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Treatment of Social Anxiety Disorder: Mechanisms, Techniques, and Empirically Supported Interventions

Eva Gilboa-Schechtman
Bar-Ilan University, Ramat-Gan, Israel,
ORCID: https://orcid.org/ 0000-0002-2831-5835, e-mail: evagilboa@gmail.com

Roy Azoulay
Bar-Ilan University, Ramat-Gan, Israel,
ORCID: https://orcid.org/0000-0001-7104-0067, e-mail: royazoulay87@gmail.com

Social anxiety disorder (SAD) is a prevalent condition negatively affecting one's sense of self and interpersonal functioning. Relying on cognitive but integrating interpersonal and evolutionary models of SAD as our theoretical base, we review basic processes contributing to the maintenance of this condition (e.g., self-focused attention, imagery, avoidance), as well as the treatment techniques geared to modify such processes (e.g., exposure, attention modification, imagery rescripting). We discuss cognitive-behavioral treatments (CBT) as combining multiple treatment techniques into intervention "packages." Next, we review the existing empirical evidence on the effectiveness of CBT. Although CBT has accumulated the most support as superior to other credible interventions, we suggest that many treatment challenges remain. We conclude by discussing the ways to enhance the efficacy of CBT for SAD. Specifically, we highlight the need to (a) elucidate the complex relationship between basic processes and techniques, (b) advance personalized interventions, and (c) include a more diverse and comprehensive array of outcome measures.

Keywords: Social anxiety, mechanism of change, cognitive biases, treatment techniques, personalized interventions.

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Гильбоа-Шехтман Е., Азулай Р. Лечение социального тревожного расстройства: механизмы, методы и эмпирически подтвержденная терапия
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Лечение социального тревожного расстройства: механизмы, методы и эмпирически подтвержденная терапия

Гильбоа-Шехтман Е.
Университет Бар-Илан, Рамат-Ган, Израиль,
ORCID: https://orcid.org/0000-0002-2831-5835, e-mail: evagilboa@gmail.com

Азулай Р.
Университет Бар-Илан, Рамат-Ган, Израиль,
ORCID: https://orcid.org/0000-0001-7104-0067, e-mail: royazoulay87@gmail.com

Социальное тревожное расстройство (СТР) является распространенным заболеванием, негативно влияющим на самоощущение и межличностное функционирование человека. Опираясь на когнитивные, но интегрирующие межличностные и эволюционные модели СТР в качестве нашей теоретической базы, мы рассматриваем основные процессы, провоцирующие это расстройство (например, сосредоточенное на себе внимание, мысленные образы, избегание), а также методы лечения, направленные на изменение таких процессов (например, экспозиционная терапия, модификация внимания, рескриптинг). Мы рассматриваем когнитивно-поведенческую терапию (КПТ) как объединение нескольких методов лечения в «набор» вмешательств. Далее мы рассматриваем существующие эмпирические данные об эффективности КПТ. Несмотря на то, что КПТ получила наибольшую поддержку в сравнении с другими заслуживающими доверия вмешательствами, мы предполагаем, что многие проблемы с лечением остаются нерешенными. В статье также обсуждаются способы повышения эффективности КПТ при СТР. В частности, мы подчеркиваем необходимость (а) прояснения сложной взаимосвязи между базовыми процессами и методами, (б) продвижения персонализированных вмешательств и (в) включения более разнообразного и комплексного подхода к оценке результатов терапии.

Ключевые слова: социальная тревожность, механизм изменений, когнитивные искажения, методы терапии, персонализированные вмешательства.

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Introduction

Most of us can recall getting intensely self-conscious and uneasy on some occasions, such as giving a speech, interviewing for a job, or getting ready for a date. Whereas for most people, such mental states happen only occasionally, for others, they are frequent and intense, causing a substantial impairment in multiple aspects of daily life, such as work, study, and relationships [3]. Individuals with social anxiety disorder (SAD) experience marked fear of one or more social or performance situations in which they are exposed to unfamiliar people or possible scrutiny [6]. Socially anxious individuals frequently attempt to avoid such feared situations altogether or to regulate their anxiety by subtler avoidance strategies, such as minimizing eye contact with others or speaking in brief sentences.

Social anxiety disorder is the third most common mental health disorder after depression and substance abuse, with lifetime prevalence rates of around 12% in industrialized countries [66]. SAD typically has an early onset and chronic course [79; 95; 103]. Most individuals with SAD experience a comorbid disorder during their lifetime, with the onset of SAD preceding the development of these comorbid conditions [27]. Despite its prevalence, severity, and association with suicide [116], SA lacks the "public relations" of its sibling disorders such as depression or substance abuse [65]. However, SAD has begun attracting scientific attention in the last several decades, leading to rapidly accumulating empirical data regarding the effectiveness of treatment techniques and "treatment packages" geared to alleviate the distress associated with this condition. These scientific efforts resulted in increased knowledge of psychopathological processes involved in SAD maintenance and the effectiveness of treatment techniques and intervention packages. However, the successful treatment of SAD remains a challenge, as even the best available psychological treatments are associated with only about 65% response and only 40% remission [101].

In the present review, we outline the existing state of knowledge regarding the psychological treatment of SAD, focusing on cognitive models and processes. We integrate and expand these cognitive models with interpersonal and evolutionary perspectives on SAD. We then focus on the treatment techniques geared to modify core maintaining processes. Next, we review the existing empirical evidence on the effectiveness of cognitive-behavioral therapy (CBT) for SAD, in which these techniques are utilized. We conclude by discussing ways to enhance the effectiveness of CBT in SAD. Specifically, we highlight the need to (a) elucidate the complex relationship between basic processes and techniques, (b) advance personalized interventions, and (c) include a more diverse and comprehensive array of outcome measures.

Cognitive Models of SAD

Cognitive models differentiate between etiological and maintaining factors of SAD. Genetic, neurobiological, and temperamental factors, as well as the nature of the early environment, are postulated to be involved in the etiology of this condition [95; 97]. Specifically, the risk of developing SAD is increased by over-controlling, critical and cold parenting; insecure attachment; emotional, physical, and sexual maltreatment, and

aversive social experiences [89]. Thus, SAD appears to develop via a complex interplay of biological and psychological factors.

According to cognitive models, socially anxious individuals firmly believe that it is important to make a favorable impression on others and the uncertainty regarding their ability to do so [23; 50; 54; 72; 83; 96]. SAD individuals tend to evaluate their social abilities and skills as low [41] and the standards needed to make a favorable impression as high [84]. Such negative beliefs are activated in social settings, generating a sense of threat and alarm [54]. This perception of threat engenders a chain of cognitive, affective, and behavioral responses, which prevents the disconfirmation of the maladaptive beliefs about self and others. These models emphasize several interrelated processes: self-focused attention, biased information processing (attention, evaluation, memory), negative imagery, enhanced avoidance, and anticipatory and post-event processing.

Recently, the "classical" cognitive models of SAD have been expanded and refined by interpersonal and evolutionary perspectives. The interpersonal perspective highlights the functioning of the affiliation system, which guides people towards potentially rewarding social situations and appears to be critical in the development and maintenance of satisfying social relationships [17]. Indeed, high-SA individuals display fewer approach behaviors such as initiation of social encounters, nonverbal displays of warmth and friendliness, and self-disclosure than low-SA individuals [10; 106]. Significantly, this perspective emphasizes the need to enhance affiliative behaviors in the treatment of SAD.

Recently, cognitive approaches to SAD also incorporated some insights from the evolutionary perspective. According to this perspective, social cautiousness is rooted in an ancient system that regulates social order and controls behaviors that may elicit conflict and disrupt such order — the social-rank system [36]. Specifically, avoidance tendencies seen in SAD are viewed as evolutionary-shaped mechanisms to avoid confrontations with dominant others [36; 37; 44; 108; 110]. Consequently, regulating negative emotions (e.g., shame, humiliation, [71]), reducing submissive behaviors [38; 40; 110], and correcting self-deprecating cognitions regarding social status [18; 41; 44] have been emphasized.

Maintaining Processes in SAD

There is considerable overlap among the processes proposed by cognitive, interpersonal, and evolutionary models for maintaining SAD: all highlight self-focused attention, biased processing of social cues and situations, and self-concealing behaviors. There are also important distinctions between the models, with cognitive models highlighting intrapersonal processes (such as memory, imagery, and emotion-regulation [16]) and interpersonal and evolutionary models emphasizing interpersonal processes (such as enhanced social avoidance and decreased affiliation). Integration of the three models suggests several central core processes detailed below.

Self-focused Attention. In SA, the perception that one is observed by others can lead to heightened self-focused attention. This shift of mental focus is experienced as enhanced attention toward one's physiological symptoms, negative images of the self, or thoughts regarding the negative ways one is judged by others [23; 55]. Indeed, under the perceived

scrutiny of others, socially anxious individuals become more aware of their bodily sensations (sweating, blushing). These sensations, in turn, are perceived as visible and indicative of weakness. Such internally focused processing may prevent an individual from concentrating on the emotions and reactions of others and thus miss important social cues [81].

Attention Biases. Selective attention to, and difficulties with, disengagement from social threats (e.g., facial expressions and features; voice) are viewed as central in maintaining SAD [43; 52; 91; 92]. Evidence that individuals with SAD exhibit enhanced vigilance, early engagement, and difficulty disengagement from threats have been documented [70; 107]. Moreover, some evidence suggests that attention bias modification alleviates SA symptoms [15]. Although many conceptual and methodological issues remain [114], attentional biases among high-SA individuals may interfere with learning new, benign information from one's surroundings and may result in avoidant behaviors, thereby preventing disconfirmation or inhibition of one's beliefs about oneself and others.

Evaluation Biases. Evaluation biases include interpreting ambiguous information and estimating the probability and cost of non-ambiguous events. SA appears to be specifically and positively related to the propensity to negatively interpret ambiguous social information and negatively related to the formation of positive interpretations [11; 32; 58; 105]. Moreover, SA is associated with the tendency to evaluate the cost of social mishaps as high [39]. Decreasing individuals' probabilities and consequences of negative social events (e.g., loss of affiliation or social status) appear to be promising for alleviating SA [12; 76] and is indeed present in many CBT interventions [23; 82].

Memory Biases. Memories of social events recalled by individuals with SAD contain more self-referential information and fewer external sensorial details than memories recalled by non-anxious individuals [84]. Moreover, SA-severity is related to the re-living of socially stressful events [12; 100] and seeing these events as central and identity-defining [42]. Importantly, socially anxious individuals exhibit a greater tendency to remember social (but not neutral) events from an external "observer" perspective than from their own "field" perspective [29].

Negative Images. SA individuals commonly experience involuntary and distressing negative self-images during social encounters [49]. In such situations, they may picture themselves as unattractive or incompetent and as behaving in embarrassing, shameful, or humiliating ways [85].SA individuals then mistakenly assume that these images are accurate reflections of the way they appear to others [53]. Importantly, whereas negative self-evaluations and self-perceptions are found in many psychopathologies [112], negative self-images appear to be uniquely associated with SA [58].

Emotion Regulation. Several maladaptive emotional processes are postulated to be involved in social anxiety. First, emotion differentiation (i.e., the ability to distinguish between various affective states and classify felt experiences into discrete emotion categories) is impaired in SA [60; 62; 63]. Lack of differentiation, particularly concerning negative emotions, may impair emotion regulation and result in a low perceived emotional control [60]. Emotion regulation refers to the processes by which individuals influence

which emotions they have, when they have them, and how they experience and express them [47; 48]. Such strategies include cognitive reappraisal and response modulation (e.g., emotion suppression). Dysfunctional regulation of negative and positive emotions is viewed as one of the core vulnerabilities in SAD [30; 45; 59; 68]. Enhancing the use of a wide repertoire of emotion regulation skills to dampen and control negative affect [67] as well as to upregulate positive affect [70] is seen as promising to alleviate SA-related distress [46].

Anticipatory and Post-Event Processing. This processing refers to mental activities and content preceding and following social situations. Although temporally distinct, post- and pre-event evaluations are correlated and influence each other [115]. During anticipatory processing, socially anxious individuals mentally preview upcoming social interactions and possible rejection, embarrassment, or humiliation scenarios. This focus enhances anticipatory anxiety and avoidance behaviors. Similarly, post-event processing typically involves reviewing the social event, focusing on one's anxious feelings and assumed (negative) image. This process may cause interpersonal interactions to be encoded negatively, resulting in shame, self-blame, and negative predictions regarding future interactions [1; 13].

Enhanced Avoidance. Avoidant behaviors are believed to be central in maintaining SAD. Direct avoidance of social situations involves refraining from attending social events such as work events, parties, and one-to-one meetings. More subtle avoidance strategies include looking at one's phone during a party, refraining from disclosing self-relevant information, and maintaining a "low-key" appearance. Although partially effective in regulating SA in the short run, these avoidance strategies tend to increase anxiety in the long run, most likely because they impede the modification and updating of prior negative predictions [23] and prevent the accumulation of novel social experiences. Indeed, engaging in avoidant behaviors is found to lead to impaired performance [99], enhanced feelings of inauthenticity and incompetence (low social rank), and decreased feelings of belongingness and affiliation [94].

Reduced Affiliation. SAD is characterized by a dysregulation of the affiliative system [10; 109]. Individuals with SAD tend to display lower frequency and intensity of affiliative intent (e.g., smiling) during relationship formation [90] and show less unintentional movement synchrony, a marker of affiliative mode. Self-protective motivation and discounting positive social signals may maintain social impairment in SA. They affect high-SA individuals' ability to engage in actions that lead to emotional closeness [35]. Combined, enhanced avoidance and reduced affiliation contribute to the persistence of SA by decreasing opportunities for rewarding interaction.

Modifying Maladaptive Processes in SAD: Main Techniques

In the following, we list the main techniques geared to modify the maladaptive processes contributing to the maintenance of SAD. Importantly, in a context of a full-fledged individualized intervention, these techniques are embedded in a secure and authentic therapeutic relationship [34]. Establishing a secure bond and a close and supportive alliance with the therapist is central to most intervention programs. It is

particularly important in treating individuals with SAD, given their reduced utilization of affiliative modes of interaction [36].

Psychoeducation in CBT typically includes familiarization with the clinical picture of the condition and the model underlying the treatment (such as the model used by Clark & Wells [23]). It further includes information regarding the factors contributing to treatment success, such as self-observation and engagement in treatment-related activities outside of therapeutic sessions. It is emphasized that the treatment includes a set of skills and that practice is encouraged to achieve proficiency in these skills.

Attentional Control is a common strategy to counteract painful self-awareness. These exercises may take the form of concentrating on non-threatening aspects of the environment, such as the actual behaviors and emotions of others [81]. For example, the ability to focus on the appearance of others or learn a new fact about them may offer a way out of painful self-awareness. Alternatively, direct attentional control training was also found to reduce this self-awareness [33].

Exposure is the most efficient way to counteract avoidance behaviors is by enhancing exploratory and approach behaviors. Exposure is a collaborative process in which the client, guided by the therapist, chooses to engage in challenging situations voluntarily and systematically. Importantly, the process of exposure differs in several ways from spontaneously encountering anxiety-provoking situations. First, the client actively chooses and plans these encounters, facilitating a sense of agency. Second, exposures are planned with pre-specified goals (e.g., to ask one's boss for a raise). It is the therapist's role to navigate the treatment such that exposures have a chance to modify the client's beliefs regarding the outcome of these social situations. It is emphasized that the importance of examining one's predictions is more central than achieving the "social" goal (such as actually getting a raise). Third, exposures are planned to be conducted systematically so that easier tasks and encounters are followed by more challenging ones. An exposure hierarchy is created to allow for gradual progression (and a fair amount of repetition) of those tasks. Fourth, exposures are preceded and followed by an "envelope" of collaborative discussion between the therapist and the client. Before exposure, the therapist attempts to elicit *specific* predictions regarding the most likely outcome of the exposure (e.g., "My boss would be angry with me for even trying to get a raise"). Exposures are effective primarily when new, belief-inconsistent information is encountered (e.g., "Although my boss did not agree to the raise, I was able to state my case clearly. My boss was not angry, and even expressed appreciation of my work"). The construction of specific predictions allows for a more effective correction of faulty prior beliefs. To facilitate these corrective experiences, clients are invited to reflect on what was learned during the exposure. Finally, the collaborative work with the therapist before and after the exposures emphasizes the potential of affiliative bonds that include sharing thoughts and feelings in a close and empathic setting, a rare context for many individuals with SAD [36].

Cognitive Restructuring refers to a therapeutic technique involving multiple sub-components:(a) understanding the range of emotions elicited by a particular situation (emotion identification and emotion differentiation), (b) linking these emotions to components of the situation and their meaning, and (c) question this meaning, usually

engaging in re-appraisal. This sequence is geared to allow new perspectives to emerge [24]. The cognitive restructuring may begin with work on emotion differentiation between emotion-infused thoughts and actual emotions ("I feel stupid" vs. shame) or between distinct emotions (shame vs. guilt). It is emphasized that specific emotions are associated with certain core meanings (e.g., shame is associated with hypothesizing that unsavory characteristics of the self are revealed). Next, meaning-questioning entails identifying, evaluating, and modifying unhelpful thinking [48; 111]. Identifying unhelpful thinking involves recognizing an event (internal or external) in which a negative emotion was experienced. The therapist then invites the clients to attend to their thoughts at the time of, before, and after the event's occurrence. Next, the client and the therapist can evaluate how helpful such thoughts were in the given context. This process calls for examining the evidence for and against a certain thought and the utility of focusing on certain aspects of the event. Finally, in the modification stage, the therapist facilitates the discovery of additional information and examination of other possible points of view. As a result, a more helpful and balanced viewpoint can be adopted. Learning to differentiate between emotions, link them to meaning, and question these meanings are discussed as acquired skills.

Imagery Rescripting is a therapeutic technique that aims to update core negative representations of the self and modify the meaning of socially stressful memories [98]. Clients are invited to relive a painful past autobiographical experience and then re-imagine this experience in a way in which the needs of the younger self are understood and addressed [9]. Thus, clients may be invited to express compassion for their younger selves or imagine them behaving differently than they did [98]. Imagery rescripting has been found to effectively reduce SA and promote significant changes in negative self-beliefs (see [75] for review). Although the significance of imagery versus verbal processing of memories is still debated [80], the amassed evidence points to the importance of detailed processing of autobiographical memories to reduce SA severity.

Effectiveness of CBT for SAD

So far, we have focused on distinct processes presumed to maintain SA and the associated techniques aimed to rectify the operation of these processes. As our previous review illustrates, some studies examine the effects of single techniques on alleviating SA distress. However, most existing data on the effectiveness of empirically-based treatment of SAD are grounded in examining the effectiveness of "packages" of techniques. The most researched type of such a package is CBT. Most empirically supported CBT programs are implemented throughout approximately 12–16 sessions. CBT consists of a group of different but theoretically related interventions, each emphasizing a different intervention "package." For example, cognitive therapy (based on Clark & Wells's [23]) typically includes psychoeducation, attentional control, cognitive processing, and memory rescripting. In addition, it includes behavioral experiments to test ominous predictions, a technique bearing a resemblance to exposure. Based on Rapee and Heimberg's conceptualization [96], a model includes psychoeducation, exposure, and cognitive restructuring. Despite the differences between these packages, they share significant similarities, thus being reviewed as a single interventional modality.

Empirical data examining the effectiveness of CBT compares this intervention either to the wait-list control condition, to placebo, or to other intervention "packages." The effect size of CBT compared to the wait-list condition varies from 0.81 to 1.56 [78]. A meta-analysis of randomized controlled trials for SAD [21] found a mean controlled effect size of 0.41 for CBT compared to a placebo condition. Importantly, CBT for SAD has also been found to be effective in naturalistic conditions [104], and most individuals with SAD exhibit some improvement over just a short course of CBT (up to 16 sessions [73]). CBT was also compared to alternative treatments using a randomized design. CBT was found to be more efficacious than interpersonal psychotherapy (IPT, [102]), as well as acceptance and commitment therapy (ACT, [51]). Other studies compared CBT to a manualized version of psychodynamically oriented therapy (PDT) for SAD (e.g., [74]). Results of PDT and CBT were comparable for social anxiety and depression symptom improvement, with CBT outperforming PDT concerning remission rates and reduction of interpersonal problems.

Providing access to state-of-the-art interventions for SAD is a major societal challenge. There has been a fair amount of progress toward advancing this important frontier by developing variants of well-established CBT protocols in the form of guided internet-based interventions [8; 28]. Internet-based CBT typically entails some contact with therapists who guide the treatment [7]. Importantly, the efficacy of CBT has been demonstrated in individuals [2; 21; 78], groups [113], in virtual reality exposure [20; 22] and in internet-delivered interventions [61; 88].

The UK and the German governments publish treatment guidelines based on the recommendations of independent societies synthesizing the available research evidence. The German [14] and British (NICE, [86]) guidelines for treating SAD recommend CBT as the first line of treatment. According to the German guidelines, individuals with SAD should be offered PDT only if CBT is unavailable, was shown to be ineffective, or if the adequately informed patient expresses a preference for this treatment [14].

Despite these encouraging findings, the treatment of SAD remains a considerable challenge: many patients either do not stay in therapy (attrition rates tend to be around 20%, [57]), fail to respond to CBT (40–57%), do not exhibit clinically significant symptom reduction even after completing the full course [26], or remain considerably symptomatic at the end of treatment (only 40% reach remission, [101]). Moreover, even following a full course of CBT, many patients reported reduced well-being and satisfaction with the quality of their interpersonal relationships [31].

Discussion

In the following, we consider the reasons for the limited effectiveness of CBT. First, these difficulties may stem from a complex and only partially understood association between maintaining processes and treatment techniques. Importantly, the relationship between techniques and processes is unlikely to be adequately modeled by one-on-one associations (see [19; 56]. Rather, each treatment technique (e.g., exposure) may impact multiple processes (such as attention, interpretation, and emotion regulation). Similarly, a modification in a specific process may be a part of several distinct techniques (e.g., attention control may be involved in the exposure and cognitive restructuring). In other

words, the mechanism of change in SA (as well as in other disorders) is likely to be multidetermined and multifactorial.

Second, the "packaging" of treatments is likely lacking in nuance, imperfectly capturing the maladaptive processes of a specific individual. This suggests that an intervention needs to be individually tailored, drawing from a range of theoretically-sound and empirically tested techniques and adapting them to a specific individual in a given societal, cultural, and life-span context [93]. Moreover, based on the central mechanisms postulated to be implicated in the disorder, a clinical evaluation may provide an individualized profile, allowing a precise selection of therapeutic techniques. However, such personalized interventions may only become clinically relevant if we can predict the treatment outcome at the level of a single patient. Unfortunately, most predictions so far rely on group-based methods that do not yield predictions suitable for individual patients. Thus, novel analytical methods are needed [77].

Third, the partial success of CBT may be due, at least in part, to a rather partial view of vulnerability in SAD, which focuses almost exclusively on negative affect in the context of the social-rank system (e.g., assertiveness). Many studies examining the outcome of CBT address only a subset of inter-and intra-personal outcomes. For example, a sense of authenticity and belongingness and the ability to experience and savor positive emotions (such as pride, [25; 45; 64]) typically remain outside the scope of many assessments. The importance of addressing both social approach and avoidance (in the context of hierarchical and affiliative relationships) is underscored by the partial independence of these systems [87]. Indeed, a CBT treatment enhanced by affiliative approach techniques resulted in significantly greater satisfaction with social relationships immediately after and 12 month after treatment with a more standard CBT-like package [4; 5]. These findings strongly favor addressing positive social functioning in SAD interventions.

The endpoint of therapy for SAD is to enable clients to increase self-compassion and become authentic and relaxed in the presence of others. Developing and empirically assessing the utility of single therapeutic techniques, feeding these efforts back to the understanding of basic processes, and assessing the impact of combinations of these techniques remains the best way to enhance the effectiveness and precision of our interventions.

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Information about the authors

Eva Gilboa-Schechtman, PhD (Psychology), Professor, Director of Emotional Processing Laboratory, Psychology Department, and the Gonda Brain Science Center, Bar-Ilan University, Ramat-Gan, Israel, ORCID: https://orcid. org/0000-0002-2831-5835, e-mail: evagilboa@gmail.com

Roy Azoulay, MA (Psychology), Psychology Department, and the Gonda Brain Science Center, Bar-Ilan University, Ramat-Gan, Israel, ORCID: https://orcid.org/0000-0001-7104-0067, e-mail: royazoulay87@gmail.com

Информация об авторах

Гильбоа-Шехтман Ева, PhD (психология), профессор, руководитель лаборатории эмоционального процессинга, департамент психологии и Многопрофильный центр изучения мозга Гонда, Университет Бар-Илан, Рамат-Ган, Израиль, ORCID: https://orcid.org/0000-0002-2831-5835, e-mail: evagilboa@gmai.com

Азулай Рой, магистр (психология), департамент психологии и Многопрофильный центр изучения мозга Гонда, Университет Бар-Илан, Рамат-Ган, Израиль, ORCID: https://orcid.org/0000-0001-7104-0067, e-mail: royazoulay87@gmail.com

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Evidence-Based Psychotherapy Practices for Preschool Children: A Brief Review for Clinicians

Marina A. Zhukova
Saint-Petersburg State University, Saint-Petersburg, Russia,
ORCID: https://orcid.org/0000-0002-3069-570X, e-mail: marina.zhukova@times.uh.edu

Erika S. Trent
University of Houston, Houston, TX, USA,
ORCID: https://orcid.org/0000-0003-4775-5999, e-mail: estrent@central.uh.edu

Despite growing consensus that clinical interventions must be supported by empirical evidence, preschool-aged children are more likely than older children to receive services with little to no empirical support. The dissemination of research findings on the efficacy of specific interventions is constrained by clinicians' limited access to peer-reviewed research journals and treatment manuals. The current paper provides a synthesis on the literature of psychological treatment for children with externalizing or internalizing problems and their parents or families. The review highlights key principles and treatment approaches that are supported by the evidence so that clinicians may readily implement these evidence-based treatments. The approaches that have the most empirical support for externalizing problems are parent behavior management training (PBMT), parent-child interaction therapy (PCIT), and cognitive behavioral therapy (CBT; in individual or group format, including social skills groups). For internalizing problems, research suggests that family-based CBT, group parent CBT (alone or in combination with group child CBT), trauma-focused CBT, and adapted versions of PCIT are the most evidence-supported treatments in preschool children. Common principles and techniques that are shared by a number of evidence-based treatments for preschool-aged children, and recommendations for clinicians and for the research community are discussed.

Keywords: Evidence-based treatments, internalizing, externalizing, preschool children.

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Научно обоснованные методы психотерапии для детей дошкольного возраста: краткий обзор для клиницистов

Жукова М.А.
Санкт-Петербургский государственный университет, Санкт-Петербург, Россия,
ORCID: https://orcid.org/0000-0002-3069-570X, e-mail: marina.zhukova@times.uh.edu

Трент Э.С.
Хьюстонский университет, Хьюстон, Техас, США,
ORCID: https://orcid.org/0000-0003-4775-5999, e-mail: estrent@central.uh.edu

Несмотря на растущий консенсус в отношении того, что клинические вмешательства должны подкрепляться эмпирическими данными, дети дошкольного возраста чаще, чем дети более старшего возраста, получают психологическую помощь с минимальной эмпирической поддержкой или без нее. Распространение результатов исследований об эффективности конкретных вмешательств сдерживается ограниченным доступом клиницистов к рецензируемым научным журналам и руководствам по лечению. Настоящая статья представляет собой обобщение литературы по психологическому лечению детей с проблемами интернализации и экстернализации поведения, а также помощи их родителям или семьям. В обзоре освещаются ключевые принципы и подходы к лечению, подтвержденные фактическими данными, чтобы клиницисты могли легко применять эти доказательные методы. Подходы, которые имеют наибольшую эмпирическую поддержку для проблем экстернализации, — это обучение управлению поведением родителей (PBMT), терапия взаимодействия родителей и детей (PCIT) и когнитивно-поведенческая терапия (КПТ (CBT); в индивидуальном или групповом формате, включая группы по социальным навыкам). Что касается проблем интернализации, исследования показывают, что семейная и групповая родительская КПТ (отдельно или в сочетании с групповой детской КПТ), ориентированная на травму КПТ и адаптированные версии PCIT являются наиболее научно обоснованными методами психологической помощи детям дошкольного возраста. Обсуждаются общие принципы, которые входят в ряд научно обоснованных методов лечения детей дошкольного возраста, рекомендации для врачей и для научного сообщества.

Ключевые слова: доказательная терапия, интернализация, экстернализация, дети дошкольного возраста.

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Introduction

Early childhood is a key developmental period during which many mental health problems emerge for the first time [12]. Mental health difficulties at this point in life are predictive of continued problems later in development [e.g., 56]; as such, early and effective intervention is critical. As preschool-aged children are highly sensitive to their environment (e.g., household organization, parenting style, and peer relationships) [35], early intervention at this stage can have a clinically meaningful and long-lasting impact on preschoolers' wellbeing [10].

Externalizing and internalizing problems represent two clusters of psychological disorders requiring early identification and intervention in this age group. Externalizing problems characterized by behavioral dysregulation, poor impulse control, aggression, and defiance are the most common reason for parents of preschoolers to seek therapy and counseling [36; 74]. Internalizing problems are characterized by negative affectivity. They include depressive and anxiety symptoms [22], which also commonly prompt parents to seek professional help for their preschool-aged children, with prevalence rates of about 10% in this age group [25]. While intervention research for these two clusters of psychological problems among school-aged children and adolescents is extensive [e.g., 32; 53; 82], such intervention research efforts for preschoolers are relatively lagging in comparison. As this body of literature has developed in recent years, a synthesis of the current state of science is called for.

Despite growing consensus that clinical interventions must be supported by empirical evidence, preschool-aged children are more likely than older children to receive services with little to no empirical support [1; 79]. This can be attributed, in part, to a gap between research and implementation in clinical practice [14; 84]. A number of published randomized controlled trials and meta-analyses have demonstrated the efficacy (or lack thereof) of interventions for externalizing and internalizing problems in preschoolers [3; 27; 28; 34; 77].

However, the dissemination of these findings is constrained by clinicians' limited access to peer-reviewed research journals. In addition, journal articles reporting on clinical trials typically do not include sufficient detail required for clinicians to apply the techniques in their routine interventions. Moreover, treatment manuals that do include such details may not be readily available or accessible to clinicians wishing to implement evidence-based approaches due to financial, organizational, or geographic barriers. Treatment manuals are numerous, and many are based on overlapping behavioral principles and mechanisms of change (i.e., "common elements"; [40; 60]). Thus, a synthesis of the literature highlighting key principles and treatment approaches that are supported by the evidence may allow clinicians to readily implement them.

Existing reviews of evidence-based treatments for childhood internalizing and externalizing problems have typically categorized any child under the age of 13 years as "children" ([e.g., 29; 32; 72; 82; 87]; with the exception of a review by Eyberg et al. [28] on disruptive behavior treatment, which identified programs geared towards 2–5-year-olds). Most existing reviews thus have not examined specific treatment effects for preschool-aged children younger than 6 years. Given significant developmental differences between preschool-aged children and school-aged children, this is a gap that warrants attention. Among reviews that have specifically focused on preschool-aged children, these reviews have focused on a particular disorder (e.g., anxiety disorders [18]) or treatment approach (e.g., cognitive-behavioral intervention for anxiety [77]). Furthermore, describing the principles and shared elements of these evidence-based interventions has typically been outside the scope of these existing reviews (e.g., [83]). The present review fulfills an unmet need for a synthesis of the literature on evidence-based treatments for preschoolers that details their shared principles in sufficient detail to be implemented by clinicians.

The aims of this review are to: 1) inform clinicians on the current state of the literature; 2) provide clinicians with the information needed to evaluate available treatment approaches and make informed decisions in selecting evidence-based interventions; and 3) describe principles and techniques underlying these evidence-based interventions.

Evidence-Based Practices for Externalizing Problems in Preschool Children

Externalizing behavior problems refer to a group of aggressive or impulsive behaviors that are aimed at the outward (or external, as the term suggests) environment. They include disruptive behavior, hyperactivity, and aggression [48]. The process of gaining autonomy from an attachment figure and exploration typically involves testing boundaries [17; 52]. Therefore, in the context of preschool-age children, it is important to distinguish between developmentally appropriate manifestations of defiance and problematic behaviors. Typically, when the magnitude and/or frequency of temper tantrums, aggressive behaviors, or disobedience are significant, parents tend to seek professional advice [64]. The mean prevalence of externalizing behavior problems in preschool children is estimated at 9% [25].

Generally, mental health problems of young children are viewed through the dimensional lens of developmental psychopathology that focuses on symptoms rather than distinct diagnostic categories. Preschool children rarely receive formal diagnoses such as attention-deficit/hyperactivity disorder (ADHD) or oppositional defiant disorder (ODD) prior to placement in a more rigorous academic environment [86]; however, they may exhibit poor impulse control, defiance, outward aggression, and behavioral dysregulation, which fall under the umbrella of externalizing behavior problems. Importantly, evidence-based techniques that are applied to externalizing behavior problems can be used regardless of the magnitude of the problem or the presence of a diagnosis. Below, we review evidence-based principles and interventions for ADHD and temper tantrums, as well as aggression and defiance (for further information about externalizing problems in children, see [8]).

Parent Behavior Management Training

In severe cases in which children fail to pay attention or control their motor agitation, parents may seek intervention before children begin school, even though the ADHD diagnosis is typically given after children have entered structured classroom instruction. Parent management training and behavioral classroom interventions (if children are attending preschool) are considered frontline interventions for ADHD in this age group.

The common underlying principle of all evidence-based interventions for ADHD is the implementation of structure and consistency [26]. Strategies aimed at the attentional component of ADHD include establishing eye contact, using visual reminders, creating checklists, scheduling breaks, and alternating between activities using timers. Techniques that address hyperactivity include establishing explicit rules, ignoring mild misbehavior, and providing labeled praise for desired behavior [71]. As working memory is implicated in ADHD, the use of simple, specific instructions that do not include multiple steps is encouraged to minimize information overload. Parent training for ADHD is a brief intervention (up to 10 sessions) that is done either in a group format or individually and includes behavior modification [86]. Given that ADHD is highly heritable [42], parent training has the added value of teaching parents themselves how to structure their environment and establish routines; such parenting practices play an important role in remediating the symptoms of ADHD in children.

For older age groups (ages 6–12 years), the combination of behavioral interventions and medication may lead to maximized treatment gains of ADHD: specifically, adding medication secondary to initial behavior modification results in better outcomes in oppositional behavior [62]. However, for preschoolers (ages younger than 6 years), the recommendation remains to start with behavioral interventions and later supplement these with medications (i.e., methylphenidate in particular [86]) if behavioral interventions alone do not lead to significant improvement [2]. However, given recent concerns with the overprescription of stimulants to youth [4] and the potential neurological and psychiatric side effects of long-term methylphenidate use in preschoolers (see [41] for a review), caution is advised when prescribing stimulant medication to this population.

To address temper tantrums and defiance, the use of parent training in behavior modification (PTBM) is recommended [37]. PTBM is an evidence-based approach that can be used regardless of the presence of the diagnoses. In fact, it is advised to intervene before the diagnosis of ODD is given. In PTBM, parents are taught how to handle specific behaviors and how to effectively set limits. It utilizes principles of behavioral psychology, such as the use of contingencies, reinforcement, negotiation, and contracts, among others.[1] First, the intervention focuses on repairing the relationship between children and parents by engaging in “special time.” Special time is a period of time set aside each day, during which

[1] Contingencies refer to consequences that immediately follow a behavior. They are broadly categorized into reinforcers, which aim to increase the frequency of desired behaviors (e.g., verbal praise, material reward), and punishment, which aims to decrease the frequency of undesired behaviors (e.g., reprimand, removal of a toy, time-out). Negotiating refers to the process of establishing explicit rules about rewards for following rules and costs of not adhering to them. A behavior contract outlines parents’ expectations for their child’s behavior and specifies the privileges attached to desired behavior. For an in-depth description of behavioral principles and their application in PTBM [42].

children are provided with a unique opportunity for positive attention and freedom of choice in activities. Providing positive attention and putting children in charge allow parents to provide children a sense of agency and trust, which is the first step in rebuilding the parent-child relationship. Parents are advised to refrain from using questions or directions during the special time. Special time is implemented on a consistent basis regardless of how a child behaves during the day.

Next, behavior modification techniques are introduced. Generally, all behavioral techniques capitalize on the principles of operant conditioning [37]. They postulate that the consequences of behavior either increase or decrease the frequency of future behaviors. The first step in modifying undesired behaviors involves ignoring. Parents are encouraged not to engage with children in any way until they stop undesired behavior. When ignoring is used, parents are prepared for an extinction burst, which refers to an increase in the undesired behavior. Like all other behavior techniques, ignoring needs to be applied systematically and consistently (across time and settings) until the behavior is extinguished. Ignoring problematic behaviors is paired with praising desired behaviors. Importantly, ignoring is *not* recommended when the child is posing a danger to themself or others (e.g., hurting others, running onto a street); in such instances, parents are taught to set firm limits using time-outs (i.e., placing the child in a setting without reinforcements for a specified number of minutes) and time-out warnings (i.e., a statement warning the child of an impending time-out unless they follow directions).

Parents are also taught behavioral techniques to increase desired behaviors. For example, how to provide labeled praise so that children know what specific behavior triggered it. Another effective technique is the token economy, which is a system to reward children for behaving in desired ways. To establish a token economy, parents and children collaboratively assign certain values to different chores and activities that the child is supposed to do, for which they receive points/tokens. Children can exchange their acquired points/tokens for rewards from a predetermined list of activities, prizes, or privileges. After the token system is in place, parents are encouraged to have a conversation about the behavior response cost, which is the removal of privileges after specific undesired behaviors (which are also negotiated with the child in advance).

A recent meta-meta-analysis, in which the authors combined all meta-analyses published on the topic until 2018 [57], evaluated the effectiveness of parent training interventions for children with externalizing behaviors. A moderate effect size (standardized mean difference [SMD]=0.45, 95% confidence interval [CI]: 0.35 to 0.55, $p<.0001$) was found for parent-based interventions for externalizing behavior problems of children under 13 years of age, and this effect was stable at follow-up from 1 to 72 months post-treatment.

Parent-Child Interaction Therapy (PCIT)

An alternative intervention for externalizing behaviors is Parent-Child Interaction Therapy (PCIT), which is parent training done in vivo [46]. PCIT typically consists of two phases. In the child-directed interaction phase, parents are taught selective attending for the purpose of improving the parent-child relationship. The main approach in this phase focuses on ignoring undesired behaviors (e.g., tantrums) and reinforcing positive,

appropriate behaviors (e.g., verbalizing anger). Next, during the parent-directed interaction phase, parents are taught how to implement effective discipline strategies. Both phases typically begin with a didactic, followed by parent-child interaction in which parents put these lessons into action; a clinician observes the parent-child interaction and provides recommendations and feedback to parents in real-time using a "bug in the ear" device. The intervention is typically used with children from 2 to 7 years of age. A meta-analysis demonstrated that PCIT is effective in decreasing problematic externalizing behaviors (standardized mean difference [SMD]=-0.87, 95% CI: -1.17 to -0.58) [75]. One example of programs that include components of both PCIT and PTBM is the Incredible Years Program [81]. The goals of the Incredible Years Program are to promote the values of positive parenting and to coach parents how to effectively communicate with their children. This is accomplished by providing parents didactics and by watching and discussing videos of parents' interactions with their children. The Incredible Years program has been successfully implemented with families of diverse cultural backgrounds [44].

Social Skills Groups

Social skills groups are an intervention frequently used with children with aggressive and defiant behavior [43]. Social skills interventions for preschool-aged children typically teach children effective communication skills by exposing them to ecologically valid stressors. These include negotiating with peers, taking turns, being assertive, and understanding boundaries. Social skills groups teach children emotion regulation techniques such as taking breaks and verbalizing frustration instead of acting out physically. Groups typically range in size from 6 to 10 children. In social skills groups, children receive instant feedback from their peers and the therapists. The benefits of social skills groups have been widely studied in the context of ODD and CD in older youth. A recent meta-analysis on the efficacy of social skills training for externalizing problems examined 98 studies, of which 22 studies included children under the age of six [9]. This meta-analysis found that, in general, adolescents (ages 16 and above) benefited more from the interventions than younger youth. However, a small positive effect of social skills groups on aggressiveness, antisocial behavior, delinquency, and oppositional behavior was also observed in preschool-aged children (Cohen's d=0.15±0.18) [9]. The findings from the literature regarding the efficacy of social skills groups are mixed; some studies have found a "peer contagion effect," which refers to the exacerbation of aggressive behavior in youth who are placed in environments with deviant peers [24]. The peer contagion effect is observed especially when aggressive children are clustered together into intervention groups in a homogenous manner [45]. While studies reporting peer contagion typically involve samples of adolescents, there is also evidence that young children can learn aggressive behavior through modeling [61]. As such, more research is needed to better understand the mechanisms and the circumstances in which peer contagion is more likely.

