDM) model, which focuses on client preferences in treatment selection, describes the process of mutual information exchange between the client and the therapist based on determining the client's values and preferences and discussing psychotherapy options (Langer and Jensen-Doss 2018). At the end of this process, a treatment plan is created in line with the client's needs (Langer and Jensen-Doss 2018). In transferring SDM to clinical practice, Elwyn et al. (2012) proposed a three-stage model (Elwyn et al. 2012):"a) choice talk", which refers to the step of ensuring that clients know that reasonable options are available; b) "option talk", which provides detailed information about available treatment options, including risk/benefit, efficacy, and expected treatment processes; and c) "decision talk", in which clients' preferences are discussed and a decision is made. It is emphasized that these stages can be implemented, especially through clinician-client dialog (Elwyn et al. 2012). Beyond statistical estimation methods, the SDM approach, which is an example in which the "individual-specific" emphasis on individualized psychotherapy is reflected in the client, demonstrates the applicability of personalized psychotherapy in clinical practice.

In a recent study where war veterans participated, an assessment and treatment planning session was organized in which the stages of the model were followed to examine the effect of SDM on treatment participation (Hessinger et al. 2018). In this study, it was observed that clients who participated in the sessions tended to choose trauma-focused treatment, and SDM implementation positively affected treatment participation (Hessinger et al. 2018). Similar results have also been found in studies on multiple psychological disorders, such as depression (Loh et al. 2007, Hopwood 2020, Matthews et al. 2021), anxiety disorders (Marshall et al. 2021), post-traumatic stress disorder (Mott et al. 2014), bipolar disorder (Samalin et al. 2018), and schizophrenia (Fiorillo et al. 2020). In studies where clients were actively involved in treatment decisions, an increase in clients' self-esteem and confidence in their decisions was observed, and treatment compliance and treatment satisfaction were also reported to increase (Stein et al. 2013, Delman et al. 2015, Thomas et al. 2021). This indicates the effect of individualized psychotherapy. In a recent meta-analysis, the effect of personalized psychotherapy was examined using the results of randomized controlled trials in this field (Nye et al. 2023). In this study, individualized treatment was associated with significantly improved outcomes compared with standard treatment (whose focus was not specific to the individual) (Nye et al. 2023). As a result, if individualized psychological care is applied, approximately 1 in 8 patients (12.5%) will experience better outcomes than standard interventions (Nye et al. 2023).

Although various methods and approaches to individualized treatment selection offer valuable contributions, when it comes to the individual in question, it may not be possible to implement the plans prepared before the therapy process. Therefore, personalization is also important throughout the process.

Therapeutic Elements

Even though empirically supported psychotherapy studies have led to the development of lists of the most effective psychotherapy methods for specific disorders, it was mentioned in the previous section that these therapy manuals are insufficient in clinical practice. The essence of personalized psychotherapy is that the same treatment cannot be applied to every client; however, this includes adapting a therapy approach to the client or targeting therapeutic skills (e.g., mindfulness, development of emotion regulation skills, etc.) specific to the client without adhering to an approach.

Following an approach that is stated to be effective for a disorder brings with it the message that this intervention will be effective only when that approach is followed. However, there is a growing consensus that a single psychotherapeutic approach may not be appropriate for all clients, problems, and conditions, even those with the same disorder, and that one approach may be insufficient for some individuals (Norcross and Goldfried 2005, Zarbo et al. 2016, Cook et al. 2017). A recent study involving more than 1000 psychotherapists found that only 15% reported using a single theoretical orientation (Tasca et al. 2015). In clinical practice, psychotherapy practitioners apply an eclectic treatment approach in which a range of therapeutic skills (e.g., mindfulness training, behavioral activation) are targeted to a particular client rather than adhering to predetermined guidelines (Greben 2004, Chorpita et al. 2005a, Zarbo et al. 2016). However, there is little basis for clinicians to determine the most appropriate therapeutic skill target for a patient (Norcross and Goldfried 2005). To address this limitation, the approaches introduced in the subtitle present therapeutic components in modules.

Modular Approach to Therapy for Children (MATCH)

In one study, therapists categorized the components of existing evidence-based treatments into modules and applied them according to the specific needs of children and adolescents (Chorpita and Weisz 2005a). In this study, with the A Modular Approach to Therapy for Children (MATCH) protocol, it was observed that the components proven to have an effect on anxiety disorders, depression, trauma, and stress-related disorders, and behavioral problems in children and adolescents in previous studies were categorized into 33 modules, and a decision flow chart based on the modules to be used for each client was presented (Chorpita and Weisz 2005b). In this approach, there are content and coordination modules. Content modules are modules with detailed information consisting of special instructions, which are an example of many treatment manuals that detail how the therapist should perform various activities and exercises with the client to achieve a goal. The coordination modules help manage decisions about whether and when to use the various content modules. For example, modules can be preferred according to the characteristics of the client, such as the suggestion to use relaxation exercises if the client has high muscle tension (Chorpita et al. 2005b). In other words, in this approach, in addition to determining the modules according to the diagnosis, modules that suggest therapeutic techniques specific to the difficulties experienced by clients other than the diagnosis can be added, as well as flexibility in the implementation of these modules.