Of note, the cognitive component is not emphasized in the evidence-based interventions for preschool-children with externalizing behavior problems. A recent meta-analysis on the effectiveness of cognitive-behavioral therapy (CBT) for externalizing problems demonstrated that the cognitive aspect of therapy is introduced in most studies once children reach school age [7]. As such, when treating externalizing behaviors in younger children, it is commonly the parents' maladaptive cognitions that are addressed in lieu of the child's (e.g., encouraging a parent to cognitively reframe their child's acting out

as a request for attention, rather than an attempt to upset the parent). Taken together, behavioral interventions have the strongest evidence for treating preschool-aged children with externalizing behaviors. These interventions are relatively cost-effective and brief.

Some interventions that do not have sufficient evidence of effectiveness for treating externalizing behaviors in preschool children include play therapy, pet therapy [38], sensory integration (which is especially popular in the context of ADHD), and dietary modifications [13]. While the listed approaches are not harmful [88], their efficacy is inconclusive or has not been demonstrated for externalizing behavior problems.

Evidence-Based Practices for Internalizing Problems in Preschool Children

Early identification and intervention for internalizing problems (i.e., anxiety and related problems and depression) in preschool children are critical, given that untreated internalizing problems are chronic and impairing [50; 78]. When assessing anxiety-related problems in preschool children, it is important that clinicians distinguish between developmentally appropriate fears and problematic anxiety. Fear of the dark may be expected of a 2-year-old child, whereas this same fear may be less appropriate for a 10-year-old child, for instance.

The four most common anxiety disorders in preschool-aged children are separation anxiety disorder (fear of separation from attachment figures), social anxiety disorder (fear of one or more social situations), generalized anxiety disorder (excessive anxiety and worry about a number of events), and specific phobia (marked fear of a specific object or situation) [22; 83]. Notably, separation anxiety problems typically manifest between the ages of 5–7 years (i.e., when children begin attending school) in the form of school refusal [20]. While less common, selective mutism (failure to speak in specific social situations where speaking is expected) is another anxiety disorder that onsets typically in the preschool years [80] (for additional information about childhood anxiety disorders, see [55]).

Contrary to initial beliefs that preschoolers are not cognitively capable of experiencing depression, research has found that depression can indeed affront children as young as 3 years [83]. Depression in preschoolers may present differently from depression in older youth that clinicians typically encounter, but several key markers distinguish depressed preschoolers from their non-depressed peers: decreased energy, increased anhedonia, irritability, excessive guilt, and engagement in activities or “play themes” related to death or suicide [51; 83] (for additional information about childhood depressive disorders, see [65]).

Below, we review evidence-based approaches for treating anxiety and related problems and depression in preschoolers. The DSM-5 no longer categorizes obsessive-compulsive disorder (OCD) and posttraumatic stress disorder (PTSD) as anxiety disorders; however, symptoms of these two disorders can onset in preschool [19; 70], and the principles of evidence-based treatment of these problems overlap with those for anxiety disorders. As such, in this review, we conceptualize these problems as falling under the umbrella of “anxiety and related problems.”

Cognitive Behavioral Therapy

The past two decades have seen an increase in research testing the efficacy of psychotherapy treatments for preschool anxiety and related problems. CBT-based treatments have the greatest empirical support for treating this cluster of internalizing problems in preschool children. Specifically, family-based CBT is efficacious in treating various types of anxiety and related problems, including separation anxiety, social anxiety, behavioral inhibition, generalized anxiety, phobias, selective mutism, mixed anxiety symptoms, traumatic stress, and OCD symptoms [18]. Family-based CBT primarily involves only the therapist and the child's parents, although it can also involve the child (e.g., "Being Brave" program; [33]). Other CBT-based treatments for preschool anxiety and related problems include group parent CBT (alone or in combination with group child CBT) and trauma-focused CBT [18].

Family-based CBT. One of the key principles of family-based CBT for anxiety-related problems is reducing problematic parenting behaviors that (inadvertently) contribute to young children's anxiety. A common example of such parenting behaviors includes parental overprotection, in which parents attempt to shield their child from anxiety-provoking experiences. Although this decreases the child's anxiety in the short term, it interferes with the child's normative development of autonomy and self-efficacy in the process (e.g., a mother accompanying her child on all social outings; [16]). Another common example of problematic parenting behaviors is family accommodation, which allows the child to avoid situations that cause anxiety (e.g., allowing the child to sleep with a light every night; [76]). These parenting behaviors may provide the child (and parent) relief in the short term but actually maintains the child's anxiety in the long term.

In family-based CBT, the therapist first teaches the parent about these problematic parenting practices and their effect on the child's anxiety. Thereafter, the therapist teaches the parent how to encourage the child to face their fears instead, in an effort to teach the child that their fears are manageable and/or unsubstantiated. Parents and children develop a fear hierarchy (or "fear ladder"), which allows them to complete exposure exercises starting with relatively low fear-provoking stimuli (e.g., for a child with a dog phobia, seeing a photograph of a dog) to greater fear-provoking stimuli (e.g., petting a dog).

In a recent systematic review, 38 treatments in samples of children with a mean age of under 8 years (N=2,228 children) were evaluated and classified according to one of five levels of empirical support: well-established, probably efficacious, possibly efficacious, experimental, or of questionable efficacy [18]. The first three levels of treatments have demonstrated varying degrees of efficacy in randomized controlled trials (see [73] for details), "experimental" treatments have not been tested in a randomized controlled trial or otherwise do not meet the criteria to be possibly efficacious, and treatments of "questionable" efficacy are found to be inferior to other treatments or control groups. In this review, family-based CBT was the only treatment classified as "well-established" [18]. Indeed, the efficacy of CBT for preschool anxiety is supported by a recent meta-analysis of 42 samples (N=2,611; SMD=-0.81 compared to control conditions) [77].

Family-based CBT is also the most strongly empirically supported treatment for early-onset OCD in children aged 5–8 years [31]. It draws on the principles of CBT for OCD

in older youth; as such, a core component of treatment is exposure and response prevention (ERP; [31]). ERP involves the therapist and parent assisting children to challenge fears through facing obsession-provoking situations ("exposure") while reducing or eliminating compensatory compulsions and avoidance ("response prevention"). For example, in treating a child with cleanliness-related obsessions and compulsions, the therapist may coach the parent to assist their child to touch a restroom floor (exposure) without washing their hands for a specified amount of time (response prevention).

Family-based CBT for early-onset OCD differs from CBT for OCD in older youth in several ways. First, the therapist uses concrete and "child-friendly" metaphors to educate children on the connections between obsessions and compulsions (e.g., obsessions are a "worry monster" and tell one to do things) and explain the benefits of ERP exercises (e.g., akin to a "yucky" medicine that makes one feel better; [5]). Second, therapists extensively involve parents as "coaches" who ensure the child adheres to treatment outside of sessions. Third, therapists address parental accommodation of child OCD behaviors. Finally, therapists address parents' own exposure to their own distress in response to their child's distress during ERP exercises [5].

Group CBT. CBT for preschool anxiety and related disorders has also been adapted to group formats to allow treatment delivery to multiple families at once. Group CBT, whether it involves only parents, or involves parents and children, is classified as a "possibly efficacious" treatment for preschool anxiety and related problems [18]. Group parent CBT is efficacious for social anxiety/behavioral inhibition and mixed anxiety symptoms, and group parent CBT in combination with group child CBT is efficacious for separation anxiety, social anxiety/behavioral inhibition, worry/fear/generalized anxiety, phobias, and mixed anxiety symptoms (e.g., Fun FRIENDS program, Turtle Program; [5; 15; 18]). Group parent CBT and group child CBT address much of the same domains as family-based CBT, in addition to addressing parents' own anxiety. Another key feature of group parent CBT sans children is that exposure exercises are assigned to parents to conduct in between sessions, rather than conducting exposure in vivo (i.e., within the session with the child).

Trauma-focused CBT (TF-CBT). TF-CBT is the most strongly empirically supported treatment for preschool PTSD [69]. TF-CBT is a short-term, structured treatment developed for young children impacted by trauma and their caregivers. It addresses posttraumatic symptoms and other affective symptoms related to the trauma by teaching children skills to manage difficult emotions and reduce negative patterns of behavior stemming from the trauma. Specifically, TF-CBT has been tailored for preschool-age children by 1) using a cartoon-based narrative to address the trauma; 2) co-constructing a book with the child's narrative of the trauma; 3) considering the parent's own trauma and trauma recovery; and 4) showing the parents a videotape of their child narrating the trauma, in later stages of treatment [68]. Variants of TF-CBT for preschool PTSD, which also have empirical support, include family-based TF-CBT (i.e., joint child-parent sessions) with or without a trauma narrative component [21] and *stepped-care* TF-CBT [67], which titrates the intensity of treatment according to the child's level of severity or need (and thus, reduces delivery costs as compared to typical TF-CBT). A recent systematic review of trials of TF-CBT for PTSD in preschoolers ages 3–6 years concluded that TF-CBT meets the criteria as a "possibly efficacious" intervention for PTSD in this age group [54].

Parent-Child Interaction Therapy (PCIT)

PCIT was originally developed for young children with externalizing problems (see above for a detailed description) but has been adapted for preschool children with separation anxiety [63] and for preschool children with depression [49]. PCIT modified for preschool separation anxiety adds a third phase to the typical two-phase sequence described above. This third phase, titled the "bravery-directed interaction" phase, includes a didactic session that provides parental psychoeducation on the nature of anxiety and the utility of graduated exposure [63]. This session also involves developing a hierarchy of activities the child typically avoids (titled the "bravery ladder") and a reinforcement system to reward the child for completing exposures (titled "reward stones"). The didactic session is followed by two "coaching" sessions which implement graduated exposure in vivo. As such, this modified PCIT for separation anxiety disorder incorporates elements of family-based CBT while also making use of PCIT's live coaching model.

To date, PCIT-Emotion Development (PCIT-ED) is the only evidence-based psychotherapy treatment for preschool depression [49]. PCIT-ED is an adaptation of PCIT that is specifically tailored for preschool depression, which adds a third phase titled the "emotion development" module. The ED module aims to improve children's emotional competence (i.e., ability to identify and understand emotions) and emotion regulation skills. This is done by teaching parents in vivo how to serve as an "emotion coach" and regulate their children's intense emotions that are specifically related to depression (e.g., persistent negative affect, sadness, or guilt). A randomized controlled trial found that, compared to a waiting list condition, PCIT-ED lowered rates of depression (odds ratio=9.52, 95% CI [8.44, 10.74]), depression severity (Cohen's d=1.01, 95% CI not reported), and levels of impairment (Cohen's d=1.16, 95% CI not reported [49]).

Treatments with Insufficient Support for Preschool Internalizing Problems

Clinicians are cautioned against using treatments with insufficient empirical support. While play therapy is currently widely used with young children with a range of difficulties, including internalizing problems, there is little evidence supporting the efficacy of play therapy for preschool anxiety and depression [83]. While clinical trials have tested play therapy in the treatment of preschool anxiety and related problems, it is currently classified as "experimental" given insufficient empirical support for its efficacy [18]. Likewise, attachment-based therapy is also currently classified as "experimental" in the treatment of preschool anxiety and related problems [18].

It is important to note that CBT, and some CBT-related techniques, are also insufficiently supported for *certain* internalizing problems in preschoolers. Specifically, relaxation therapy has been classified as having "questionable" efficacy in the treatment of preschool OCD; relaxation therapy was found to be inferior to other treatment groups and waitlist control groups [18]. Moreover, CBT has yet to be adapted and tested for depression in preschool children [83]; this is in part due to the fact that depression was only recently recognized in this age group, and intervention research is still lagging.

Finally, a recent systematic review of 11 studies testing the use of medication treatment for internalizing problems in preschool children noted that this literature is

extremely limited and weak in terms of methodological rigor [6]. Additionally, although a growing number of children ages 2–5 years are being prescribed antipsychotic medication to manage mood, no published clinical trial to date has tested the efficacy and potential harm of antipsychotic medication for very young children with depression [59]. As such, empirically supported psychotherapy is recommended as a first-line treatment, with pharmacologic interventions considered in unique cases and with caution [6].

Discussion

The first aim of the current review was to synthesize the literature on evidence-based approaches to treating externalizing and internalizing problems in preschoolers. The approaches that have the most empirical support for externalizing problems are parent behavior management training (PBMT), parent-child interaction therapy (PCIT), and cognitive behavioral therapy (CBT; in individual or group format, including social skills groups). For internalizing problems, research suggests that family-based CBT, group parent CBT (alone or in combination with group child CBT), trauma-focused CBT, and adapted versions of PCIT are the most evidence-supported treatments in preschool children.

Importantly, an integral component in both internalizing and externalizing interventions for preschoolers is the heavy involvement of parents. Parents are the main figures in the environment of preschool children and thus are the key to their successful socialization and adaptive functioning; therefore, their active involvement in therapy with preschoolers is important. Many parents inadvertently contribute to the exacerbation of problematic behaviors [e.g., 68]; for example, parents of clinically anxious children may enable avoidance of feared stimuli, and parents of children with externalizing problems may reinforce tantrums by responding with attention. For these reasons, the first component of many evidence-based treatments with preschoolers is providing psychoeducation to parents and teaching them new interaction strategies.

The synthesis of the literature revealed several gaps that warrant attention from the research community. First, more clinical trials testing potentially efficacious treatments for preschool depression are needed. Intervention research for preschool depression lags behind that for externalizing problems and anxiety problems, with PCID-ED being the only evidence-based treatment currently available for preschool depression. Adapting and testing CBT for depression in preschool children is an important next step for intervention research. Another future direction for research is studying the efficacy and potential side effects of medication for internalizing problems in preschoolers. Additionally, the research community is recommended to engage in dissemination efforts. Despite research studies that demonstrate the inefficacy of certain treatments (e.g., play therapy) for externalizing and internalizing problems, in practice, such treatments continue to be used in lieu of evidence-based treatments. While this issue is observed in healthcare research as a whole and is not unique to psychotherapy research (e.g., [85]), the research community is encouraged to utilize dissemination practices where possible [66], study the effectiveness of treatments in routine clinical practice, and identify barriers in the implementation of evidence-based treatment for preschool children.

The second aim of this review was to provide clinicians with information to make informed decisions to select evidence-based interventions. To date, there is widespread

use of interventions for preschoolers that have little to no empirical support. Such interventions include play therapy, attachment-based therapy, relaxation therapy (in the case of early-onset OCD), sensory integration, animal therapies, and biofeedback. Regarding play therapy, it should be noted that given that play is one of the leading activities for preschool children, elements of play therapy are incorporated into several evidence-based approaches. For instance, PMBT utilizes "special time," which in essence is a child-centered non-directive play therapy. The first phase of PCIT also uses unstructured play to repair the parent–child relationship. While play is a necessary component of these interventions, the evidence suggests that it is not sufficient to produce the behavioral change needed to alleviate internalizing and externalizing problems. There is growing research in the field examining the efficacy of play therapy and animal-assisted therapy, among others [11; 23; 47; 58]. While it is possible that these interventions may demonstrate an evidence base in the future, currently, they are *not* recommended for the treatment of internalizing and externalizing problems in preschoolers. Clinicians are strongly encouraged to use empirically supported treatments instead. Professional training to implement several of the empirically supported treatments discussed in this article are available through resources such as *Evidence-Based Behavioral Practice* (https://ebpp.org), *PracticeWise* (https://practicewise.com), the Beck Institute (https://beckinstitute.org), and PCIT International (https://pcit.org).[2]

The field of research on intervention for preschool internalizing and externalizing problems is still evolving. As new findings from upcoming clinical trials emerge, recommendations may be adjusted. As such, it is important for clinicians to stay up-to-date with the literature as much as possible through methods such as: reading peer-reviewed journal articles through an institutional subscription, in open-access journals, or available from the authors; and reading resources identified in online resource centers (e.g., Substance Abuse and Mental Health Services Administration's Evidence-Based Practices Resource Center; https://www.samhsa.gov/resource-search/ebp). The American Psychological Association Society of Clinical Psychology (Division 12) provides a free online resource detailing various treatments and their level of empirical support (https://div12.org/treatments/). Additionally, the Blueprints for Healthy Youth Development offers an online database of evidence-based treatment programs for youth (https://www.blueprintsprograms.org).

Finally, the third aim of this review was to provide clinicians with a framework for implementing evidence-based approaches. In this review, we described the principles underlying evidence-based interventions. Treatment manuals and treatment programs frequently share a common treatment approach and techniques at their core [60]. In describing the shared treatment approaches, we highlight that an evidence-based approach to intervention does not necessarily equate to manual-based therapy. While manualized treatments are important in psychotherapy research and helpful in clinical practice, clinicians may be advised to adopt a stance of "flexibility within fidelity" [39]. Fidelity to the treatment approach that is supported by empirical evidence, combined with the flexible application of the approach to the needs and presentation of each patient, will likely yield the best therapeutic outcomes. This is especially the case with treating internalizing and externalizing problems with preschoolers, whose symptom presentations and

[2] Resources are provided for informational purposes only and do not constitute an endorsement.

environments vary widely and represents a still-emerging area of intervention research. To provide the best care possible to this population in need, clinicians are encouraged to apply evidence-based approaches described above in a way that appropriately addresses each child's and parent's needs.

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Information about the authors

Marina A. Zhukova, PhD (Psychology), Research Fellow, Laboratory of Translational Developmental Sciences, Saint-Petersburg State University, Saint-Petersburg, Russia; Senior Research Fellow, Center for Cognitive Sciences, Sirius University, Federal territory "Sirius", Russia; Research Assistant, Department of Psychology, University of Houston, Houston, TX, USA; ORCID: https://orcid.org/0000–0002–3069–570X, e-mail: marina.zhukova@times.uh.edu

Erika S. Trent, M.A. (Psychology), Doctoral Student, Department of Psychology, University of Houston, Houston, TX, USA, ORCID: https://orcid.org/0000-0003-4775-5999, e-mail: estrent@central.uh.edu

Информация об авторах

Жукова Марина Андреевна, кандидат психологических наук, научный сотрудник, Лаборатория междисциплинарных исследований развития человека, Санкт-Петербургский государственный Университет, Россия; старший научный сотрудник, Центр когнитивных исследований, Университет «Сириус», ФТ «Сириус», Россия; ассистент-исследователь, департамент психологии, Хьюстонский университет, Хьюстон, Техас, США; ORCID: https://orcid.org/0000–0002–3069–570X, e-mail: marina.zhukova@times.uh.edu

Трент Эрика С., магистр (психология), аспирант, департамент психологии, Хьюстонский университет, Хьюстон, Техас, США, ORCID: https://orcid.org/ 0000-0003-4775-5999, e-mail: estrent @central.uh.edu

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Personality Psychopathology and the Role of Self-Compassion[1]

Emily B. Sorem
Sam Houston State University, Huntsville, TX, USA,
ORCID: https://orcid.org/0000-0003-3128-2314, e-mail: emily.brooke.sorem@gmail.com

Kelsey Priebe
Sam Houston State University, Huntsville, TX, USA,
ORCID: https://orcid.org/0000-0003-0409-5417, e-mail: kmp070@shsu.edu

Jaime L. Anderson
Sam Houston State University, Huntsville, TX, USA,
ORCID: https://orcid.org/0000-0002-9840-3726, e-mail: jla068@shsu.edu

Previous research has examined the relationship between particular personality disorders (PDs) and self-compassion. However, the field has developed new methods for assessing and diagnosing personality psychopathology, and previous work has not extended to the Alternative Model for Personality Disorders (AMPD) of the DSM-5. The current study aimed to examine associations between self-compassion and personality psychopathology using an evidence-based assessment and diagnosis approach. The study used Neff's Self-Compassion Scale (SCS) in addition to Criterion A (elements of personality functioning) and Criterion B (pathological traits) of the AMPD in order to observe associations between PDs and self-compassion. The results indicated that there were strong associations between identity and self-compassion, as well as that self-compassion and its components were moderately negatively associated with the majority of the AMPD personality traits. The findings can help to establish working treatment methods for individuals with PDs as well as provide support for the evidence-based hybrid dimensional-categorical model of personality assessment.

Keywords: Self-compassion, empathy, personality psychopathology, alternative model for personality disorders, DSM-5.

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Психопатология личности и роль самосострадания[2]

Эмили Б. Сорем
Государственный университет Сэма Хьюстона, Хантсвилл, Техас, США,
ORCID: https://orcid.org/0000-0003-3128-2314, e-mail: emily.brooke.sorem@gmail.com

Келси Прибе
Государственный университет Сэма Хьюстона, Хантсвилл, Техас, США,
ORCID: https://orcid.org/0000-0003-0409-5417, e-mail: kmp070@shsu.edu

Джейми Л. Андерсон
Государственный университет Сэма Хьюстона, Хантсвилл, Техас, США,
ORCID: https://orcid.org/0000-0002-9840-3726, e-mail: jla068@shsu.edu

В предыдущих исследованиях изучалась взаимосвязь между определенными расстройствами личности (PDs) и самосостраданием. Однако в этой области были разработаны новые методы оценки и диагностики психопатологии личности, и предыдущие исследования не касались альтернативной модели расстройств личности (AMPD) DSM-5. Текущее исследование направлено на изучение связей между самосостраданием и психопатологией личности с использованием подхода к оценке и диагностике, основанного на эмпирических данных. В исследовании используется Шкала самосострадания Кристин Нефф (SCS) в дополнение к критерию А (элементы личностного функционирования) и критерию В (черты патологической личности) альтернативной модели расстройств личности, чтобы обнаружить ассоциации между расстройством личности и самосостраданием. Результаты показали, что существует высокая корреляция между идентичностью и самосостраданием, а также что самосострадание и его компоненты умеренно негативно связаны с большинством личностных черт альтернативной модели расстройств личности. Полученные результаты могут помочь в разработке методов лечения людей с расстройством личности, а также обеспечить поддержку основанной на эмпирических данных гибридной размерно-категориальной модели оценки личности.

Ключевые слова: самосострадание, эмпатия, психопатология личности, альтернативная модель расстройств личности, DSM-5.

[2] Данные, использованные для этого проекта, а также дополнительные материалы находятся в открытом доступе по ссылке: https://osf.io/49sdc/?view_only=31a7040ebd3244d7b815d060ea51d256

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Personality Psychopathology and the Role of Self-Compassion

Personality disorders (PDs) are widely defined as being configurations of maladaptive personality traits accompanied by functional impairment. Research into the DSM-5's current taxometric approach to diagnosis suggests that PDs are better assessed via a dimensional approach [24; 26]. With the introduction of the Alternative Model for Personality Disorders (AMPD), clinicians are able to focus on the expressed symptoms within a broad range of personality psychopathology rather than relying on the specific symptom lists within each disorder. This can lead to better evidence-based case conceptualization and potentially assist in tailoring treatment to each individual to maximize symptom reduction.

A strictly categorical approach to PD diagnosis is currently used in the DSM-5. However, due to numerous criticisms of this model, many have argued a dimensional approach should be implemented [6; 8; 19; 63]. Indeed, there is an absence of research supporting the clinical utility of the categorical model [62], and there is substantial diagnostic overlap [40; 67], resulting in an extensive amount of comorbidity and heterogeneity between and among PD diagnoses. The current conceptualization of PD diagnosis is, therefore, complex, and there is a dearth of evidence-based assessment strategies currently being utilized in clinical settings [53]. Given the stigma associated with PDs [54], and the lack of evidence-based treatment for the variety of PDs listed in the DSM-5 [3; 11], it is concerning that our current method of diagnosing PDs also lacks much empirical support.

In response to these limitations, the DSM-5 created an alternative model for the assessment and diagnosis of personality psychopathology. Section III of the manual includes an Alternative Model for Personality Disorders (AMPD), which takes a hybrid, dimensional-categorical approach. This hybrid model attempts to separate PD "severity" (*Criterion A*) from "style" (*Criterion B*). Criterion A focuses on significant impairments of the self (e.g., identity and self-direction) and interpersonal functioning (e.g., empathy and intimacy), and Criterion B focuses on pathological personality trait domains and facets. Criterion B consists of 25 pathological trait facets subsumed under five pathological domains (Antagonism, Detachment, Disinhibition, Negative Affect, and Psychoticism) that can be conceptualized as a pathological variant of the well-established Five-Factor Model of personality [66]. The model allows for a more dimensional perspective of personality psychopathology in clinical work but also maintains the categorical diagnoses using Criterion A and B (see Appendix 1). Numerous studies have supported the AMPD and the validity of its measures [6; 33; 37]. Given that the model is relatively new and not yet routinely used for diagnosing PDs, research surrounding the model is still somewhat

limited, whereas research studying personality psychopathology using the categorical model is abundant. However, given the lack of a cohesive evidence-based approach to PD assessment and diagnosis using the previous model, it is imperative to further explore the new empirically based system.

Impairment in Personality Functioning in Personality Disorders

Important to the AMPD conceptualization of personality psychopathology, PDs are characterized by impairment in personality functioning. Indeed, numerous studies have shown associations between personality psychopathology and impairment in personality functioning [e.g., 5; 34; 46; 55].

Relevant to the current study is impairment in empathy. Indeed, impairment in empathy has been demonstrated across several PDs [2], with each PD having an explicit profile for impairment in empathy according to the AMPD Criterion A. Additionally, numerous studies supported a lack of empathy, or alteration in empathy, in individuals with borderline personality disorder (BPD), which was predicted to impact the level of impairment in interpersonal relationships of those individuals [9; 20; 45]. Of additional import, numerous studies have suggested that empathy and compassion are strongly related to one another, and research frequently conceptualizes compassion as falling within the broader concept of empathy [4; 13; 23; 70]. Therefore, compassion-focused research, including research into self-compassion, may be relevant to better understanding personality psychopathology both in the categorical and hybrid models. Expanding our understanding of the various facets of impairment associated with personality psychopathology will help researchers to improve the tools used to assess PDs and, in turn, lead to more empirically supported diagnostic strategies.

Self-Compassion

Self-compassion is an ability to understand one's own emotions without judgment or blame. Self-compassion includes three main principles: self-kindness, common humanity, and mindfulness [42]. Self-kindness encompasses an understanding of oneself rather than holding onto judgments of shortcomings. Common humanity is the understanding that no one is perfect and that all humans are flawed. Finally, mindfulness refers to one's ability to have a clear understanding of one's own suffering [42]. Much of the literature on self-compassion supports the idea that individuals with high levels of self-compassion have better emotional coping skills [43]. On the other hand, individuals with low levels of self-compassion tend to judge themselves more harshly than they do others [41]. Not surprisingly, previous work has shown links between self-compassion and the constructs of anxiety and depression. Numerous studies have suggested that self-compassion moderates the relationship between symptoms of depression and anxiety in the presence of psychological stressors [5; 7; 12; 21; 22; 28; 29]. Cumulatively, these studies suggest that higher levels of self-compassion reduce the severity of anxious and depressive symptoms, suggesting that self-compassion is beneficial in times of adversity [41].

Most of the research regarding self-compassion and PDs has specifically focused on BPD, with limited research focused on other PDs. For example, Rivera [50] found evidence supporting the idea that reduced levels of self-compassion increase symptoms of BPD. Relatedly, another study found that Compassion Focused Therapy (CFT), which involved promoting self-compassion, reduced BPD patients' self-loathing symptoms over time [31].

However, the same study found that many individuals with BPD associate self-compassion with self-destructive behaviors, which can lead to a developed fear of self-compassion [31]. Other work has examined shame in NPD populations, where the authors found that shame could potentially be resolved by having patients access their underlying self-compassion in psychotherapy [25]. More recent research into models of self-compassion and PDs have found that paranoid, avoidant, dependent, and borderline PDs all evidence deficits in self-compassion [61].

Although the studies above included a variety of methods and measures of self-compassion, the Self-Compassion Scale [41], appears most frequently in research. The SCS was designed based on the three principle features of self-compassion, including self-kindness vs. self-judgment, common humanity vs. isolation, mindfulness vs. over-identification. Furthermore, the previous studies examining PDs and self-compassion have been limited to the categorical model, which lacks empirical support [19]. Therefore, the utilization of the AMPD and its associations with self-compassion would allow for insight into the specific trait domains and facets, as well as areas of impairment in personality functioning that have the strongest correlations with self-compassion and its facets. Additionally, utilizing both of these measures would increase our understanding of the interplay between self-compassion and personality psychopathology using evidence-based methods. Notably, the AMPD Criterion A provides an explicit profile of impairment in empathy, along with other elements of impairment in personality functioning across PDs that would allow for associations between such areas of impairment and self-compassion to be examined. In addition, the AMPD Criterion B provides pathological trait domains and facets for each PD that can be used to further examine the role of self-compassion in PDs. Therefore, the use of the AMPD is advantageous as it will allow for a more nuanced and empirically supported view of the role of self-compassion in personality psychopathology.

Current Study

The current study aimed to examine self-compassion and its relationship with impairment in personality functioning and pathological personality traits in the AMPD using evidence-based methods of assessment. These concepts are important in considerations for the treatment of individuals with personality psychopathology. Although some research has been conducted regarding the relationship between self-compassion, as measured by the Self-Compassion Scale [41], and personality psychopathology [25; 31; 41; 50], this work has been limited and has utilized strictly categorical approaches that lack the empirical support observed in the AMPD's hybrid dimensional-categorical approach [19]. Therefore, this study examined personality psychopathology and its impairment using a categorical-dimensional approach to increase the relevance of findings from an empirical standpoint.

Although self-compassion and its facets were expected to show at least moderate associations with personality impairment (AMPD Criterion A) in both self and interpersonal functioning broadly, a particularly strong association was expected with impairment in empathy. As noted, past research has supported the interchangeability between empathy and compassion [4; 13; 23; 70]. Therefore, although Empathy in the AMPD model refers to empathy towards others, empathy was expected to show strong associations with self-compassion. Furthermore, at least moderate relationships were expected between self-compassion and its facets and several dimensional personality traits

(AMPD Criterion B). At the domain level, the strongest (negative) association was expected between self-compassion and Negative Affectivity. Given the previous work showing associations between categorical BPD and self-compassion [31; 50], as well as the level of negative affectivity common in individuals with BPD [2; 17; 18], it is expected that self-compassion will show strong associations with trait-based BPD and its associated impairment. Therefore, the strongest associations at the trait facet level were expected between self-compassion and Anxiousness (-), Emotionality Lability (-), Submissiveness (-), and Impulsivity (-), given their prevalence in the dimensional conceptualization of BPD.

Methods

Participants and Procedures

The current study used both an undergraduate sample (n=155) and an Amazon Mechanical Turk (MTurk) sample (n=278). G*Power analysis [10] suggested a sample of 79 to capture a medium effect; therefore, the anticipated sample was adequate for all proposed analyses. All measures were administered online using Qualtrics software, following the participants reading an informed consent document and providing digital consent to participate. Undergraduate students received course credit for their participation. Individuals on Amazon Mturk were compensated $1.50 USD for their participation. All data collection was approved by the Sam Houston State University (SHSU) Institutional Review Board. Groups were analyzed separately in order to focus on similar findings across both samples.

Three hundred and twenty students were included in the undergraduate sample. Using a built-in validity measure (described below), 165 participants were excluded from the analyses, leaving a total of 155 participants. Of the remaining sample, participants were 89.8% female, with a mean age of 20.48 years (SD=3.86). Participants were primarily Caucasian (47.8%), followed by Hispanic/Latino (24.8%), African American (19.7%), Asian (3.2%), and Other race/ethnicities (3.2%; other included participants who identified as “mixed,” “Caucasian/Native American” and “multi-ethnic”). The majority of participants identified as straight/heterosexual (80.3%), with the remainder identifying as bisexual (15.9%), lesbian (0.6%), and gay (0.6%). Of the sample, 25.5% reported having been previously diagnosed with a mental illness.

One thousand responses were included in the MTurk sample, with 722 participants being removed after failing to pass the validity measure, leaving a total of 278 participants. These participants were cleared via the validity check, and their completion time was also evaluated to ensure valid participation. Initial data evaluation also supported the validity of the 278 remaining responses. Of the remaining sample, participants were 59.3% female, with a mean age of 36.70 (SD=12.08). Participants were primarily Caucasian (68.9%), followed by Asian (10.4%), African American (10%), Hispanic/Latino (6.4%), Pacific Islander (0.7%), Native American (0.4%), and Other (2.5%; other included participants who identified as Middle Eastern, European, African European, and “mixed”). Approximately 38.2% of individuals reported a bachelor’s degree as their highest level of education, while 23.9% reported high school as their highest level of education, 18.6% reported having an associate’s or technical degree, 15% reported having a master’s degree, and 3.6% reported having a doctorate. The majority of participants identified as straight/heterosexual

(81.4%), with the remainder identifying as bisexual (10.7%), lesbian (3.2%), gay (2.5%), demisexual/polyamorous (0.4%), and fluid (0.4%). Of the sample, 25.4% reported having been previously diagnosed with a mental illness.

The data used for this project as well as supplementary materials are publicly available and can be found at: https://osf.io/49sdc/?view_only=31a7040ebd3244d7b815d060ea51d256

Measures

Self-Compassion Scale (SCS). The SCS [41] is a 26-item self-report questionnaire designed to assess an individual's level of self-compassion as characterized by the three components of Self-Kindness, Common Humanity, and Mindfulness. Each of the 26 items is answered on a 5-point scale ranging from 1 (almost never) to 5 (almost always). The three components of the SCS are then integrated to identify a single higher-order self-compassion scale. The internal consistencies for both samples are shown in Appendix 1.

Personality Inventory for DSM-5 (PID-5). The PID-5 [2] is a 220-item self-report questionnaire developed to measure the pathological personality traits in Criterion B of the AMPD. Items are answered on a 4-point scale ranging from 0 (very false or often false) to 3 (very true or often true). It assesses five-dimensional trait domains (Negative Affect, Disinhibition, Antagonism, Detachment, and Psychoticism), which are further divided into 25 facets. Previous research has supported the reliability, validity, and factor structure of this measurement of pathological traits (see [1] for a review). The current study used the official PID-5 scoring algorithm, and all scores were derived using the mean across all items on each domain or facet. The internal consistencies for both samples are shown in Appendix 1.

Level of Personality Functioning Scale Self-Report (LPFS-SR). The LPFS-SR [36] is an 80-item self-report questionnaire designed to measure the severity of one's personality psychopathology across the four dimensions included in Criterion A of the AMPD. These four dimensions of personality functioning include identity, self-direction, empathy, and intimacy. Each item is measured on a 4-point scale ranging from 1 (totally false) to 4 (very true). Previous research supports the overall reliability and validity of the measure [36]. The internal consistencies for both samples are shown in Appendix 1.

Validity Indicator. Because the measures used in this study do not have built-in validity scales, six validity items were dispersed throughout to ensure participants were responding appropriately to the item content. Validity indicator items were written as statements that a majority of participants would disagree with, such as "I am only friends with people born in August." Individuals who agreed with two or more validity items were removed from analyses.

Results

Given the number of comparisons in the current study, there is an inflated possibility for Type I error. Therefore, we used a Bonferroni corrected alpha of $p<.001$ to determine statistical significance. This was calculated by dividing the original alpha value ($p<.05$) by the number of tests being conducted with each dependent variable (n=48). In addition, we only interpreted moderate correlations ($r>.30$) as meaningful. All moderate correlations

were also statistically significant in the current study. Finally, we included associations between demographic variables and main study variables (See Supplemental Tables 2 through 6 at https://osf.io/49sdc/?view_only=31a7040ebd3244d7b815d060ea51d256). The two samples differed significantly from one another in both gender, $\chi^2(2, 429)=47.01$, $p>.05$, and ethnicity, $\chi^2(6, 430)=52.07$, $p>.05$. As age was significantly correlated with multiple variables of interest, we controlled for this in our analyses.

First, we evaluated the zero-order associations between the LPFS-SR impairment in personality functioning and self-compassion. These results are shown in Appendix 2. All LPFS-SR Total and subscale scores were moderately or largely correlated with the SCS Total and subscale scores in both samples. However, the LPFS Identity subscale and the LPFS Total scale were the only scales that showed strong correlations across the majority of facets of self-compassion in both samples. Additionally, although the LPFS Empathy subscale was expected to have particularly strong correlations with self-compassion, it showed the weakest correlations with all facets of self-compassion compared with the other total and subscales of functional impairment.

Next, we evaluated the zero-order associations between AMPD pathological personality domains and trait facets on the PID-5-SF and self-compassion using the SCS. These results are shown in Appendix 3. The majority of AMPD domains and traits facets were moderately correlated with SCS total and subscale scores in both samples. The strongest association was found between the trait domains Negative Affectivity, followed by Detachment and Disinhibition. The majority of Negative Affectivity trait facets had moderate negative correlations, with the facets of Anxiousness and Emotional Lability exhibiting the strongest correlations. Additionally, particular facets of Detachment (i.e., Withdrawal, Anhedonia, Depressivity, and Suspiciousness) and Disinhibition (i.e., Impulsivity and Distractibility) showed moderate associations with SCS total and subscale scores. However, no associations were found between the trait facet Grandiosity and self-compassion in either sample.

Discussion

The primary purpose of the current study was to investigate the role of self-compassion in personality psychopathology, as measured in the DSM-5 AMPD. Two samples were examined in the study to investigate the convergence of self-compassion and the AMPD scores across both samples. We examined self-compassion and its associations with impairment in personality functioning and pathological personality domains and traits. The utilization of two samples allowed us to see if the findings would be similar across undergraduate and community populations. We focus this discussion on findings that were compared across both samples.

Our results showed a pattern of moderate to strong negative associations between impairment in personality functioning and the three facets of self-compassion. This was not surprising, given that previous research indicates self-compassion is associated with better emotional coping skills [2; 43]. However, we predicted that impairment in personality functioning in empathy, specifically, would have the strongest association with self-compassion and its facets due to previous research suggesting that empathy and compassion are interchangeable terms [4; 13; 70]. Despite our prediction, the results

showed that although impairment in empathy had moderate negative associations with self-compassion and its facets (as expected), the associations were weaker compared with other total and subscales of the LPFS. Instead, Identity evidenced the strongest associations with self-compassion. This may be accounted for by previous research that indicated that individuals that judge themselves more harshly tend to have lower levels of self-compassion [41], which may be better accounted for by impairment in empathy. In addition, it is possible that empathy and compassion are interchangeable terms but that the operationalization of empathy in the AMPD is different from empathy operationalized by self-empathy. Nonetheless, this finding extends beyond previous literature in regard to the relationship between self-compassion and impairment in personality functioning and provides further insight into the underlying components of the assessment tools used.

The second aim of the study was to investigate associations between self-compassion and its facets and specific trait domains and facets of Criterion B. The domain of Negative Affectivity was shown to have the strongest (negative) associations with self-compassion, followed by Detachment and Disinhibition. These findings are consistent with expectations. More specifically, moderate associations were found with Negative Affectivity's traits of Anxiousness, Emotional Lability, and Submissiveness, with the first two showing the strongest associations. Given previous research suggesting that low levels of self-compassion can impact and exacerbate BPD symptomology [50], it is unsurprising that Negative Affectivity (a core feature of BPD) and its composite traits were found to have strong negative associations.

Furthermore, particular traits of the domains of Detachment (i.e., Withdrawal, Anhedonia, Depressivity, and Suspiciousness) and Disinhibition (i.e., Impulsivity and Distractibility) were found to have moderate negative associations. Although these were not hypothesized to be among the strongest associations, past findings have shown a relationship between higher levels of self-compassion and both anxious and depressive symptoms [7; 21; 22; 28; 29; 41], making the Detachment associations less surprising. Furthermore, this finding provides additional evidence that using a dimensional approach to personality psychopathology allows for a more in-depth understanding of the specific underlying facets of personality psychopathology, rather than limiting our understanding to a single PD.

Implications

Overall, our findings have implications for the role self-compassion plays in personality psychopathology. More specifically, given the lack of research on the relationship between self-compassion and personality psychopathology from the dimensional perspective, the current study examined each element of impairment in personality functioning and pathological trait domains and facets. These associations helped to provide insight into areas of dysfunction associated with particular traits. For instance, the study found notably stronger associations between self-compassion and particular subscales of impairment in personality functioning (i.e., identity). The identity subscale was found to have even stronger associations with self-compassion than empathy, which could be a subject for further research. Examining different facets of identity and their associations with self-compassion may aid in a better understanding of how to treat those with identity impairment (e.g., by working to improve self-compassion). The findings

also have implications for how identity and empathy are measured in the AMPD, in that empathy toward oneself is better accounted for in the identity subscale. Though not necessarily surprising (and not inherently problematic), this is important in understanding how to best classify areas of impairment in the AMPD.

Further, the implications also extend to the trait model of the AMPD. Three trait domains (i.e., Negative Affectivity, Detachment, and Disinhibition) showed the largest associations with self-compassion. Of note, the strong correlations between Negative Affectivity and self-compassion in the current study indicate a need to further examine the similarities between these two constructs. Though the associations between Detachment and self-compassion were not surprising given previous research on self-compassion and its role in anxiety and depression, these findings extend previous work into the AMPD. Indeed, as we move toward integrating the AMPD and other evidence-based methods for diagnosis into general clinical practice, it will be important to have a thorough understanding of the way in which pathological personality traits coexist with other problematic areas of functioning (such as lacking in self-compassion).

Importantly, treatment methods, such as Compassion-Focused Therapy (CFT), have been developed to increase compassion for the self and others [31; 57; 59]. Therefore, the strong negative associations found between particular trait domains and facets and self-compassion suggest the need for further research into the use of CFT in PD populations. For instance, it is possible that trait domains and facets with strong negative associations with self-compassion would be more likely to benefit from therapy that targets that particular area of impairment. However, there has been limited work related to treatment efforts focused on the AMPD. Therefore, further research might contribute to a better understanding of shared impairment, which could impact the way working treatment plans are approached and established.

Limitations and Future Directions

There are several limitations of the current study that should be noted. First, the number of statistical analyses leads to inflated error. Although we attempted to mitigate this by using two samples, using a Bonferroni corrected alpha, and focusing on findings with moderate effect sizes, the possibility for error should not be ignored. In addition, the Cronbach's alphas for some trait facets of the PID-5-SF were found to have poor internal consistencies (i.e., Suspiciousness, Perceptual Dysregulation, Unusual Beliefs and Experiences, Deceitfulness, and Irresponsibility). However, none of the aforementioned traits were predicted to have a particularly strong association with self-compassion.

Another limitation was the imbalance of gender within our undergraduate sample. Although our MTurk sample had a more balanced proportion of men to women, our undergraduate sample was largely female. Therefore, our results related to undergraduate men should be interpreted with caution, and future directions may benefit from looking further into these results in men. Furthermore, no clinical samples were utilized in the study. Therefore, the potential range restriction at the more pathological ends of the domains is another limitation. Future directions should include a possible replication of the study in clinical samples to account for the more extreme expressions of pathological trait domains. Finally, the utilization of self-report measures in the current study was another

potential limitation. The use of multi-method assessments that include behavioral indicators and interview rated data, along with self-report, would be beneficial in understanding these relationships in the future and should be considered for future research.

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Appendix 1

Descriptive and Inferential Statistics for SCS, PID-5-SF, and LPFS

	Undergraduate			Community		
	α	M	SD	α	M	SD
SCS						
Self-kindness vs. Self-judgment	**.90**	3.02	.93	**.87**	2.71	.81
Common humanity vs. Isolation	**.83**	3.12	.86	**.78**	3.01	.76
Mindfulness vs. Overidentification	**.87**	3.24	.90	**.76**	3.01	.72
SCS total	**.95**	3.13	.85	**.93**	2.91	.70
PID-5-SF						
Antagonism	**.90**	.56	.54	**.84**	.35	.39
Manipulative	**.80**	.69	.65	**.76**	.47	.55
Deceitfulness	**.80**	.53	.62	.67	.36	.47
Grandiosity	**.85**	.48	.64	**.71**	.24	.40
Attention Seeking	**.84**	.72	.72	**.90**	.88	.81
Callousness	**.85**	.35	.57	**.84**	.20	.41
Detachment	**.90**	.76	.63	**.86**	.70	.56
Withdrawal	**.84**	.99	.78	**.76**	.84	.66
Intimacy Avoidance	**.85**	.59	.71	**.83**	.61	.73
Anhedonia	**.90**	.72	.81	**.72**	.66	.77
Depressivity	**.90**	.53	.76	**.90**	.46	.71
Restrict Affect	**.79**	2.04	.72	**.83**	2.22	.74
Suspiciousness	**.77**	.74	.70	.67	.70	.60
Disinhibition	**.90**	.72	.60	**.88**	.75	.57
Irresponsibility	**.74**	.41	.56	.63	.26	.42
Impulsivity	**.88**	.75	.74	**.90**	.65	.78
Distractibility	**.90**	1.00	.85	**.89**	1.33	.92
Risk Taking	**.87**	.63	.68	**.78**	.64	.61
Rigid Perfectionism	**.82**	2.01	.76	**.86**	1.92	.84
Negative Affectivity	**.91**	1.01	.70	**.90**	1.29	.71
Emotional Lability	**.88**	.79	.77	**.85**	1.05	.86
Anxiousness	**.90**	1.33	.94	**.84**	1.65	.85
Separation Insecurity	**.82**	.91	.80	**.85**	1.17	.89

Submissiveness	**.85**	1.12	.75	**.83**	1.03	.74
Hostility	**.86**	.73	.77	**.83**	.86	.77
Perseverance	**.84**	.95	.75	**.81**	.90	.73
Psychoticism	**.90**	.62	.60	**.84**	.56	.50
Unusual Beliefs & Experiences	**.76**	.53	.64	.62	.48	.57
Eccentricity	**.89**	.99	.91	**.88**	.93	.86
Perceptual Dysregulation	**.76**	.33	.52	.60	.26	.40
LPFS						
LPFS_Identity	**.87**	80.94	24.17	**.84**	84.92	21.88
LPFS_Self-direction	**.83**	55.59	18.27	**.81**	56.71	17.37
LPFS_Empathy	**.77**	40.24	13.30	**.74**	38.53	11.59
LPFS_Intimacy	**.86**	65.43	21.21	**.80**	66.46	18.69
LPFS_Total	**.95**	241.75	69.33	**.93**	246.36	59.90

Notes. PID-5-SF — Personality Inventory of DSM-5 Short Form; LPFS — Level of Personality Functioning. Significant alpha values are presented in boldface font.

Appendix 2

Pearson Correlations for SCS and AMPD Criterion A: LPFS controlling for age

	SelfKind_SelfJ	ComHum_Isol	Mindf_Overid	SCS total
LPFS_Identity	**-.60*/-.58***	**-.63*/-.62***	**-.66*/-.59***	**-.67*/-.65***
LPFS_Self-direction	**-.40*/-.38***	**-.47*/-.36***	**-.49*/-.49***	**-.48*/-.44***
LPFS_Empathy	**-.33*/-.31***	**-.41*/-.29***	**-.42*/-.42***	**-.41*/-.37***
LPFS_Intimacy	**-.37*/-.33***	**-.46*/-.37***	**-.46*/-.46***	**-.46*/-.42***
LPFS_Total	**-.48*/-.48***	**-.56*/-.49***	**-.57*/-.57***	**-.57*/-.55***

Notes. SelfKind_SelfJ — Self-kindness vs. Self-judgment; ComHum_Isol — Common humanity vs. Isolation; Mindf_Overid — Mindfulness vs. Overidentification); LPFS — Level of Personality Functioning The correlations prior to the slash represent the community sample and the correlations following the slash represent the undergraduate sample. Significant values are presented in boldface font; * — correlations that met the threshold for the Bonferroni correction.

Appendix 3

Pearson Correlations for SCS and AMPD Criterion B: PID-5-SF controlling for age

	SelfKind_SelfJ	ComHum_Isol	Mindf_Overid	SCS total
Antagonism	-.09/-.06	-.12/-.03	-.17/-.12	-.14/-.07
Manipulative	-.02/-.10	-.00/-.02	-.02/-.14	-.00/-.09
Deceitfulness	-.16/-.18	**-.21*/**-.15	**-.26*/**-.21	**-.23***/-.20
Grandiosity	.02/.05	-.06/-.02	-.10/-.08	-.06/-.01
Attention Seeking	-.08/-.11	-.07/-.10	-.17/-.20	-.11/-.14
Callousness	-.14/-.10	-.16/-.11	-.15/-.15	-.16/-.13
Detachment	**-.53*/-.51***	**-.49*/-.46***	**-.52*/-.45***	**-.55*/-.52***
Withdrawal	**-.46*/-.44***	**-.43*/-.47***	**-.43*/-.40***	**-.47*/-.48***
Intimacy Avoidance	**-.20/-.23**	-.15/-.15	**-.18**/-.15	**-.19/-.20**
Anhedonia	**-.58*/-.51***	**-.56*/-.48***	**-.59*/-.47***	**-.62*/-.53***
Depressivity	**-.53*/-.50***	**-.53*/-.53***	**-.54*/-.47***	**-.58*/-.55***
Restricted Affectivity	-.05/.15	-.01/.12	-.07/-.02	-.01/.09
Suspiciousness	**-.40*/-.37***	**-.43*/-.37***	**-.44*/-.47***	**-.46*/-.43***
Disinhibition	**-.44*/-.29***	**-.42***/-.23	**-.51*/-.44***	**-.49*/-.34***
Irresponsibility	**-.27***/-.16	**-.24***/-.12	**-.30***/-.28	**-.29***/-.20
Impulsivity	**-.27*/-.28***	**-.24***/-.22	**-.37*/-.35***	**-.32*/-.31***
Distractibility	**-.49*/-.34***	**-.43*/-.29***	**-.49*/-.40***	**-.51*/-.37***
Risk Taking	-.04/-.05	-.06/-.00	-.09/-.14	-.06/-.07
Rigid Perfectionism	**.38*/.30***	**.27*/.34***	**.38*/.31***	**.37*/.34***
Negative Affectivity	**-.65*/-.47***	**-.60*/-.43***	**-.73*/-.60***	**-.70*/-.54***
Emotional Lability	**-.40*/-.40***	**-.37*/-.37***	**-.54*/-.54***	**-.57*/-.47***
Anxiousness	**-.66*/-.49***	**-.60*/-.45***	**-.70*/-.52***	**-.70*/-.53***
Separation Insecurity	**-.38*/-.42***	**-.34*/-.32***	**-.46*/-.51***	**-.42*/-.45***
Submissiveness	**-.39*/-.31***	**-.36*/-.28**	**-.44*/-.26**	**-.42*/-.31***
Hostility	**-.46*/-.36***	**-.40*/-.37***	**-.56*/-.43***	**-.51*/-.42***
Perseverance	**-.47*/-.46***	**-.45*/-.37***	**-.56*/-.47***	**-.53*/-.47***

Psychoticism	**-.31***/-.12	**-.30***/-.16	**-.36***/-.15	**-.35***/-.16
Unusual Beliefs & Experiences	**-.18***/-.05	-.15/-.09	**-.21**/-.05	**-.19**/-.07
Eccentricity	**-.34***/-.19	**-.33*/-.24**	**-.37***/-.17	**-.37***/-.22
Perceptual Dysregulation	**-.16**/.00	**-.18***/-.06	**-.20***/-.09	**-.19***/-.05

Note. SelfKind_SelfJ — Self-kindness vs. Self-judgment; ComHum_Isol — Common humanity vs. Isolation; Mindf_Overid — Mindfulness vs. Overidentification); PID-5-SF — Personality Inventory of DSM-5 Short Form. The correlations prior to the slash represent the community sample and the correlations following the slash represent the undergraudate sample. Significant values are presented in boldface font; * — correlations that met the threshold for the Bonferroni correction.

Information about the authors

Emily B. Sorem, M.A. (Psychology), Research Associate, Sam Houston State University, Huntsville, TX, USA, ORCID: https://orcid.org/0000-0003-3128-2314, e-mail: emily.brooke.sorem@gmail.com

Kelsey M. Priebe, M.A. (Psychology), Research Associate, Sam Houston State University, Huntsville, TX, USA, ORCID: https://orcid.org/0000-0003-0409-5417, e-mail: kmp070@shsu.edu

Jaime L. Anderson, PhD (Psychology), Research Associate, Professor, Sam Houston State University, Huntsville, TX, USA, ORCID: https://orcid.org/0000-0002-9840-3726, e-mail: jla068@shsu.edu

Информация об авторах

Сорем Эмили Б., магистр (психология), научный сотрудник, Государственный университет Сэма Хьюстона, Хантсвилл, Техас, США, ORCID: https://orcid.org/0000-0003-3128-2314, e-mail: emily.brooke.sorem@gmail.com

Прибе Келси М., магистр (психология), научный сотрудник, Государственный университет Сэма Хьюстона, Хантсвилл, Техас, США, ORCID: https://orcid.org/0000-0003-0409-5417, e-mail: kmp070@shsu.edu

Андерсон Джейми Л., PhD (психология), научный сотрудник, профессор, Государственный университет Сэма Хьюстона, Хантсвилл, Техас, США, ORCID: https://orcid.org/0000-0002-9840-3726, e-mail: jla068@shsu.edu

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Treating Posttraumatic Stress Disorder in Combat Veterans: A Guide to Using Behavior Therapy for Anxiety and PTSD (BTAP)

Jason T. Goodson[1]
VA Salt Lake City Health Care Systems, Salt Lake City, UT, USA,
ORCID: https://orcid.org/ 0000-0002-6048-7784, e-mail: jason.goodson@va.gov

Gerald J. Haeffel
University of Notre Dame, Notre Dame, IN, USA
ORCID: https://orcid.org/0000-0002-4029-1493, e-mail: ghaeffel@nd.edu

PTSD is a chronic and disabling condition associated with psychiatric and medical comorbidity and diminished quality of life. Military Veterans are at increased risk for developing PTSD, and combat-related PTSD may be more difficult to treat than civilian PTSD. Both Prolonged Exposure and Cognitive Processing Therapy are empirically supported treatments for PTSD in military populations with a strong empirical foundation. However, they require considerable resources to implement and can be difficult for providers and patients to learn. To address these limitations, we created Behavioral Therapy for Anxiety and PTSD (BTAP), which is a simple, behavior-based therapy rooted in learning theory. Building on empirically established therapies such as Prolonged Exposure, BTAP has a singular focus on identifying, reducing, and countering safety behaviors that maintain PTSD. Because it only focuses on safety behaviors, it is simple to learn and implement; therapist trainings are one day, and follow-up consultation provided as needed. In this special issue article, we describe the BTAP protocol as well as provide real world case examples from Veterans to illustrate key components of the treatment. We also present data from five Veteran patients that demonstrate feasibility, acceptance, and preliminary evidence of effectiveness. Patients reported significant reductions in PTSD symptoms, depressive symptoms, intrusions, and safety behaviors. This work suggests that BTAP for treating PTSD merits further investigation.

Keywords: safety behaviors, PTSD, BTAP, treatment interventions, veterans.

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[1] Correspondence concerning this article should be addressed to Jason T. Goodson, PTSD Clinical Team, VA Salt Lake City Health Care Systems.

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Гудсон Дж.Т., Хеффель Дж.Дж. Лечение ПТСР у ветеранов боевых действий: руководство по использованию поведенческой терапии при тревоге и ПТСР (BTAP)
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Лечение посттравматического стрессового расстройства у ветеранов боевых действий: руководство по использованию поведенческой терапии при тревоге и посттравматическом стрессовом расстройстве (BTAP)

Гудсон Дж.Т.[2]
Администрация по делам ветеранов, Солт-Лейк-Сити, Юта, США,
ORCID: https://orcid.org/0000-0002-6048-7784, e-mail: jason.goodson@va.gov

Хеффель Дж.Дж.
Университет Нотр-Дам, Нотр-Дам, Индиана, США,
ORCID: https://orcid.org/0000-0002-4029-1493, e-mail: ghaeffel@nd.edu

Посттравматическое стрессовое расстройство (ПТСР) — это хроническое и дезадаптирующее состояние, связанное с психиатрическими и другими заболеваниями и снижением качества жизни. Ветераны боевых действий подвергаются повышенному риску развития ПТСР, и оно может хуже поддаваться лечению, чем у гражданского населения. Как пролонгированная экспозиция, так и терапия когнитивной обработки являются эмпирически подтвержденными методами лечения ПТСР у военнослужащих. Однако для их внедрения требуются значительные ресурсы, и поставщикам медицинских услуг, а также пациентам может быть трудно их освоить. Чтобы устранить эти ограничения, мы разработали поведенческую терапию тревоги и посттравматического стрессового расстройства (Behavioral Therapy for Anxiety and PTSD), которая представляет собой простую поведенческую терапию, основанную на теории обучения. Основываясь на эмпирически доказанных методах лечения, таких как пролонгированная экспозиция, поведенческая терапия тревоги и посттравматического стрессового расстройства, уделяется особое внимание выявлению, снижению и противодействию охранительному поведению, которое поддерживает ПТСР. Поскольку терапия фокусируется только на охранительном поведении, ее легко освоить и внедрить. Тренинги для терапевтов проводятся в течение одного дня, а последующие консультации проводятся по мере необходимости. В этой статье специального выпуска мы описываем протокол поведенческой терапии тревоги и ПТСР, а также приводим реальные примеры из практики, чтобы проиллюстрировать ключевые компоненты лечения. Мы также представляем данные пяти пациентов-ветеранов, демонстрирующие целесообразность, приемлемость и предварительные доказательства эффективности терапии. Пациенты сообщали о значительном снижении симптомов ПТСР и депрессии, а также навязчивых состояний

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и охранительного поведения. Эта работа предполагает, что поведенческая терапия тревоги и ПТСР требует дальнейшего изучения в качестве средства лечения ПТСР.

Ключевые слова: охранительное поведение, посттравматическое стрессовое расстройство, поведенческая терапия тревоги и ПТСР, лечебные вмешательства, ветераны.

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Posttraumatic Stress Disorder (PTSD) is a chronic and disabling condition affecting 5–10% of the U.S. general population [29] and approximately 3.9% in cross-national samples [31] (see Table 1 for diagnostic criteria). It is associated with high rates of both psychiatric and medical disorders. For example, people with PTSD are more likely to experience mood disorders, anxiety disorders, substance use disorders, chronic pain, and cardiovascular disease [1; 3; 29; 45]. PTSD is also associated with significant problems in relationships, early retirement and job loss, and diminished quality of life [2; 6; 22; 48].

Rates of PTSD are higher for military veterans (ranging from 10–25%) compared to the general population [27; 34; 35]. A number of factors have been shown to increase the risk for PTSD in military veterans, including younger age, racial minority status, lower socioeconomic status, higher number of deployments, prior emotional problems, and lack of social support [40]. Moreover, military or combat-related PTSD may be more difficult to treat than civilian PTSD [19; 36]. For instance, studies have found large non-response rates among military and veteran populations [14], high drop-out rates [43], and smaller treatment effect sizes [5; 7]. That said, there is still a large effect size for evidence-based psychotherapies in combat veterans (d=1.2, [20]).

The PTSD treatments with the greatest empirical support are Prolonged Exposure Therapy and Cognitive Processing Therapy. Prolonged Exposure is a behavioral based therapy with strong empirical support for military related PTSD [11; 20; 43]. The standard Prolonged Exposure protocol is usually around 12 sessions in military veterans [21] and has 4 major components: 1) psychoeducation about trauma and PTSD; 2) breathing retraining; 3) *in vivo* exposure; and 4) imaginal exposure.

Cognitive Processing Therapy is arguably the most used therapy across the United States Veteran Health Administration System, and it has a large body of empirical support [40; 41]. Cognitive Processing Therapy is based on the theory that trauma related beliefs and interpretations (also known as cognitive “stuck points”) maintain PTSD symptomology. These stuck points are either assimilated (changing the event to take responsibility or blame on self) or over-accommodated (rigid all-or-nothing beliefs about the world or others). Cognitive restructuring interventions are used to increase awareness

about trauma-related thoughts and eventually challenge trauma-related beliefs (stuck points; [41]).

Building on Existing Treatments — Behavior Therapy for Anxiety and PTSD

Both Prolonged Exposure and Cognitive Processing Therapy are empirically supported treatments for PTSD in military populations with a strong empirical foundation. However, they are not without limitations. First, these therapies can require considerable time, financial, and personnel resources to implement. For example, standard Prolonged Exposure trainings are 4 full days followed by approximately 6 months of individual and group supervision (weekly). This a time consuming and costly proposition which often does not result in continued implementation by providers. For example, in one large urban Veteran Administration center, only 20% of 45 licensed providers continued to practice Prolonged Exposure after completing the initial training [15].

Further, these therapies can be difficult for patients to fully understand and implement on their own. For example, cognitive interventions for PTSD require a patient to learn to identify automatic thoughts, evaluate their veracity, and then generate new cognitions. This highly deliberate and effortful restructuring process needs to be taught, practiced, and ultimately performed at times when the therapist is not there to help. Further, patients often need to complete the restructuring process during times of heightened emotions and high stress, when cognitive resources are even further diminished [23]. Another limitation is that the exercises used, and content discussed, in these treatments are emotionally arousing and highly distressing (e.g., repeated imaginal exposure). Thus, it may not be surprising that these therapies have drop-out rates ranging from 16% to 54% [11; 26; 28; 43]. Finally, recent findings have suggested that hypervigilance (along with sleep) are the least likely symptoms to respond in empirically-based principles treatments for PTSD [8].

To address these limitations, we created Behavioral Therapy for Anxiety and PTSD (BTAP), which is a simple, behavior-based therapy rooted in learning theory. Building on empirically established therapies such as Prolonged Exposure, BTAP has a singular focus on identifying, reducing, and countering safety behaviors that maintain PTSD. Because it only focuses on safety behaviors, it is simple to learn and implement; therapist trainings are one day, and follow-up consultation provided as needed.

What Are Safety Behaviors?

“Safety behaviors” are actions and mental processes that people engage in to avoid feared outcomes [42]. They manifest in a variety of forms ranging from excessive reassurance seeking to frequent handwashing. The use of safety behaviors can be adaptive, and even necessary, in the presence of actual threat such (such as being hypervigilant during combat). However, in the absence of actual threat, the use of safety behaviors has been associated with negative outcomes, particularly increases in anxiety [9; 13; 18; 39]. Studies show that reducing safety behaviors enhances treatment outcomes across anxiety disorders [30; 37; 38; 47]. For example, a meta-analysis by Heibig-Lang and Petermann [24] found that the efficacy of exposure therapy could be increased by reducing safety

behaviors. Similarly, failure to address safety behaviors results in smaller treatment gains [25; 44] and the reemergence of anxious symptoms after treatment [4]. Surprisingly, despite the inclusion of safety behaviors in early conceptualizations of PTSD [10], no clinical interventions have examined the effect of reducing and countering safety behaviors on symptoms of PTSD. In PTSD, common safety behaviors include: vigilance (e.g., scanning others for danger) suppression (e.g., pushing away trauma memories, keeping mind occupied, distraction), checking (checking doors/windows are locked), escape/evade (leaving situations early), avoidance/withdrawal (lack of engagement in situations and activities), worry/rumination (excessive planning, analyzing traumatic events), and safety bolstering (e.g., safety aids such as guns) [16].

In the sections to follow, we describe the BTAP manualized treatment (available on the Open Science Framework: https://osf.io/z38qv/), provide case examples and report preliminary support for its effectiveness in military veterans.

BTAP Protocol

BTAP has four treatment phases: 1) assessment, 2) education, 3) safety behavior reduction related to intrusive imagery (e.g., suppression of trauma memories), and 4) safety behavior reduction related to threat and anxiety (e.g., vigilance). An optional fifth phase is focused on safety behavioral reduction related to trust, withdrawal, and rumination. We provide case-example information and preliminary treatment data on 5 BTAP cases. All cases were veterans diagnosed with PTSD and treated on a VA PTSD Clinical Team.

Phase 1: Assessment

Patients are first administered baseline assessments of safety behavior usage and PTSD symptoms. We use the Safety Behavior Assessment Form (SBAF; [18]) and the PCL-5 (PTSD Checklist for DSM-5; [46] for these purposes, respectively (available on Open Science Framework: https://osf.io/z38qv/). The SBAF assesses safety behaviors in a wide variety of anxiety and trauma-related conditions; it consists of 6 subscales: PTSD, vigilance, generalized, social, panic, and health. The PTSD subscale consists of 12 common PTSD safety behaviors that are frequently targeted in BTAP. However, assessment for additional safety behaviors is crucial as many are ideographically related to patient fears (see BTAP manual available on Open Science Framework for lists of safety behaviors not covered by the SBAF). A few core safety behaviors may be added to the PTSD subscale for each patient (although these additions are not included in the total score). The PTSD subscale, along with the PCL-5, are used to track progress in treatment across sessions.

Case Example. Adam was an Iraq veteran in his 30s' with a PTSD diagnosis. He was administered the SBAF and scored high on the PTSD subscale as expected (mean item score of 2.3; range is 0-3) endorsing items such as scoping places out before entering, sitting with back to wall, watching others for signs of danger, and checking locks on doors and window. These items were recorded as safety behaviors he might choose to try to eliminate. He also scored high on the social anxiety subscale (mean item score of 2.3) endorsing items such as monitoring conversations, monitoring others' reactions, preparing what to say ahead of

time, and hiding anxiety. Based on this information, the therapist probed for a possible comorbid Social Anxiety Disorder and found that Adam did indeed meet criteria. In discussing treatment goals, it was agreed to incorporate a small number of social anxiety safety behaviors to address in treatment (self-monitoring, prolonging conversations, etc.).

Phase 2: Education (Sessions 1–3)

Phase two is dedicated to socialization and teaching patients about safety behaviors. The first session involves socialization to treatment, assessing motivation, and establishing treatment goals and expectations. For example, the client is informed that he or she will be expected to do homework on a daily basis. Likewise, he or she is told that safety behavior practices will often necessitate going places specifically to practice the exercises, and that it will not be possible to complete this treatment without any changes to one's routine. Additionally, it is explained that self-report measures will be completed each session and discussed. Finally, the patient is introduced to the two major phases of treatment (i.e., safety behavior reduction related to intrusive imagery and safety behavior reduction related to threat and anxiety) and he or she selects which one with which to begin.

After socialization, the beginning sessions are dedicated to education about safety behaviors including: a) what they are, b) how they maintain PTSD symptoms, c) how to monitor them, and d) how to reduce/eliminate them. Additionally, patient's major safety behaviors are identified along with corresponding fears or beliefs, as well as how these have maintained the patient's symptoms over time. A corresponding client workbook helps solidify the education provided in treatment (available on Open Science Framework: https://osf.io/z38qv/).

Finally, monitoring is carried out. This includes identifying safety behaviors in real time as well as the fear or negative belief driving each safety behavior identified. Identified safety behaviors and corresponding negative beliefs or fears are recorded to consider for elimination. In addition, a behavior experiment designed to identify safety behaviors is included as an optional monitoring component; patients engage in a challenging situation for the purposes of eliciting safety behaviors. Upon completion of the education and monitoring phase, all major safety behaviors should be identified. The list of safety behaviors (from questionnaires, in-person queries, and monitoring) is called the "master list"; it should contain approximately 10–20 safety behaviors to be addressed in treatment.

Case Example. Don is a married, White, male in his 70's who was a highly successful career service member. He was experiencing PTSD symptoms. After socialization, Don was given information about the temporary nature of anxiety and trauma and factors that cause them to become chronic. First, it was explained that trauma memories are unprocessed (i.e., unfinished business) which results in continued intrusions and high levels of associated distress. The intrusive memory and related negative emotions result in safety behaviors. The session ended with two homework assignments: 1) read chapters 1 and 2 from the safety behavior client workbook; and 2) monitor safety behaviors using the "Where, What, Why" safety behavior monitoring form (available on Open Science Framework: https://osf.io/z38qv/).

Phase 3: Intrusive Imagery Safety Behaviors (Sessions 3–7)

This phase consists of four primary components. The first component is the elimination of safety behaviors related to intrusive memories (e.g., distracting oneself, and not talking about the traumatic memory). Patients are asked to eliminate these safety behaviors in conjunction with the following three strategies:

1) Acceptance of Intrusive Memories and Related Feelings: This safety behavior elimination strategy begins with education about the paradoxical effects of memory and emotion suppression. Following, acceptance of intrusive memories is introduced, taught, and practiced in-session ("Welcoming Intrusions"). Specifically, patients are instructed to recall intrusive images and then recognize their bodily sensations and feelings. For homework, patients are asked to practice in-the-moment acceptance when intrusions occur as well as carrying out Welcoming Intrusions for 15 minutes per day. In-the-moment acceptance of intrusions is considered a core skill and is practiced throughout all of treatment.

It should be noted that one of the most common safety behaviors in PTSD is keeping oneself (and mind) busy. To reduce this safety behavior, the patient should be asked to conduct an experiment in which he or she does nothing for 30 minutes. Distressing thoughts or memories should be written down in a journal. Following, the patient should be instructed to spend certain periods of time each day doing nothing (this can be presented as opportunity to practice in-the-moment acceptance).

2) Purposeful Trauma Recall: This is a safety behavior countering strategy that naturally follows intrusion acceptance practice. In this countering strategy, the trauma is slowly walked through with images being identified for each major scene of the trauma. Following, the patient is asked to recall and hold each image and fully accept ("lean into and embrace") the feelings. This exercise typically takes 20–30 minutes and the patient is asked to practice each day.

3) Written Trauma Exposure: This is a safety behavior countering strategy in which the patient writes a narrative about the trauma. Throughout the writing process, the therapist periodically asks the veteran to stop and feel his or her feelings. Upon completion of the written exposure, the veteran reads the narrative to the therapist. In between sessions, the patient reads the narrative each day and when new details emerge, he or she is asked to add them to the end of the narrative. The next week the trauma narrative is written again, and the new details are added. This practice continues until the patient feels he or she is "done" with the memory and no longer needs to read it.

Case Example. Cedric is a married, White, male who suffered a military related traumatic event that has "haunted" him for years. The first strategy used was in-the-moment acceptance. Cedric was asked to recall the trauma (no further specific instruction) and hold the image(s) for a few seconds. He was then asked to focus his attention on his body and fully feel whatever sensations or emotions arise for 20–30 seconds. This was practiced three times and given as homework practice. It was also emphasized that this intervention would continue to be practiced throughout all of the treatment.

The next intervention was the purposeful trauma recall. Cedric and the therapist walked through the major scenes and identified corresponding images. He was then asked to sequentially move from scene to scene and "hold" each image and "fully feel" any and all emotions that surfaced. This was completed 5 times in-session. Cedric found it somewhat difficult but did not foresee any problems carrying it out as homework. When Cedric returned the next session, he reported that he felt much less bothered by the memory and was ready to move to the next phase of treatment.

Phase 4: Threat and Anxiety Safety Behaviors (sessions 7–12)

Phase 3 is focused on reducing vigilance and anxiety-related safety behaviors and increasing self-efficacy. Initial strategies are geared towards reducing and countering vigilance, which are then followed by addressing threat and anxiety safety behaviors.

Vigilance is a safety behavior that lends itself to being dropped in all-or-nothing terms, as opposed to individual components. Whenever possible, we recommend practicing in-session. The initial task is to identify approximately 5–10 challenging "practice situations". Next strategies for countering vigilance are discussed and the specific method or methods that will be used are agreed upon. Following, practices are carefully planned out in session, including the situation, the duration, the number of practices, the countering strategy, and any problems that may come up. Daily practice is encouraged with practices being at least 20 minutes in duration. We have found it helpful to meet the patient outside of the office and have one practice session together. This allows the therapist to provide real-time coaching with respect to dropping vigilance.

Vigilance practices should be continued as homework until: 1) the patient feels confident in his/her ability to drop vigilance; and 2) anxiety in situations has reduced. In debriefing practices, discussions emphasize what was learned and what still needs to be learned. Examples of methods for dropping or countering vigilance are listed in the manual.

Other anxiety and threat-related safety behaviors are addressed during this phase. For example, if the veteran frequently checks that doors are locked or does perimeter checks, they can be asked to delegate this activity to their spouse. If the veteran avoids situations or withdraws from important activities they can be asked to systematically engage in meaningful activities and counter avoidance. If the veteran leaves situations early, he or she can be asked to postpone leaving for an agreed upon amount of time. If the veteran ends conversations early, he or she can be asked to continue with conversations until they are ended by the other partner. If the veteran overly plans activities, he or she can ask their child or partner to select an activity and immediately embark upon it. If the veteran carries a gun, then he or she can be asked to go on outings without the weapon. It is very important that all practices are debriefed with an emphasis on what was learned and self-efficacy.

Often times in debriefing practices, underlying fears or negative beliefs associated with safety behaviors are processed. In fact, countering strategies can directly target underlying fears or beliefs. For instance, if the veteran holds the belief that no place is safe, he or she can be asked to enter into crowded situations and expose their back to others or

sit at a coffee shop and read a paper or book. If the veteran believes that no one can be trusted they can ask others for favors, or put themselves in situations where they are reliant on others, or share information about themselves.

Clinical examples can be used to elucidate the emphasis on learning and underlying fears/beliefs. In a recent case, the first author assigned a veteran to walk downtown and not scan and then ride the city Tracks up and down main street without engaging in vigilance. In debriefing the practice, the veteran was asked what he learned. In response, he stated: "Well first-of-all, nothing bad happened… but also, that I'll probably have an idea ahead of time if something bad is going to happen." In a second example, a veteran with fears of losing control was asked to enter into a difficult situation and "do nothing" for an extended period of time. In debriefing the exercise, the veteran talked about his growing confidence in his ability to handle difficult situations and strong feelings.

Case example. Jose is a 40-year-old Afghanistan combat veteran. He retired from the military approximately one year prior to initiating BTAP. Jose was referred to BTAP after reporting little success with Cognitive Processing Therapy. The first session of the Threat and Anxiety Phase began with a review of the treatment rationale and his master list of safety behaviors to identify those safety behaviors to be addressed. Jose chose to practice dropping vigilance safety behaviors using Recognize, Drop, and Refocus (RDR) as the countering strategy. Specifically, agreed to go to Walmart for 30 minutes of vigilance dropping practice.

In the next session, Jose reported that he lasted only 1 minute and quickly abandoned the RDR technique when his anxiety escalated. Jose was praised for the one minute he was able to complete. That minute was referred to as the most important minute of treatment until this time. This is consistent with the "no failure" approach to BTAP. As long as an effort is made, the practice is considered a success. Jose and his therapist also processed what was learned in the experiment and were able to identify two important factors. First, Jose needed to start with some easier safety behaviors, and second, practices with his wife are more difficult. Jose was then asked what safety behaviors he would like to work on for the following week. He picked one safety behavior: not avoiding taking trails while hiking. The following session, Jose reported success with the practices. He noted that even though at times he felt like he was in Afghanistan, he was able to stay with the practice.

The following week, he selected two safety behaviors to address: 1) reducing contingency planning and 2) reducing perimeter checks. Jose returned the next session and reported feeling more depressed and stated he had not done much homework. He attributed this to not getting along with his wife. Again, Jose was praised for practicing at all, given he was in conflict with his wife and feeling more depressed. Some time was spent processing the marriage issue and then the focus was returned to BTAP.

Jose spent three more sessions in this treatment phase. He completed the following safety behavior practices: letting people walk behind him, saying hi to more people, talking with his neighbors more; and engaging in more social-public related activities. Jose had an excellent response to treatment.

Preliminary Effectiveness Data for BTAP

Participants were five male veterans (M_{age}=50; SD_{age}=15.6) with PTSD treated on a PTSD Clinical Team (the vast majority of the veterans treated on this team are male). The majority of the participants were White (80%), with one being Asian-American. 8% had previous treatment for PTSD. Measures of PTSD symptoms, depression, quality of life and PTSD-related safety behaviors were administered pre and post, with the measures of PTSD and safety behaviors administered every session to track progress. All participants were seen weekly or twice weekly over telehealth. Patients were seen over telehealth due to COVID precautions. The average number of sessions was 10 (SD=2.9).

Measures

PTSD Symptoms. The PTSD Checklist (PCL-5), a 20-item self-report measure was used to assess the severity of PTSD symptoms [45]. The PCL-5 is frequently used in VA settings and has good psychometric properties [46]. Total scores range from 0–80 with higher scores indicating greater severity of PTSD symptoms.

Depressive Symptoms. The Patient Health Questionnaire-9 (PHQ-9, [33]), a 9-item self-report measure, was used to assess symptoms of depression. The diagnostic validity and high levels of sensitivity and specificity for major depression have been demonstrated for the PHQ-9 in several studies [33]. Higher scores indicate greater depression severity.

Quality of Life. The Behavioral Health Questionnaire–20 (BHQ-20, [32]), a 20-item self-report measure was used to assess global mental health. The BHQ-20 has been found to be reliable and valid with adequate internal consistency, test-retest reliability, and construct validity [32]. Two subscales (Wellbeing and Life Functioning) were used to assess Veterans' quality of life. Scores from both subscales were summed for a total quality of life score, with scores ranging from 0–28.

Safety Behaviors. Safety behaviors and PTSD-specific safety behaviors were measured with Safety Behavior Assessment Form [18]. The SBAF has been shown to have excellent psychometric properties across several different populations [18] and is associated with anxiety and PTSD treatment outcomes [17]. Higher scores indicate greater use of safety behaviors.

Results

As shown in Table, there were significant reductions in PTSD symptom scores over the course of treatment. The mean symptom reduction across the 5 veterans was 31 points, which corresponded to an effect size of 1.7 (Cohen's d). Veterans also reported a significant reduction in the use of PTSD-related safety behaviors (mean 10-point reduction and effect size of 2.2). They also reported significant reductions in depressive symptoms (average reduction of 5.4 points and a corresponding effect size of 1.6). Finally, quality of life scores increased and had large corresponding effect sizes, but the pre-post difference did not reach significance, likely a result of low power. Figures 1–3 show session by session change for the primary study variables over the course of treatment.

Table

The diagnostic and statistical manual for mental disorders (DSM-5) criteria for PTSD

Intrusion Symptoms (1 needed for diagnosis)
1. Unwanted, intrusive memories
2. Distressing recurrent nightmares
3. Flashbacks
4. Emotional reactivity when reminded of the traumatic event(s)
5. Physical reactivity (strong physical symptoms) when reminded of the traumatic event(s)
Avoidance Symptoms (1 needed for diagnosis)
1. Avoidance of distressing memories, thoughts, or feelings related to the traumatic event(s)
2. Avoidance of situations, places, activities, and people and cause reminders of the traumatic event(s)
Negative Alterations in Cognition and Mood Symptoms (2 needed for diagnosis)
1. Inability to remember important aspects of traumatic event(s)
2. Negative beliefs about self, others, or the world
3. Distorted thoughts of blame or responsibility about the traumatic event(s)
4. Persistent negative emotional states
5. Decreased participation in significant activities
6. Feelings detached or cut-off from others
7. Inability to experience positive emotions
Alterations in Arousal (2 needed for diagnosis)
1. Irritable behavior and angry outbursts
2. Reckless or self-destructive behavior
3. Hypervigilance or being overly watchful and on-guard
4. Exaggerated startle response
5. Concentration problems
6. Sleeping disturbance

Notes. DSM-5 criteria differ from DSM-4 criteria in several ways. First, in DSM-5 PTSD is no longer considered an "anxiety disorder", but rather it is now a "trauma-related disorder." Second, DSM-5 expanded what constitutes a trauma, resulting in broader definition [10; 11]. Criteria related to the need to respond to the event with fear, helplessness, or horror was eliminated, but now includes: 1) being exposed to the aftermath of traumatic events; and 2) being informed of the sudden, violent death of a loved one [10; 11]. Finally, the DSM-5 changed the structure of the diagnostic criteria from 3 clusters (i.e., re-experiencing, avoidance/numbing, and arousal) to 4 clusters (i.e., intrusions, avoidance, negative alterations in cognition and mood, and alterations in arousal). The new diagnostic criteria include a total of 20 symptoms that are organized by cluster.