Common Elements Treatment Approach

Modular intervention studies have been conducted on adults in low- and middle-income countries (Murray et al. 2014, Murray et al. 2018, Murray et al. 2020). These studies are based on the Common Elements Treatment Approach (CETA), in which the first module selection is based on symptom presentation; however, the subsequent modules are added or modified according to the needs of the client (Murray et al. 2014). The components of this approach include psychoeducation and encouraging participation, anxiety management strategies and relaxation, behavioral activation, cognitive coping/cognitive restructuring, progressive exposure, problem solving, suicide and safety assessment, and substance use (Murray et al. 2020). Studies have shown that this approach was applied in Iraq and Thailand to treat individuals with post-traumatic stress symptoms and was effective in reducing depression, anxiety, and post-traumatic stress symptoms in a period of 12 sessions compared with the waiting-list control conditions (Bolton et al. 2014, Weiss et al. 2015, Murray et al. 2020).

Both approaches are essentially reflections of the transdiagnostic approach, as they involve the selection and adaptation of treatment components targeting common difficulties among different psychological disorders rather than providing psychological disorder-specific guidelines. The transdiagnostic approach aims to intervene in common factors across psychopathologies (Mansell et al. 2012, Barlow and Farchione 2018). The Unified Protocol (IP), another modular approach, is a transdiagnostic approach that individualizes the selection of treatment components and focuses on common factors that affect the emergence and maintenance of emotional disorders (Barlow et al. 2004).

Unified Protocol (UP) and Dynamic Assessment Treatment Algorithm

This approach focuses on helping individuals develop new ways of reacting to their disturbing emotions (Barlow et al. 2011). UP consists of 8 modules: goal setting and motivation, understanding emotions, mindful emotion awareness, cognitive flexibility, countering emotion-driven behaviors, understanding and confronting bodily sensations, emotion exposures, and recognizing achievements and looking ahead, and is planned for approximately 12 sessions (Barlow et al. 2011, Barlow and Farchione 2018, Barlow et al. 2020). Five modules, mindful emotion awareness, cognitive flexibility, countering emotion-driven behaviors, understanding and confronting bodily sensations, and emotion exposures, have been identified as the basic UP modules (Barlow et al. 2011). Each module has a skill that it aims to develop, and the content and duration of the modules are adapted to the needs of the given client (Barlow et al. 2012). For example, clients who have difficulty in recognizing and naming their emotions may start with the module on understanding emotions, where psychoeducation on emotions is provided. A cognitive flexibility module may be applied to a client who has difficulty coping with the effects of feelings of worthlessness, and more than one session may be planned for some modules (Fisher and Boswell 2016). In a study, to determine which modules to apply to each client, the predominant dimensions of the symptoms of generalized anxiety disorder and major depression disorder were defined by personalized factor analyses, unified protocol modules were selected accordingly, and individual-specific interventions were applied (Fernandez et al. 2017). This study preferred the "Dynamic Assessment Treatment Algorithm (DATA)", which was created to guide the personalized, dynamic assessment, and treatment of symptoms in dimensional models of psychopathology (Fernandez et al. 2017). This algorithm includes determining which symptoms of the clients are predominant, determining the most common dimensions of the symptoms, and evaluating the temporal changes in the relationships of these dimensions with each other. In other words, it assesses the potential impact of one symptom area on another. These assessments are used in module selection and module ranking. If dynamic factor analyses reveal a cross-lagged relationship, for example, if cognitive symptoms trigger negative affectivity, the module focusing on cognitive symptoms is presented before the modules focusing on negative affectivity. It has been reported that individualizing the UP using such a method leads to a reduction in clients' depressive and anxiety symptoms. However, most UP modules presented to clients after the proposed method were similar to standard UP presentations (Fernandez et al. 2017). Although modular approaches are based on the needs of the client, therapeutic element personalization is not limited to modular treatment approaches.

Process-based Treatment Approach

Process-based treatment (PBT), which evaluates the difficulties experienced by clients according to specific areas rather than modules and recommends interventions, is an important example of an individualized psychotherapy approach (Linardon et al. 2017, Moskow et al. 2023). This approach changes the question, from "What is the best treatment for a particular disorder?" to "Given this goal, what basic biopsychosocial processes should be targeted for this client and how can they be changed in the most efficient and effective way?" (Hofmann and Hayes 2019). This approach essentially focuses on functional themes (e.g., avoidance of fear of rejection) that explain the client's mental, social, or behavioral difficulties rather than diagnostic classification (Fried and Nesse 2015). The impact of past and present contexts other than the time the individual is being assessed is also considered, and treatment is focused on intervention by evaluating the change processes in the contexts in which the symptoms occur rather than treating the disorders (Hofmann and Hayes 2019). To illustrate, instead of trying to treat "major depressive disorder", PBT may require targeting the ruminative cognitive processes linked to low self-worth that trigger depressed mood or anxiety in individuals with a history of bullying (Ong et al. 2022). In this approach, which emphasizes individual differences, a three-dimensional classification of psychopathological processes is proposed (Philippot et al. 2019). The first dimension is related to the psychological domain in which the process is nested, the second dimension is related to the specificity with which the process is conceptualized, and the third dimension is related to whether the process is intrapersonal or interpersonal. For process-based interventions, evaluating these dimensions in line with individual needs is an important step in treatment (Hofmann and Hayes 2019). As one can imagine, it is possible to discuss many processes for a client; yet, Philippot et al. (2019) offer suggestions on how to focus on which of these processes should be addressed in treatment. First, it is emphasized that for a process to be selected for intervention, it should be the main determinant of the psychological problem(s) that both the client and the therapist agree to address (Philippot et al. 2019). Therefore, the case formulation should be based on the assessment of different dimensions and take into account the intensity of the symptoms and the importance of their consequences. The second recommendation is that processes in a given client should be assessed using information from different sources (including idiographic data). Another recommendation is that clinicians

should follow current knowledge in the field and take this information into account when selecting specific intervention processes. Another recommendation concerns clinical applicability (Philippot et al. 2019). It is emphasized that some processes (e.g., behavioral avoidance) may be more easily targeted by a psychological intervention than others (e.g., automatic attention biases toward threat). In this approach, it is seen that individual and context-specific evaluations are at the forefront of personalizing therapeutic elements according to the individual.

Hierarchical Taxonomy of Psychopathology (HiTOP)

In the personalization of therapeutic elements, it is important that the difficulties experienced by clients are assessed in terms of clients rather than diagnostic categories. Similar to the emphasis of the process-based approach, which prioritizes the contextual and temporal assessment of symptoms and includes their development and impact rather than what they are, individual differences in personality may also play an important role in individualized psychotherapy, rather than focusing on transient symptoms (Mullins-Sweat et al. 2020). This is in line with their view that from the beginning, clients are not just about diagnostic characteristics. The fact that there are temporal limitations in the DSM, such as symptoms lasting 6 months or 1 year, is criticized, and it is emphasized that some features are present in connection with the difficulties experienced by individuals since childhood (DeYoung et al. 2022). In line with this criticism, the Hierarchical Taxonomy of Psychopathology (HiTOP), which presents a hierarchical multidimensional classification of psychopathological traits, emphasizes the distinction between symptoms and traits (Kotov et al. 2017, DeYoung et al. 2022). In other words, attention is emphasized on the distinction between conditions that occur within a certain period of time (symptoms) and traits that individuals have been carrying for longer periods (DeYoung et al. 2022). In recent years, criticisms regarding the classification of psychological disorders in the literature have paved the way for such a system (Kotov et al. 2017, Krueger et al. 2018). In this classification system, it is accepted that psychological health problems exist in a continuum between pathology and normality. At the bottom of the hierarchy are symptom components (e.g., performance anxiety, risk taking, rigid perfectionism), which are combined into empirically derived psychopathology syndromes (e.g., social phobia). These are then further expanded beyond diagnoses to psychopathology spectra (e.g., internalizing, externalizing somatization, etc.) (Kotov et al. 2017). The dimensional approach aims to reduce heterogeneity in the same psychological disorder by grouping symptoms and eliminating the complexity related to co-diagnosis or subthreshold diagnoses. This approach provides a more precise framework for understanding psychological disorders and allows for a detailed focus on specific symptoms or broader problems when necessary (DeYoung et al. 2022). These contributions support the client-specific intervention steps of individualized psychotherapy.

Alternative Model of Personality Disorders

Similar to HiTOP, the Alternative Model of Personality Disorders in DSM-5 distinguishes between traits and symptoms (Skodol et al. 2011, Morey et al. 2015). This model allows clinicians to rate clients according to a limited number of traits (e.g., negative emotionality, avoidance, hostility, disinhibition, and psychoticism) and to select treatment elements/methods accordingly (Morey et al. 2014, Krueger and Hobbs 2020). For example, if the client has a high level of hostility, an intervention for interpersonal relationships may be beneficial as social behavior needs to be increased (Bach et al. 2015, Bach and Presnall-Shvorin 2020). Likewise, individuals with high levels of conscientiousness may benefit more from the use of homework during therapy; thus, cognitive-behavioral approaches may be chosen (Skodol et al. 2015). For individuals with high levels of responsibility, assigning homework assignments between sessions may accelerate the therapy process. Beyond these predictions, no study has determined whether the selection of intervention techniques based on individual characteristics or personality is more effective than existing therapy guidelines for specific disorders. Before this, it is necessary to increase the knowledge of the intervention techniques that should be selected according to the client characteristics. Therefore, studies on this gap, especially in the context of individualized psychotherapy, are valuable.

In summary, modular approaches that can be flexed according to the needs of the client primarily contribute to the personalization of therapeutic elements. However, with the process-based approach that has come to the forefront in recent years, the development process of the difficulties experienced by clients is addressed by evaluating different contexts. In other words, the difficulties experienced by the clients rather than their diagnoses and the development and change of these difficulties are at the forefront. Interventions are recommended by contextually or temporally evaluating the difficulties experienced by clients beyond diagnoses or symptoms. In addition to this perspective on assessment, the purpose of emphasizing the classification of

hierarchical taxonomies and alternative personality disorder approaches in the literature in recent years is to think that efforts to classify the difficulties experienced by individuals by presenting different perspectives and specifying their characteristics will enrich individualized psychotherapy practices. Although client-specific therapeutic elements are mentioned in this title, the question of which elements will be selected for which clients brings with it the fact that the order of therapy elements may also vary according to individuals.

Individualized Sequencing of Therapy Elements

Up to this point, in the context of individualized psychotherapy, client-specific treatment and the selection of treatment elements have been discussed. Nonetheless, starting with a particular treatment modality, the sequence of treatment elements can also be individualized. The clearest example is CBT, which has been proven to be an effective and recommended treatment approach for depression (Butler et al. 2006, Cuijpers et al. 2013, Kazantzis et al. 2018). Based on these findings, an important decision point when a clinician begins to apply CBT to a client is whether to start with cognitive or behavioral techniques. The general recommendation is to start with behavioral activation for depression (Gautam et al. 2020). This recommendation actually includes some client characteristics; especially if the level of depression is high, behavioral activation is recommended because cognitive techniques may lead to increased depressive thoughts (Dimidjian et al. 2006, Dobson et al. 2008, Stein et al. 2021). In an empirical study, it was predicted that there were stronger relationships between the use of behavioral methods and changes in symptoms, with fewer previous depressive episodes and higher pre-treatment anxiety (Sasso et al. 2015). However, this approach may not be appropriate for all clients; for example, Keefe et al. (2016) found that cognitive interventions (e.g., intervention on dysfunctional core beliefs) were beneficial for clients with depression and personality disorders, but other interventions did not show similar effects (Keefe et al. 2016). Accordingly, the decision can be based on the clinician's assessment of both the severity of depression and client characteristics.