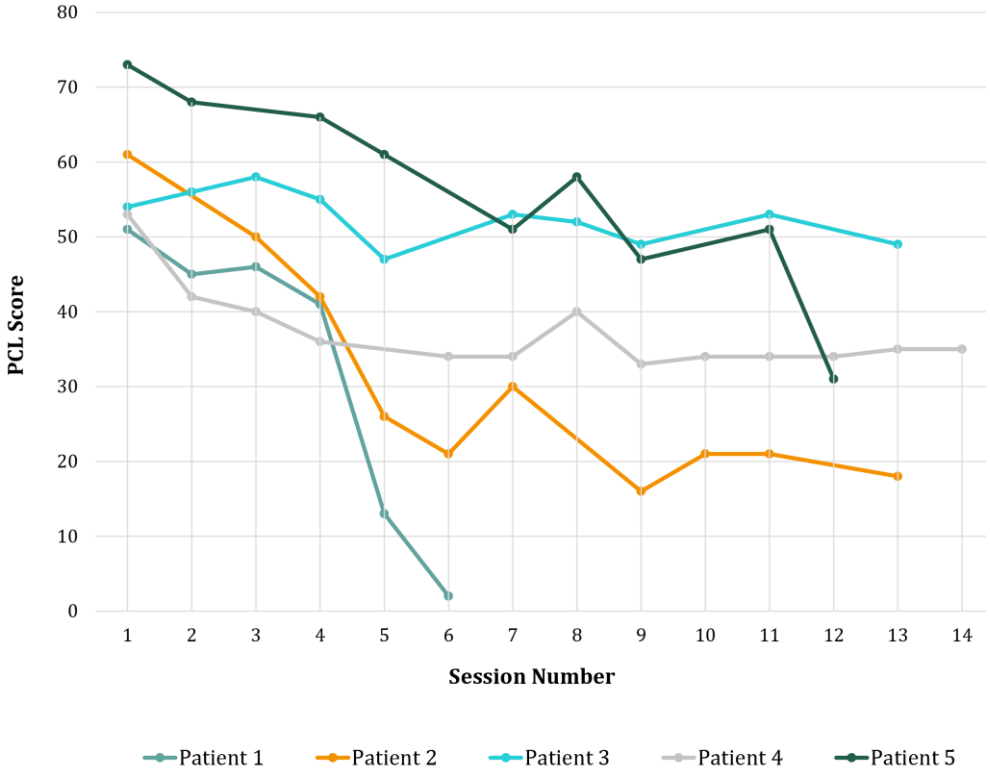

Figure 1. PTSD symptom scores over the course of treatment

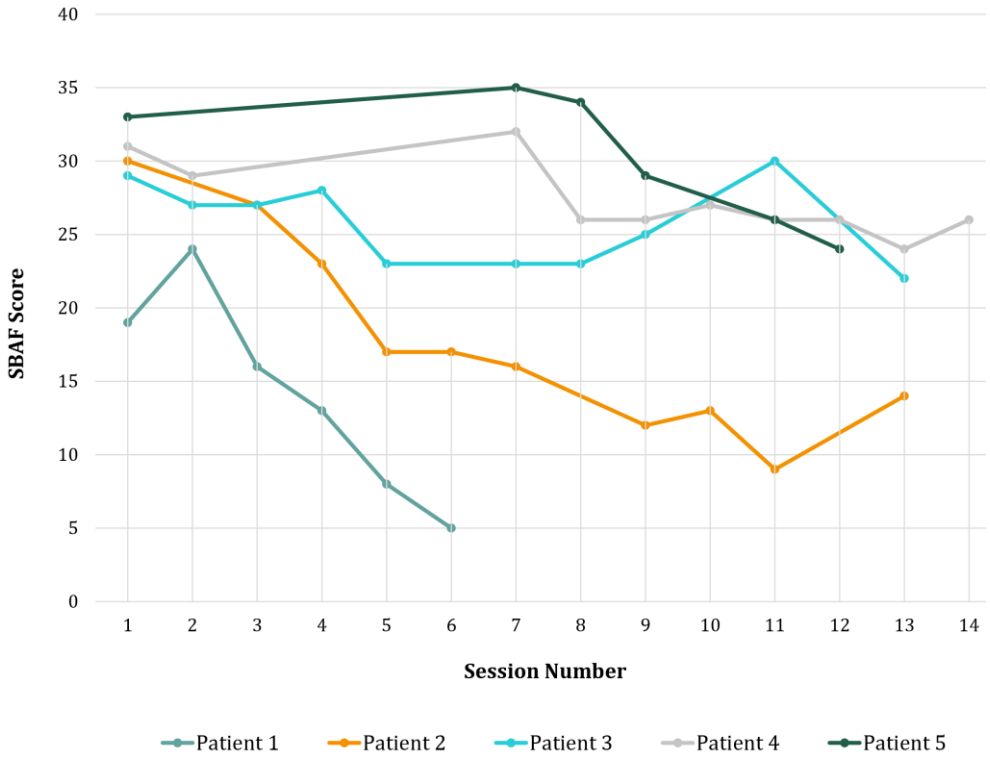

Figure 2. Safety behavior scores over the course of treatment

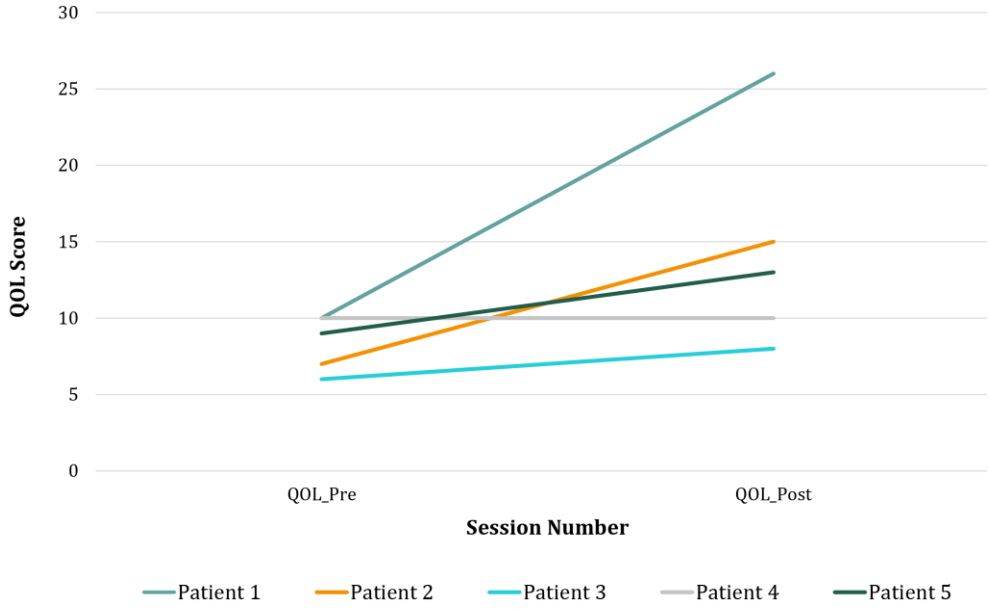

Figure 3. Quality of life and wellbeing scores over the course of treatment

Discussion

The purpose of this article was to provide a primer for using BTAP to treat PTSD in military veterans. We described the major treatment components, provide case examples, and preliminary effectiveness data. The preliminary outcomes from these 5 cases are encouraging and suggest that additional study of the effectiveness of safety behavior elimination as a treatment for PTSD is merited. All materials are on Open Science Framework, and thus, available to use in future research.

There are several theoretical reasons that support our preliminary effectiveness of BTAP for PTSD. First, as conceptualized by Ehlers and Clark [12], PTSD is a disorder of ongoing threat. It is well established in the research literature that safety behaviors both preserve and reduce threat. As such, addressing safety behaviors in PTSD is a sound conceptual fit with etiological models of PTSD development and maintenance. Second, vigilance is a difficult symptom to address and like worry, often is accompanied with positive and negative beliefs. A recent PTSD treatment study with veterans found vigilance (along with sleep) to be the least responsive to existing evidence-based treatments [8]. The existing treatments for PTSD to not directly target vigilance in the same rigorous way as BTAP. Indeed, most participants had several preferred vigilance strategies and without practice identifying and countering them, they would have remained intact, and the veterans at risk for relapse of symptoms [4]. BTAP is also promising in its simplicity. Most veterans easily grasp the concept of safety behaviors and bought into the rationale that reducing/countering safety behaviors would reduce symptoms of PTSD. For example, one veteran stated “I now have a set of tools for dealing with anxiety and PTSD that I can continue to use on whatever happens to come up.” This represents buy-in and the realization that safety behavior reduction is a successful strategy for dealing with anxiety and trauma in general. Lastly, BTAP is unique in its flexibility, which is likely highly desirable for trauma survivors. Veterans are given their choice of what safety behaviors to

address, how to address them, and in what order they should be addressed. This flexibility likely enhances the therapeutic alliance which is also facilitates positive treatment outcomes. In fact, one veteran who had not responded to Cognitive Processing Therapy, stated that this treatment worked for him because: "I didn't feel I was being told what I had to do or think."

Although the results of this study are promising, the small number of participants is a limitation. Many treatments are shown to be effective in preliminary phases, but when the rigors of scientific methodologies are applied, their effectiveness dampens. Additionally, the study sample was all male and mostly White veterans. This lack of diversity should be taken into consideration before assuming generalization to more diverse populations. Likewise, the mean age of the sample was 50 and thus does not speak to the potential effectiveness with younger participants. However, these results do suggest that further study of safety behavior elimination to treat PTSD is merited.

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Information about the authors

Jason T. Goodson, PhD (Psychology), Staff Psychologist, PTSD Clinical Team, VA Salt Lake City Health Care Systems, Salt Lake City, UT, USA, ORCID: https://orcid. org/0000-0002-0777-1111, e-mail: jason.goodson@va.gov

Gerald J. Haeffel, PhD (Psychology), Professor, University of Notre Dame, Notre Dame, IN, USA, ORCID: https://orcid.org/0000-0002-0777-1122, e-mail: ghaeffel@nd.edu

Информация об авторах

Гудсон Джейсон Т., PhD (психология), штатный психолог, Клиническая группа по ПТСР, Администрация по делам ветеранов, Солт-Лейк-Сити, Юта, США, ORCID: https://orcid.org/0000-0002-0777-1111, e-mail: jason.goodson@va.gov

Хеффель Джеральд Дж., PhD (психология), профессор, Университет Нотр-Дам, Нотр-Дам, Индиана, США, ORCID: https://orcid.org/0000-0002-0777-1122, e-mail: ghaeffel@nd.edu

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Implementing Behavioral Activation in Geriatric Depression: A Primer

Rachel Hershenberg
Emory University, Atlanta, GA, USA,
ORCID: https://orcid.org/0000-0001-5471-6694, e-mail: rachel.hershenberg@emory.edu

Oliver M. Glass
Northeast Georgia Physicians Group, Gainesville, GA, USA,
ORCID: https://orcid.org/0000-0003-3522-9086, e-mail: oliver.glass@gmail.com

Behavioral activation (BA) is a psychosocial treatment for depression designed to help patients increase contact with positive and rewarding aspects of daily life. The majority of BA research has focused on general adults and adolescents. While emerging data suggests that behavioral treatment is efficacious for depressed, elderly patients, there is little published guidance on how to adapt behavioral principles to meet the unique needs of an aging patient population. This article is designed as a primer to move from the empirically supported treatment to working as an evidence-based practitioner when treating geriatric patients with depression, providing suggestions for adapting the principles of behavioral activation to a depressed elderly population. We highlight prototypical situations and stressors that can present in older age patients who meet the criteria for late-life depression. We start with general suggestions for case conceptualization in behavioral activation. We then place a specific emphasis on case conceptualization and treatment planning for four prototypical psychosocial stressors: retirement, bereavement, physical pain/medical comorbidities, and caregiver stress. In each section, we emphasize how to anticipate and intervene around difficulties with activity scheduling and activity enjoyment.

Keywords: Behavioral activation, geriatric depression, depressed elderly, retirement, bereavement, chronic pain, caregiver stress.

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Реализация поведенческой активации при гериатрической депрессии: руководство

Хершенберг Р.
Университет Эмори, Атланта, Джорджия, США,
ORCID: https://orcid.org/0000-0001-5471-6694, e-mail: rachel.hershenberg@emory.edu

Гласс О.М.
Медицинская клиника «Northeast Georgia Physicians Group», Гейнсвилл, Джорджия, США, ORCID: https://orcid.org/0000-0003-3522-9086, e-mail: oliver.glass@gmail.com

Поведенческая активация (ПА) — это вид психосоциальной терапии депрессии, предназначенный для того, чтобы помочь пациентам увеличить контакт с позитивными и полезными аспектами повседневной жизни. Большинство исследований ПА были в целом сосредоточены на взрослых и подростках. Хотя новые данные свидетельствуют о том, что поведенческое лечение эффективно для пожилых пациентов с депрессией, существует мало опубликованных рекомендаций о том, как адаптировать поведенческие принципы для удовлетворения уникальных потребностей пожилых пациентов. Эта статья является руководством для перехода от эмпирически обоснованного лечения к практической работе психолога при работе с пожилыми пациентами с депрессией. В статье также приводятся предложения по адаптации принципов поведенческой активации для работы с пожилыми людьми с депрессией. Мы описываем типичные ситуации и стрессоры, которые могут присутствовать у пациентов старшего возраста, отвечающих критериям депрессии в пожилом возрасте. В начале статьи мы приводим общие рекомендации по концептуализации кейса в поведенческой активации. Затем мы уделяем особое внимание концептуализации кейса и планированию лечения для четырех типичных психосоциальных стрессоров: выход на пенсию, тяжелая утрата, физическая боль, сопутствующие заболевания и стресс опекуна. В каждом разделе мы описываем как предвидеть и устранять трудности с планированием занятий и получением удовольствия от занятий.

Ключевые слова: поведенческая активация, гериатрическая депрессия, пожилые люди с депрессией, выход на пенсию, тяжелая утрата, хроническая боль, стресс опекуна.

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The behavioral theory of depression posits that environmental influences and avoidant behaviors can perpetuate and intensify depressed mood [4]. Behavioral activation (BA) seeks to help patients increase contact with positive and rewarding aspects of their daily life. As an empirically supported treatment, BA focuses on identifying contexts that are reinforcing and, as needed, problem solving barriers to either scheduling or enjoying activities [23]. Activity scheduling is a cornerstone of behavioral activation and cognitive behavioral therapy [14].

Though a vast majority of BA research has focused on general adults and, to a lesser extent, adolescents, examining the applicability of existing behavioral treatments in elderly patients struggling with depression has been a growing area of focus. In the past several decades, accumulating research has demonstrated that behavioral activation is efficacious in treating geriatric depression [7; 14]. Substance Abuse and Mental Health Services Administration (SAMSHA) has also concluded that behavioral therapy for depressed elderly patients is an empirically supported treatment [5].

The restriction of daily activities may be a final pathway toward depression in elderly patients [8]. Some of the most common stressors that elderly patients present with can impact daily habits and previously engaged in activities. This can be the result of retirement, changes in physical functioning, becoming a caregiver to a spouse, and/or bereavement. These life events change the landscape of daily life and may contribute to a significant level of stress. Fiske and colleagues [8] present a comprehensive model that weighs different factors that contribute to depression in older adults. Consistent with the behavioral model, a final common pathway includes a decreased engagement in activities. The reduction in activities is thought to increase the risk for self-critical cognitions and avoidance-type behavior. Together, these factors are thought to escalate an individual's susceptibility to depressive symptoms [8]. Moreover, evidence suggests that older depressed patients are more likely to complain of anhedonia than overt sadness [8; 9; 19]. Thus, strategies aimed at improving access to natural sources of joy [18], discovering meaning [11; 12], and promoting motivated behavior to pursue rewards [4] may be a recipe for counteracting behavioral and certain environmental factors of depression.

Understanding how to help a patient re-engage with their environment may be a potent target of intervention, either as a stand-alone intervention or in combination with pharmacotherapy. Accordingly, psychologists, psychiatrists, and other clinical mental health workers who treat elderly depressed patients may benefit from understanding the principles of behavioral activation and how to promote it.

From empirically supported treatment to evidence-based practice. Evidence based practice considers the research evidence in concert with the therapeutic relationship. It also takes into consideration the patients' individual differences, such as their values and preferences. The elderly patient's experience, circumstance, and psychosocial and medical stressors can vary in numerous ways compared to younger patients. Compared to younger adults, older age individuals are more likely to experience certain types of stressors. This can include loss of resources related to job loss, changes in relationships, and changes in physical functioning [10; 15]. The goal of this primer is to encourage the clinician to consider behavioral activation as a principle of change that can be adapted to the needs of a variety of depressed elderly patients. To assist the clinician in feeling more comfortable

with implementing behavioral activation, we provide suggestions about the case formulation and treatment planning strategies that geriatric depressed patients may be more likely to experience. We place emphasis on patients who: are having difficulty adjusting to retirement; have had changes to their interpersonal functioning due to bereavement or becoming a caregiver; and/or who struggle with chronic pain or other chronic health conditions. These four categories were chosen as highly representative of the lived experience of the young-old and the oldest-old [10].

Assessment. Adapting the principles of BA is appropriate for patients who are experiencing an initial episode of late-life depression or who have long histories of recurrent or chronic depression.

In addition to symptom-based information collected from the semi-structured interview and self-report scales, a method of collecting a plethora of relevant information from your patient is to ask them to walk you through a typical day. You might ask them to share the mundane details of when they wake up, whether they eat breakfast, who they see, and whether they leave the house. As they walk you through their weekday and weekend activities, take note of the following (see Table for a summary).

Table

Quick reference, assessing your patient's current functioning and preferences

Structured time	Is there any predictability to their days? Is there an established social rhythm?
Social support	Do they see others in a typical day? Are they avoiding time or self-disclosure in existing relationships? Do new relationships need to be formed?
Level of independence	Will your patient be able to schedule BA activities outside of their residence independently? What type of assistance will be needed, and what level of physicality is appropriate and safe?
Comfort with technology	How will you teach your patients to self-monitor the relationship between their mood and activities? Do they have access to/are they comfortable with a Smartphone, or will it easier to use a traditional calendar or therapy journal?
Comfort with social distancing (pandemic specific)	How comfortable does your patient feel going to public places, and how can you increase their time spent away from their residence or with other people in a way that feels safe?

Structured time. Is there any predictability to their days? Do they use a calendar or plan activities in advance? Take note if there are any type of predictable social rhythms, such as when waking from sleep, eating meals, exercising, socializing, and leaving the house. Is it highly regimented or, on the opposite end of the spectrum, highly unstructured? Keep in mind that the retiree and widow(er)will likely present with a lack of structure and

may need help building more structure; the chronic pain patient will likely need flexibility regarding when to adapt the structure and plans; and the caregiver will need to work within the confines of a highly structured and busy schedule.

Social support. Are they socially isolated? Do they feel lonely? Who are their sources of social support? Have close friends and family passed away? Do they keep their level of distress private? All four prototypical patients may need to focus on building social activities. This might involve opening up to existing relationships (e.g., the widower who does not tell his children how much he is hurting) or creating new relationships (e.g., the retiree who lost social connectedness when the job ended).

Level of independence. Can your patient independently complete activities of daily living? Can they drive? Do they live independently or in a care facility? Understanding functionality will help you keep in mind how to realistically brainstorm and choose activities to schedule, such as inside and/or outside of their residence.

Comfort with technology. Activity scheduling is the heart of BA. You will want to be flexible about how to adapt planning and tracking of activities based on what is most obtainable for them. Will you use pen and paper schedules, a daily to-do list, or an online calendar? Do they own, and are they comfortable with a smartphone? Work with what feels most comfortable for them, and do not be afraid to restructure the schedule with a new format in subsequent weeks. Collaboration is key. Additionally, would they use applications that might facilitate activation goals, such as ride-sharing company like Lyft, or access relaxation exercises using the Insight Timer app?

Comfort with social distancing during and after the pandemic. Even with a vaccine, your older age patient may continue to express hesitation to go to populated places such as gyms or museums. Validating the patient's concern and setting goals that respect their comfort level will be important. For example, you might help your patient to find a personal trainer via Zoom rather than at a rehabilitation center. Addressing cognitive distortions, such as catastrophizing, may result in improved social interactions with close ones who have already been vaccinated. Patients might slowly grow more comfortable with repeated exposures outside the home, and you can help them with the pacing. Over time the patient may begin to feel more comfortable with gradually increasing the social gathering number.

Assessing these broad domains of structured time, social support, level of independence, comfort with technology, and COVID-19 precautions will inform your conceptualization. This conceptualization ties into the overarching principle of change*: the identification of the barriers that inhibit your patient from coming into contact with positive and rewarding aspects of their daily lives*. Feedback and suggestions for personalizing treatment are reviewed in the sections that follow for each of the four prototypical presentations. More specifically, we will first review critical points tied to case formulation. Following, we address common barriers that interfere with activity scheduling and activity enjoyment, with strategies to address those barriers. To appreciate sensitivity to individuals who are gender-neutral, we will alternate between pronoun identifiers throughout the article.

Retirement

Case formulation. Your patient may have fallen into a typical pattern where the lack of structure was enjoyed initially but eventually became a cause of depression. In that case, it is important to validate how haphazard days make sense but are also problematic. For example: "When you first retired, you may have reveled in the lack of structured time. Most people go through a honeymoon period after retirement. The ability to leisurely choose what to do and to have laid back days was probably quite enjoyable at first. But you may have noticed that, while you've continued with this lack of structure, your mood has simultaneously started to plummet, which brought you to see me. Now, if I'm hearing you right, time passes by during the day, and you find yourself aimlessly shifting from one activity to another. You don't have routine opportunities to experience feelings of being excited or really engaged in things; and perhaps most importantly, you don't have many moments of feeling productive or meaningful. Do you know what I mean? You may have also noticed that the longer you've fallen into this lack of routine, the more your mood has dropped, and the harder it has become to be more active and get out of that rut. Does that fit with what you've experienced?"

As you explain the purpose of the intervention, you will want to simultaneously promote predictable social rhythms as well as the identification of new activities to fill up free time. You may also want to anticipate that thinking of what to do may feel overwhelming for the patient or that they simply draw a blank when thinking about what they would like to do. For example: "The heart of what I want to help you do is, counterintuitively, bring back structure to your days. It's probably counterintuitive because part of you likes that you don't "have" to show up to things now that you are no longer wedded to a workday. What I want to hone in on is that your days right now are set up to keep perpetuating low energy and lack of engagement. This, of course, just worsens your other symptoms, such as feeling like you're useless, feeling hopeless about your remaining years, feeling disengaged from those around you, and so on. I want to spend session time helping you build back a predictable daily rhythm and give you activities to look forward to each day so you will have an easier time getting out of bed. Even if you have to coach yourself to show up at first, it usually ends up being better than expected, and it opens up new opportunities for connection and excitement. And then it becomes easier and easier to keep showing up. If you're thinking that you have no idea what to do or what you might have an interest in — that's completely ok. In fact, that's part of our work together. How does that sound to you?"

Issue that may interfere with activity scheduling: "What do I do?" The prototypical depressed retiree may agree with the conceptualization and agree with building in more structure but is unclear about what to do.

A patient may have tried one or two things that they tell you did not go well, or they may tell you that their spouse and kids told them they just need to do X or Y. In response to this, they have a long list of "yes, but…" Critically, it is important not to fall into the role of telling your patient what to do or to generate the list for them, which can perpetuate reactance. Instead, you can gently guide the patient into the realm of increased curiosity and use elements of their life that they signify as valuable in a brainstorming roadmap. To

that end, one main strategy to counteract this issue is to begin with values exploration using a Values Inventory and use *values* as the roadmap of your therapy.

Begin by explaining what values are and how values are different than goals. For example: "Values are your overarching principles for how you want to be as a person, whereas goals are the items you check off a to-do list. For example, up until retirement, a top value may have been to be a trustworthy and hardworking employee. The actions you did to live consistent with that value were to show up to work on time, to communicate with your co-workers, and so on."

A critical point is that the top values you focus on naturally shift and change throughout the lifespan. "For the past four decades, your top priorities were work and raising a family. And now your kids are older, and you are retired. That's a really big shift, which may have brought with it a sense of loss. There is also opportunity inherent in this change. In addition to having a space to discuss the sense of loss you feel, I want us to spend time figuring out what you want your life to be about in the remaining years of your life. We can honor the loss while also seeing the change as an opportunity." The language of values thus provides a context to address this role change. After encouraging the patient to work on a values inventory at home, the next session can be spent reviewing the areas that used to be focal, what was meaningful about that to them (i.e., honoring the accomplishment and sense of loss), and what areas have long been neglected. Additionally, it will be useful to identify the areas they imagine themselves focusing on that might be part of the well-being recipe. For example, physical health, emotional health, relationships with grandchildren, spirituality, community, or lifelong learning may be areas that would benefit from more investment.

A second critical point is not to make assumptions about what would be good for the patient. Patients will often be told by family and friends that they should engage in "volunteer work" and often have very different agendas for their own retirement. You may likewise be tempted to say — "why don't you do volunteer work?" or your patient may vocalize what he thinks he "should" be doing with his time. Research shows that there is a relationship between *personal engagement* in volunteering and well-being [16]. Therefore, if your patient is only showing up because it is a "should," data suggests the benefit will be undermined. "I also want to be clear I don't want to focus on the "shoulds." This inventory is a chance to look at yourself and say, 'What are the areas that actually matter to me? What would give me a reason to get out of bed in the morning? What will be my guiding principles for how to spend my time?'"

In sum, a values inventory is an exercise that can produce rich conversation. Generate what matters to your patient and what areas have long been neglected. For the areas that matter, determine how much time they are actually spending engaged in values that they consider priorities. Try to pick up to three top areas for goal setting, which serves as your guide for helping them pick concrete activities to schedule into their daily life, which will increase structure and accountability.

Issue that may interfere with enjoying the activity: Relying on previous expectations of accomplishment. The prototypical depressed retiree may set goals that seem realistic at first glance. But when you review progress in subsequent sessions, she

may be maintaining a dysphoric mood when you hear that she is engaging in self-critical thinking for not getting as much done as she wanted. It may be noticed that he is focusing on all that he still has to do rather than what he did do; or she may be fixating on her low levels of energy that interfere with what she planned to accomplish.

A theme related to these topics that can be discussed with the patient are the expectations he has for himself. What are normative changes related to aging that he may need to accommodate? You may help him realize that his speed is different than it used to be, he may be less able to multi-task, or he may need to give himself permission to challenge his work ethic and prioritize activities that provide enjoyment. If there is a particular time of day the patient gets more fatigued, you may want to help him incorporate that into his overall scheduling strategy. For example, if there is typically a 2:00 PM dip in energy, this may not be the best time for him to complete his taxes. However, it may be a good time to take a neighborhood stroll or listen to a meditation exercise. Plan around diurnal variation in mood; for example, if mornings are the hardest, try to schedule in an activity where there is social accountability for late mornings so that he gets out of bed and dressed at an appropriate time. Finally, keep in mind how your patient is defining his metric of success. If he compares himself to what he used to be capable of, or if he is focusing on all that he still wants or needs to do, then he will be caught in a negative vicious cycle. Help him frame success based on *what choice* he made and his level of engagement in whatever task he set out to do. Making progress on a values-consistent area will be more sustainable and reinforcing.

In summary, the retired patient may be caught in a habit of haphazard days that fuel depression. She may resist the idea of structure at first because she spent decades looking forward to a lack of structure. Stabilizing her social rhythms will help to counteract biological components of depression. Helping her have accountability to show up to things that matter will help counteract psychological components of depression. It will also increase her self-confidence, motivation, and pleasure while decreasing rumination. Encourage her to be in the driver's seat, metaphorically speaking, of what to do. Acknowledging loss that is part of this new life stage is important. Defining success in terms of the active choice *to do* — rather than how much was done — can be an element that leads to improved mood.

Bereavement of the Spouse/Long-Term Romantic Partner

Case formulation. Bereavement, including persistent complex bereavement disorder (PCBD), may occur when individuals suffer from prolonged grief that continues to cause dysfunction and distress in their own lives [3]. If your patient does not meet the criteria for a complicated bereavement, there may still be subtle patterns of avoidance that undermine their confidence, which contributes to the ongoing dysphoric and anxious mood.

One productive exercise in treatment, prior to activity scheduling, may be to review the 15-item Grief-Related Questionnaire (GRAQ) [20]. Reviewing the items can be a practical and interactive way to ask your patient if she avoids some of the most common stimuli, such as talking about the loved one, specific activities inside or outside the home, and/or looking at photographs. Sharing the list with her and asking which items are relevant may identify behaviors that contribute to her sense of distress. This conversation

can then be used as a guide for activity scheduling. Indeed, in addition to helping the patient identify activities that would bring her a sense of joy, peace, accomplishment, or other positive emotions, you may consider working with her to identify grief-related activities that have been avoided [1]. The avoidance behavior may be directly linked to a sense of fear that she would not be able to cope with the distress arising from the activity.

Issue that may interfere with activity scheduling: Avoiding because it feels too painful. After having your patient generate a list of what they avoid, have them use their past experiences as a guide. *Have there been small steps you have already taken that you feel good about or that went better than expected?* There are usually several "firsts" that they have already done that were a successful experience, such as: the first time back at their place of worship, the first birthday of the loved one, or the first closet they cleaned out. With a calm and open-ended style, ask them what was helpful when engaging in that challenging activity. Also, try to see if you can elicit some grief-related activities that have become easier to face over time.

Consider a rating scale as you apply that rationale to the new activities they generated. Even if you do not use numerical ratings (e.g., 0–10 or 0–100), it could be helpful to conceptualize and appreciate the fact that some activities will feel more daunting than others. Consider having the patient generate what they want to try first and the pace at which they would like to attempt it. Ideally, the patient should be setting the goal. The therapist should be able to provide genuine confidence that they will be able to cope with their feelings when confronted with it.

You may learn that your patient avoids sitting still or being home alone. In this situation, the patient will benefit from the therapist's assistance with scheduling time to sit still. Ask her if she is afraid of the quiet and if she has lost the willingness to sit with herself. You may want to have her do an imaginal rehearsal in session in which she talks through and imagines herself in her house alone, where urges to distract are noticed. She can learn to coach herself through this therapeutic target and hopefully gain an increased sense of peace.

Take note of the extent to which the patient has or draws upon sources of social support. For example, your patient may not want to discuss how much she misses her husband to her children because she is afraid it will upset them too much. A consequence of keeping her grief private is that it contributes to further withdrawal and a sense of alienation, which further exacerbates symptoms of depression. It can be helpful to think of reminiscing as an activity scheduling goal. Sharing fond memories of a loved one with others who also loved the person may be an appropriate therapeutic target. You may even give them permission to externalize the rationale, e.g., *Blame it on me — tell your kids Dr. X thought it would be good for you to talk about your dad.* The patient might be encouraged to take out old photo albums and tell stories or to ask her friends or family members to tell her some of their favorite stories with the deceased. Multiple forms of communication are encouraged, including in person, by phone, and, if relevant, by e-mail or chat.

Issue that may interfere with enjoying the activity: too busy worrying. There are generally new responsibilities that fall on the surviving spouse. If his partner was the one to generally manage the finances, then paying monthly bills may become a source of stress.

If his partner was the one to generally manage the home, then cooking, doing laundry, or grocery shopping may be a source of stress. Learning to take on new roles in the grieving process may become overwhelming due to a general sense of loss of control as well as potential skills deficits.

Worries can undermine BA. For example, imagine that your patient is driving on a sunny day to go shopping, but all he can think of is whether he forgot to pay the credit card bill. Accordingly, strategies to identify sources of worry can be beneficial.

For example, "worry time" may be incorporated into your patient's schedule. Have your patient dedicate 20 minutes per day to writing about her feelings, particularly her stressors and concerns. When she brings the worry time journal to session, you can teach her to identify action items, which are topics she can do something about to decrease the likelihood of the feared outcome from happening. Action items become new items to schedule, consistent with the BA model. As weeks progress, worry time can transition into more broadly conceptualized journal time. In addition to the action items, this time allocation can be used to acknowledge a vulnerability of what feels distressing and uncertain, which is often tied to a sense of losing control.

The bereaved spouse may engage in subtle forms of cognitive, behavioral, or emotional avoidance that, if left undetected, can undermine the benefit of increasing pleasurable and values-driven activities. For example, despite getting out to the gym or going to a movie with a friend, they may be returning home every night to their husband's office that looks like it did the day he passed; or they may be sleeping in a separate bedroom, afraid to return to the marital bed. These are avoidance behaviors that are not likely to come up in session unless directly probed for by the therapist. Opening a compassionate discussion about ways in which they may be avoiding certain reminders of the loved one can help to identify new "firsts," which may occur while working on other activities that promote mastery. Providing additional strategies to manage worry, such as mindfulness, can help the patient feel more comfortable in the present moment when stressful *or* pleasurable experiences arise [2]. This may eventually allow for an improved sense of control.

Dealing with Medical Comorbidities

Case formulation. Your patient may feel helpless in regard to his physical health condition. "It sounds like you are afraid of when [the condition] will flare up, or you know if you work too hard it will flare up, so you've found it's easiest to stay in that recliner. You may be embarrassed of symptoms acting up or embarrassed of the new support you need. So it's easier to stay home than explain yourself. You may think it is also easier to just suffer instead of having people feel sorry for you. But as you know, when you are home, you lose the opportunity to have fun and to feel engaged. Over time, your illness has started to define you. The more time you are home in that chair, the more you fuel false beliefs about how useless you are and how unlikely things are to change. Does that sound like it fits what you've been going through?"

This patient may have a black and white mentality of "do nothing" or "do everything," which has led him to learn that inactivity decreases physical discomfort even if the cost has

been increased depression. In behavioral terms, inactivity is negatively reinforced because it removes physical pain in the short-term. Consistent with a CBT framework for chronic pain [6], the heart of BA with this patient will be to *flexibly* choose how to implement their goal activities.

Issue that may interfere with activity scheduling: Rigidity in scheduling. The major task of helping a patient with his BA goals is to encourage him to listen to his body and find a middle path between complete inactivity (e.g., sitting on the recliner and watching TV) and completing the initial goal 100%.

You could try starting with a values inventory, as discussed above. Try to identify valued areas that range in level of physical activity. For example, taking care of physical health can mean going to a swimming class (highly physical), but it can also mean doing a relaxation exercise (less physical). Likewise, intellectual curiosity might be stimulated by attending a lifelong learning class (more active if in person, less active if via Zoom). It can also be met by listening to a book on tape or a podcast (less activity and interaction required). Having a wide understanding of how a value might become enacted will assist with flexibility in scheduling.

One straightforward strategy that fits well with BA is to help your patient develop decision trees. For example:

If I wake up without pain (e.g., 4 or less on my 0–10 rating), *plan A is to go to swimming class.*

If I wake up in pain (e.g., higher than 5)*, plan B is to still focus on physical health, but I'll do a progressive muscle relaxation exercise instead. Or I can focus on my other valued area of relationships and call two of my friends and ask them how they are feeling.*

As the day goes on, I will listen to my body and try to take a walk around the block (aim for 1 PM). I'll start with 5 minutes and either come back or walk a little further, depending on how I feel.

Finally, it is generally helpful to teach and have your patient schedule in a range of relaxation techniques, including progressive muscle relaxation and deep breathing [22]. Not only can these strategies provide physical relief, but they can also help patients experience more control over their illness. Notably, engaging in active behaviors to improve physical health, such as self-compassion, is associated with reduced secretion of cortisol [13].

Issue that may interfere with activity enjoyment: Viewing lack of follow through as a failure. Consistent with the idea of being flexible in what to do, a priority should be to encourage your patient with being flexible in how he evaluates that choice. Model to your patient in how to celebrate the process more than the outcome. For example, evaluate if and how he worked through a decision tree and if he made a decision that took care of his body and his mind. "Your status quo has been at 0% sitting in the recliner, arguably doing nothing. But to be a success, we don't need you to do 100% goal completion either. The reality is that, depending on the day, you are going to be at different places on that spectrum. From my vantage point, success means you worked through a decision tree,

made an intentional choice, and chose to spend your time doing something that was actively consistent with your values. Even if it wasn't highly physical in nature that is ok. Success is in the active choice, regardless of which activity on the spectrum it ends up being." He can get a positive affect boost from the lower energy activity by seeing that he is making choices on how to best take care of his body.

The patient facing chronic pain or illness may have learned that being too active makes the condition flair up, which, over time, has resulted in a passivity to the illness and a limited repertoire of behaviors. Like the retiree, you can help the patient identify core values she wants to live by. Action can be taken consistent with those values each day. Consider promoting inner awareness, where she listens to his body and then makes an active choice to do *something* while respecting her physical limitations. Defining success as being connected to the intentional choice, rather than what or how much was done, can be a contributing factor to an improved mood.

Caregiver Burnout

Case formulation. For your patient whose primary role has become that of a caregiver, including, for example, for a spouse or a grown child, her time is likely pre-determined and highly structured. Days may be organized around giving medications, assisting with ADLs, and traveling to doctor's appointments. Therefore, you may quickly rupture a therapeutic alliance if you merely suggest that she needs to schedule in activities that bring her mastery and pleasure without nuance to the constraints she is working under, both psychological and practical.

"On the one hand, you love this person very much, and doing what you can to be there for them is clearly consistent with your values and brings meaning to your life. If I'm hearing you right, you wouldn't have it any other way. At the same time, you're human. It's natural to feel depleted. Your days may be all about completing tasks and none about pleasure — which was probably ok for a while but seems to be starting to take its toll. It sounds like that's what brought you through these doors to this visit. I wonder if you and I could work together to help figure out how best to take care of you — respecting completely that your number one job right now is supporting your loved one. How does that sound?"

Issue that may interfere with activity scheduling: Cannot find the time. You might take a self-care approach with your patient. Self-care can be conceptualized as taking care of your body and mind in small moments throughout the day. Main areas include but are not limited to sleeping, eating, exercising, and replacing drugs and alcohol with relaxation. You might check in with your patient to see which of these areas she is doing well in, which feel out of balance, and which she feels are critical to helping her feel more emotionally balanced. Your patient may have gotten into a habit of drinking more than is typical to help her relax at night; she may have given up on exercising; or she may have gotten into the habit of picking up fast food on the way home from appointments.

These are areas that you can jointly conceptualize as the non-negotiables. In other words, there could be a short list of activities you encourage your patient to turn into daily habits that, consequently, are less likely to be procrastinated. Second, you can encourage

creativity in how those non-negotiables are scheduled in, keeping in mind that the total length of time may be much less important than making an intentional choice to nourish oneself for any length of time. For example, a daily practice of relaxation might be dedicating her first 10 minutes of the morning to a deep breathing exercise or mindful stretching, rather than ruminating about how tired she feels. The daily shower might become an opportunity to purchase some special bath products or for singing her heart out to the radio. The idea is to help your patient create nourishing rituals that tap into her own resilience. Secondary benefits include replacing mindless time, which typically fuels rumination or worry, with present-focused time that promotes positive emotions. It will also allow the patient to engage in strategies that are inherently anti-depressant, such as exercise or relaxation.

Issue that may interfere with enjoying: Feeling guilty that you need "you" time in the first place. Your patient likely expresses ambivalence in the interview or seemingly engages in contradictory statements that are simply reflections of that ambivalence. She is starting to identify that she is overwhelmed, and the depressive symptoms are escalating. This patient may have a hard time acknowledging that she has limitations, and she may experience negative emotions by admitting to you (and to herself) that she has needs that are not being met. Thus, activities designed to bring her into the present moment, with a focus on improving the body and mind connection, may be undermined by further ruminations.

Encouraging your patient to seek social support can be a scheduled activity that serves as an antidote to the unrealistic expectations she is carrying about herself. One option is going to support groups. The National Institute of Aging recommends joining caregiver support groups, either in the community or online [17; 21], which can be a place to express what feels like socially undesirable thoughts and feelings. This simultaneously reduces isolation and provides an opportunity to exchange resources and other practical strategies. The cognitive restructuring takes place from the stories they hear and the exchanges they have. For some, this can be more compelling than having those thoughts reframed in an individual therapy session. Beyond support groups, generally encouraging the patient to maintain other meaningful relationships and scheduling time to catch up or participate in a shared activity can also provide critical relief. This should ultimately help the patient tap into other roles and aspects of themselves that they have not had a chance to focus on. These social activities are likely to be very potent in increasing momentary positive affect and decreasing feelings of loneliness. Reviewing the relationship between activities, behavior, and mood in session may be the data that the patient needs to see that they are indeed a better caregiver when more life balance is incorporated into the schedule.

The patient in the caregiver role may experience conflicting emotions. On the one hand, they are seeking treatment, so in part, they know that the situation, as is, is not tenable. At the same time, they may feel guilty acknowledging their needs and are frustrated with themselves for not being "stronger." Work with the patient to pick *moments* throughout the day in which they nourish themselves. Encourage them to focus on areas of self-care that may be physiologically and psychologically anti-depressant. Encourage social interactions, either formally in a support group or informally with friends or other family, where they get to occupy other roles. This will allow the patient to tap into other aspects of

themselves that have been dormant. As they accumulate positive feedback from their experiences, ask them to explain how these activities impact their mood. Then inquire about how this may positively affect the caregiving relationship.