Mentioning only one disorder or CBT in the ranking of therapeutic elements would be limited given the wealth of psychopathology and psychotherapy approaches. In Schema Therapy, an alternative approach in which we can observe differences in the ordering of client-specific therapeutic elements, cognitive, experiential, or behavioral techniques are recommended for schemas, which are defined as self-destructive emotional and cognitive patterns that result from destructive childhood experiences that recurring throughout life (Young et al. 2005). In this approach, cognitive techniques are applied in no strict order, starting with cognitive techniques for preparation for change and awareness, followed by experiential techniques in which actual change is predicted to occur, and then behavioral techniques that emphasize the transfer and maintenance of change in daily life (Young et al. 2005). However, there may be changes in this order; sometimes in the same week, an assignment from behavioral techniques may be given, and cognitive or experiential techniques may be applied. Even occasionally, since it is not possible to reduce the impact of schemas without changing the family environment that perpetuates the schema, important life changes can be realized without postponing therapy until the end of the treatment. This approach allows for improvement in therapy can begin (Young 2005, Rafaeli et al. 2010, Finogenow 2021). These variables vary according to the client's schema, coping style, living conditions, and characteristics. However, there are no rules for making these choices, nor is there a recommendation according to the schemas taken as a basis because individuals cope with schemas, the effect of schemas on daily functioning, or whether clients want to change the schema, their past experiences are very diverse. Therefore, it is difficult to draw conclusions about the order in which techniques should be presented according to the client characteristics.

Dynamic Factor Model and Capitalization Compensation Approach

The "Dynamic Factor Model" of Fisher et al. (Fisher and Boswell 2016, Fisher et al. 2019), which shows temporal relationships between symptom dimensions, can also be used to determine the ordering of modules in modular approaches. With this method, symptoms that cause other problems can be first targeted. However, as observed in depression, behaviors that appear to be the result of depressive thoughts may start to reinforce the thoughts after a certain point. Other researchers have examined the effect of prioritizing clients' strengths or deficits, arguing that instead of temporal relationships between symptom dimensions, clients can be prioritized according to their initial skills (Cheavens et al. 2012, Sauer-Zavala et al. 2019, Southward and Sauer-Zavala 2020). For example, in a randomized controlled trial, the strengths and deficits of individuals with major depressive disorder were identified through semi-structured interviews, and the intervention was prioritized according to these areas (Cheavens et al. 2012). In this study, identifying relative strengths and deficits involved assessors who evaluated the frequency and skill level of each patient's use of cognitive strategies, interpersonal skills, and behavioral activation. Following the interviews with the clients, two strengths and two deficits for

each client were identified and assigned to the conditions, with capitalization being the condition in which strengths were prioritized and compensation being the condition in which deficits were prioritized. The results of this study demonstrate that focusing on clients' current strengths is associated with more rapid symptom improvement than focusing on clients' deficits (Cheavens et al. 2012). In a similar study, it is seen that UP modules, which are modular approaches, are ranked according to clients' strengths and deficits before treatment (Sauer-Zavala et al. 2019). In this study, for 12 adults diagnosed with anxiety and depression, skills parallel to the modules were measured (e.g., Beliefs about Emotions Scale; Rimes and Chalder 2010), and the participants completed the intervention by randomly assigning them to modules that prioritized their strengths or weaknesses (Sauer-Zavala et al. 2019). Similar to a previous finding (Cheavens et al. 2012), participants for whom strengths were prioritized exhibited a accelerated rate of change compared to participants for whom deficits were prioritized (Sauer-Zavala et al. 2019). Taken together, these findings suggest that personalizing the order of skills can reduce the number of sessions needed before symptoms improve. However, there are too few studies to speak of an optimal way of prioritizing symptoms or the order of techniques. While emphasizing this point, it may be important to consider clinical practice in future studies on the importance of symptoms, as it is only theoretically stated that researchers' decisions can have an undue influence on which symptoms are important (Bastiaansen et al. 2020).

Personalized Psychotherapy Process

In the context of individualizing psychotherapy, it is important to address the changes or difficulties experienced in the process from the beginning to the end of the therapy, as well as the choices made before the therapy. It is true that clients may experience difficulties or disruptions in change even in an individually planned intervention using one of the previously mentioned methods. Changes in the client or events or situations experienced during the therapy process may develop beyond the predictions of theoretical approaches, whether or not they are initiated with individualized planning. For example, if the client has difficulties with cognitive techniques in a therapy process started with CBT, should the clinician continue to try to apply these techniques in different ways or should he/she change his/her approach? When should he/she ask any of these questions or when should he/she take action? Because situations similar to these challenges are encountered in clinical practice, some studies have begun to investigate these situations. In this context, it is worth mentioning the "Routine Outcome Monitoring (ROM)" approach, which focuses on client assessment throughout the therapeutic process (Howard et al. 1996).