Conclusion

Beyond its applicability as an empirically supported treatment, BA is a principle of change. This article was designed as a primer to move from the empirically supported treatment to working as an evidence-based practitioner when treating geriatric patients with depression. It can be challenging to encourage patients to experience positive and rewarding aspects of their daily life when there are barriers, life changes, and stressors. This article is meant to highlight prototypical situations and stressors that can present in older age patients who meet the criteria for late-life depression.

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Information about the authors

Rachel Hershenberg, PhD (Psychology), Assistant Professor of Psychiatry and Behavioral Sciences, Emory University, Atlanta, GA, USA, ORCID: https://0000-0001-5471-6694, e-mail: rachel.hershenberg@emory.edu

Oliver M. Glass, M.D., Inpatient Psychiatrist, Northeast Georgia Health System, Northeast Georgia Physicians Group, Gainesville, GA, USA, ORCID: https://orcid.org/0000-0003-3522-9086, e-mail: oliver.glass@gmail.com

Информация об авторах

Хершенберг Рэйчел, PhD (психология), старший преподаватель психиатрии и поведенческих наук, Университет Эмори, Атланта, Джорджия, США, ORCID: https://0000-0001-5471-6694, e-mail: rachel.hershenberg@emory.edu

Гласс Оливер М., доктор медицинских наук, врач-психиатр, Система здравоохранения Северо-Восточной Джорджии, Медицинская клиника «Northeast Georgia Physicians Group», Гейнсвилл, Джорджия, США, ORCID: https://orcid.org/0000-0003-3522-9086, e-mail: oliver.glass@gmail.com

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Cognitive Behavioral Therapy for Depression: A Primer

Ciara E. Lawlor
University of Notre Dame, Notre Dame, IN, USA,
ORCID: https://orcid.org/0000-0002-8920-8566, e-mail: clawlor3@nd.edu

Jason T. Goodson
VA Salt Lake City Health Care Systems, Salt Lake City, UT, USA,
ORCID: https://orcid.org/0000-0002-6048-7784, e-mail: jason.goodson@va.gov

Gerald J. Haeffel[1]
University of Notre Dame, Notre Dame, IN, USA,
ORCID: https://orcid.org/0000-0002-4029-1493, e-mail: ghaeffel@nd.edu

Depression is one of the most common, disabling, and lethal (e.g., suicide) forms of psychopathology. Nearly 300 million people struggle with depression worldwide, and it is the leading cause of disability for people ages 15-44. Unfortunately, most people with depression do not receive the treatment they need. There is limited access to mental health services, and when services are available, the treatments used tend to have limited scientific support. This is because many mental health professionals are not trained in empirically supported treatments, are ambivalent about the role of science in clinical practice, and have limited access to scientific research (e.g., journal paywalls). The purpose of this special issue article is to provide a free and easy to use primer on Cognitive Behavioral Therapy (CBT) for depression. CBT is the most studied form of psychotherapy, has a strong theoretical basis, can be implemented by therapists of varying experience levels, and is as effective or more effective than existing treatments, including medication. CBT may not work for every client, but it is the best place to start. In this article, we discuss: a) why CBT should be the first-line treatment for depression, b) the theoretical basis of CBT for depression, and c) a basic overview of how to administer 12 sessions of CBT for depression. We also provide a reading list and supplemental open-access materials (e.g., a cognitive skills workbook) for further education.

Keywords: CBT, depression, treatment, cognitive vulnerability, cognitive therapy, behavior therapy.

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[1] Correspondence concerning this article should be addressed to Gerald J. Haeffel, Corbett Hall, University of Notre Dame, Notre Dame, IN 46656; e-mail: ghaeffel@nd.edu.

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Лоулор К.Э., Гудсон Д.Т., Хеффель Дж.Дж.
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Когнитивно-поведенческая терапия депрессии: руководство

Лоулор К.Э.
Университет Нотр-Дам, Нотр-Дам, Индиана, США,
ORCID: https://orcid.org/0000-0002-8920-8566, e-mail: clawlor3@nd.edu

Гудсон Д.Т.
Администрация по делам ветеранов, Солт-Лейк-Сити, Юта, США, ORCID: https://orcid.org/0000-0002-6048-7784, e-mail: jason.goodson@va.gov

Хеффель Дж.Дж.[2]
Университет Нотр-Дам, Нотр-Дам, Индиана, США,
ORCID: https://orcid.org/0000-0002-4029-1493, e-mail: ghaeffel@nd.edu

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Депрессия является одной из наиболее распространенных дезадаптирующих смертельных (например, самоубийство) форм психопатологии. Почти 300 миллионов человек во всем мире борются с депрессией, и она является основной причиной возникновения ОВЗ среди людей в возрасте 15–44 лет. К сожалению, большинство людей, страдающих от депрессии, не получают необходимого лечения. Доступ к услугам в области психического здоровья ограничен, а когда услуги доступны, используемые методы лечения, как правило, имеют ограниченную научную поддержку. Это связано с тем, что многие специалисты в области психического здоровья не обучены эмпирически подтвержденным методам лечения, неоднозначно относятся к роли науки в клинической практике и имеют ограниченный доступ к научным исследованиям (например, к платным научным журналам). Цель данной статьи в специальном выпуске — предоставить бесплатное и простое в использовании руководство по когнитивно-поведенческой терапии (КПТ) при депрессии. КПТ является наиболее изученной формой психотерапии, имеет прочную теоретическую основу, может применяться терапевтами с различным уровнем опыта и является столь же эффективным или более эффективным, чем существующие альтернативные методы лечения, включая медикаментозное лечение. КПТ может подойти не каждому клиенту, но с нее лучше начинать. В этой статье мы рассмотрим: а) почему КПТ должна быть терапией первой линии при лечении депрессии, б) теоретические основы КПТ при депрессии и в) общий обзор того, как проводить 12 сеансов КПТ при депрессии. Мы также приводим список литературы и дополнительные материалы в открытом доступе (например, учебное пособие по когнитивным навыкам) для дальнейшего обучения.

Ключевые слова: когнитивно-поведенческая терапия, депрессия, лечение, когнитивная уязвимость, когнитивная терапия, поведенческая терапия.

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[2] Корреспонденция, касающаяся данной статьи, должна быть адресована Джеральду Дж. Хеффелю, Корбетт Холл, Университет Нотр-Дам, Нотр-Дам, Индиана, США, 46656; e-mail: ghaeffel@nd.edu.

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Depression is one of the most common, disabling, and lethal (e.g., suicide) forms of psychopathology [13; 24]. Nearly 300 million people struggle with depression worldwide, and it is the leading cause of disability for people ages 15–44 [25]. Unfortunately, most people with depression do not receive the treatment they need [13; 14]. There are several reasons for the treatment gap, including poor case identification and limited access to mental health services. Further, when services are available, the treatments offered are typically not supported by scientific evidence [2; 8]. Many mental health professionals are not trained in empirically supported treatments (e.g., due to weak graduate program accreditation standards and/or a lack of national licensing requirements) and are skeptical about their usefulness [2]. This is a problem because, on average, empirically supported treatments are more effective than non-empirically supported treatments and thus, may decrease suffering and save patients money (that would have been used on sub-optimal treatment strategies). This does not mean that empirically supported treatments are always successful or that they will work for everyone; but, given a choice between a treatment that helps 50% of people on average versus a treatment that helps 20% of people on average, which option would *you* prefer?

The purpose of this article is to provide a free and easy to use primer on one empirically supported treatment for depression — Cognitive Behavioral Therapy (CBT). We discuss why CBT should be the first-line treatment for depression, provide a basic overview of the theoretical foundation of the treatment and how to conduct it, link to an open access workbook [11; https://osf.io/7ekz8/] that can supplement in-person therapy, and provide a reading list for further education (see Table).

Why Choose Cognitive Behavioral Therapy (CBT)?

There are a number of empirically supported treatments for depression, including CBT, cognitive therapy, behavior therapy, interpersonal therapy, and medication. Given these options, why choose CBT[3] as the initial treatment? The first reason is that CBT is the most studied form of psychotherapy [4; 15]; there are hundreds of studies testing the efficacy of CBT, and this work consistently finds that CBT for depression is as effective, or more effective, as all other therapies [e.g., 15]. Second, CBT is based on a well-articulated and empirically supported theory of cognition and depression [1; 3]. Third, research shows that the scientific results (from randomized controlled trials) generalize to real-world practice [21; 23]. Finally, many of the basic treatment strategies used in CBT for depression can also be applied to other forms of psychopathology (e.g., anxiety disorders).

[3] We define "CBT" as a treatment protocol that combines cognitive and behavioral techniques to try to alter maladaptive thinking patters (e.g., cognitive vulnerability; Lorenzo-Luaces and colleagues, 2016).

That said, even the best treatments do not work for everyone. The primary argument for using CBT is one of probabilities. The question to ask is — given a person with depression, which treatment gives him or her the greatest probability of getting better right now? In other words, if you had to "bet" on a treatment working, which treatment would you pick? Our answer is CBT because it has the greatest level of empirical support, is as effective as all other treatments, including medication [12], and is derived from basic cognitive research on appraisal and attribution theory. CBT gives a patient their greatest initial probability for improvement. If CBT does not work, which may very well be the case [16], then it is time to try another empirically supported treatment.

Theoretical Background

Arguably, the most consistent and robust predictor of depression is major life stress [18]. Upwards of 80% of people with depression report experiencing a major life stressor prior to the start of their depressive episode [17]. However, most people who experience a major stressor will not develop depression. Thus, given the same stressful life event, why is it that one person will develop depression and another will not? According to the cognitive theories of depression [1; 3], the answer to this question depends on whether or not the person possesses a *cognitive vulnerability.*

Cognitive vulnerability refers to the tendency of a person to generate overly negative inferences about the cause, consequences, and self-worth implications of stressful life events. Specifically, when faced with a stressful life event, an individual who has a cognitive vulnerability is likely to: (a) attribute the event to stable and global causes; (b) view the event as likely to lead to other negative consequences; and (c) construe the event as implying that he or she is unworthy or a failure. Individuals who generate these negative inferences are hypothesized to be at heightened risk for depression. There is strong empirical support for the cognitive vulnerability hypothesis as research has consistently shown that those who report high levels of cognitive vulnerability are at greater risk for developing depressive symptoms and depressive disorders during times of stress than those who generate more adaptive inferences (i.e., exhibit low levels of cognitive vulnerability [9; 19]). Given this empirical work, it is not surprising that many treatments for depression are focused on changing cognitive vulnerability. The gold standard of which is CBT [15].

Treatment Basics

CBT is a collaborative, structured, and goal-oriented therapy that can be conducted individually or in groups. It uses both cognitive and behavioral strategies to change cognitive vulnerability and other maladaptive thinking patterns. Treatment typically consists of 12–20 hour-long sessions, but there is no strict limit on the number of sessions. Research suggests that twice-weekly sessions may be more effective than once-weekly sessions [6]. Further, when CBT is effective, large and sustainable treatment gains are often reported as early as the fifth session [16; 22].

The overarching goal of the treatment is for the client to understand how one's thoughts influence one's mood. The client then learns specific strategies to change the negative patterns of thinking that maintain their depression (a process called "cognitive restructuring"). Throughout therapy, four points should be kept in mind:

1) CBT is not "positive thinking" therapy; the purpose is to teach the client more "realistic" thinking. It is not about turning lemons into lemonade but rather recognizing that the lemons may not be quite as terrible as believed;

2) CBT should be carried out within the context of a strong collaborative working alliance (which is necessary, but not sufficient, for successful treatment);

3) homework is a fundamental component of CBT. According to Dr. Judith Beck [5, p. 1], "We tell our patients that it is not enough to come to therapy and talk for 50 minutes a week. The way to get better is to make small changes in their thinking and behavior every day";

4) therapists should administer measures of depressive symptoms (e.g., Patient Health Questionnaire (https://www.hrsa.gov/behavioral-health/patient-health-questionnaire-phq-screeners) or Beck Depression Inventory) weekly to track patient progress as symptom monitoring (by patient and clinician) improves therapy outcomes [7]. Therapists should also routinely evaluate suicidal risk and substance use.

Session 1: Intake Interview

The first session is dedicated to proper diagnosis, case conceptualization, and establishing rapport. We recommend the therapist use a structured interview such as the Structured Clinical Interview for DSM Diagnoses (SCID) for diagnostic purposes as it reduces bias and increases reliability [20]. We acknowledge that conducting a full SCID is not feasible given time constraints, so the therapist should administer the sections that apply to the client (e.g., the most likely diagnoses). The therapist should also evaluate suicidal risk, psychosocial history, and medical history.

Session 2: Socialization to Treatment

The second session is dedicated to a review of the diagnosis, socialization to treatment, and treatment goals. The client is informed of their diagnosis of Major Depressive Disorder (or other depressive disorder) and that it can be treated with a gold standard intervention called Cognitive Behavioral Therapy (CBT for short). The therapist should try to instill hope that therapy will be successful. The therapist should also highlight the collaborative nature of the treatment and the use of homework (also called "action plans") between sessions [26].

The client is then taught the general cognitive model (see Figure). Specifically, the client learns to differentiate thoughts and moods. They are then taught that when negative thoughts are changed, then negative moods, behaviors, and even neurochemistry and brain activation patterns also change. Finally, the therapist and client create a list of treatment goals.

Sessions 3–10: Cognitive Restructuring, Experiments, and Behavioral Activation

The majority of sessions are focused on changing negative patterns of thinking. As a reminder, clients should always complete a symptom measure at the start of each session. Further, each session should begin by creating an agenda that includes a discussion of events since the last session, a review of homework, goal(s) for the current session, and skill acquisition.

Clients first learn to identify and rate their moods. As clients become adept at monitoring their moods, they are then taught to identify the negative automatic thoughts that precede and accompany depressed moods. These negative cognitions become the target for cognitive restructuring. Throughout this learning process, clients also may begin to identify situational factors that affect their moods (e.g., depression is worst in the morning).

Cognitive restructuring is a deliberate and effortful process by which clients evaluate and challenge the veracity of their negative thoughts. It is typically accomplished with Socratic-style questioning from the therapist (e.g., would your friend agree with that?) as well as the use of thought and behavior experiments. Perhaps the most common technique is for the client to serve as a "judge" for their thoughts; they write down the evidence "for" and "against" negative thoughts using a thought record worksheet. After considering all the evidence, they then try to generate more realistic or less extreme cognitive responses. These skills are practiced both in-session and outside of session via homework. Behavioral experiments are also used to test the accuracy of negative thoughts and beliefs. For example, a client may have thought, "no one wants to spend time with me." The client could then test this thought by asking a friend to get coffee. It may be helpful to think about cognitive restructuring as learning a second language [10]; both take time, practice, and overcoming highly engrained patterns of thinking.

In addition to cognitive restructuring, clients should engage in behavioral activation. For example, it is useful to create a weekly activity schedule to increase goal-directed behaviors (e.g., go for a 15-minute walk or visit a friend). It is important to pursue activities from which the client not only derives pleasure but also can experience a sense of accomplishment. Thus, small attainable activities should be the focus.

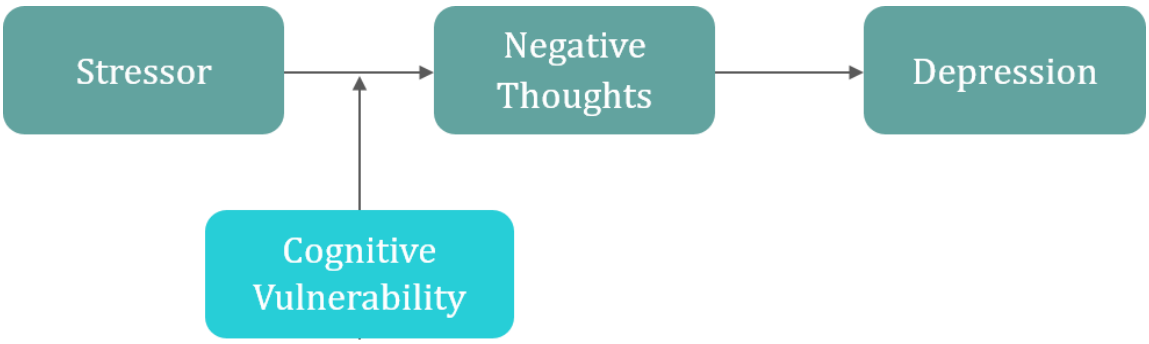

Figure. Basic Cognitive Model of Depression

Sessions 11–12: Consolidating Treatment Gains and Relapse Prevention

The final sessions are dedicated to consolidating the skills the client has learned. The patient should be well versed in the cognitive model of depression, competent at identifying automatic thoughts, cognitive restructuring, and behavioral activation. The patient should continue to do homework and practice their cognitive skills while both the client and therapist try to anticipate challenges that may arise after therapy termination.

Materials for Further Education

Cognitive Skills Workbook. We created a cognitive skills workbook that can supplement in-person CBT [11]. It can be downloaded here: https://osf.io/7ekz8/. This workbook provides psychoeducational activities (e.g., thought records) that can be used in sessions or as homework. This is not meant to be a standalone intervention, and its efficacy was only tested in relatively healthy American college students [11].

Reading List

Table

Articles that provide more in-depth analyses of CBT, including how to conduct it and its efficacy

Manuals and Guides
Beck, J.S. (2011, November 17). The How and Why of Cognitive Behavior Therapy. https://www.huffpost.com/entry/the-how-and-why-of-cognit_b_628131
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Notes. To obtain copies of peer reviewed articles behind paywalls, please email the corresponding author of the article or you can email the corresponding author of this article.

Conclusion

When a patient presents with depression, which treatment should a therapist try first? We argue that it is best to start with Cognitive Behavioral Therapy (CBT). It is the most studied form of psychotherapy, has a strong theoretical basis, can be implemented by therapists of varying experience levels, and is as effective or more effective than existing treatments, including medication. CBT may not work for every client, but it is the best place to start.

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Information about the authors

Ciara E. Lawlor, PhD (Psychology), Research Assistant, Department of Psychology, University of Notre Dame, Notre Dame, IN, USA, ORCID: https://orcid.org/0000-0002-8920-8566, e-mail: clawlor3@nd.edu

Gerald J. Haeffel, PhD (Psychology), Professor, University of Notre Dame, Notre Dame, IN, USA, ORCID: https://orcid.org/0000-0002-0777-1122, e-mail: ghaeffel@nd.edu

Jason T. Goodson, PhD (Psychology), Staff Psychologist, PTSD Clinical Team, VA Salt Lake City Health Care Systems, Salt Lake City, UT, USA, ORCID: https://orcid.org/0000-0002-0777-1111, e-mail: jason.goodson@va.gov

Информация об авторах

Лоулор Киара Э., PhD (психология), научный сотрудник, департамент психологии, Университет Нотр-Дам, Нотр-Дам, Индиана, США, ORCID: https://orcid.org/0000-0002-8920-8566, e-mail: clawlor3@nd.edu

Хеффель Джеральд Дж., PhD (психология), профессор, Университет Нотр-Дам, Нотр-Дам, Индиана, США, ORCID: https://orcid.org/0000-0002-0777-1122, e-mail: ghaeffel@nd.edu

Гудсон Джейсон Т., PhD (психология), штатный психолог, Клиническая группа по ПТСР, Администрация по делам ветеранов, Солт-Лейк-Сити, Юта, США, ORCID: https://orcid.org/0000-0002-0777-1111, e-mail: jason.goodson@va.gov

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Implementing Cognitive-Behavioral Therapy in Children and Adolescents with Anxiety Disorders

Guadalupe C. Patriarca
Florida International University, Miami, FL, USA,
ORCID: https://orcid.org/0000-0001-7282-2407, e-mail: gpatriar@fiu.edu

Jeremy W. Pettit
Florida International University, Miami, FL, USA,
ORCID: https://orcid.org/0000-0002-7426-9411, e-mail: jpettit@fiu.edu

Wendy K. Silverman
Yale University School of Medicine, New Haven, CT, USA,
ORCID: https://orcid.org/0000-0003-4415-4098, e-mail: wendy.silverman@yale.edu

This article provides an introduction and overview of the cognitive-behavioral treatment approach to anxiety disorders in children and adolescents. We first provide an introduction to the cognitive-behavioral conceptualization of anxiety, emphasizing the tripartite model of emotions: cognitions, physiological arousal, and avoidance behaviors. We then provide an overview of the basic principles of cognitive behavioral treatment for anxiety disorders in children and adolescents, including generalized, social, and separation anxiety, and specific phobia. We follow this introduction and overview with a discussion of the structure and goals of treatment, including the three phases of treatment (psychoeducation, application, and relapse prevention). In the context of discussing application, we focus primarily on implementation strategies relating to behavioral exposures and cognitive restructuring. We conclude with a summary of different formats wherein cognitive-behavioral treatment can be implemented, including child-only, peer-group, parent-involved, and telehealth.

Keywords: Anxiety disorders, children, adolescents, cognitive behavioral therapy.

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Проведение когнитивно-поведенческой терапии с детьми и подростками с тревожными расстройствами

Патриарка Г.С.
Международный университет Флориды, Майами, Флорида, США,
ORCID: https://orcid.org/0000-0001-7282-2407, e-mail: gpatriar@fiu.edu

Петтит Дж.В.
Международный университет Флориды, Майами, Флорида, США,
ORCID: https://orcid.org/0000-0002-7426-9411, e-mail: jpettit@fiu.edu

Сильверман У.К.
Медицинская школа Йельского университета, Нью-Хейвен, Коннектикут, США,
ORCID: https://orcid.org/0000-0003-4415-4098, e-mail: wendy.silverman@yale.edu

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В этой статье представлены введение и обзор когнитивно-поведенческого подхода к лечению тревожных расстройств у детей и подростков. Сначала мы представляем введение в когнитивно-поведенческую концептуализацию тревоги, выделяя тройственную модель эмоций: когниции, физиологическое возбуждение и избегание. Затем мы представляем обзор основных принципов когнитивно-поведенческой терапии тревожных расстройств у детей и подростков, включая генерализованное тревожное расстройство, социальную тревожность, страх разлуки, а также специфические фобии. Затем мы приводим структуру и цели лечения, включая три этапа лечения: психообразование, практическое применение навыков и предотвращение рецидивов. В контексте практического применения мы фокусируемся в первую очередь на стратегиях поведенческой экспозиции (exposure) и когнитивной перестройки. В заключение мы приводим краткое описание различных форматов, в которых может быть реализована когнитивно-поведенческая терапия, включая индивидуальную работу с ребенком, групповой формат, терапию с участием родителей и телемедицину.

Ключевые слова: тревожные расстройства, дети, подростки, когнитивно-поведенческая терапия.

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Despite decades of research into the efficacy of cognitive-behavioral treatment (CBT) for child anxiety [18; 46], there is a continued limited accessibility to evidence-based treatments, including CBT, and an insufficient number of trained providers for child anxiety worldwide [23]. The limited access and training on evidence-based treatments for child anxiety impact novice clinicians interested in implementing CBTs. Therefore, the purpose of this article is to present the cognitive-behavioral conceptualization of anxiety disorders and an overview of the CBT approach to anxiety disorders in children for clinicians with little exposure or access to training in evidence-based treatments. For a more in-depth discussion of CBT for child anxiety, we refer readers [3; 21; 41].

What are Anxiety Disorders?

Anxiety disorders in childhood and adolescence (child) are characterized by excessive, developmentally inappropriate fears and worries [1]. While anxiety is a universal, rational emotion that may be experienced in response to threatening stimuli [48], anxiety disorders persist beyond developmentally appropriate periods and are associated with significant distress and interference with daily functioning [1]. About 10–20% of children meet the Diagnostic and Statistical Manual of Mental Disorders [1] diagnostic criteria for an anxiety disorder [14], with the most prevalent being specific phobias and separation, social, and generalized anxiety disorders. If left untreated, anxiety disorders often run a chronic course and persist into adulthood [12; 19].

Cognitive-Behavioral Conceptualization of Anxiety

The cognitive-behavioral conceptualization ascribes to a tripartite model of emotions: cognitions, physiological arousal, and avoidance behaviors [e.g., 24; 25; 34; 35]. Activation of these components may occur concurrently (all components are active) or not (one or two components are active) [25; 31; 35]. For example, a child with high separation anxiety may believe that parents will have a car accident and die and they will never be able to see parents again (cognition), cry, sweat or tremble upon separation from parents (physiological arousal), and beg parents not to leave them (avoidance behavior).

CBT focuses primarily on increasing approach and decreasing avoidance behaviors by conducting exposures wherein the child faces fear- or anxiety-provoking stimuli; and challenging the child's anxious thoughts and beliefs. A key premise of exposure-based CBT is that fear and anxious avoidant behaviors develop through the formation of associations between stimuli or situations and negative outcomes. These associations, referred to as excitatory associations [10], can form through direct and indirect experience, vicarious observation, and information transmission [15]. Once formed, associations generalize to other, similar stimuli and situations. Avoidance of the feared stimuli/situations strengthens associations and maintains anxiety. Evidence from experimental studies and clinical trials supports the cognitive-behavioral treatment of anxiety [e.g., 12; 46; 51].

Basic Principles of CBT for Anxiety

CBT is time-limited, problem-focused, and requires active participation of the therapist and child. The role and level of parent involvement vary across cases, as discussed briefly later. A typical CBT course is 12 to 16 sessions. This limited time frame

highlights the importance of identifying the primary areas of interference or impairment relating to the child's anxiety (i.e., accurate differential diagnosis) and case formulation. In CBT, the therapist is akin to a coach, providing psychoeducation about anxiety and support throughout treatment [21; 41]. Like any coaching context, there ought to be some level of consensus among all team players — in this context, therapist, child, and parent. The consensus relates to the primary anxiety areas of interference (e.g., separation anxiety from caretaker), which then are targeted in treatment. Consensus is important to foment the therapeutic alliance and family motivation to work on these areas to attain success in accomplishing treatment tasks and reaching treatment goals. It further serves to increase adherence to treatment and child completion of in-session and out-of-session tasks [8; 28]. To foster the therapeutic alliance, it is important the therapist displays warmth, genuineness, concern, and active listening — a keystone of all psychotherapeutic endeavors [37].

The above must all be considered within the context of factors relevant to the particular child, including family structure, race, ethnicity, socio-economic status, gender orientation, and development. For example, parents may participate actively in the child's treatment [9; 39], and therapists should consider how race, ethnicity, and socio-economic status impact barriers to accessing mental health care and feasibility of parents to provide tangible rewards [2; 30]. It is also important for therapists to be aware of how gender stereotypes affect symptom expression [17]. Developmental considerations are of similar importance, such as the possible clinical benefits of using play with younger children versus engaging in age-appropriate conversation with older children and adolescents.

CBT Structure and Goals

Initial sessions, typically the first three, involve providing psychoeducation about anxiety and setting treatment goals (i.e., psychoeducation phase); the next 6 to 8 sessions entail the therapist working with the child in devising and completing in- and out-of-session behavioral exposures or experiments, and practicing cognitive or self-control strategies to manage anxiety (i.e., application phase); the final two or three sessions emphasize termination and preparing the child to manage anxiety upon termination (i.e., relapse prevention phase). The precise number of sessions may need to vary depending on, for example, anxiety severity [33]. Some children may need extra time practicing skills; others may pick up skills and strategies early in treatment and require fewer sessions. Even when the emphasis is working with the child individually, it is still common to include the parents in the first meeting, a middle meeting, and a final meeting to ensure parents understand the key concepts underlying the child's CBT and whether parents might need to help facilitate the child's successful completion of CBT (e.g., participate with the child in an exposure task).

Phase I: Psychoeducation

During the psychoeducation phase, the therapist orients the child and parent to the treatment program, explaining that treatment is a joint effort. As noted, the therapist can use the coaching analogy to explain that the therapist initially takes an active coach-like role in explaining how anxiety occurs and how to use CBT skills to manage it. This is

followed by the child taking a more active role by practicing facing their fears and implementing the skills. The therapist emphasizes there is no "magic wand" that will completely eliminate anxiety. Rather, the emphasis is on the child improving their management of or coping with their anxiety [16; 41]. For treatment to be effective, it is important that the child practice what they learn during sessions. To facilitate practice, the therapist assigns out-of-session tasks and explains that the more the child practices, the more likely they will learn to manage their anxiety.

After orienting the child to treatment, the therapist provides psychoeducation. The therapist explains that anxiety is designed to 1) draw our attention to immediate threats and 2) to keep ourselves safe by activating the fight-or-flight system, and signals may be activated in dangerous and non-dangerous situations. A smoke alarm metaphor is helpful to explain this concept. A smoke alarm signals that there is a fire in the building, and people must get out to remain safe. Sometimes alarms are helpful in signaling real danger, but sometimes alarms go off when there is no real danger, such as when someone burns toast. The alarm makes the same sound when there is an actual fire and when there is only smoke. Anxiety works similarly by alerting people to possible danger even when they are not in a dangerous situation. Nonetheless, it feels "real" because it activates aspects or even all of the tripartite signals (cognitions, physiological, behavioral).

The therapist introduces the tripartite concept of anxiety as follows. Anxiety shows itself in three ways: thoughts, bodily responses, and behaviors, and these components may show at the same time, one or two at a time, and/or one of them may not appear at all. For example, if a child with social anxiety needs to give a presentation in front of the class, they may think, "I will mess up in front of everyone, and everyone will make fun of me," and they may cry and complain of stomachaches but may not avoid giving the presentation. The therapist helps the child identify the way that the tripartite anxiety response shows itself in anxiety-provoking situations to improve the child's management of the response. Visual aids often help children with learning the tripartite concept, such as cartoon drawings of children with thought bubbles and spaces for the child to write in the bubbles regarding how their anxiety shows itself [4; 41].

Another relevant concept to explain in psychoeducation is the negative reinforcing pattern that occurs with anxiety, what we often refer to as the 'cycle of anxiety' [41]. Avoidance of stimuli/situations brings about short-term transient relief from anxiety, providing negative reinforcement. This serves to maintain continued avoidant behavior due to the negative reinforcing pattern that results. An analogy can be provided with wearing sunglasses. The sun in individuals' eyes can be aversive. People learn to put on sunglasses, and this behavior is maintained because it leads to a continued reduction of sunlight in the eyes. So too does continued behavioral avoidance because it leads to continued reduction of fear and anxiety reactions. It is hard to break this cycle without prescribing exposures to experience the feared anxious reaction and to learn that harm will not occur. Related to parental behavior is the 'protection trap' [41]. This occurs when parents and loved ones protect the child from experiencing anxiety by allowing them to avoid the situation that brings about distress. For example, when the child is permitted to stay home rather than go to school, in the short term, the child's anxiety is reduced, and the parent feels they are protecting the child from the anxiety of school attendance. But here

too, avoidance serves to maintain the negative reinforcement cycle. In this case, *both* child- and parent-behavior are negatively reinforced by distress- or anxiety-reduction (the child because they do not need to attend school; the parent because they feel relieved by 'protecting' their child from anxiety). To help break the cycle of anxiety and the protection trap when involving parents in the child's treatment, a child is asked during CBT to face the fear- or anxiety-provoking stimuli/situations; the parent is asked to reduce their use of negative reinforcement (i.e., discourage avoidance, encourage approach). This is what the child practices during the application phase: exposures.

Phase II: Application

Behavioral strategies: Exposures

Exposure is a key therapeutic component for anxiety reduction. Exposures involve facing the stimuli/situations that provoke anxiety in a planned and controlled way. A common view of exposure implementation in CBT is the habituation model, in which a child gradually faces feared stimuli. As such, each exposure task is designed to represent increased anxiety intensity and be more challenging to complete. In habituation, the child is therefore asked to stay in the situation as long as they can to experience the fearful or anxious reactions until they decrease, with the idea that continued exposure will reduce anxiety. Another common view is the inhibitory learning model, in which a child faces feared stimuli that are associated with the nonoccurrence of the feared outcome, or the occurrence of the feared outcome is experienced at a lower rate and intensity than expected (i.e., a mismatch between what is expected to happen and the outcome) [10]. According to this view, exposure tasks are designed so that facing the feared or anxious stimuli violates the (feared) expectations. This approach is thus tied to violating expectations of outcomes and not to habituating fear or anxiety levels [11].

Exposure tasks vary with the assigned diagnosis and require careful planning to target the specific maladaptive avoidant behaviors and accompanying thoughts or cognitions. That is, a child with a specific phobia of needles will complete exposure tasks involving needles or similar objects; a child with separation anxiety disorder will complete exposure tasks involving being apart from their parent. To facilitate the identification of specific behaviors to target during treatment, the child (and the parent, as appropriate) are asked to create a list of situations that the child avoids.

Because facing a stimuli or situation that induces strong emotions can be difficult, in habituation, the exposure is conducted gradually, starting with facing low fear- or anxiety-provoking situations or stimuli, with increasingly more challenging exposures as the child progresses. Children are usually reassured when they know that the exposure will be broken down into smaller, achievable steps so that they increase their confidence, mastery, and ability before moving on to more challenging tasks. It is important for the child to experience anxiety and to stay in the situation until it decreases. The therapist can explain to the child that the anxiety is akin to a wave. At first, the child will have intense, unpleasant feelings when facing their fear, but the longer they stay in the situation and with repeated practice, the unpleasant feelings will decrease. As noted, in the inhibitory learning model, exposure tasks are designed to violate individuals' expectations of the

aversive outcomes [11], with less regard for the intensity of the fear. For example, a child with social anxiety may expect to be laughed at when ordering food at a restaurant; so, a helpful exposure could be to order food in a restaurant. The therapist can further use the analogy of a scientist or detective. That is, with each exposure task, the child can look for evidence or clues about whether their expectation (hypothesis) is warranted or not. Exposures may be conducted with the hierarchy in random order, at varying durations and stimuli [11].

It is helpful for the therapist to be concrete and specific when assigning exposures, including delineating the duration, frequency, and if a parent needs to be present. For example, parents of a child with a specific phobia of dogs may accompany their child to the pet store to practice being near dogs; parents of a child with separation anxiety disorder may leave the house for 10 minutes so that child is exposed to being alone. With children who are able to complete exposures independently, parents can be involved by prompting the child to complete the assigned tasks or providing rewards.

To complete an effective exposure, the child and therapist need to agree on the task to be completed, and there should be no unplanned or unexpected activities. Although anxiety ought to be experienced in each exposure task, there is therapeutic value in the child feeling competent and confident in accomplishing the exposure. Toward this end, if a step of the ladder is too difficult, the therapist can break that step down into smaller and easier steps. Reminder: CBT is collaborative between therapist and child, so the child may also contribute to developing tasks.

Of note, a common obstacle in completing exposures is child compliance. Often, involving parents and teaching them contingency management strategies may be helpful. This is done by contracting with the child (i.e., making a concrete plan by setting a specific date and time, discussing steps to prepare for the task) and providing a reward contingent upon completion of the task [36; 42].

After each exposure task is conducted, it is important to debrief. Debriefing helps the child to process with the therapist the experience, what was easy and hard, and to describe their tripartite reactions before, during, and after the exposure. It is important for the therapist to praise the child for attempting and/or successfully completing each task, though as important is for the child to learn to praise themselves (i.e., self-reinforcement; [42]). With younger children, this might take the form of tangible and nontangible rewards, such as going to the child's favorite restaurant or extra time playing video games. Importantly, rewards need to be provided after a successful attempt or completion of an exposure; not before. This is what distinguishes rewards or reinforcers from bribes. Rewards, especially with young children, may function to keep motivation high and encourage the child to further engage in exposures.

Cognitive strategies: Cognitive restructuring

Anxious thoughts are not always accurate but can elicit strong emotions and maintain anxiety [41]. Anxious thoughts occur typically in the form of negative self-talk in anticipation of or during anxiety-provoking situations. To address these thoughts, the

therapist introduces cognitive strategies and practices them with the child in the context of exposure tasks. The acronym STOP (scared, thoughts, other thoughts, praise) can be used to explain this strategy [41]. "Scared" (S) can be identified with the tripartite view of anxiety explained previously.

Anxious thoughts (T) can occur in the form of self-talk. These thoughts can also be called "thinking traps" because they are unhelpful ways to think about situations that elicit strong emotions and avoidance. These traps include catastrophizing (thinking the worst possible outcome will happen), overgeneralizing (using words such as "always" or "never"), and mind- reading (assuming what others are thinking), among others. The therapist can help the child identify their pattern of negative thinking that they engage in, particularly before or during exposure tasks. For young children or children who have difficulty identifying anxious thoughts, the therapist shifts the focus to maladaptive behaviors that the child displays in anxiety-provoking situations (such as avoidance or reassurance-seeking).

To address negative thoughts, the child is asked to challenge each of them by generating "other" thoughts (O) and asking to gather evidence that supports and contradicts the anxious thought (T). Younger children may understand this concept better by using the analogy of detectives that are looking for clues. Some questions to ask the child include, "How likely it is to happen?" "How do you know for sure that it is going to happen?" or "What other things may happen?" The therapist may also ask the child to think about past experiences where the thought became true. For example, a child with social anxiety may be asked how many times in the past someone laughed at them after something they said, could the person have laughed at something else, or maybe the person thought they had said something funny and laughed at their joke. As treatment progresses, the child should be able to generate these responses on their own. In the example of the child with social anxiety, they might generate the thought, "I might feel nervous, but people probably won't notice," or "If I say something wrong, people may forget about it."

The last step for managing thoughts is for the child to praise (P) or reward themselves for the effort of identifying anxious thoughts (T) and generating coping thoughts (O). Children should feel hopeful that they are making progress in managing their anxiety.

Phase III: Relapse prevention

During the relapse prevention phase, the therapist discusses strategies with the child for preventing the reoccurrence of avoidant behaviors [44]. By sessions 12–14, the child will have completed most, if not all, of the items on the fear ladder. The therapist now reviews the child's progress in treatment and highlights the situations that the child is now able to face. Although the child may have made progress, it is not unusual for them to "slip" after treatment. Slipping refers to engaging in pretreatment avoidant behaviors and/or pretreatment maladaptive thinking. A key to avoid slipping is to emphasize the importance of practice prior to termination. Specifically, the therapist places emphasis on practicing to prevent slipping by explaining to the child that the more they practice facing their fears, the

less afraid they will be and the less likely they are to slip. Also important is to explain to children and parents how to interpret slips. Specifically, slipping may occur, but it does not mean that they have lost all the progress made. If a child encounters a situation that proves difficult, they can break it down into smaller steps and work their way up, just like they did in treatment. The use of retrieval cues where individuals carry cues, such as a wrist band, can serve as reminders of what they learned in therapy when encountering an anxiety-provoking situation [11].

CBT Formats

CBT is flexible in that the core elements may be administered in different formats, including child-only, peer-group, parent-involved, or telehealth. In individual-child CBT, only the child meets with the therapist, and parents are given progress updates out of the session. A benefit of individual CBT is tailoring treatment, given the emphasis on individual progress [38]. In group-CBT, children of a similar age are placed together. One of the advantages of group CBT is that the group provides an opportunity to practice exposures in front of peers of similar age, to normalize anxiety, and provide peer modeling and social support [43; 45]. Past comparative efficacy trials of individual CBT with group-CBT did not find that one modality outperformed the other in terms of symptom severity or diagnostic outcome [50], although this requires further study in community effectiveness trials, including further analysis of group-CBT's likely improved cost-effectiveness [50].

In parent-involved CBT, the parent takes a more active role, particularly in the application phase. Some discussion may be devoted to how the parent-child relationship influences child anxiety. For example, the therapist can discuss how parental negative reinforcement of the child's avoidant behaviors maintains anxiety and how parental positive reinforcement (such as providing rewards or words of encouragement after facing an anxiety-inducing situation) can encourage child independence and competence [47]. There has also been recent work demonstrating the efficacy of parent-based treatment only, by reducing parent accommodation, which overlaps to some extent with reducing parent use of negative reinforcement [26; 27]. Some children may benefit from their parent being involved in treatment; others may not. For example, the parent-child relationship may be strained due to over-controlling or over-involved parent behaviors [6]. Parents may have difficulties with psychopathology themselves, such as anxiety or depression, which also may be associated with child treatment response [e.g., 5]. However, this factor, like most, has been inconsistently demonstrated as being a significant predictor of treatment response [20; 36]. In the absence of conclusive data, we suggest therapists rely on evidence-informed judgments, including whether other approaches such as medication [10] or attention bias modification training [32], might be useful adjuncts to CBT.