Routine Outcome Monitoring (ROM)

Routine outcome monitoring is a method based on receiving clients' personal feedback on the psychotherapy process in a regular and standardized manner to guide clinical decision-making, monitor treatment progress and indicate when treatment adaptation is necessary (Pinner and Kivlighan 2018, Gold et al. 2019). Previous studies have shown that ROM consists of 3 stages: collecting data from the client regularly, providing feedback to both the clinician and the client about these data, and adapting the psychotherapy process, if necessary, according to this feedback (Barkham et al. 2023). At the stage of regular data collection from the client, there are 4 systems that are evaluated at different focal points. These include assessment of progress in psychotherapy and therapeutic alliance; assessment of symptomatology and functioning levels; assessment of psychological well-being, social functioning, problems/symptoms, and risk areas for harming others/self; and assessment of psychological distress, interpersonal functioning, and social functioning satisfaction (Evans et al. 2000, Barkham et al. 2023).

It is seen that different measurement tools are used in these assessment areas, and various studies have been conducted; however, it is stated that the most scientific support from these areas is from systems that evaluate the areas of psychological distress and functionality (Boswell et al. 2015). Before the assessment is used in the adaptation of the clinical intervention, it is recommended that the clinician and the client make a common decision in cooperation with the focus on feedback (Greenhalgh et al. 2018, Faija et al. 2022, Barkham et al. 2023). Emprical studies have found that interventions that adopt such an approach positively affect clients' participation in treatment, commitment, and the course of psychological disorders (Russell et al. 2018, Tauscher et al. 2021). While such an approach involves individualized follow-up of the process, it is unclear to what extent the measurement tools used in this follow-up reflect client characteristics and the reliability of the outcome measures reported by the clients (Peterson and Fagan 2021). Besides, it may not always be possible to talk about a linear treatment in the therapy process (Hayes et al. 2007).

Clinical Problem Solving Tools

Considering the limitations of the ROM approach, studies have also been conducted to create recommendations for clinical practice (Lutz et al. 2019). In these studies, "Clinical Problem Solving Tools" were used to determine whether patients continued on the road to recovery and to detail the necessity of clinical adaptations based on the warning that things were not going well in therapy (Whipple et al. 2003). In this approach, various intervention suggestions are made for different problem areas for clients who are predicted to be at risk of treatment failure (Whipple et al. 2003, Lambert 2007). In one study, the problem areas experienced by a group of clients were routinely assessed every 5 sessions and according to this evaluation intervention techniques, such as problem solving and motivation, were applied (Lutz et al. 2022). It was reported that clients treated with this approach experienced a more rapid change in problem areas compared to clients who were not treated with this approach (Lambert et al. 2018, White et al. 2018, Lutz et al. 2022).

Trier Treatment Navigator

With the reflection of the personalized psychotherapy approach, a digital decision support and guidance system "Trier Treatment Navigator (TTN)" has been developed, in which intervention recommendations are elaborated using a feedback system in the clinical problem-solving tool approach (Lutz et al. 2019). In this system, feedback is provided about the client's motivation for change, therapeutic alliance, suicide risk, and emotion regulation, and intervention techniques to solve the problem are recommended according to the client's characteristics (Lutz et al. 2019). This system combines personalized pre-treatment recommendations, including prediction of drop-out risk and the most appropriate treatment modality; a dynamic risk index to identify clients at risk of treatment failure; and adaptive personalized recommendations during treatment, including clinical problem-solving tools for tailoring the intervention (Lutz et al. 2019). In TTN, various methods are used to make data-based predictions about the expected prognosis of treatment and to provide recommendations, such as the nearest neighbors approach mentioned in the first topic (Lutz et al. 2019). A wide range of measures are also used, including symptom measures, process measures, interpersonal behavior measures, and emotional experiences during sessions (Schaffrath et al. 2022). In the therapy process implemented with the system in question, feedback not only provides convenience for clinicians but also has benefits for clients, such as enabling them to participate more in therapy and gaining a new perspective on the difficulties they experience (Schaffrath et al. 2022).

Sequential Multiple Assignment Randomized Controlled Trials

An example of the reflection of the individual-specific approach in the therapy process in scientific studies is the "Sequential Multiple Assignment Randomized Controlled Trial" (SMART; Bigirumurame et al. 2022), which was based on more flexible randomized controlled trials and evaluated whether a therapy was effective or not. In this method, at predetermined decision stages in which more than one treatment is applied, clients are offered options such as staying in the treatment group they are currently in or continuing with the other treatment method. The client's decision stage is supported by the information provided by the therapist (Almirall and Chronis-Tuscano 2016). In one study, this method was applied in individuals (n=191) with binge eating disorder and obesity (Grilo et al. 2020). In a study in which participants who did not show improvement in the standard behavioral weight loss intervention for 1 month were given the opportunity to continue with CBT, a decrease in binge eating behavior, and strong improvements in weight loss were reported (Grilo et al. 2020). However, more studies are needed to examine the effects of adaptive randomized controlled trials on treatment. To conclude, it is known that factors that may require individual-specific adaptation or change will be encountered at every step of the therapy process, which is considered uncertain, and it is possible to discuss various studies in the context of making adaptations using both pre-treatment predictions and measurements taken during the interventions. It is observed that this is not ignored methodologically in scientific studies and randomized controlled trials, which have been dominant in the field for many years, have been extended in this context. In these studies, there was an effort to transfer the therapy process to clinical practice by making it tailored to the individual with various methods and systems rather than theoretical suggestions; increasing the number of studies in this field will make it easier to obtain suggestions that may be useful in clinical practice.