Telehealth is another promising option for decreasing barriers to mental health care and increasing the retention of families who may otherwise find it difficult to access treatment [7; 49]. Telehealth interventions may include computerized self-guided interventions with supplemental telephone calls from a therapist (e.g., Cool Teens; [13]) or videoconference calls with real-time live therapists. During real-time videoconference calls, exposures can be adapted to fit the setting and be similarly anxiety-producing for the child

as if it were an outside situation. For example, exposures to social anxiety can include having the child read a story and make mistakes on purpose, answer a question incorrectly in class, or give a 3-minute oral presentation during the session [22; 29]. There are ongoing efforts to develop and test digital technology, including by the authors, to enhance engagement and facilitate the completion of out-of-session tasks (e.g., [40]).

Conclusion

In this article, we described the cognitive-behavioral conceptualization of anxiety and presented an overview of cognitive-behavioral treatment for child anxiety disorders. From a cognitive-behavioral perspective, anxiety is conceptualized as a learned phenomenon and treatment, therefore, emphasizes learning of other behaviors, and thoughts as a means of reducing anxiety. This is accomplished through the provision of psychoeducation, exposure to feared stimuli/situations, and cognitive restructuring.

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Information about the authors

Guadalupe C. Patriarca, B.A. (Psychology), Doctoral Student, Department of Psychology, Florida International University, Miami, Florida, USA, ORCID: https://orcid.org/0000-0001-7282-2407, e-mail: gpatriar@fiu.edu

Jeremy W. Pettit, PhD (Psychology), Professor, Chair, Department of Psychology, Florida International University, Miami, Florida, USA, ORCID: https://orcid.org/0000-0002-7426-9411, e-mail: jpettit@fiu.edu

Wendy K. Silverman, PhD (Psychology), Professor, Child Study Center, Yale University School of Medicine, New Haven, Connecticut, USA, ORCID: https://orcid.org/0000-0003-4415-4098, e-mail: wendy.silverman@yale.edu

Информация об авторах

Патриарка Гуадалупе С., бакалавр (психология), аспирант, департамент психологии, Международный университет Флориды, Майами, Флорида, США, ORCID: https://orcid.org/0000-0001-7282-2407, e-mail: gpatriar@fiu.edu

Петтит Джереми В., PhD (психология), профессор, руководитель, департамент психологии, Международный университет Флориды, Майами, Флорида, США, ORCID: https://orcid.org/0000-0002-7426-9411, e-mail: jpettit@fiu.edu

Сильверман Уэнди К., PhD (психология), Центр изучения ребенка, Медицинская школа Йельского университета, Нью-Хейвен, Коннектикут, США, ORCID: https://orcid.org/0000-0003-4415-4098, e-mail: wendy.silverman@yale.edu

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Cognitive Behavioral Therapy for Insomnia (CBT-I): A Primer

Jamie Walker
University of Arkansas, Fayetteville, AR, USA,
ORCID: https://orcid.org/0000-0003-2256-3931, e-mail: jlw110@uark.edu

Alexandria Muench
University of Pennsylvania, Philadelphia, PA, USA,
ORCID: https://orcid.org/0000-0003-4826-8498, e-mail: amuench@pennmedicine.upenn.edu

Michael L. Perlis
University of Pennsylvania, Philadelphia, PA, USA,
ORCID: https://orcid.org/0000-0002-6806-759X, e-mail: mperlis@upenn.edu

Ivan Vargas[1]
University of Arkansas, Fayetteville, AR, USA,
ORCID: https://orcid.org/0000-0002-0787-5630, e-mail: ivvargas@uark.edu

Cognitive Behavioral Therapy for Insomnia (CBT-I) is a multi-component treatment for insomnia that targets difficulties with initiating and/or maintaining sleep and is delivered over the course of six to eight sessions. The primary focus of CBT-I is to address the perpetuating factors (according to the three-factor model of insomnia) that contribute to the development of chronic insomnia. Chronic insomnia is the most prevalent sleep disorder, occurring in approximately 6–10% of the population, and is a risk factor for multiple medical and psychiatric disorders. Despite its prevalence and morbidity, the widespread dissemination of CBT-I is not commensurate with insomnia's overall public health impact. This is particularly surprising given its large evidence base and recent recommendation as the first line intervention for insomnia. The primary goal of this article is to provide a primer or brief introduction to CBT-I that is intended to be accessible to all clinicians and researchers, including non-sleep experts. Core components of CBT-I (i.e., Sleep Restriction Therapy, Stimulus Control Therapy, Sleep Hygiene, and Cognitive Therapy), relapse prevention strategies, multicultural considerations, adjuvants to traditional interventions, treatment adherence issues, efficacy, and further training options are described. A session-by-session outline is also provided.

Keywords: Cognitive Behavioral Therapy for Insomnia, insomnia, sleep restriction, cognitive therapy.

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[1] Correspondence concerning this article should be addressed to Ivan Vargas, 310 Memorial Hall, University of Arkansas, Fayetteville AR, 72701, e-mail: ivvargas@uark.edu

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Когнитивно-поведенческая терапия бессонницы (КПТ-Б): руководство

Уокер Дж.
Университет Арканзаса, Фейетвилл, Арканзас, США,
ORCID: https://orcid.org/0000-0003-2256-3931, e-mail: jlw110@uark.edu

Мюнч А.
Пенсильванский университет, Филадельфия, Пенсильвания, США,
ORCID: https://orcid.org/0000-0003-4826-8498, e-mail: amuench@pennmedicine.upenn.edu

Перлис М.Л.
Пенсильванский университет, Филадельфия, Пенсильвания, США,
ORCID: https://orcid.org/0000-0002-6806-759X, e-mail: mperlis@upenn.edu

Варгас А.[2]
Университет Арканзаса, Фейетвилл, Арканзас, США,
ORCID: https://orcid.org/0000-0002-0787-5630, e-mail: ivvargas@uark.edu

Когнитивно-поведенческая терапия бессонницы (КПТ-Б) — это многокомпонентное лечение бессонницы, направленное на устранение трудностей с засыпанием и сном, которое проводится в течение 6–8 сеансов. Основной целью КПТ-Б является устранение факторов (в соответствии с трехфакторной моделью бессонницы), которые способствуют развитию хронической бессонницы. Хроническая бессонница является наиболее распространенным расстройством сна, встречающимся примерно у 6–10% населения, а также фактором риска развития многочисленных медицинских и психических расстройств. Несмотря на распространенность и заболеваемость, широкое распространение КПТ-Б несоизмеримо с общим воздействием бессонницы на здоровье населения. Это особенно удивительно, учитывая обширную доказательную базу КПТ-Б и недавнюю рекомендацию использовать ее в качестве первой линии лечения бессонницы. Основная цель этой статьи — представить руководство, или краткое введение в КПТ-Б, которое должно быть доступно всем клиницистам и исследователям, включая экспертов, не занимающихся вопросами сна. Описаны основные компоненты КПТ-Б (ограничение сна, контроль стимулов, гигиена сна и когнитивная терапия), стратегии профилактики рецидивов, межкультурный аспект, вспомогательные средства для традиционных видов вмешательств, проблемы соблюдения режима лечения, эффективность и варианты дальнейшего обучения. Также приводится посессионный план терапии.

Ключевые слова: когнитивно-поведенческая терапия бессонницы, бессонница, ограничение сна, когнитивная терапия.

[2] Корреспонденцию, касающуюся этой статьи, следует направлять Айвану Варгасу, Мемориал Холл, Университет Арканзаса, Фейетвилл, Арканзас, 72701, e-mail: ivvargas@uark.edu

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According to the three-factor (3P) model of insomnia, there are three primary factors that contribute to the development of chronic insomnia: (1) *predisposing* factors — traits or conditions (e.g., high emotional reactivity) that increase one's vulnerability to developing insomnia; (2) *precipitating* factors — situational conditions (e.g., stressful life events) that trigger the onset of insomnia; and (3) *perpetuating* factors — behaviors and cognitions that contribute to the transition from acute to chronic insomnia and maintain the disorder long term [36].

One noteworthy aspect of this model is that insomnia can be maintained long after the life stressor or precipitating event has resolved. This is thought to be the case because other factors serve to perpetuate insomnia over time (e.g., going to bed earlier to compensate for sleep loss, worrying about daytime functioning). In the context of Cognitive Behavioral Therapy for Insomnia (CBT-I), it is these perpetuating factors that are the primary focus of treatment [22; 24; 28]. Please note that while sleep problems and symptoms of insomnia are common in children and adolescents, the present paper focuses on the application of CBT-I in adult populations. For more information related to behavioral interventions for pediatric insomnia, please refer to a prior review and meta-analysis [18].

What is CBT-I?

CBT-I is a multi-component treatment for insomnia that targets difficulties with initiating and/or maintaining sleep. Standard treatment is delivered over the course of six to eight sessions (session length may vary between 30 and 90 minutes). Each session typically has a specific agenda (e.g., evaluation, rationale, delivery of individual interventions, adherence management, relapse prevention, etc.). Sessions most often occur in person or via telehealth on a weekly or bi-weekly schedule and can be delivered in either individual or group format. Please refer to the Appendix for a list of treatment manuals that are currently available.

This intervention is typically comprised of two core components: Sleep Restriction Therapy (SRT) and Stimulus Control Therapy (SCT); and two adjunctive components: Sleep Hygiene (SH) and Cognitive Therapy (CT). Most treatment protocols and published manuals [6; 17; 22; 31] deliver SRT and SCT as complementary therapies. SRT's primary indication is to increase homeostatic sleep drive (or the propensity to fall asleep) and to allow for consolidated sleep. SCT's primary indication is to manage nocturnal wakefulness via behavioral modification. Even in the absence of traditional cognitive therapy exercises (e.g., debunking dysfunctional beliefs and addressing catastrophization), SRT and SCT still include cognitive work via the therapist's explanations and efforts to garner adherence to the prescriptive aspects of therapy. The art of CBT-I pertains to how successful the therapist is at garnering patient "buy-in." This aspect of learning CBT-I is so central to the process that some treatment manuals provide therapist/patient example dialogues.

Core Treatment Components

Sleep Restriction Therapy (SRT). SRT is based on the notion that the most important perpetuating factor for chronic insomnia is sleep extension [37]. Sleep extension is the tendency for individuals to compensate for "lost" sleep by increasing their time in bed (e.g., going to bed earlier, sleeping in later, or napping). A consequence of sleep extension, however, is the mismatch between sleep ability (i.e., how much time the person actually sleeps) and sleep opportunity (i.e., how much time the patient spends in bed). The primary goal of SRT is to address this mismatch by limiting sleep opportunity to the person's average sleep ability. SRT is effective because it increases the homeostatic sleep drive and consequently reduces the time it takes to fall asleep or the amount of time spent awake at night. According to the original formulation, SRT can be completed using the following steps: (1) determine the patient's baseline sleep ability in terms of average sleep duration (as assessed with daily sleep diaries gathered over a period of two weeks), (2) set the patient's prescribed time in bed (PTIB, i.e., the patient's "sleep window") equal to their average sleep duration during the baseline period, (3) determine a morning rise time that the patient can closely adhere to on a daily basis, given their work schedule or other life style constraints, and (4) set the prescribed time to bed (PTTB) by subtracting PTIB from the desired wakeup time (e.g., if PTIB is 6 hours and rise time is set to 7:00 a.m., than PTTB equals 1:00 a.m.). This sleep schedule is maintained or altered based upon how consolidated the patient's sleep is. For example, if the patient's sleep efficiency (SE%; the percent of time in bed spent actually sleeping) is less than 85%, PTIB is reduced by 15 minutes. If SE% is between 85% and 90%, PTIB remains as prescribed. If SE% is greater than 90%, PTIB is increased by 15 minutes. Adjustments to the sleep schedule or PTTB are completed each week after reviewing the patient's sleep diary from the previous week.

Stimulus Control Therapy (SCT). SCT is based on behavioral principles and the idea that one stimulus may lead to a variety of responses, depending on the conditioning history [2]. In good sleepers, the stimuli typically associated with sleep (e.g., bed, bedroom, etc.) are paired with and subsequently elicit the response of sleep. In patients with insomnia, these same sleep-related stimuli become paired with other activities, such as reading, watching television, and lying awake in bed while *trying* to sleep (also known as sleep "effort"). Engaging in these other behaviors while in bed contributes to a maladaptive conditioning pattern (or stimulus dyscontrol) and, therefore, reduces the probability that sleep will occur when and where the patient wants. Most importantly, these other behaviors strengthen the association between one's bed and wakefulness (i.e., the bed and the bedroom become cues for wakefulness). Stimulus control recommendations are as follows: (a) lie down to sleep only when sleepy, (b) avoid using the bed for activities other than sleep or sex, (c) get out of bed if unable to sleep within 15–20 min and return to bed only when sleepy, (d) repeat this pattern throughout the night as necessary, (e) get up at the same time every day, and (f) avoid napping throughout the day [30]. These recommendations form the basis for the development of good sleeping habits and are to be observed even after remission is achieved.

Sleep Hygiene (SH). Educating patients about SH promotes better sleep practices by providing information about behaviors that influence sleep [24]. Although it shows only minimal treatment effects when used as a stand-alone intervention [7; 11], SH is considered a necessary part of CBT-I [23]. SH usually includes a one-page handout that outlines various

lifestyle and environmental factors that can be modified to decrease the risk of experiencing a sleepless night (e.g., limiting caffeine and alcohol use before bedtime, napping, creating a comfortable sleeping environment, and exercising regularly). SH is thought to be most helpful when tailored to the patient's own sleep/wake behaviors.

Cognitive Therapy (CT). The primary goal of CT is to help patients develop realistic sleep expectations by (1) identifying dysfunctional thoughts about sleep that perpetuate insomnia or contribute to pre-sleep arousal, (2) examining these thoughts for accuracy, and, if necessary, (3) modifying them to be more rational and/or realistic [24]. Research on the influence of dysfunctional beliefs about sleep, attentional biases, and pre-sleep cognitions highlights cognitive restructuring as an increasingly important component of CBT-I [8]. CBT-I follows the traditional cognitive therapy approach by identifying maladaptive sleep-related cognitions and the resulting emotional reactions using thought records. The patient is then instructed to describe the situation that produced the thought, the content of the thought, the emotional reaction, and its intensity in detail. These beliefs are evaluated with cognitive restructuring techniques including, but not limited to, disputation of dysfunctional beliefs and decatastrophization, and replacing them with more adaptive sleep-promoting thoughts [22]. The patient is instructed to apply their revised thought to the situation and notes the change in emotion. These cognitive therapy techniques allow the patient to go through a process of guided discovery to realize that their beliefs may not be accurate or helpful, which in turn helps them to better manage their problematic sleep beliefs and cognitive responses.

Session-by-Session Outline

CBT-I typically begins with a 60–90-minute pre-treatment session, during which the therapist collects clinical information from the patient regarding the presenting sleep concerns, relevant sleep, and psychiatric history, relevant social and medical history, baseline symptom measurement (via self-report measures such as the Insomnia Severity Index (ISI) and a retrospective sleep diary). The primary goal of this initial session is for the therapist to develop diagnostic impressions and determine whether CBT-I is appropriate. If the therapist determines that CBT-I is warranted, an overview of insomnia, CBT-I, the format of treatment sessions, and orientation to the daily sleep diary is also provided during this initial session. Following Session 1, baseline sleep data is collected for 1-2 weeks using a daily sleep diary (while various versions exist, a consensus sleep diary was published in 2012 [3]). The remaining CBT-I sessions are typically 30–60 minutes and follow the structure outlined in Table 1.

Relapse Prevention

Prior to treatment termination, relapse prevention strategies are discussed. The patient is instructed on strategies to maintain healthy sleep patterns and how to self-administer treatment should they experience future sleep continuity problems. During this final session, the therapist discusses how to maintain the gains the patient has made in treatment and help them to identify the key strategies to manage their insomnia on their own. This typically includes a review of the strategies that were discussed during SRT and SCT, such as the 3P Model of Insomnia, the importance of maintaining a consistent sleep schedule, and what to do when you experience a bout of acute insomnia (and how to stay mindful of factors or events that may potentially trigger these future episodes of insomnia).

Table 1

Session-by-session outline

Session #	Session focus	Session tasks
1	Assessment and introduction to CBT-I	• Determine patient's presenting complaint(s) and comorbid conditions • Administer assessment battery • Administer instructions on how to complete the sleep diary
2	Introduce SRT and SCT	• Review sleep diary • Introduce 3P Model of Insomnia (mismatch between sleep ability and opportunity) • Introduce sleep restriction and stimulus control • Set sleep prescription (PTIB)
3	Sleep hygiene	• Review sleep diary • Identify problems and devise strategies to enhance adherence to new sleep schedule • Introduce sleep hygiene
4	Cognitive therapy	• Review sleep diary • Identify problems and devise strategies to enhance adherence • Introduce cognitive therapy rationale
5–7	Continue cognitive therapy and adherence management	• Review sleep diary and make appropriate adjustment to PTIB (if treatment gains have been met (SE>90% and sleep duration is adequate, proceed to Session 8) • Identify problems and devise strategies to enhance adherence • Review status of sleep hygiene changes • Continue cognitive therapy as needed
8	Relapse prevention	• Review sleep diary and treatment progress • Discuss relapse prevention • Summarize final recommendations and confirm 3-month follow-up

Note. Adopted from Perlis et al. [28] — Cognitive behavioral treatment of insomnia: A session-by-session guide.

Multicultural Considerations

While the effects of insomnia can be significant for all, some research suggests that insomnia disproportionately affects those who are already socially and/or economically

disadvantaged, including racial/ethnic minorities [4; 5; 9; 10; 32]. That is, cultural/racial factors may influence the likelihood that someone will (1) develop insomnia, (2) identify sleeplessness as a problem, and (3) seek out or utilize medical or psychological interventions for sleep-related concerns. For example, racial minorities are disproportionately represented in lower income populations [33]. Socioeconomically disadvantaged individuals are therefore more likely to engage in behaviors that precipitate or perpetuate sleep continuity disturbance, such as having less consistent work/life schedules (e.g., greater proportion of people working rotating or night shifts), limited access to regular or comfortable sleeping conditions, or increased stress [1]. Moreover, some research supports that racial and ethnic minorities are less likely to seek treatment for their sleep difficulties. Studies have found cultural differences in what is considered a sleep "problem" [4; 16]. Therefore, it may be the case that individuals from certain cultural groups are more likely to minimize the presence of insomnia symptoms [14] or use cognitive appraisal strategies that minimize the functional impact of sleep/insomnia on their life [13].

These are important multicultural considerations that may limit the acceptability of interventions such as CBT-I and thus should be the focus of future research efforts (e.g., how to adapt behavioral interventions to different racial/ethnic groups).

Adjuvants to Traditional Interventions

In addition to the key components of CBT-I, additional interventions, such as nighttime grounding/relaxation, deep breathing, progressive muscle relaxation, or mindfulness meditation, may be beneficial components as well. For example, one of the most influential changes to CBT-I was the adoption of mindfulness training. Mindfulness was first introduced in the context of insomnia to address sleep-related cognitive arousal [26]. The approach differs from traditional cognitive therapy in that it is not focused on disputing, derailing, or disengaging worry or intrusive negative thoughts. Instead, mindfulness is focused on the non-judgmental observation of one's cognitions, with the desired goal of changing one's relationship with their thoughts as opposed to fighting with them. In this way, the process encourages more acceptance.

Treatment Adherence Issues

Lack of treatment response can often be explained by participant non-adherence. Even if adherence does not appear to be an issue when referencing the sleep diary, the clinician should question each aspect of the regimen. If an aspect of non-adherence is identified, the clinician may ask questions to determine reasons for non-adherence, review the basis for the behavioral prescription, and generate solutions with the participant to promote better adherence. The most common adherence problems include: not completing sleep diaries, not adhering to the prescribed bedtime and wake time, not getting out of bed during the night when unable to sleep, not staying out of bed long enough during the night for sufficient sleepiness to build, and napping. During this assessment, the clinician should avoid patronizing or scolding the participant for non-adherence, as this may worsen the problem. The participant should feel like a collaborator in this process. General approaches to the most common issues with adherence are outlined in Table 2.

Table 2

Strategies for managing adherence issues

Adherence Issue	General Strategy
Concerns about restricting sleep schedule	Patients often express dissatisfaction with their usual amount of sleep and are therefore inclined to spend extra time in bed to get any more sleep or at least to rest. Help them see that this strategy hasn't been working for them and that it is only likely exacerbating the problem. Explain to them that by learning that they can sleep solidly, their anxieties about sleep will reduce, and their shedule will begin to repair itself. Also, remind them that as they begin to sleep solidly, they will be able to gradually increase their time in bed and maintain efficiency, so this restriction is short-term and not a lifetime sentence.
Difficulty getting out of bed at the prescribed rise time	It is important to encourage patients to set an alarm even if they normally do not. They should also inform their bed partner of their required wake time and solicit their assistance in helping them to get out of bed. Other useful strategies include having participants place the alarm clock at a distance from them, so they are forced to get out of bed to turn it off and scheduling morning activities with other people. It is also important to reiterate the rationale for consistent wake times to regulate the circadian clock.
Falling asleep before their prescribed bedtime	Often the prescribed bedtime is later than the patient's habitual bedtime, and they may spend the last few hours before bed alone and engaged in a quiet activity, making them vulnerable to falling asleep. The patient should be encouraged to schedule social activities, both inside and outside the house, and to spend later evening hours doing something active rather than passive. You can reassure the patient that getting too "wound up" is less problematic than falling asleep before their prescribed bedtime.
Failure to observe the 15–20 minute "rule"	Patients often instinctively want to remain in bed to stay under the warmth of their covers, to avoid "waking themselves up," or at least "to rest." Getting up may also represent failure or cause worry that it could disturb others. Encourage them to expect to be up and so to make a specific plan about what they will do (e.g., leave the heat and light on in the living room, set out a book). The more specific the plan, the greater the likelihood the patient will follow through during the night.
Napping during the daytime	Patients may nap during the daytime or after work to deal with the daytime sleepiness associated with restricting their sleep. It is important to reiterate the rationale for avoiding daytime napping by framing it in terms of building the drive for sleep and not spending or depleting that drive at any time other than at night when they want to sleep. It is also helpful to schedule alternative activities during that time to avoid the urge to nap. They should also view daytime sleepiness as an indication that the behavioral strategies are successfully increasing their sleep drive.

Lapsing from the assigned schedule, especially on weekends	Patients should be encouraged to avoid exceptions to their sleep schedule during treatment. Reiterate the rationale for regularity and consistency and emphasize that it will shorten their treatment if they are consistent. Help them to generate morning activities to get them out of bed at the appropriate time. It can be emphasized that to fall asleep earlier, or sleep in later, will spend down sleep drive thus, making the next several nights more prone to problems.
Desire to make rapid adjustments to the restricted sleep schedule	Patients will often ask to make significant increases to TIB early in the therapy, especially if they notice increases in their SE early on. Empathize with this desire but emphasize that it takes time to restore the biological clock to a consistent rhythm. It can also be useful to draw a distinction between how long they have had insomnia and how quickly they have made positive changes to highlight that this is a longstanding issue that requires changing, which is likely to take some time. Note that adjustments are permissible when the patient meets the SE≥85% criterion.

Note. Adopted from Perlis et al. [28] – Cognitive behavioral treatment of insomnia: A session-by-session guide.

Efficacy of CBT-I

While a complete review of CBT-I's overall efficacy is beyond the scope of the present paper, the evidence is clear: CBT-I works. According to meta-analytic estimates, the average treatment effect sizes range from 1.0-1.2, which corresponds to approximately a 50% post-treatment reduction in individual insomnia symptoms [21; 35; 38]. These treatment effect sizes are even greater when overall insomnia severity (e.g., as assessed by the ISI) is assessed [38]. Just as importantly, the effects of CBT-I are stable over time (i.e., clinical gains can be maintained for up to 24 months post-treatment [23; 25]). Finally, one study showed that CBT-I could even be effective in treating insomnia among "real world" patients (i.e., those with comorbid medical and behavioral disorders) [27]. Please also refer to the Appendix for a more complete list of recommended readings related to the evidence for and efficacy of CBT-I.

Conclusion and Further Training

There is an overwhelming preponderance of evidence that CBT-I is an efficacious treatment for chronic insomnia [15; 38]. Specifically, the literature supports that it is as effective in treating insomnia symptoms as sedative-hypnotics during acute treatment (4–8 weeks [12; 15; 29]) and is more effective than sedative-hypnotics in the long term (e.g., 3+ months following treatment) [19; 20]. For these and other reasons, the American College of Physicians has recently recommended that CBT-I be considered the first line treatment for chronic insomnia [34]. The issue that emerges from this is how to make CBT-I available. Some recommendations include: (1) having clinicians assess for insomnia; (2) educating clinicians that the first-line therapy for chronic insomnia is CBT-I; (3) routinely referring patients to insomnia treatment and allowing clinicians to decide whether to make CBT-I available in their practice or to refer patients to an outside CBT-I

provider. In the case of the former, one could either hire a CBT-I specialist or learn to deliver CBT-I within their own practice. One way to accomplish this would be to buy a treatment manual and read it. While that's an excellent place to begin (and it will make the clinician a more informed consumer of CBT-I), practicing or using this intervention in one's practice will be more successful if clinicians engage in a more rigorous training regimen; one that includes CE courses, observation, and supervision/peer consultation. Resources for such educational activities can be found via any of the major CBT-I training programs (i.e., University of Pennsylvania [Perlis/Posner], Oxford University [Espie/Simon], Ryerson University [Carney], University of Arizona [Grandner/Taylor], or the VA [Manber]). Such educational opportunities may help enrich even the most experienced clinician's foundational knowledge of the principles and practice of CBT-I. At the end of the day, the prescriptive components of CBT-I are straightforward, but garnering patient adherence is a high art form. If the clinician elects to refer for CBT-I, this can be done in at least one of three ways: (1) prescribe CBT-I as a digital therapeutic (e.g., Somryst, Pear therapeutics); (2) recommend the patient use an online (unattended) internet-based CBT-I (e.g., Sleepio; SHUTi); and (3) refer to behavioral sleep medicine specialists via the use of provider directories (https://www.behavioralsleep.org/index.php/united-states-sbsm-members or https://www.med.upenn.edu/cbti/provder_directory.html).

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APPENDIX

List of CBT-I treatment manuals and other recommended articles that review the theory and evidence for CBT-I

Manuals and Guides
Edinger, J.D., & Carney, C.E. (2014). Overcoming insomnia: A cognitive-behavioral therapy approach, therapist guide. Oxford University Press
Manber, R., & Carney, C.E. (2015). Treatment plans and interventions for insomnia: A case formulation approach. Guilford Publications
Morin, C.M., & Espie, C.A. (2007). Insomnia: A clinical guide to assessment and treatment. Springer Science & Business Media
Perlis, M.L., Aloia, M., & Kuhn, B.R. (2010). Behavioral treatments for sleep disorders: A comprehensive primer of behavioral sleep medicine interventions. Elsevier Science
Perlis, M.L., Jungquist, C., Smith, M.T., & Posner, D. (2006). Cognitive behavioral treatment of insomnia: A session-by-session guide. Springer Science & Business Media
Theory and Evidence
Irwin, M.R., Cole, J.C., & Nicassio, P.M. (2006). Comparative meta-analysis of behavioral interventions for insomnia and their efficacy in middle-aged adults and in older adults 55+ years of age. *Health Psychology: Official Journal of the Division of Health Psychology, American Psychological Association,* vol. 25(1), pp. 3–14. DOI: 10.1037/0278-6133.25.1.3
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Information about the authors

Jamie Walker, M.A. (Psychology), PhD Student, Department of Psychological Science, University of Arkansas, Fayetteville, AR, USA, ORCID: https://orcid.org/0000-0003-2256-3931, e-mail: jlw110@uark.edu

Alexandria Muench, PsyD (Psychology), Post-Doctoral Fellow, Behavioral Sleep Medicine Program; Chronobiology & Sleep Institute, University of Pennsylvania, Philadelphia, PA, USA, ORCID: https://orcid.org/0000-0003-4826-8498, e-mail: amuench@pennmedicine.upenn.edu

Michael L. Perlis, PhD (Psychology), Professor / Clinical Researcher, Department of Psychiatry, University of Pennsylvania, Philadelphia, PA, USA, ORCID: https://orcid.org/0000-0002-6806-759X, e-mail: mperlis@upenn.edu

Ivan Vargas, PhD (Psychology), Professor, Department of Psychological Science, University of Arkansas, Fayetteville, AR, USA, ORCID: https://orcid.org/0000-0002-0787-5630, e-mail: ivvargas@uark.edu

Информация об авторах

Уокер Джейми, магистр (психология), аспирант, департамент психологических наук, Университет Арканзаса, Фейетвилл, Арканзас, США, ORCID: https://orcid.org/0000-0003-2256-3931; e-mail: jlw110@uark.edu

Мюнч Александрия, PsyD (психология), постдокторант, Программа поведенческой медицины сна; Институт хронобиологии и сна, Пенсильванский университет, Филадельфия, Пенсильвания, США, ORCID: https://orcid.org/0000-0003-4826-8498, e-mail: amuench@pennmedicine.upenn.edu

Перлис Майкл Л., PhD (психология), профессор/клинический исследователь, департамент психиатрии, Пенсильванский университет, Филадельфия, Пенсильвания, США, ORCID: https://orcid.org/0000-0002-6806-759X, e-mail: mperlis@upenn.edu

Варгас Айван, PhD (психология), профессор, департамент психологических наук, Университет Арканзаса, Фейетвилл, Арканзас, США, ORCID: https://orcid.org/0000-0002-0787-5630, e-mail: ivvargas@uark.edu

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ISSN: 2304-0394 (online)

A Russian Translation of the BRIEF2 Disproportionately Flags Typical Russian and Previously Institutionalized Individuals on Validity Scales

Lisa K. Chinn
University of Houston, Houston, TX, USA,
ORCID: https://orcid.org/0000-0001-8498-9909, e-mail: lisa.chinn@times.uh.edu

Darya A. Momotenko
Sirius University of Science and Technology, Federal territory "Sirius", Russia,
ORCID: https://orcid.org/0000-0003-2544-5420, e-mail: daryamomotenko@gmail.com

Elena L. Grigorenko
University of Houston, Houston, TX, USA,
ORCID: https://orcid.org/0000-0001-9646-4181, e-mail: elena.grigorenko@times.uh.edu

The Behavior Rating Inventory of Executive Function (BRIEF) is a commonly used tool for researchers and clinicians to assess executive functioning, especially in individuals with learning or other developmental disorders. Although it has been translated and used in multiple countries, the BRIEF has only been officially normed by its manufacturers in U.S. samples. In order to further the ideal of cultural sensitivity in psychological testing and examine whether the BRIEF functions appropriately in Russia and in its distinct subpopulations (e.g., individuals with an early history of adversity), we assessed the performance of its built-in validity scales by administering the BRIEF2 Self-Report Form to a Russian sample (n=572) either raised in biological families (n=315) or with a history of institutionalized care (n=257). Results indicate that, compared to U.S. norms, a large number of this sample was flagged for inconsistent or abnormal answers on the BRIEF2 validity scales. This finding highlights the importance of validity checks when psychological tools are used in new cultures, languages, and samples. Results point to a need for fine-tuning of the BRIEF2 Self-Report Form and/or its scoring system before widespread adaptation among Russian clinicians and researchers.

Keywords: BRIEF, behavior rating inventory of executive function, institutionalization, executive functioning, scale, cross-cultural, validation.

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Чинн Л.К., Момотенко Д.А., Григоренко Е.Л.
Русский перевод BRIEF2 непропорционально
отмечает русскоговорящих людей с опытом
и без опыта институционализации
по шкалам валидности
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Русский перевод BRIEF2 непропорционально отмечает русскоговорящих людей с опытом и без опыта институционализации по шкалам валидности

Чинн Л.К.
Хьюстонский университет, Хьюстон, Техас, США,
ORCID: https://orcid.org/0000-0001-8498-9909, e-mail: lisa.chinn@times.uh.edu

Момотенко Д.А.
Научно-технологический университет «Сириус», ФТ «Сириус», Россия,
ORCID: https://orcid.org/0000-0003-2544-5420, e-mail: daryamomotenko@gmail.com

Григоренко Е.Л.
Хьюстонский университет, Хьюстон, Техас, США,
ORCID: https://orcid.org/0000-0001-9646-4181, e-mail: elena.grigorenko@times.uh.edu

Опросник The Behavior Rating Inventory of Executive Function (BRIEF) является широко используемым инструментом для исследователей и клиницистов для оценки исполнительных функций, особенно у людей с нарушениями обучения или другими нарушениями развития. Несмотря на то, что BRIEF был переведен и используется во многих странах, он был официально валидизирован только создателями теста на выборках испытуемых из США. Чтобы расширить культурное разнообразие в психологическом тестировании и проверить, адекватно ли функционирует BRIEF в России и в отдельных подгруппах (например, у людей, имеющих опыт переживания неблагоприятных событий на ранних этапах жизни), мы оценили эффективность

встроенных в опросник шкал валидности, предложив заполнить форму самоотчета BRIEF2 русскоязычной выборке (N=572), представители которой либо выросли в биологических семьях (n=315), либо в прошлом были институционализированы (n=257). Результаты показывают, что по сравнению с американскими нормами большое количество ответов в выборке данного исследования были помечены как непоследовательные или нетипичные по шкалам валидности BRIEF2. Такой результат подчеркивает важность проверки валидности в случаях, когда психологические инструменты применяются в новых культурах, языках и выборках. Кроме того, результаты указывают на необходимость доработки формы самоотчета BRIEF2 и/или системы начисления баллов перед проведением широкомасштабной адаптации среди российских клиницистов и исследователей.

Ключевые слова: BRIEF, behavior rating inventory of executive function, институционализация, исполнительные функции, шкала, кросс-культурный, валидация.

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Для цитаты: *Чинн Л.К., Момотенко Д.А., Григоренко Е.Л.* Русский перевод BRIEF2 непропорционально отмечает русскоговорящих людей с опытом и без опыта институционализации по шкалам валидности [Электронный ресурс] // Клиническая и специальная психология. 2022. Том 11. № 2. С. 138–157. DOI: 10.17759/cpse.2022110208

The Behavior Rating Inventory of Executive Function (BRIEF) [32] is an executive functioning scale widely used among clinical psychologists. The BRIEF is recommended for use in psychological disorders, such as attention deficit hyperactivity disorder (ADHD) and autism spectrum disorder (ASD), and has also been found to show changes in a variety of medical conditions, including traumatic brain injury [8] and Alzheimer's disease [29]. Although it has been featured in over 400 peer-reviewed papers and used in multiple countries [31], to our knowledge, the BRIEF has not yet been validated in Russia in general nor in previously institutionalized Russian adolescents and adults specifically. Furthermore, the producers of the version of the BRIEF studied here — the BRIEF2 for ages 5–18 — state that it has only been officially normed within English-speaking/reading samples and standardized based on USA census statistics [16]. However, translated versions exist and have been studied outside the USA [15]. The current study assessed the performance of the BRIEF2 Self-Report Form validity scales when the form was translated to Russian and administered to Russian adolescents and adults who were either previously institutionalized or raised in biological families.

Many efforts to examine the effectiveness of the BRIEF in languages other than English and countries other than the USA have involved analyzing its factor structure. For example, the parent and teacher forms of a French version of the BRIEF were found to be reliable and to have a good model fit for two- or three-factor models comprised of the individual subscales [15]. A Dutch translation of the BRIEF was characterized by high internal consistency, high test-retest stability, and a factor structure similar to U.S. participants [19]. Some articles on BRIEF translations do not mention the validity scales at all, and others do not analyze their performance in depth. For example, an article on the performance and factor structure of the BRIEF in a Spanish clinical sample mentioned excluding participants who were flagged by the Negativity or Inconsistency scales but did not report the percentage of participants excluded or compare performance on these scales to USA norms [13]. In the current study, we checked the performance of the validity scales, even though this method is not common in the literature on BRIEF translations. This decision was because the validity scales would potentially be used in future work to exclude participants who answer atypically, and we wanted to check whether such exclusions could be made using U.S. thresholds.

Extensive testing of translated measures is also important because cultural bias in psychological testing is a major ethical concern for clinicians [30] and researchers. For instance, mean scores on assessments such as IQ tests tend to differ among minority groups [30], making the cultural validity of psychological assessments a topic of heated debate. Besides linguistic equivalence in translations, other factors can vary across cultures, such as equivalence in constructs measured, familiarity with the type of assessment, and cultural relevance of measures [6]. A majority of psychological research has been conducted in Western Industrialized Rich Democracies; therefore, the validity of assessments in diverse cultures is a concern [23]. Additionally, many cross-cultural instrument adaptation studies have relied on factor analysis and underutilized other strategies [2]. To further the goal of testing assessment instruments thoroughly before using them in new cultures, we aimed to test the BRIEF2 Self Report Form in Russian and previously institutionalized samples, starting here with its validity scales.

According to the BRIEF2 manual, rater characteristics such as parent education level and race/ethnicity did not contribute meaningfully to BRIEF self-report standardized scores [16]. For example, parent education accounted for less than 3% of the variability in the self-report data, and race/ethnicity was not significantly related to BRIEF2 self-report scores. Therefore, some factors that may vary cross-culturally, such as education and race/ethnicity, might not contribute substantially to differences in BRIEF performance. Nonetheless, it is important to test performance of the BRIEF before using it extensively in new languages and countries.

The standardization sample used for the BRIEF2 manual included participants with no history of special education, psychotropic medication usage, or neurological disorders (such as ADHD or ASD), with 803 participants who completed the self-report from [16]. The current study, which was part of a larger project on institutionalization, did not screen for type of education or medication use, so our samples might not match the standardization samples on those aspects. Unfortunately, the BRIEF2 has not been standardized in

a previously institutionalized US sample, which would have been interesting to compare to our Russian institutionalized sample. The manual includes general clinical samples, as well as samples prone to deficits in executive functioning, including ADHD and ASD.

Institutional care, defined here as care in government institutions without a family structure (e.g., orphanages or baby homes), in Russia, is often characterized by psychosocial deprivation, frequent changes in caregivers, and the deprivation of close individual contact between the child and caregiver [22; 34]. Children in institutions may have psychosocial difficulties associated with the absence of personal space due to living in the same room as multiple other children, a low level of adaptive care, and stigmatization from peers with whom they attend school [27; 35]. Russian institutions disproportionately contain children with disabilities, although typically developing infants and children are also placed in institutions [20]. U.S. institutions are often termed "group homes," which house between 7 and 12 children, or "residential care." These institutions primarily house those who need services such as therapy and medical care for severe behavioral issues or mental disorders [10; 38] but also contain typical children awaiting foster care placement. In both the U.S. and Russia, institutions are highly structured [22; 34; 10]. Children in U.S. and Russian institutional care may face some of the same struggles, such as trauma from changes in guardians [27; 35]. One difference is that although institutional care is improving in quality and becoming less common in Russia, it is still more common than in the U.S. For instance, approximately 19% of Russian children without parental care are placed in institutions [28], versus around 10% of children without parental care in the U.S. [11]. This 19% comprises a large number of individuals because the rate of public care is high in the Russian Federation (1673 in 100,000 children as of 2021) [28].

Executive Function Assessment

Executive function assessments are important for clinicians because executive functioning is linked to academic achievement [1], health-related quality of life [5], language ability [17], and other major life outcomes. Executive functioning is also implicated in a range of disorders, including ADHD [24], depression [37], and schizophrenia [9], among many others, as well as early life experiences. Specifically, a history of institutional care has been shown to be related to deficits in executive function, as measured with cognitive performance tasks and neuroimaging [21; 25; 26]. The number of individuals with a history of such care is large (see above); therefore, executive functioning assessments for clinicians working with previously institutionalized individuals are important.

The BRIEF2 is one such assessment that has practical advantages over some executive function assessments commonly used in research or clinical practice. It contains seven subscales of executive functioning in just one 55-item questionnaire: Inhibit, Self-Monitoring, Shifting, Emotional Control, Task Completion, Working Memory, and Planning and Organization [16]. Therefore, it is comprehensive and quick. It does not require expensive neuroimaging or computing equipment. It also does not involve multiple tasks with different sets of instructions to assess different aspects of executive functioning, which might be difficult for those with attentional deficits to complete. If demonstrated to be valid in Russia and in previously institutionalized samples, it would be a useful tool for clinical

evaluation and research in Russia in general and in particular for studying individuals with a history of institutionalization. The current study examined the validity scales built into the BRIEF2 Self-Report form designed to detect atypical, inconsistent, or overly negative responses.

Method

Participants. Recruitment took place in major Russian cities. Those at least 18 years of age gave their written informed consent on a consent form approved by the Ethical Committee of the St. Petersburg State University #02-199 on May 3, 2017. Those under 18 had their caregivers sign consent forms. Participants were compensated with 1000 rubles, which came out to an hourly rate approximately equal to the average local hourly wage at the start of the study in 2017. They were primarily recruited through orphanages, social assistance centers, and secondary educational institutions (e.g., lyceums, technical schools, colleges), and some were self-referred via Internet ads. Participants were included in the institutional care (IC) group if institutional records or the participant reported at least 6 months of institutionalization on the initial study screening. The biological family care (BFC) group was raised exclusively in their biological families. These participants were recruited to fall within a similar age range and educational level as the IC group. Participants were native Russian speakers.

Participants were adolescents and adults who took part in a larger project on institutionalization outcomes (n=677). Of these, 654 completed the BRIEF2 Self Report Form, and 636 completed a medical questionnaire. After excluding four participants who selected multiple answers on some BRIEF items and six who failed to complete all BRIEF items, there were 625 participants who completed both the BRIEF2 Self Report Form and the medical questionnaire. Of the 625 who completed both the BRIEF2 and the medical questionnaire, 53 were excluded because they did not select “no” on medical questions asking if they had a recent history of head trauma or neurological illness. The final sample contained 572 participants (331 female, 241 male; 315 BFC, 257 IC). Of these participants, 182 were adolescents (68 BFC, 114 IC; 103 female, 79 male; ages 15–17 years, mean age=16.38, SD=0.64), and 390 were adults (247 BFC, 143 IC; 228 female, 162 male; ages 18–38 years, mean age=22.47 years, SD=4.68). In this sample, 550 participants completed the Culture Fair IQ Test (CFIT) [7]. Because IQ was not the primary focus of the current study or an exclusion criterion, we did not exclude participants who did not complete the CFIT. Participants were involved in a larger project that included additional assessments not analyzed here, including 4 EEG tasks, a handedness questionnaire, and a behavioral battery of language ability.

Because participants were recruited primarily through educational institutions with the goal of approximately matching the IC and BFC groups on age and education, we did not control our sample to make it perfectly representative of the overall Russian population. Median income for adults in our sample was greater than 30000 rubles, versus a median of 28345 rubles in the Russian Federation at the time of data collection in 2017 [12] (https://eng.rosstat.gov.ru/). In our sample, 25% of participants aged 15–29 had a job. Based on Russian government statistics stating that 68.5% of individuals aged 15–72 have jobs and that only 20.2% of the employed were 15–29 years, we estimate that

approximately 13% of the 15- to 29-year-old general population was employed at the time of data collection [12]. In our sample, employment rates may have been higher because we focused recruitment on secondary educational institutions with a high percentage of students from orphanages (such as technical schools). Students from these types of institutions may have been more likely to have additional earnings in comparison with full-time students of bachelor's degree-granting universities or individuals with less education. The IC and BFC groups were not matched on all income-related variables. For example, satisfaction with income was lower in the IC group ($\chi^2_{(1)}$=30.945, p<.001), as was employment ($\chi^2_{(1)}$=37.127, p<.001).

Assessments

Culture Fair IQ Test (CFIT). The Culture Fair Intelligence Test (CFIT; Scale 2; Form B [7]) was used to assess non-verbal intelligence (IQ). IQ data from this study did not fit a normal distribution and, therefore, could not be used to calculate standardized scores. Instead, IQ scores were calculated using the Cattell Culture Fair IQ Key standard scores for Form A, Scale 2 based on both a USA sample and a UK sample. The USA scoring most closely gave the data a normal distribution, so we used the USA scoring guide.

BRIEF2 Self-Report Form. The BRIEF2 Self-Report Form is a 55-item questionnaire originally designed for ages 11–18. It takes approximately 10 minutes to complete. Each item on the BRIEF2 describes a behavior that represents a problem with executive functioning and asks the participant to rate whether they never, sometimes, or often have the problem [16]. The item scores are then summed into composite scores (1 — never, 2 — sometimes, 3 — often) within each of 7 subscales (Working memory, Inhibit, Self-Monitor, Shift, Emotional Control, Task Completion, Plan/Organize). Therefore, higher scores on the BRIEF2 indicate worse executive functioning. For the current study, all items were translated to Russian and then translated a second time into English (a commonly accepted method called back-translation [4]) to check the accuracy of the first translation. At the time of the current analyses, accuracy of the Russian translations was checked once again by a native Russian speaker with English fluency. To be able to analyze adult and adolescent data together in analyses that are part of our larger project on institutionalization, we used the same version of the questionnaire (the BRIEF2 Self-Report) for all participants (adults and adolescents), and in the current paper checked whether the validity scales performed differently in the two age groups. Many items on the BRIEF2 for ages 11–18 and the Adult (BRIEF-A [33]) Self-Report forms are identical or very similar, suggesting that the 11- to 18-year-old version might also accurately assess young adults.

Validity Scales. The BRIEF2 Self-Report contains three validity indicators designed to flag individuals with questionable responses: Infrequency, Inconsistency, and Negativity scales.

Infrequency. The Infrequency scale contains three questions that are not part of the executive function subscales and are highly unusual to endorse, even for severely cognitively impaired participants according to the professional manual for the BRIEF2 (e.g., endorsing that they forget their own name) [16]. Thus, these items are designed to detect highly atypical answers and may reflect falsehoods or extreme impairments.

Inconsistency. The Inconsistency scale identifies inconsistency between answers to similar questions. Discrepancy scores are computed for pairs of similar items to check for response inconsistencies.

Negativity. The Negativity scale contains items that are part of the executive functioning scales, and it identifies when a participant gives an abnormally large number of "often" responses on negative items (e.g., endorsing that the participant often talks at the wrong time).

Results

Demographic Analysis. Although the BRIEF2 manual explains that validity measures have been tested in a typical standardization sample as well as a variety of clinical samples, including cognitive impairment, we checked IQ scores on the CFIT for the current sample to make sure that the majority of participants did not have very low IQ. The mean IQ score was 99.31 ($Mean_{BFC}$=105.67, SD_{BFC}=13.15; $Mean_{IC}$=91.14, SD_{IC}=12.80; see Figure 1). Thirteen participants had scores lower than 70 (2.3%; 5 with 57, 3 with 62, 5 with 66), which is a common threshold for diagnosing intellectual disability [14]. They were retained in the current analyses due to their small number and the BRIEF manufacturer's suggestion that the validity scales work in most clinical groups and that the BRIEF works with a broad range of participants. Furthermore, only a small number of participants flagged on the validity scales had IQ below 70, so excluding them would not have changed the results by much (see Table 1 and 2 captions and Negativity Scale results below).

BRIEF Reliability*.* Cronbach's alpha values were computed for our sample to compare to the BRIEF2 manual [16]. Scores for our whole dataset (alpha range 0.72 to 0.83 across scales) and for the individual BFC (0.67 to 0.83) and IC (0.75 to 0.82) groups largely overlapped with the standardization (0.81 to 0.90) and atypical clinical (0.71 to 0.85) samples described in the BRIEF2 manual [16].

CFIT Reliability. Reliability of the CFIT in our overall sample was checked using Cronbach's alpha. For our whole sample, the range of Cronbach's alpha across subtests was 0.88 to 0.91. Alpha values for the BFC (0.77 to 0.90) and IC (0.81 to 0.87) groups largely overlapped with each other. The CFIT manual does not clarify how reliability was computed for the manual, so we cannot directly compare the manual to our sample, but the manual gives a value of 0.76 for consistency over items [7].

Infrequency Scale. According to the professional manual for the BRIEF2 [16], questionable scores on the infrequency scale, indicated by selecting "sometimes" or "often" on at least one infrequency item, indicate a greater than 99th percentile score, even in most clinical groups and in individuals with cognitive impairment (tested in U.S. samples). However, in the current overall sample, questionable scores on this scale occurred for 8.6% of participants (see Table 1), which is significantly more often than 1% ($z=18.27$, $p<.0001$). Even for the current study subgroup with the lowest rate of questionable scores (BFC adolescents; 4.4%; see Figure 2), the rate was significantly higher than the 1% indicated by U.S. norms ($z=2.82$, $p<.01$).

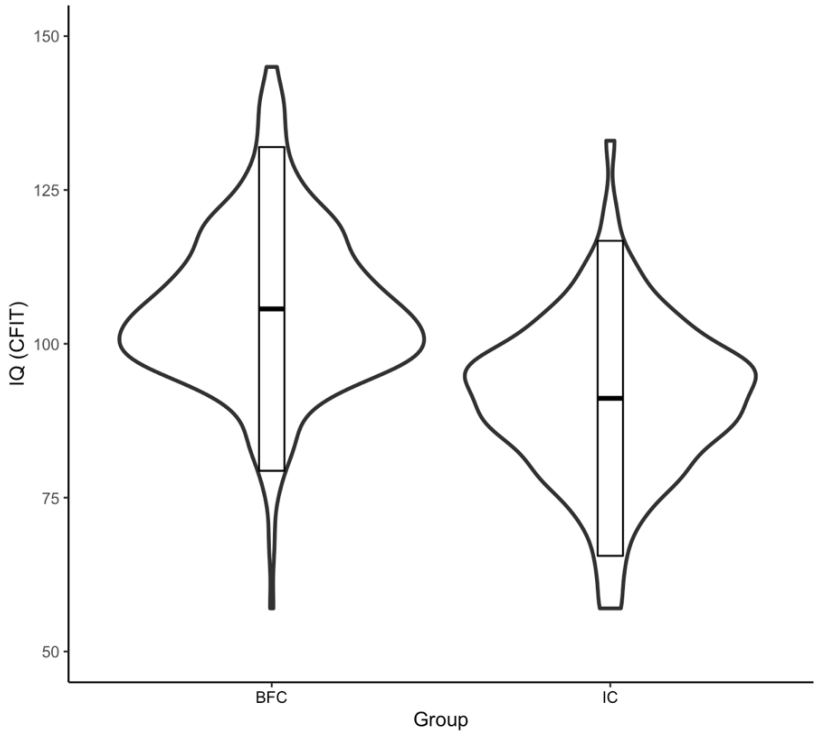

Figure 1. Violin plots of IQ scores by institutionalization status. Rectangles represent two standard deviations from the mean

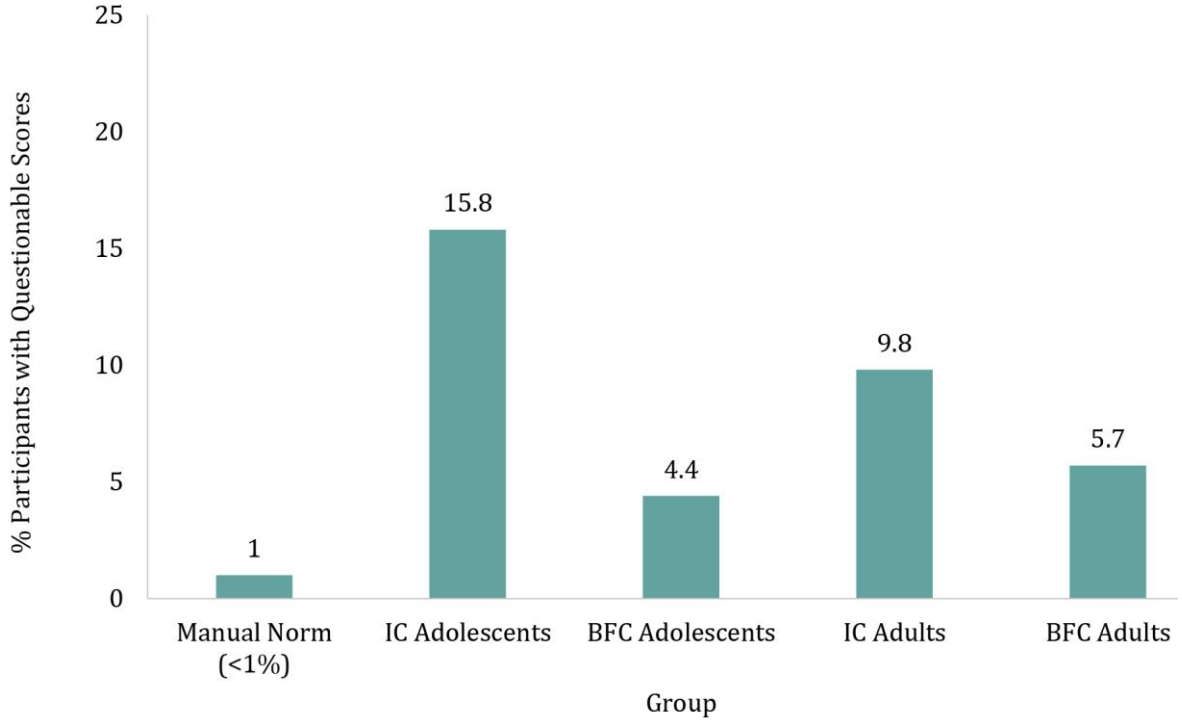

Figure 2. Percentages of questionable scores on infrequency items split by age groups and institutionalization history

Table 1

Count data and percentages of questionable scores on infrequency items split by age groups and institutionalization history

	Questionable Scores
Total	49/572=8.6%*
Adolescents	21/182=11.5%
IC Adolescents	18/114=15.8%
BFC Adolescents	3/68=4.4%
Adults	28/390=7.2%
IC Adults	14/143=9.8%
BFC Adults	14/247=5.7%
IC Total	32/257=12.5%
BFC Total	17/315=5.4%

Notes. * — with individuals with IQ below 70 excluded, 44 participants had questionable scores on the infrequency scale. Therefore, a high proportion of low IQ individuals were flagged on this scale (4 out of 13). However, even with those who have an IQ below 70 excluded, the percentage of participants flagged on this scale in this sample remains high compared to a U.S. sample (8.2% versus <1%).

Inconsistency Scale*.* Inconsistency scores are computed by summing the absolute value of the differences between similar items, and the questionnaire contains 8 similar item pairs. A score less than or equal to 5 is acceptable (98th percentile or lower according to U.S. norms), 6-7 is questionable (99th percentile), and 8+ indicates inconsistent responses (>99th percentile). In the current sample, both questionable + inconsistent scores (101/572 or 17.7%) and inconsistent scores alone (14/572 or 2.4%) occurred significantly more often than 1% of the time ($z=40.04$, $p<.0001$; $z=3.48$, $p<.001$, respectively; see Table 2 and Figure 3), which is the maximum amount of questionable and inconsistent scores according to the manual normed on U.S. participants.

Negativity Scale*.* To compute negativity scores, the number of items with a score of "often" on 8 negativity items is counted. A total of 6 or less is considered acceptable, 7 is elevated, and 8 is highly elevated. According to the normative samples used in the BRIEF2 manual, elevated scores are considered 99th percentile, and highly elevated are above the 99th percentile (according to U.S. samples). Only one participant in the current sample scored above a 6 (see Table 3), which was significantly less than the 1% indicated as likely based on U.S. norms ($z=-1.98$, $p<.05$). The one flagged individual had an IQ above 70, so exclusions based on IQ would not have changed the results significantly.

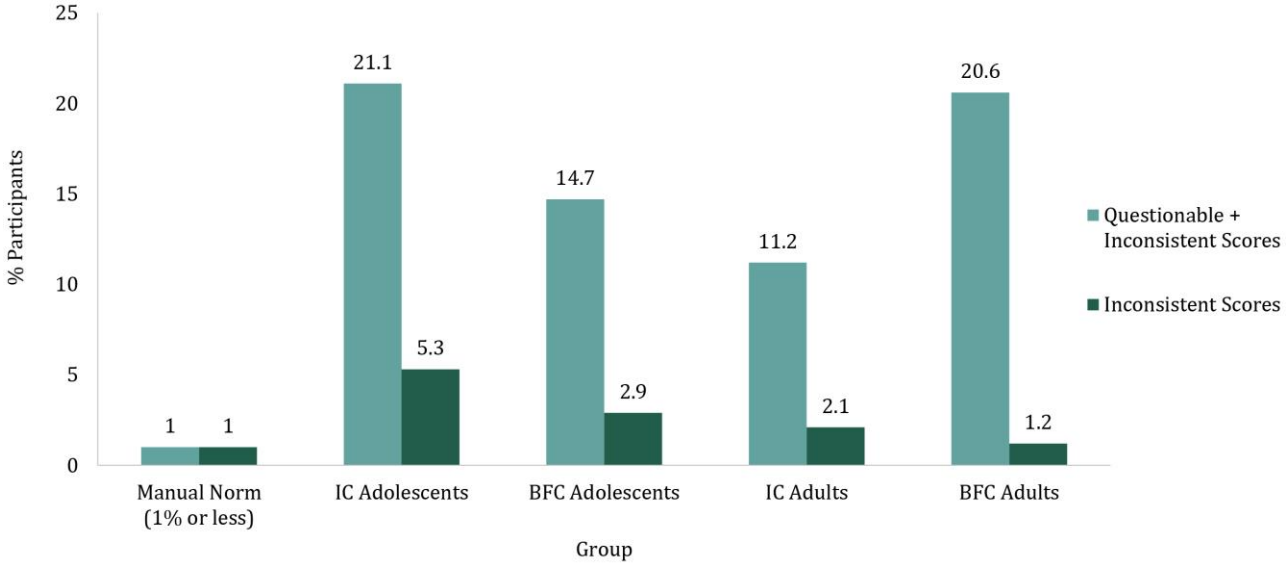

Figure 3. Percentages of questionable + inconsistent or inconsistent only scores derived from inconsistency items, split by age groups and institutionalization history

Table 2

Count data and percentages of questionable + inconsistent or inconsistent only scores derived from inconsistency items, split by age groups and institutionalization history

	Questionable + Inconsistent Scores	Inconsistent Scores
Total	101/572=17.7%*	14/572=2.4%*
Adolescents	34/182=18.7%	8/182=4.4%
IC Adolescents	24/114=21.1%	6/114=5.3%
BFC Adolescents	10/68=14.7%	2/68=2.9%
Adults	67/390=17.2%	6/390=1.5%
IC Adults	16/143=11.2%	3/143=2.1%
BFC Adults	51/247=20.6%	3/247=1.2%
IC Total	40/257=15.7%	9/257=3.5%
BFC Total	61/315=19.4%	5/315=1.6 %

Notes. * — with individuals with IQ below 70 excluded, 94 participants had questionable or inconsistent scores and 12 had inconsistent scores on the inconsistency scale. Therefore, a high proportion of low IQ individuals were flagged on this scale (7 out of 13). However, even with those who have an IQ below 70 excluded, the percentage of participants flagged on this scale in this sample remains high compared to a U.S. sample (17.5% questionable or inconsistent versus 1%; 2.2% inconsistent versus <1%).

Table 3

Count data and percentages of elevated or highly elevated + inconsistent scores on negativity items, split by age groups and institutionalization history

	Scores
Total Elevated	0/572=0%
Total Highly Elevated	1/572=0.2%
Adolescents Highly Elevated	1/182=0.5%
IC Adolescents	1/114=0.9%
BFC Adolescents	0/68=0%
Adults Highly Elevated	0/390=0%
IC Adults	0/143=0%
BFC Adults	0/247=0%
IC Total Highly Elevated	1/257=0.4%
BFC Total Highly Elevated	0/315=0%

Relations between Validity Scales, Covariates, and BRIEF. Because percentages of individuals with questionable scores on the Infrequency and Inconsistency scales were higher than indicated in the BRIEF2 Professional Handbook with norms created within the United States, despite excluding those with head trauma or neurological illness and despite not explicitly recruiting a clinical population, further exploration was warranted. The negativity scale is not analyzed in this section because only one participant had an elevated negativity score.

Infrequency and Inconsistency. If the reason for the high number of questionable responses on the infrequency scale was that some participants selected answers arbitrarily or inaccurately, it seemed likely that participants with questionable responses on the infrequency scale participants would also be prone to answering similar questions inconsistently and be flagged by the inconsistency scale. Although a majority of participants with questionable scores on the infrequency scale had acceptable scores on the inconsistency scale (34/49; see Figure 4), a higher proportion of individuals with questionable infrequency scores had questionable or inconsistent answers on the inconsistency scale than those with acceptable infrequency scores ($\chi^2_{(1,572)}=6.19$, $p<.05$).

IQ and Validity Scales. For the Infrequency and Inconsistency scales, a logistic generalized linear model testing the effects of IQ, Group (IC, BFC), Age Group (Adult,

Adolescent), and the IQ x Group interaction on whether scores were questionable was run using the glm function in R with a binomial distribution specified.

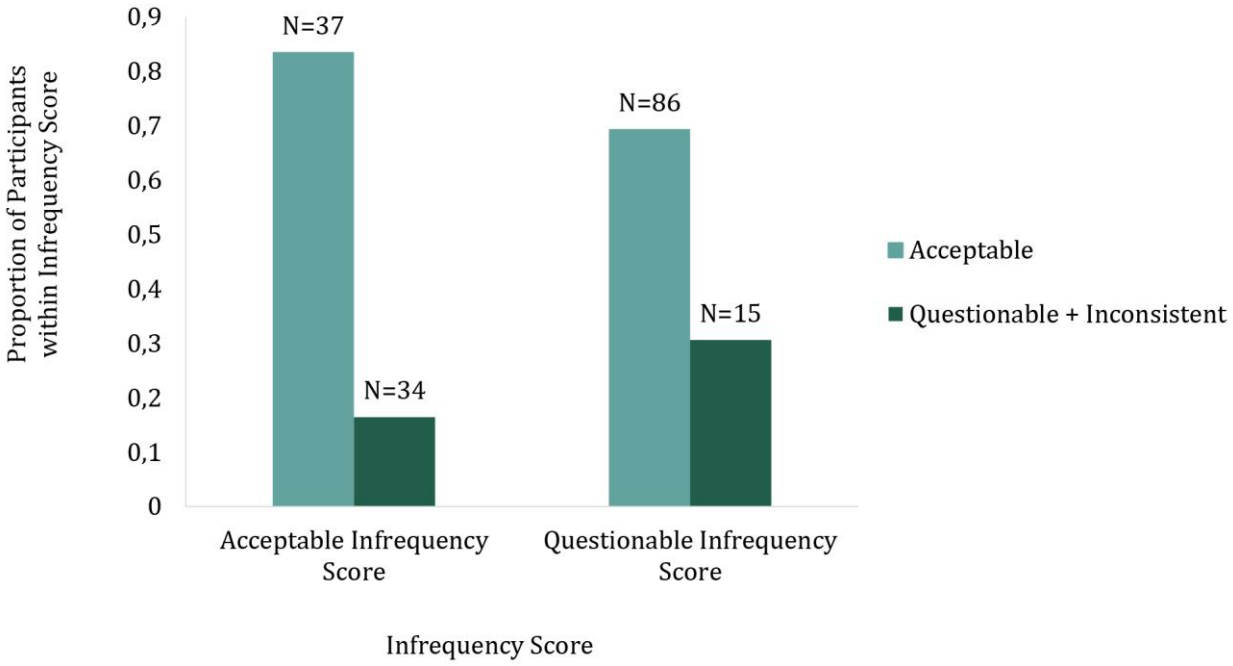

Figure 4. Proportions of participants with acceptable or questionable infrequency scores and those with acceptable or questionable + inconsistent inconsistency scores, plus count data

Infrequency. The IQ x Group interaction had a statistically significant effect on the probability of getting a questionable infrequency score ($\chi^2_{(1)}$=7.62, p<.01; see Figure 5). Follow-up tests indicated that in the BFC group, IQ scores were not significantly related to the probability of getting a questionable infrequency score (z=1.70, p=.09), and in the IC group, IQ scores were negatively related to the probability of getting a questionable infrequency score (z=-2.30, p<.05). The main effect of Institutionalization was statistically significant ($\chi^2_{(1)}$=9.14, p<.01), such that those with a history of institutionalization were more likely to have questionable infrequency answers than those raised in biological families. The Age effect was not statistically significant.

Inconsistency. Questionable and inconsistent scores were combined into one "non-acceptable" category. There were no statistically significant effects of IQ, Group (BFC, IC), IQ x Group, or Age Group (adolescent, adult) on the probability of getting non-acceptable answers on the inconsistency scale.

BRIEF Performance and Validity Scales. A linear regression tested the effects of validity (Acceptable or Questionable) on each BRIEF subscale, controlling for Group (IC, BFC), Age Group (Adolescent, Adult), and Gender (male, female). For all subscales of the BRIEF and for both Infrequency and Inconsistency subscales, questionable answers were associated with worse executive function (see Table 4).

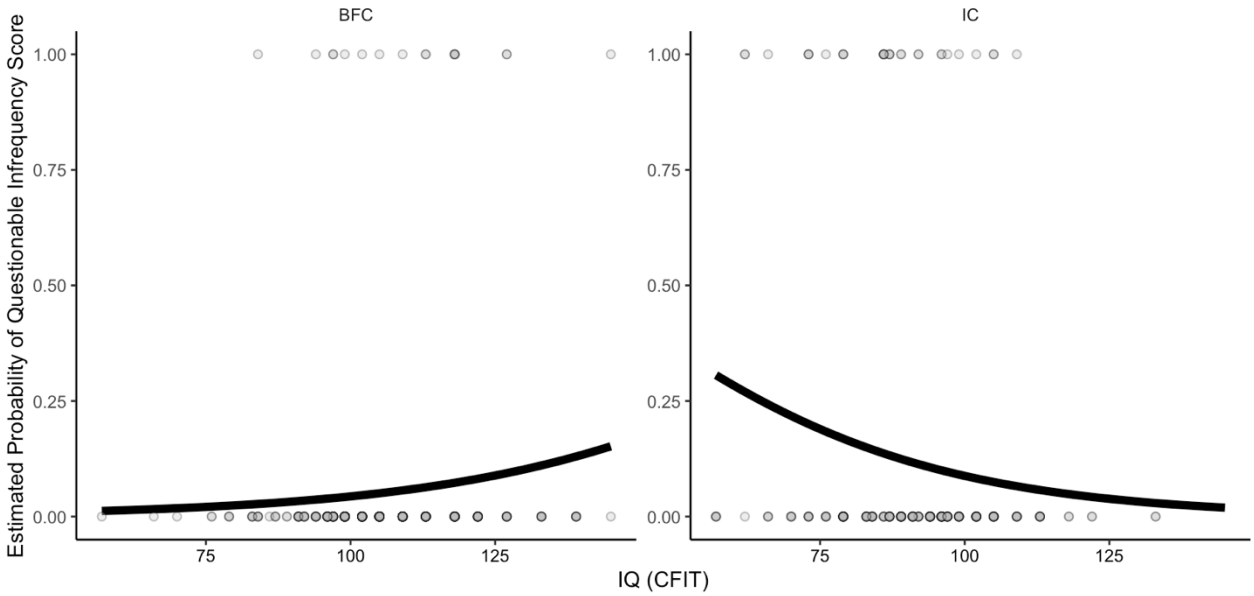

Figure 5. IQ by predicted infrequency probability in each group

Notes. Black lines represent the GLM-predicted probability of having a questionable infrequency score. Dots represent the raw data, with 0=acceptable and 1=questionable. Overlapping dots are darker.

Table 4

F-values, p-values, and directions of effects for linear models testing effects of questionable Infrequency and Inconsistency scores on each BRIEF subscale

BRIEF Subscale	Infrequency F-value	Infrequency p-value	Inconsistency F-value	Inconsistency p-value
Inhibit	17.19	<.0001	17.68	<.0001
Working Memory	33.11	<.0001	42.88	<.0001
Shift	9.45	<.01	18.17	<.0001
Plan	20.48	<.0001	25.63	<.0001
Self-Monitor	31.74	<.0001	18.06	<.0001
Task Completion	12.91	<.001	48.59	<.0001
Emotional Control	6.60	<.05	22.07	<.0001

Discussion

The current study compared Russian samples raised in exclusively in biological families or at least partially in institutionalized care to U.S. norms on three validity scales

built into the BRIEF2 Self-Report form [16]. Results indicate that for scales designed to flag highly infrequent (abnormal) or inconsistent answers, significantly more individuals were flagged in our overall sample (8.6 & 17.7%) compared to typical and clinical samples in the U.S. (~1% or less). The infrequency scale, designed to detect highly abnormal answers, was also sensitive to IQ and a history of institutionalization. Questionable answers on infrequency and inconsistency scales were also associated with worse executive functioning on all subscales of the BRIEF. Although the BRIEF2 was designed for use in individuals aged 11–18, performance on the infrequent and inconsistent validity scales did not significantly vary by age group (adolescent, adult). Results point to possible cultural differences in responding between the U.S. and Russia and highlight the need for culturally sensitive validity checks before translated measures are used extensively in research or clinical practice.

The high rates of questionable scores on the infrequency and inconsistency subscales and low rate of elevated scores on the negativity scale in the current study were not driven by any particular question(s). For example, the three infrequency items had similar numbers of questionable responses (26, 22, & 24 questionable responses per item). Additionally, even though our sample included previously institutionalized individuals who may be more prone to lower IQ [36] and executive functioning [21; 25; 26] than non-institutionalized individuals, the results seem unlikely to be driven by low functioning in this sample. One reason for this conclusion is that the BRIEF2 validity scales were tested in the U.S. in clinical samples and those with cognitive impairment, and they still showed low levels of questionable answers. Additionally, mean IQ in this sample (99.31) was close to the U.S. average (100). Furthermore, even when considering only the intended age group (our adolescent group) and participants raised in biological families, the Russian sample had more questionable answers on the infrequency scale and inconsistency scales than U.S. norms. Lastly, although several of our 13 participants with IQ below 70 were flagged on the inconsistency and infrequency scales, this was a small percentage of our total participants. Thus, excluding them would still have left us with higher numbers of questionable responses on the infrequency and inconsistency scales. The questionable scores, therefore, do not seem to be driven solely by impaired intelligence (although questionable scores in the IC group were associated with lower IQ) and are likely to be elevated, at least in part, for another reason.

The relatively high number of individuals flagged on infrequency and inconsistency validity scales could be due in part to cross-cultural differences in assessments, specifically unfamiliarity with the type of testing [6]. Although the Russian education system uses multiple choice tests, psychological screening in Russia has historically been less common compared to western countries [3; 18]. Therefore, participants may not have been as comfortable with self-reflection and self-report questionnaires. The differences found here may also be due to unidentified cultural differences between Russia and the U.S.

Another possibility is that the high infrequency and inconsistency scores might reflect a subset of individuals who answered quickly or carelessly. Although participants got an hour break halfway through testing, the larger study visit took approximately five hours. Therefore, some participants may have answered indiscriminately to rush through testing or made errors if they became fatigued during testing. Furthermore, we saw strong

relations between two of the validity scales (inconsistency and infrequency) and the BRIEF subscales that measure executive functioning, such that those with lower executive functioning were more likely to be flagged on the validity scales. (Although note that it remains unclear how much the BRIEF executive function scores can be trusted in individuals flagged by the validity scales.) Careless answering or attentional difficulties could explain the high percentage of participants flagged for inconsistent answers. Additionally, since only one response of "sometimes" or "often" on any of the three infrequency items was required for a participant to be flagged on the infrequency scale, indiscriminate answering would likely flag more than the U.S. norm of 1% of participants on this scale. However, most participants who were flagged on one of these validity scales were not flagged on the other (only 15/572 were flagged on both), suggesting that a majority of questionable scores may not have been driven by one set of participants choosing answers at random.

Low engagement on the BRIEF in some participants could also partially explain why the negativity scale flagged no participants in the current study as "elevated" and just one (~0.1%) as "highly elevated". In order to be flagged on the negativity scale, a participant had to answer "often" on 7-8 out of 8 items on the negativity scale [16]. If a subset of participants was indiscriminately providing a range of answers, they would be unlikely to answer "often" on so many negativity items and could slightly lower the negativity rate. However, it remains unclear why such a small number (1/572) was flagged on this subscale in our sample or how meaningfully different this is from the 1% in U.S. norms, given that reaching 1% would have required only 4-5 more participants to be flagged in our sample.

A limitation of the current study is that we cannot conclusively determine the reason(s) for differences in validity between our sample and U.S. norms, so cultural differences would need to be explored in future research. Additionally, due to a focus on recruiting individuals with a history of institutionalization, our sample did not match the larger population of the Russian Federation on all demographic measures. An additional future direction could be to norm validity scales in larger Russian samples of neurotypical and clinical participants, more similar to the U.S. BRIEF2 scoring manual [16]. Future work could apply the same exclusion criteria as U.S. standardization samples, such as psychotropic medication use. Researchers could also directly compare Russian and U.S. samples in the same study and could try a study design with a smaller number of additional measures to reduce the potential for rushing or fatigue effects. The reason(s) that we saw a Group x IQ interaction on the infrequency scale also remains unclear and should be explored further.

Conclusions

The primary goal of this report was to evaluate the usability of the BRIEF2 Self-Report Form scales in a Russian sample. Cultural validity is important when a scale is used in new populations [6; 23; 30], and here we demonstrated that the BRIEF2 validity scales may not perform the same in Russian and U.S. samples. The infrequency scale also does not perform the same in individuals raised in biological families versus those raised at least partially in institutions. Future work will evaluate the BRIEF2 further, using analyses such as item response theory, confirmatory factor analysis [15], and checking for correlations between

the BRIEF2 scores and neural measures of executive functioning using EEG. Until results are clearer, researchers and clinicians should use translations of this scale in Russian samples with caution.

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Information about the authors

Lisa K. Chinn, PhD (Psychology), Postdoctoral Fellow, Texas Institute for Measurement, Evaluation, and Statistics, Department of Psychology, University of Houston, Houston, TX, USA, ORCID: https://orcid.org/0000-0001-8498-9909, e-mail: lisa.chinn@times.uh.edu

Darya A. Momotenko, M.S. (Psychology), PhD Student, Saint-Petersburg State University, Saint-Petersburg, Russia; Junior Researcher, Center for Cognitive Sciences, Sirius University of Science and Technology, Federal territory "Sirius", Russia, ORCID: https://orcid.org/0000-0003-2544-5420, e-mail: daryamomotenko@gmail.com

Elena L. Grigorenko, PhD (Psychology, Behavioral Genetics), Hugh Roy and Lillie Cranz Cullen Distinguished Professor of Psychology, University of Houston, Houston, TX, USA; Adjunct Senior Research Scientist, Moscow State University for Psychology and Education, Moscow, Russia; Professor and Acting Director, Center for Cognitive Sciences, Sirius University of Science and Technology, Federal territory "Sirius", Russia; Research Certified Professor, Baylor College of Medicine, Houston, TX, USA; Adjunct Professor, Child Study Center and Adjunct Senior Research Scientist, Haskins Laboratories, Yale University, New Haven, CT, USA, ORCID: https://orcid.org/0000-0001-9646-4181, e-mail: elena.grigorenko@times.uh.edu

Информация об авторах

Чинн Лиза К., PhD (психология), постдокторант, Техасский институт измерений, оценки и статистики, департамент психологии, Хьюстонский университет, Хьюстон, Техас, США, ORCID: https://orcid.org/0000-0001-8498-9909, e-mail: lisa.chinn@times.uh.edu

Момотенко Дарья Анатольевна, магистр (психология), аспирант, Санкт-Петербургский государственный университет, Санкт-Петербург, Россия; младший научный сотрудник, Центр когнитивных исследований, Научно-технологический университет «Сириус», ФТ «Сириус», Россия, ORCID: https://orcid.org/0000-0003-2544-5420, e-mail: daryamomotenko@gmail.com

Григоренко Елена Леонидовна, PhD (психология, поведенческая генетика), заслуженный профессор психологии Хью Рой и Лилли Кранц Каллен, Хьюстонский университет, Хьюстон, Техас, США; ведущий научный сотрудник, Московский государственный психолого-педагогический университет, Москва, Россия; профессор и и.о. директора, Научный центр когнитивных исследований, Научно-технологический университет «Сириус», ФТ «Сириус», Россия; профессор, Медицинский колледж Бейлора, Хьюстон, Техас, США; адъюнкт-профессор, Центр исследований детства и Лаборатории Хаскинса, Йельский университет, Нью-Хейвен, Коннектикут, США, ORCID: https://orcid.org/0000-0001-9646-4181, e-mail: elena.grigorenko@times.uh.edu

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Gold Standard Versus Treatment as Usual: Assessment Practices in the Juvenile Justice System

Julia D. Kovalenko
University of Houston, Houston, TX, USA,
ORCID: https://orcid.org/0000-0003-0125-1816, e-mail: julia.kovalenko@times.uh.edu

Nan Li
University of Houston, Houston, TX, USA,
ORCID: https://orcid.org/0000-0002-4095-2810, e-mail: nan.li@times.uh.edu

Elena L. Grigorenko
University of Houston, Houston, TX, USA,
ORCID: https://orcid.org/0000-0001-9646-4181, e-mail: elena.grigorenko@times.uh.edu

Mental health concerns are highly prevalent in the juvenile justice system (JJS). Assessment practices vary significantly across probation departments, often relying on past medical history or unstructured clinical interviews. Numerous structured and semi-structured assessment tools exist, some of which have previously been used within JJS samples. The current research compared mental health diagnosis prevalence and distribution as assigned by the current practice in a probation department versus utilizing the Kiddie Schedule for Affective Disorders and Schizophrenia (K-SADS) in a sample of youth involved with the JJS. Results suggested the K-SADS identified a higher variety of mental health concerns with higher precision (e.g., all diagnoses were specified rather than unspecified). However, the standard assessment practice identified a higher prevalence of ADHD diagnoses, as well as "Other Conditions That May Be a Focus of Clinical Attention." Limitations and future directions are discussed.

Keywords: Assessment, juvenile justice, K-SADS, mental health, delinquency, semi-structured assessment**.**

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«Золотой стандарт» в сравнении с лечением на основании собственного клинического опыта («Treatment as usual»): диагностическая практика в системе ювенальной юстиции

Коваленко Ю.Д.
Хьюстонский университет, Хьюстон, Техас, США,
ORCID: https://orcid.org/0000-0003-0125-1816, e-mail: julia.kovalenko@times.uh.edu

Ли Н.
Хьюстонский университет, Хьюстон, Техас, США,
ORCID: https://orcid.org/0000-0002-4095-2810, e-mail: nan.li@times.uh.edu

Григоренко Е.Л.
Хьюстонский университет, Хьюстон, Техас, США,
ORCID: https://orcid.org/0000-0001-9646-4181, e-mail: elena.grigorenko@times.uh.edu

Проблемы с психическим здоровьем широко распространены в системе ювенальной юстиции. Методы диагностики значительно различаются в разных исправительных учреждениях, часто опираясь на прошлую историю болезни или неструктурированные клинические интервью. Существует множество структурированных и полуструктурированных инструментов оценки, некоторые из которых ранее использовались в выборках в системе ювенальной юстиции. В текущем исследовании сравниваются распространенность и распределение диагнозов психических расстройств в соответствии с текущей практикой в отделе пробации по сравнению с использованием Шкалы для оценки аффективных расстройств и шизофрении в детском возрасте (K-SADS) на выборке молодежи, вовлеченной в систему ювенальной юстиции. Результаты показали, что K-SADS выявила более широкий спектр проблем с психическим здоровьем с более высокой точностью (например, все диагнозы были уточненные, а не неуточненные). Однако стандартная практика оценки выявила более высокую распространенность диагнозов СДВГ, а также других состояний, которые могут быть в центре клинического внимания. Обсуждаются ограничения и перспективы исследования.

Ключевые слова: оценка, ювенальная юстиция, K-SADS, психическое здоровье, делинквентность, полуструктурированная диагностика.

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It is well-established that many youths involved with the juvenile justice system (JJS) face significant mental health concerns, with estimates of prevalence of mental illness ranging from 65–98% [3; 13; 14; 17; 36; 41]. Frequent diagnoses include disruptive behavior disorders (DBDs), substance use disorders, ADHD, and affective disorders, which are more prevalent in girls [17; 37]. A proper diagnosis carries important practical implications. Specifically, assigning a diagnosis can provide a better understanding of the youth's problems and needs, which in turn may ensure they receive appropriate treatment. As such, clinicians should be very careful when assigning a diagnosis to a youth because that diagnosis not only impacts the type of intervention to be provided but also may bias how judges and probation officers view the juveniles [14]. Thus, reliable and valid diagnoses are particularly important in a forensic setting.