Personalized Approach to Regulating the Session Frequency and Termination of Therapy

A reflection of the views of determining which client will benefit from which therapy approach or interventions

and taking into account individual-specific factors throughout the therapy process is the issue of determining and adapting the frequency of sessions according to the client and taking individual characteristics into account when terminating the therapy process.

Session Frequency (1 or 2 per week)

Tailoring session frequency to the client is a familiar expression in practice among clinicians; still, it is also necessary to consider scientific studies on this issue. For example, increasing the frequency of sessions with clients at risk of suicide is a common example (Linehan et al. 2012, Roush et al. 2017). The general tendency is to increase the frequency of sessions when there is a risk of suicide, but it can be stated that this cannot be preferred for every client (Berman et al. 2015, Linehan et al. 2012). It can be predicted that the severity of suicide risk will be an effective factor here, but which client characteristics are effective in the decision to increase the frequency of sessions in clients with suicide risk? Clinicians can evaluate clients from different perspectives, such as past events, psychological difficulties, and the presence of previous suicide attempts; however, increasing the number of studies in which the characteristics/factors that are recommended to be evaluated and recommendations for them are presented may be useful in clinical practice (Bolton et al. 2015, Roush et al. 2017). The lack of evaluation and recommendations regarding the organization of session frequency according to the characteristics of the clients is not only in the context of those at risk of suicide but also in other studies focusing on different psychological disorders. For instance, one study examined the effect of applying CBT and Interpersonal Relationship Therapy 1 or 2 times a week in clients diagnosed with depression and found that those who received sessions 2 times a week had a decrease in symptoms and showed more rapid recovery compared to the group that received sessions 1 time a week. Nevertheless, this study does not mention a specific examination of whether the intervention is offered 1 or 2 times a week according to client characteristics (Bruijniks et al. 2020). Some studies have shown that a higher number of sessions is associated with better treatment outcomes; however, again, there is no individual-specific focus (e.g., Erekson et al. 2015).

Good-enough Level Model

In addition to the frequency of sessions, there are also studies on the number of sessions, and in these studies, the number of sessions required for symptom change was examined (Hansen et al. 2002, Cuijpers et al. 2013, Robinson et al. 2020). It has been stated that the dose-response model of psychotherapy is examined and that improvement develops after an average of 26 sessions and that only 10% of clients improve in the first 4 sessions (Hansen et al. 2002). However, by examining intervention duration and symptom changes in different psychological disorders, it has been observed that most individuals deviate from the typical dose-response pattern observed in psychotherapy (Baldwin et al. 2009, Bone et al. 2021, Juul et al. 2023). The number of sessions has been shown to be unrelated to the likelihood that the client will show clinically significant change, and the "good-enough model" has been referred to, which emphasizes that patients remain in treatment until they and their therapists decide that they have reached a "good-enough" level (Baldwin et al. 2009, Bone et al. 2021). To say differently, the estimated number of sessions specified in package treatments for certain psychological disorders is a limited recommendation.

In these studies, the number of sessions was mentioned with a focus on changes in symptoms, but it was limited to making inferences only about changes in symptoms during psychotherapy. Considering Cuijpers' (2019) study, which presents many discussions on what constitutes change, goal, and outcome in psychotherapy, it can be stated that it is inconvenient to recommend a number of sessions based only on symptom change. In this study, it is noted that clients' psychotherapy goals may differ from those of some psychotherapy approaches, for example, clients' self-discovery, insight, and understanding of their emotions. In addition, while some psychotherapy approaches aim to reduce symptoms, other approaches, such as the existential approach, expect an increase in symptoms. Hence, decisions regarding the frequency of sessions or termination of sessions should take into account more than symptom changes. In another study where the personalized approach was applied to terminate treatment, UP treatment modules were applied according to the strengths and deficiencies of adults diagnosed with anxiety disorder and depressive disorder diagnoses (Southward and Sauer-Zavala 2020). After these applications, the results of the clients who were planned to terminate the therapy after the 6th or 12th session, especially considering their experiential avoidance skills, were examined, and comparable results were obtained (Southward & Sauer-Zavala, 2020). In other words, when the session duration and termination were planned according to the strengths and weaknesses of the clients, similar results were obtained even when the number of sessions was different.

Individual specific characteristics of the termination of the therapy process can influence the number of sessions, as mentioned earlier. Nevertheless, what this termination means for the client and how it is performed are also critical. The termination of psychotherapy was defined by Gelso and Woodhouse (2002) as "the final stage of counseling in which the therapist and client consciously or unconsciously seek to end the treatment" (p. 346). As the definition indicates, both therapist and client factors play a role in this process. When focusing on the client side in the context of an individualized psychotherapy approach, it is important to understand how clients perceive the termination of therapy and how this termination makes them feel (Råbu and Haavind 2018). The psychodynamic perspective mentions that termination is experienced as a loss by the client (Strupp and Binder 1985, Joyce et al. 2007). To give an example in terms of client characteristics, regardless of the approach used, it is stated that clients with a dependent personality pattern encounter some difficulties, such as unwillingness to leave the treatment and separation anxiety during the termination of therapy (Berk and Parker 2009, Clemens 2010, Geurtzen et al. 2019). When these difficulties are encountered, should the therapist decide to continue psychotherapy with new sessions to help the client overcome these difficulties, or should the therapist terminate the therapy, no matter what, because it reinforces separation anxiety if the patient chooses this path? In the literature, there have been many discussions about whether experiencing such difficulties is positive or negative (Geurtzen et al. 2023); however, no empirical studies exist on which decision should be made according to client characteristics. Although the termination of therapy and the form of this termination are decided in clinical practice by considering the client characteristics, more studies are needed in this field on how and when to terminate according to the client characteristics. In future studies, many factors, such as session frequency, number of sessions, demographic characteristics, marital status, and personality patterns, etc. should be determined to achieve clinically significant improvement after psychotherapy. Increasing these investigations will make it possible to make inferences about the duration or termination of therapy according to individual client characteristics.

Discussion

Psychotherapy, by its very essence, cannot be seen as the "Bed of Procrustes" in Greek mythology, where various limbs are amputated and some are tried to be lengthened to fit everyone into a bed. If the therapy process is to be conducted as if it were this way, interventions may bring harm rather than benefit to the client, just as the bed mentioned in mythology turns into torture. In previous studies, clients stated that they were organized according to the therapy rather than the therapy being shaped according to them and did not view this as useful (Li et al. 2024). The personalized psychotherapy approach focuses on tailoring treatment to client characteristics rather than tailoring the client to the therapy approach. The emergence of this approach was triggered by the failure to obtain consistent results in the search for effective psychotherapy, which has been ongoing for many years in the literature. It has been emphasized in recent years that psychotherapy approaches (e.g. CBT), which have been shown to be effective in many studies, do not have the expected effect on some clients. In this context, the emphasis on the complex nature of psychopathologies and the studies conducted in this context have highlighted the limitations of diagnosis-specific treatment guidelines. The high rate of comorbidity and different symptom combinations in different psychopathologies make it difficult to apply a psychotherapy approach that is said to be effective for a diagnosis, which may lead to the dismissal of factors that maintain psychopathology or other diagnostic features. Thus, studies on effective psychotherapy practice are inadequate, and the individualized psychotherapy practices has become critical. In particular, the finding that this approach is more effective than standard treatment in a recent meta-analysis study (Nye et al. 2023) indicates that there will be significant developments in the context of evidence-based practice in the field of clinical psychology using this approach. Based on this information, the proposed approach appears to be worthwhile in many respects. The aim of this review is to present various approaches and methods in scientific studies on the individualization/personalization of psychotherapy and to enlighten new studies to overcome the deficiencies related to this field. However, as can be seen, this topic has been examined in the literature from many perspectives (selection of treatment, sequencing of treatment elements etc.) and from many methods and approaches (statistical methods, therapy approaches, assessment methods etc.). The mention of many methods and approaches generally speaking indicates three things; first, when the focus is on the personalized psychotherapy approach, it can be reported that this is an ambiguous way in which quite a lot of factors need to be considered because each individual is unique and carries an infinite combination of life events and challenges they experience. Second, it is understood from the literature that many researchers have shown an increasing amount of attention in recent years to the individualization of psychotherapy through different methods, approaches, and recommendations. Finally, this indicates that there is no definitive way forward for individualized psychotherapy; therefore, more studies are needed.

When tailoring psychotherapy to the individual, clinicians should choose an intervention that is effective for the client from the available alternatives. This decision is primarily influenced by the client's diagnosis; yet, according to studies focusing on the personalized psychotherapy approach, the individual characteristics of the clients (such as stressful life events, childhood traumas, work situation) rather than the diagnosis affect which therapy approach they can benefit more from. There are many studies on the characteristics of these variables using statistical methods such as machine learning; but in general, these studies are based on the data of previous studies, and predictions are made based on these previous studies. In addition, these studies focused on predictive variables; they did not include information on whether clients with specified characteristics actually show better results when they receive the treatment in question compared to other treatments. However, findings beyond predictions are needed to present the results of the studies as recommendations for clinical practice. In this context, it can be concluded that more studies are required.

In the therapeutic process, psychotherapy practitioners also choose the therapeutic techniques to be applied to clients, and studies on how this selection can be made in a client-specific manner generally focus on the selection of techniques of an approach (e.g., CBT, IP). In addition, although some studies have suggested choosing techniques to be applied according to the most dominant symptoms, it should not be ignored that sometimes the symptoms that seem dominant may reflect other difficulties in the background. Similarly, the temporal relationship between symptoms may not always be as clear as that mentioned in previous studies. In this context, studies can be repeated within these possibilities. It is also important to mention an approach that can compensate for the limitations of these studies: In particular, it is seen that the focus of the process-based perspective is quite parallel to the personalized psychotherapy approach. Although it mainly focuses on the temporal assessment of symptoms, this approach also includes contextual features in the assessment. In this approach, symptoms and client characteristics are evaluated with a broader perspective, and intervention recommendations are made according to this evaluation. This approach recommends that clients and therapists make decisions together, that problem-related goals should be chosen, and that clinicians should follow current studies; however, more studies are needed on the implementation of these recommendations in clinical practice. Although examples of this approach in the form of case studies have been presented in recent studies, the results of its application to a larger number of participants are valuable.

In addition to the choice of treatment or the selection of therapeutic techniques, it is worth noting that the sequence of therapy elements can vary according to individual characteristics. Any change in the order of therapy elements may also affect therapy outcomes; however, it can be said that there are fewer studies in which client characteristics are examined in terms of technique. Despite the lack of research attention, a change in the order of therapeutic elements according to the areas that the client wants to prioritize can potentially affect therapy outcomes. On the other hand, no studies have investigated how and to what extent changing the order of techniques affects therapy outcomes; however, such an examination should go beyond simply changing the order of techniques. In a few studies, it has been mentioned that some techniques may be effective for some clients according to their personality traits. However, little evidence exists to recommend these characteristics. Additionally, it may be that a client who does not possess the personality trait in question may benefit more when the proposed technique is applied. For example, for a client with a high level of responsibility, homework assignment is predicted to be associated with more effective therapy, whereas another client with a low level of responsibility who wants to change may see homework as an opportunity to change. Therefore, empirical studies to be conducted beyond such predictions and studies to be conducted on clients with or without a tendency toward certain characteristics can identify possible scenarios and provide clinicians with various steps that can be applied to different situations.

While many points are based on assumptions, in individualized psychotherapy, the needs, expectations, and goals of the clients or the areas in which they develop during the psychotherapy process may change, and client-specific steps may be necessary throughout the therapy process based on concrete examples. This need has prompted studies on routine outcome monitoring, which recommends taking various measurements throughout the therapy process. This method examines the progress of the client and provides feedback to both the client and the therapist; however, it does not provide empirically supported recommendations on how the clinician should proceed following this feedback. This limitation has been instrumental in the emergence of new methods, such as clinical problem-solving steps and the Trier Treatment Navigator. It is stated that these methods have benefits, such as enabling clients to participate more in therapy and providing clients with new perspectives. These results are promising; increasing the number of similar studies and including the characteristics of the clients in the studies are expected to contribute to the literature. Since data-based methods (e.g., the nearest neighbors approach), which were previously used in treatment selection, were used in studies focusing on clinical problem-solving tools or treatment guidance, these studies bring together the findings in

the context of individualized psychotherapy and take the studies in the field one step further. Nevertheless, it seems to be an important point that the applicability of a process such as taking measurements to observe the needs of the clients during the therapy process in terms of the client and the clinician should also be the subject of studies, and evaluations should be made in the context of clinical practice facts.

Another area of personalization is determining how often sessions should take place and when and how they should be terminated. Compared to other areas, session frequency and termination have been the subject of fewer studies; still, in the studies that have been conducted, practical reasons such as financial power, client time, and circumstances, have been frequently ignored. Including these issues when examining client or therapist characteristics believed to affect session frequency or termination would provide a more realistic perspective.

Personalization of psychotherapy provides many advantages; client characteristics that have been ignored in studies for many years, psychopathological characteristics other than a single diagnosis, and consideration of individual needs are just a few of them. Moreover, considering various factors affecting the client's psychological well-being (e.g. coping, personal history) during the therapy process and following the client's development, changing needs and goals throughout the process is another benefit. This approach also aims to provide important information in terms of ensuring client compliance with treatment and preventing dropout. Even if all these are very valuable in terms of increasing the effectiveness of psychotherapy, the findings on how to conduct these practices are limited, the methods vary, and no guidelines exist on individualized psychotherapy practice. Despite the many advantages of this approach, its implementation in clinical practice is time-consuming for the clinician, challenging considering the socioeconomic conditions, and seems to be quite complex. Eliminating this complexity requires new studies in the light of the findings of previous studies in this field. Based on the studies discussed in general, it can be seen that the number of studies conducted in the context of personalization in pre-treatment psychotherapy selection is higher than those dealing with the individualization and sequencing of therapy elements, individualization, and session frequency in the therapy process or termination of therapy. Whereas it is seen that predictions are made using data from previous RCTs in studies focusing on treatment selection, case studies, pilot studies, or RCTs, the validity of these predictions is quite limited.

Furthermore, although the individualized psychotherapy approach has been developed based on the limitations of diagnosis-specific treatment guidelines, it is noteworthy that most studies conducted in the treatment selection focus on data from studies on the diagnosis of depression. In other words, studies in the context of different psychopathological characteristics are needed to enrich knowledge in this field. Besides, many methods have been mentioned in the context of pre-treatment personalization, so studies on which method is more practical and functional are also important. There are few studies on the individualization of treatment elements, and only a few studies examining UP are randomized controlled trials. It seems that there is a need for more studies on other methods, especially RCTs, to examine these methods. Case studies are especially prominent in process-oriented approaches. Since the process-based treatment approach seems to start with an individualized perspective that includes assessment from the very beginning, studies to increase the application of this approach and to examine its effects are expected to lead to the development of the field of personalization of psychotherapy.

Another point that is expected to contribute to the literature on individualized psychotherapy is the Trier Treatment Guideline method, which addresses personalization throughout the therapeutic process. In recent years, the number of studies on this method has increased. Individualized psychotherapy studies have been emphasized to have limited features, but when the studies conducted are taken into consideration, it seems that the most possible way to focus on the personalization of psychotherapy is to combine pre-treatment personalization approaches with methods in which the development of clients is monitored throughout the treatment. The work to be done for the sake of such a possibility may seem exhausting for researchers, clinicians, and clients; however, evidence-based psychotherapy precisely refers to the burdens of the three. Finally, especially in our country, no studies have been conducted in the context of an individualized/personalized psychotherapy approach; therefore, this review makes significant contributions by enlightening the replication of the mentioned studies in our country by considering cultural characteristics and the conduct of new studies by taking into account their limitations.

Conclusion

Studies conducted in the field of clinical psychology in the context of evidence-based practice have highlighted the need for individualized psychotherapy. To individualize psychotherapy, various methods have been

proposed in terms of pre-treatment or treatment process factors. In particular, in the pre-treatment selection phase, statistical methods come to the fore. However, theoretical approaches also offer a rich perspective in the context of adapting therapy to the needs of the client. In recent years, studies have combined both pre-treatment selection approaches and individual-specific adaptations during treatment. Based on these studies, we conclude that integration efforts are the best possible way to implement personalized psychotherapy. Although there is no definite way of implementing individualized psychotherapy, studies are encouraging.

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