A report from the Office of Juvenile Justice and Delinquency Prevention (OJJDP) suggests that there are highly variable assessment practices within the JJS, and there is a reliance on the youth's past utilization of mental health services as an indicator of the youth's current problems [41]. Authors reported that a common practice to evaluate mental health needs is to rely on the history of receiving prior mental health services, which is not always reliable or reflective of the youth's current needs. A reliable, valid but also cost-effective way of diagnosing youth within the system is necessary to ensure youth receive the services they need. Structured or semi-structured diagnostic interviews would be a suitable tool within the JJS due to their validity, reliability, and ability for non-clinicians to administer it (including computerized self-administration).

Structured interviews and psychological tests provide empirically quantified information, are often normed, and have research on the reliability and validity of that specific individual test or assessment [29]. Thus, clinicians have a clearer opportunity to gauge the data they are collecting from the individual [29]. Studies have found that when psychiatrists were treating patients who received a structured interview (Structured Clinical Interview for DSM Disorders, SCID) compared with control patients (who received treatment as usual, which included review of service eligibility, a clinical interview, chart

review, and laboratory tests), they were more likely to not only update and change the diagnosis consistent with the SCID results but to order additional evaluative procedures, change prescription medication type while being less likely to increase patients' medication dosages [20].

Structured diagnostic interviews are often more reliable than unstructured clinical interviews due to the questions being standardized, thus resulting in decreased variability among interviewers, less variability of the symptoms over time, as well as reliability between client self-report and collateral information [35; 39]. Structured interviews also have increased validity because they cover diagnostic criteria systematically and completely, some of which may be overlooked during less formal evaluation procedures [28; 34].

Structured diagnostic tools are cost-effective, as they can be administered by non-clinicians or clinicians still in training. Some semi-structured interviews are computerized and even offer self-administration options, such as the Kiddie Schedule for Affective Disorders and Schizophrenia, KSADS-COMP [21; 38]. According to the Kennedy Krieger Institute, the K-SADS is the most widely used and well validated diagnostic interview for children and adolescents [38]. The reliability and validity of the K-SADS-COMP are well-documented and are convergent between a clinician-administered version, a self-administered youth version, and a self-administered parent version [38].

A number of structured and semi-structured diagnostic interviews have been used in the JJS, including the K-SADS [5; 26]. Other assessments included the Practical Adolescent Dual Diagnosis Interview (PADDI), which identified a high prevalence of mental health concerns in JJS youth (ranging from 92% for male participants to 97% for female participants), provided information on comorbid disorders, and demonstrated strong internal consistency [1; 7]. The Mini-International Neuropsychiatric Interview for Children and Adolescents (MINI-KID) has also been used within the community and the JJS to assess mental health concerns and suggested that disruptive disorders were most frequent, followed by substance-related disorders, anxiety, and mood disorders [32].

A meta-analysis provided an overview of the results of additional structured assessment tools, including versions of the Diagnostic Interview Schedule for Children (DISC), Schedules for Clinical Assessment in Neuropsychiatry (SCAN), Diagnostic Interview for Children and Adolescents, Revised (DICA-R), and Salford Needs Assessment Schedule for Adolescents (SNASA) [9]. The results suggested the overall high prevalence of mental health concerns, including ADHD and CD, as well as an increased prevalence of rates of depression in girls. In addition, it was reported that the DISC provided lower prevalence estimates for depression, ADHD, and conduct disorder than other instruments, while studies that utilized psychiatrists as interviewers had lower prevalence estimates of depression [9].

Research studies that have used versions of the K-SADS have reported a number of mental health concerns in the system. For example, T. Kang, J. Wood, J. Eno Louden, and E. Ricks [19] recorded that even among low-risk offenders, mental health services and substance abuse treatment are highly needed. They also observed that girls are in need

of more services for affective disorders. Additional studies that utilized the K-SADS identified a high prevalence of non-suicidal self-injury in youth involved with juvenile justice or welfare systems [26]. Research suggests that mental health problems are a significant factor associated with delinquency and that when assessed with the K-SADS, a majority of female juvenile delinquents met lifetime criteria for at least three psychiatric diagnoses [6].

Given the importance of a proper diagnosis for youths involved in the JJS, utilizing a structured or semi-structured interview may provide useful information to the mental health providers in the JJS. A recent study found that in a sample of youth involved with a Texas juvenile probation department, the primary diagnosis from the disruptive behavior chapter of DSM-5 was Unspecified Disruptive, Impulse-Control, and Conduct Disorder(UDICCD) [23]. Based on the literature, that finding was unexpected as specified DBD's such as oppositional defiant disorder (ODD) or CD were anticipated [23; 37]. While the unspecified category has been reported to be frequently used as a placeholder or reflect other diagnostic uncertainty, there may be treatment implications due to the "vagueness" of the diagnosis [10; 11; 23]. Specifically, treatment and other correctional decisions within the justice system are dependent on the type of presenting concerns the youth has [2], yet Kovalenko and colleagues' article demonstrated that despite juveniles receiving the same UDICCD diagnosis, they may have different presenting concerns and needs (e.g., academic achievement concerns versus internalizing comorbid diagnoses). A valid and reliable diagnostic system to screen for specific mental health concerns would be beneficial within the JJS as it would provide accurate diagnoses that can be targeted with interventions and can help prevent future recidivism [7].

It has been shown that mental health concerns, including in individuals involved with the JJS, often carry a stigma in the community [18; 33]. A qualitative study found that parents of youth who present mental health concerns and have had contact with the JJS have significant concerns about their youth being "labeled" with a diagnosis due to worries about stigmatization [42]. The article also noted that the youth primarily received services through their involvement with the JJS (e.g., as a component of their probation) rather than the family seeking out services independently. It may be possible that the UDICCD diagnosis is used to minimize stigmatization that is associated with mental illness, however research on the effects of diagnostic labels on the perception of individuals involved with the justice system are mixed. While some studies identified a negative relationship between a diagnostic label and mock juror's perception of the youth [8], other research did not identify a negative relationship between a diagnostic label and the perception of the youth by judges or juvenile probation officers (JPO). A diagnostic label also did not impact JPO's recommendations of sanctions, in fact, it only impacted their recommendations for the youth to receive additional psychological services [30; 31].

A semi-structured diagnostic interview would allow for consistent assessment of youth and provide a more accurate picture of the types of problems youths in the JJS face, as well as lead to more targeted interventions. The aim of this study was to investigate the distribution of mental disorders in JJS-involved youth residing in post-adjudication facility and in their communities using a semi-structured diagnostic interview and compare to the prevalence of disorders given current practice. In particular, we hypothesized that the

semi-structured diagnostic interview would provide valid and reliable results on the distribution of mental disorders in a sample of JJS youth as the K-SADS is the "gold standard" of mental health assessments. In addition, we hypothesized that the distribution and prevalence of diagnoses from this study would differ from the distribution and prevalence of diagnoses identified with the current practice in HCJPD. Specifically, with the semi-structured tool more specified as compared to unspecified diagnoses will be identified.

Method

The study aimed to use a semi-structured diagnostic tool to provide valid and reliable diagnoses to JJS youth involved with the Harris County Juvenile Probation Department (HCJPD). HCJPD maintains a centralized database for youth under their jurisdiction. As part of a collaborative project, HJCPD provided access to the data of youth who participated in the current research study.

Participants

Youth placed in HCJPD detention facilities or those who are on probation were invited to participate in the current research study by HCJPD social workers or JPO's. The social workers or JPO's obtained all necessary documentation from parents/legal guardians with regard to their children, including informed consent for participation in the research study. Criteria for involvement included conversational English proficiency. Data were collected in person or over Zoom, depending on the youth's placement. Due to the ongoing Covid-19 health crisis, very few youths were placed within post-adjudicated detention facilities.

For youth who have had a K-SADS assessment completed, HCJPD provided additional data. As noted above, not every juvenile on probation receives a full behavioral health evaluation. Specifically, to limit unnecessary exposure to the JJS, full behavioral health evaluations are primarily collected on youth who have been placed in detention facilities. No youth in our sample who were on probation had behavioral health data available from HJCPD. Thus, the sample of youth who had both K-SADS and HCJPD data was primarily comprised of youth who were placed within post-adjudicated facilities, which potentially skewed the matched sample to represent more youth who have been in detention.

A total of n=27 youth from the probation department and post-adjudicated facilities participated in the K-SADS assessment. Three youth had assessments that were initiated; however, they were not completed (and did not have enough information for a diagnosis), thus they were not included in either K-SADS-only analyses or in the comparison analyses with HCJPD data. The overall K-SADS sample size included in descriptive analyses was n=24 (M_{age}=15.6, SD=0.89;83.3% male). HCJPD was unable to provide data on seven youth from the K-SADS sample as they did not have behavioral health evaluations. Four of the seven unmatched youth were on probation rather than in a detention facility. The sample used in analyses to compare HCJPD and K-SADS data were 16 youth (M_{age}=15.8, SD=0.93; 87.5% male). Data on race/ethnicity were only available for youth who were matched with HCJPD data as it was not collected as part of the K-SADS study. The racial distribution included Black/African American youth (43.8%) and Hispanic/Latinx youth (56.3%). Demographic information is provided in Table 1 for the 16 youth who had K-SADS and HCJPD data.

Table 1

Demographics and number of unspecified diagnoses for matched sample

Youth	Age	Gender	Race	N of unspecified diagnoses K-SADS	N of unspecified diagnoses HCJPD
1	16	Male	Black	0	1
2	17	Male	Black	0	0
3	16	Male	Black	0	1
4	15	Male	Hispanic	0	0
5	14	Male	Hispanic	0	0
6	15	Male	Hispanic	0	0
7	16	Male	Black	0	2
8	15	Female	Black	0	0
9	17	Male	Hispanic	0	2
10	16	Male	Hispanic	0	1
11	15	Male	Hispanic	0	0
12	15	Male	Black	0	3
13	17	Male	Hispanic	0	0
14	16	Female	Hispanic	0	1
15	15	Male	Hispanic	0	1
16	17	Male	Black	0	0

Assessments

HCJPD Procedures. Information on youth's diagnoses in the dataset is dependent on whether a youth received a full behavioral health evaluation or a screener. Screeners utilize an unstructured diagnostic interview and sometimes academic achievement and IQ assessments as needed. Full evaluations utilize an unstructured diagnostic interview and follow up questionnaires for specific concerns (mood, ADHD). When available, collateral information (e.g., school records, caregiver report) is incorporated into case conceptualization. All youth within HCJPD receive a screener; however, much fewer youth receive a full behavioral evaluation. HCJPD provided diagnostic information on youth who participated in the K-SADS evaluation; however, as described above, there were seven youth who participated in the K-SADS evaluation who did not have diagnoses assigned by HJCPD and thus were not included in the comparison sample. HCJPD utilizes the DSM-5 nomenclature to assign mental health diagnoses to youth. Of note, HCJPD also provides information on "Other Conditions That May Be a Focus of Clinical Attention," unlike the K-SADS.

Kiddie Schedule for Affective Disorders and Schizophrenia (KSADS-COMP), clinician administered. The computerized version of the K-SADS uses pre-programmed branching logic, which guides the clinician (or patient) appropriately through the interview. It ensures that all required probes and supplements are administered. In addition, data are automatically stored in an electronic database, eliminating the need for scoring and data entry, thus removing the possibility of human errors [38]. The reliability and validity of the KSADS-COMP are well-documented and are convergent between a clinician-administered version, a self-administered youth version, and a self-administered parent version [37]. Of particular interest, it was reported that for the clinician administered KSADS-COMP, all raters scored 94–96% of items identically, and there was a 98% agreement if the items were above the clinical threshold [38]. In addition, the authors reported correlations between the KSADS-COMP and standardized symptom measures ranging from 0.55 (for bipolar disorder) to 0.76 (for ADHD). The K-SADS provides both current diagnoses (symptoms present in the past two weeks), current diagnoses in partial remission, as well as past diagnoses (meaning the youth endorsed experiencing symptoms in their lifetime) [38].

Data analysis. We completed analyses on two sets of data. The first included all youth assessed via the K-SADS (n=24), with data on current and past diagnoses for the youth. The second sample only included youth who had both K-SADS and HCJPD data available (n=16) from the full K-SADS sample. If youth had numerous evaluations conducted during their time at HCJPD, the latest HCJPD evaluation was used in analyses to ensure the most up-to-date diagnostic information was included. The prevalence of diagnoses and their comorbidities were examined amongst the full K-SADS sample as well as the matched K-SADS/HCJPD sample to identify common mental health difficulties youth in the system face. Diagnoses were grouped based on their chapter in the DSM-5, such as DBD's anxiety, depression, or bipolar and related disorders. Each youth received a total score for how many diagnoses they received, either via the K-SADS or HCJPD mental health practitioner's evaluation. The number of unspecified diagnoses were also summed for each youth to examine the prevalence of unspecified diagnoses in youth assessed with K-SADS as compared to prevalence based on the assessment by HCJPD. The ICC statistic was utilized to examine inter-rater reliability and consistency of HCJPD and K-SADS diagnoses. The general guidelines indicate that 0.5 are indicative of poor reliability, while values between 0.75 and 0.9 suggest good reliability [22]. The ICC estimate may be negative in cases where the value of the mean square for error exceeds the mean square for subjects [28]. Figures and tables are provided for variables that could not be statistically analyzed. Analyses were conducted using SPSS.

Results

The average number of current diagnoses (diagnoses at time of testing) provided by the K-SADS for the full sample was just under five (M=4.96; min=0, max=13). The average number of past diagnoses was 2.5 (min=0, max=7). The K-SADS assigned only one unspecified diagnosis for the whole sample. See Figure 1 and for the distribution of current and past diagnoses for the full sample of youth. Substance-related concerns were the most frequently encountered under current diagnoses, accounting for 40% of diagnoses. DBD's accounted for 17% of the diagnoses within the sample, while anxiety disorders and trauma- and stressor-related disorders were equivalent to 7% each. Of note, the K-SADS identified a high frequency of homicidal ideation, in particular, in the past diagnoses, as well as

suicidality in both current and past diagnoses. For past diagnoses, anxiety and substance-related disorders accounted for 24% and 18%, respectively, of all diagnoses. Only one youth had one unspecified diagnosis in the full sample.

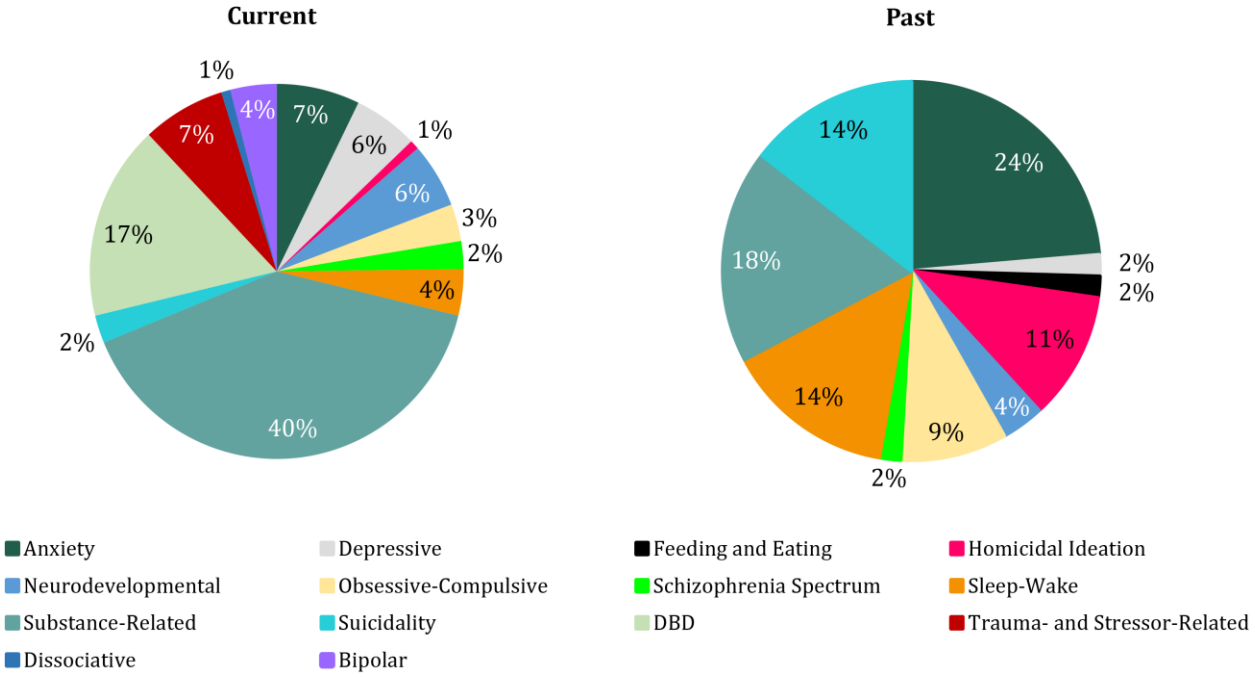

Figure 1. Current and Past K-SADS Diagnosis Prevalence for Full Sample of 24 Youth

For the comparison sample (youth who had both K-SADS and HCJPD data available), the ICC statistic was utilized to determine the consistency of inter-rater reliability of the total sums of diagnoses assigned to a youth by the K-SADS to the total sum of diagnoses provided by the HCJPD. The average number of diagnoses assigned by the K-SADS was M=5.8 (SD=4.3), while the average number for HCJPD was M=3.4 (SD=1.1). In general, the K-SADS generated more diagnoses of youth but had a larger standard deviation. HCJPD assigned less diagnoses on average; however, they had a smaller standard deviation. Within the current sample, ICC(3,2)=-0.23 (-2.52; -0.57), meaning the two-way mixed effects model was applied with a consistency definition. The ICC results suggest extreme inconsistency in the number of diagnoses assigned for the youth by HCJPD as compared to the K-SADS. Specifically, a negative value is difficult to interpret as an appropriate range for inter-rater reliability would fall within the 0.75 and 0.90 range. This suggests that K-SADS and HCJPD provided very different ratings for the number of diagnoses each youth received.

Table 1 also presents the data on frequency of unspecified diagnoses assigned by K-SADS as compared to HCJPD. Of note, none of the youth used in analyses had an unspecified diagnosis assigned when assessed with the K-SADS. Alternatively, HCJPD assigned up to three unspecified diagnoses (M=0.8, SD=0.9). It was not possible to examine the differences using parametric statistics as the K-SADS did not provide unspecified diagnoses in the matched sample, meaning the variable was a constant (0). Therefore, Cohen's Kappa did not provide interpretable information.

Please see Figure 2 to examine the prevalence of disorders diagnosed by the K-SADS versus HCJPD. The K-SADS results for diagnosis distribution suggested the largest

proportion of diagnoses fell under the substance-related and addictive disorders (39%), followed by DBDs (14%) and anxiety disorders (10%). However, HCJPD assigned an equal proportion of substance related and DBD diagnoses (28%), as well as a high prevalence of neurodevelopmental (23%). The K-SADS provided more variable diagnoses, likely due to the ability to capture internalizing concerns, such as depression or anxiety. However, the K-SADS identified less neurodevelopmental concerns than were identified by the HCJPD.

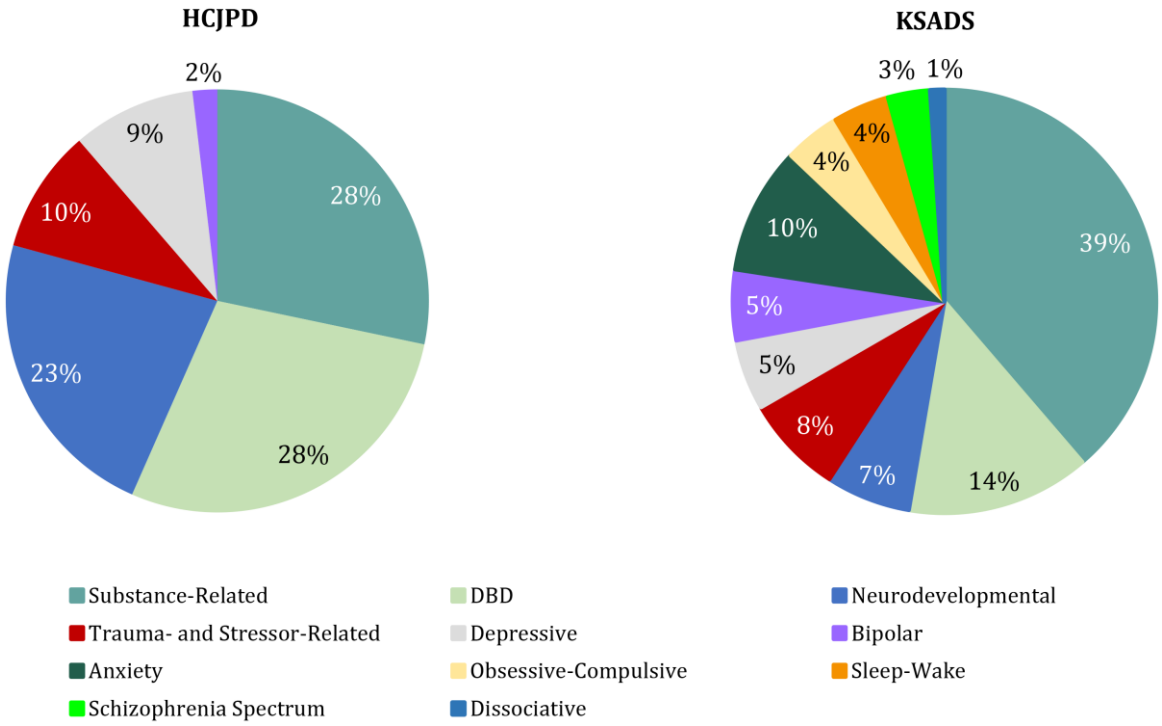

Figure 2. K-SADS Disorder Diagnosis Prevalence for Matched Sample of 16 Youth

Discussion

The discordant (negative) ICC and Cronbach's alpha results are consistent with the hypothesis that the K-SADS and the HCJPD diagnostic systems differ from each other. In particular, it suggests that the ICC is not interpretable due to the inconsistent assignment of the number of diagnoses between the two sources [22]. The discordant ratings may be due to a series of factors. First, K-SADS follows branching logic, thus evaluating all domains of the DSM-5 [38], while HCJPD may not assess for all possible mental health concerns. Second, K-SADS assesses all youth following the same procedures as it is a semi-structured tool. HCJPD varies its assessment protocol based on a series of factors, including whether a youth is "flagged" during a screener suggesting they need a fuller evaluation. Human bias is introduced with unstructured clinical interviews, which is avoided (at least in part) when using a semi-structured tool, as evidenced by increased interrater reliability [35; 38].

K-SADS provides a fuller evaluation via the screener portion of the assessment, which determines the criteria to further assess to provide the most appropriate diagnosis. It ensures that each diagnostic chapter is assessed, which is not necessarily true of unstructured interviews. The K-SADS total sum of diagnoses also had a larger standard deviation, potentially accurately reflecting the variation in presenting concerns among

youth involved with the JJS. Of note, it may be more difficult to establish rapport with a youth while administering a semi-structured tool, which may explain why some youth assessed via the K-SADS did not meet any diagnostic criteria. HCJPD had a diagnosis for every youth, perhaps suggesting they have the opportunity to build a connection with the youth, as a rapport has been found to be an integral piece of therapeutic success [25]. HCJPD provides fewer diagnoses than the K-SADS, which could be due to a number of factors, including limited access to collateral information or limited time with the youth.

Of note, HCJPD assigned a larger number of neurodevelopmental concerns (primarily ADHD). Potentially, the discrepancy was due to HJCPD clinicians having access to medical and/or school records for some of the youth to confirm an ADHD diagnosis, while the K-SADS relied on youth self-report. Interestingly, both HCJPD and the K-SADS identified a large proportion of youth with substance use concerns. It has been noted that both ADHD and SUD concerns have been related to delinquency, in particular, when comorbid with other disorders, internalizing or externalizing [24; 40]. Regarding the unspecified diagnoses, the K-SADS assigned one unspecified diagnosis for the entire sample and none for youth included in the matched sample. HCJPD provided up to three unspecified diagnoses for each youth in the current sample, suggesting limited ability to assess for all criteria necessary for a specific diagnosis. The primary benefit to having diagnoses properly assigned is to provide information to determine the type of intervention and services the youth would benefit from while involved with HCJPD, with some of the available health services including mental health and substance-use specific placements [16]. For particularly at-risk youth, detention facility placements are their only access to health care services, further demonstrating the necessity of addressing youth's needs while they are involved with the JJS [12].

A strength of the HCJPD clinical interview approach is the ability to indicate "Other Conditions That May Be a Focus of Clinical Attention" for youth, including abuse or family separation. The K-SADS does not provide such data unless a child endorsed abuse or conflict within the PTSD module. While not an official diagnosis, the category of "other conditions" can provide helpful information to understand a youth's presentation and needs, which may alter the type of intervention or placement the youth receive while involved with the probation department. Research suggests that it is equally important to target criminogenic needs (antisocial peers, poor family dynamics) in addition to mental health needs to limit recidivism and have increased positive outcomes [27; 34].

The risk-need-responsivity (RNR) model, which emphasizes rehabilitation rather than punitive practices, is becoming more widespread in juvenile justice [4]. Appropriate and specific mental health diagnoses (e.g., the needs of the youth) can ensure informed decisions are made regarding placement and treatment (e.g., the response). Of note, HCJPD may be hesitant to assign too many diagnoses due to concerns with negative effects of labeling youth [33; 42]. However, it is important to balance the opportunity to provide the most relevant and beneficial services to juveniles while limiting potentially stigmatizing labels. Given the value of providing appropriate care, in particular, if this is a youth's first exposure to mental health care services, reliable and valid diagnoses are necessary. Incorporating structured or semi-structured tools into the assessment of juveniles involved with the JJS is a cost-effective way of collecting thorough diagnostic information for youth, including those who may not receive an extensive psychological and academic evaluation otherwise.

Limitations and Future Directions

In the current project, we were able to detect a series of differences between the diagnostic system currently utilized by HCJPD compared to the "gold standard" of mental health assessments. Due to the Covid-19 pandemic and the movement to limit youth's exposure to the JJS, we were not able to achieve our originally intended sample size due to fewer youth being referred to detention facilities and/or placed on probation [15]. Therefore, the current study has a limited sample, which likely impacted analyses. Specifically, it would be important to examine whether there are diagnostic differences present based on demographics, as has been noted in previous studies [17]. It might be of interest to examine, with a larger sample, whether unspecified diagnoses would be more frequent in the K-SADS sample and whether the distribution of types of diagnoses would differ. The sample may not be representative of all juvenile probation departments, both demographically and regarding diagnostic methodology within the department, as the current sample utilized methods specific to HCJPD. The current distribution of diagnoses may be specific to the current sample and not necessarily generalizable to other counties or probation departments. Overall, the K-SADS captured more variability in mental health concerns in youth involved with HCJPD, including internalizing concerns. However, HCJPD identified a larger proportion of neurodevelopmental concerns (e.g., ADHD) and "Other Conditions That May Be a Focus of Clinical Attention," which was not captured by the K-SADS.

For future directions, it would be of interest to examine the interaction between the diagnostic approach, interventions provided to the youth, and recidivism rates. If the K-SADS more accurately assigns diagnoses, it could impact the types of services provided to the youth, thus addressing more of their needs, specifically, internalizing or substance use concerns. Future research would benefit from larger and more diverse samples (e.g., gender, race, and age diversity).

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Information about the authors

Julia D. Kovalenko, M.A. (Psychology), Graduate Student, Department of Psychology, University of Houston, Houston, TX, USA, ORCID: https://orcid.org/0000-0003-0125-1816, e-mail: julia.kovalenko@times.uh.edu

Nan Li, PhD (Measurement, Quantitative Methods, & Learning Sciences), Postdoctoral Researcher, Department of Psychology, University of Houston, Houston, TX, USA, ORCID: https://orcid.org/0000-0002-4095-2810, e-mail: nan.li@times.uh.edu

Elena L. Grigorenko, PhD (Psychology, Behavioral Genetics), Hugh Roy and Lillie Cranz Cullen Distinguished Professor of Psychology, University of Houston, Houston, TX, USA; Adjunct Senior Research Scientist, Moscow State University for Psychology and Education, Moscow, Russia; Professor and Acting Director, Center for Cognitive Sciences, Sirius University of Science and Technology, Federal territory "Sirius", Russia; Research Certified Professor, Baylor College of Medicine, Houston, TX, USA; Adjunct Professor, Child Study Center and Adjunct Senior Research Scientist, Haskins Laboratories, Yale University, New Haven, CT, USA, ORCID: https://orcid.org/0000-0001-9646-4181, e-mail: elena.grigorenko@times.uh.edu

Информация об авторах

Коваленко Юлия Дмитриевна, магистр (психология), аспирант, департамент психологии, Хьюстонский университет, Хьюстон, Техас, США, https://orcid.org/0000-0003-0125-1816, e-mail: julia.kovalenko@times.uh.edu

Ли Нан, PhD (Измерения, квантитативные методы и науки об учении), постдокторант, департамент психологии, Хьюстонский университет, Хьюстон, Техас, США, https://orcid.org/0000-0002-4095-2810, e-mail: nan.li@times.uh.edu

Григоренко Елена Леонидовна, PhD (психология, поведенческая генетика), заслуженный профессор психологии Хью Рой и Лилли Кранц Каллен, Хьюстонский университет, Хьюстон, Техас, США; ведущий научный сотрудник, Московский государственный психолого-педагогический университет, Москва, Россия; профессор и и. о. директора, Научный центр когнитивных исследований, Научно-технологический университет «Сириус», ФТ «Сириус», Россия; профессор, Медицинский колледж Бейлора, Хьюстон, Техас, США; адъюнкт-профессор, Центр исследований детства и Лаборатории Хаскинса, Йельский университет, Нью-Хейвен, Коннектикут, США, ORCID: https://orcid.org/0000-0001-9646-4181, e-mail: elena.grigorenko@times.uh.edu

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Psychometric Properties of the Preschool Language Scales, Fifth Edition (PLS-5) in Russian-Speaking Children: A Classical and Item Response Theory Study

Oksana I. Talantseva
Sirius University of Science and Technology, Federal territory "Sirius", Russia,
ORCID: https://orcid.org/0000-0002-7555-1216, e-mail: talantseva.oi@talantiuspeh.ru

Iuliia O. An
Saint-Petersburg State University, Saint-Petersburg, Russia,
ORCID: https://orcid.org/0000-0002-4695-7065, e-mail: iuliia.o.an@gmail.com

Marina A. Zhukova
*Saint-Petersburg State University, Saint-Petersburg, Russia***,**
ORCID: https://orcid.org/0000-0002-3069-570X, e-mail: marina.zhukova@times.uh.edu

Anna N. Trubitsyna
Novosibirsk State University, Novosibirsk, Russia,
ORCID: https://orcid.org/0000-0002-3702-4693, e-mail: atrubicyna@ngs.ru

Anastasiya V. Teedemaa
Novosibirsk State University, Novosibirsk, Russia,
ORCID: https://orcid.org/0000-0002-1982-3555, e-mail: belkavkolese@mail.ru

Elena L. Grigorenko
University of Houston, Houston, TX, USA,
ORCID: https://orcid.org/0000-0001-9646-4181, e-mail: elena.grigorenko@times.uh.edu

Difficulties in language development are common hallmarks of different neuro-developmental disorders. Early diagnosis is a crucial factor for proper early interventions and better prognosis. Currently, there is a severe shortage of standardized instruments for assessing potential language disorders in Russia. To address this gap, we analyzed the psychometric properties of the Russian version of the Preschool Language Scale, 5th edition (RPLS-5). The sample consisted of 473 children aged 3 to 96 months (Mean=32.64, SD=19.79), including 224 typically developing (TD) children and 240 at-risk (AR) children. To assess the reliability of the Russian version of the PLS-5, we used both Classical Test Theory (CTT) and Item Response Theory (IRT). The results indicated the high reliability of the RPLS-5 based on both types of analyses. According to the results of IRT analysis, the difficulty of items ranged from very easy to very difficult, and with few exceptions, the difficulty parameters consistently increased for each subsequent item, reflecting the hierarchical organization of the test. The discrimination parameters ranged from high to perfect. In general, IRT demonstrated that the RPLS-5 is reliable for low-to-high levels of language abilities.

Keywords: Item-response theory, psychometrics, language, assessment, PLS-5, reliability, validity.

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Психометрические свойства русскоязычной версии «Языковых шкал для дошкольников» пятого пересмотра (PLS-5): исследование с помощью классической теории тестов и современной теории тестирования

Таланцева О.И.
Научно-технологический университет «Сириус», ФТ «Сириус», Россия,
ORCID: https://orcid.org/0000-0002-7555-1216, e-mail: talantseva.oi@talantiuspeh.ru

Ан Ю.О.
Санкт-Петербургский государственный университет, Санкт-Петербург, Россия,
ORCID: https://orcid.org/0000-0002-4695-7065, e-mail: iuliia.o.an@gmail.com

Жукова М.А.
Санкт-Петербургский государственный университет, Санкт-Петербург, Россия,
ORCID: https://orcid.org/0000-0002-3069-570X, e-mail: marina.zhukova@times.uh.edu

Анна Н. Трубицына
Новосибирский государственный университет, Новосибирск, Россия,
ORCID: https://orcid.org/0000-0002-3702-4693, e-mail: atrubicyna@ngs.ru

Анастасия В. Теедемаа
Новосибирский государственный университет, Новосибирск, Россия,
ORCID: https://orcid.org/0000-0002-1982-3555, e-mail: belkavkolese@mail.ru

Елена Л. Григоренко
Хьюстонский университет, Хьюстон, Техас, США,
ORCID: https://orcid.org/0000-0001-9646-4181, e-mail: elena.grigorenko@times.uh.edu

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Трудности в развитии языка и речи являются частыми признаками различных расстройств развития нервной системы. Ранняя диагностика является решающим фактором для правильного выбора лечения на ранних этапах и улучшения прогноза. В настоящее время в России наблюдается острая нехватка стандартизированных инструментов для диагностики потенциальных языковых нарушений. Чтобы устранить этот пробел, мы проанализировали психометрические свойства русской версии Языковых шкал для дошкольников 5-го издания (RPLS-5). Выборка включала 473 ребенка в возрасте от 3 до 96 месяцев (M=32,64, SD=19,79), в том числе 224 типично развивающихся ребенка и 240 детей из группы риска. Для оценки надежности русской версии PLS-5 мы использовали как классическую теорию тестов (CTT), так и современную теорию тестирования (IRT). Результаты показали высокую надежность RPLS-5 на основе обоих типов анализов. Согласно результатам анализа IRT, сложность заданий варьировалась от очень простых до очень сложных, и за редким исключением параметры сложности последовательно увеличивались для каждого последующего задания, отражая иерархическую организацию теста. Параметры дискриминативности варьировались от высоких до очень высоких. В целом, IRT-анализ продемонстрировал, что шкалы RPLS-5 надежны для оценки языковых способностей детей.

Ключевые слова: современная теория тестирования, IRT, психометрика, язык, оценка, PLS-5, надежность, валидность.

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Introduction

Difficulties and delays in language development can serve as markers for different groups of neurodevelopmental disorders, such as communication disorders, autism spectrum disorder (ASD), specific learning disorders, and others [1; 19]. Importantly, children with language impairment are more vulnerable to social, behavioral, and emotional difficulties and less successful in academic settings compared to their typically developing peers [7; 33]. Early identification of language difficulties is essential for diagnosis and the provision of intervention services that could lead to better life-long outcomes [11]. Thus, a comprehensive assessment of preschool children's speech and language skills has crucial importance for identifying specific difficulties and providing appropriate routes of interventional and educational plans.

To date, the assessment of language abilities by an interdisciplinary and multi-source approach, documenting medical history, clinical examination, screening checklists for parents, and in-depth assessment of children's receptive and expressive language abilities, along with dynamic procedures such as diagnostic teaching, is the gold standard [7; 11]. However, there is no single reference instrument for language assessment, and professionals should flexibly choose the most appropriate one depending on the child's biological and mental age, specific diagnostic aims, comorbid disorders, available time and methodological resources, and clinical expertise in administering specific instruments. To cover these different conditions, a variety of methods have been designed for preschoolers in higher income countries, mostly for English-speaking children [7; 11]. At the same time, there is an urgent need for standardized language assessment tools for use with Russian-speaking preschoolers. Without such tools, the accurate identification of language difficulties is challenging, especially for the receptive domain, as language comprehension difficulties are less evident without specific instruments [7]. In the absence of such standardized language assessment tools, there may be an overall under-detection of language disorders in Russia.

One approach to address this issue is to develop new methods for use within specific cultural settings. This may be the preferred method in some circumstances, as it takes into account the peculiarities of a specific language and the context in which native children are raised. It could also facilitate the training of specialists and reduce the costs of training and purchasing an instrument. However, developing a new language specific test may require massive and high-cost effort and may be challenging due to a lack of expertise in contemporary psychometrics and the administration of contemporary instruments. Also, it may limit the possibility of comparing the obtained data with samples from other countries [15]. To the best of our knowledge, the Assessment of the Development of Russian (ORRIA) [4] is the only standardized tool designed specifically for Russian-speaking children, developed using state-of-the-art diagnostics of speech and language strengths and problems. The ORRIA is a direct assessment of children aged 3 to 9. It assesses

phonological, morphological, and syntactic skills of children, as well as vocabulary in both receptive and expressive modalities. The ORRIA has been validated and could be used with typically developing children and children with developmental language disorders [16; 24].

An alternative approach is to adapt existing assessment tools. A growing body of literature supports the use of tests developed in high-income countries to assess children in other contexts when carefully translated, adapted, normed, and applied [15]. This could be essential for research purposes and is crucial to lay the foundations for the expertise needed for the development of new and more culturally appropriate methods. The only method normed for a Russian-speaking sample is the MacArthur Communicative Development Inventories (CDI) [12] — two checklists for caregivers of children from 8 to 30 months. The Vineland Adaptive Behavior Scales, 2nd edition (VABS-II) [32], have also been recently adapted and psychometrically evaluated with a Russian-speaking sample [22], although no norms are available for the Russian version. However, there are no adapted and standardized norm-referenced instruments for Russian-speaking children for the direct evaluation of children's language skills.

The Preschool Language Scales, Fifth Edition (PLS-5) [41] is among the most widely used standardized instruments for young children. The PLS-5 is an individually administered play-based instrument designed to evaluate language skills in children from birth to 7 years 11 months. It is used for both clinical and research purposes. The PLS-5 comprises two standard subscales (Auditory Comprehension and Expressive Communication), along with additional indicators (The Language Sample Checklist, Articulation Screener Scale, and Home Communication Questionnaire). The Auditory Comprehension (AC) subscale evaluates the child's ability to understand spoken language. The Expressive Communication (EC) subscale determines how the child expresses himself/herself verbally and communicates with others. In both scales, items are arranged by complexity according to developmental expectations, which helps to detect changes in language skills over time. The test is used to assess preverbal as well as language skills in the areas of semantics, morphology, syntax, integrative and early literacy skills.

The PLS-5 has been shown to be effective with typically developing children, as well as special populations, such as children with ASD [28] and attention deficit hyperactivity disorder [26]. Standardization of the original version of the PLS-5 was conducted in the United States with a sample of 1,400 children, including children with various clinical diagnoses. The retest reliability of the PLS-5 showed a good level of stability of results over time (stability coefficients ranged from 0.86 to 0.95). The internal consistency of the tool showed very high values (0.91 for the Auditory Comprehension scale, 0.93 for the Expressive Communication scale, and 0.95 for the overall score). Correlation coefficients for the PLS-5 and the CELF Preschoolers-2 [35] scores ranged from medium (0.70) to high (0.82) [41]. In addition to the English-language version (also normed for Australia and New Zealand), the authors have adapted and standardized the Spanish-language version of the PLS-5. The PLS-5 also has adapted versions in Turkish [30], Bengali [2], and Indonesian [31].

The Russian version of the PLS-5 (RPLS-5) was translated and adapted for a large-scale research project investigating the developmental effects of rearing in orphanages [38]. The preliminary evaluation of the psychometric properties of the RPLS-5 was conducted with a sample of 44 children; 28 of these children (M_{age}=32.50 months,

SD_{age}=7.50) had a history of institutional care placement, and 16 children (M_{age}=35.13 months, SD_{age}=8.08) were raised in biological families. The results demonstrated high reliability (Cronbach's α coefficients were 0.96 for both subscales) and a high correlation between scores and chronological age on both subscales (r=0.89, p<.001 for AC and r=0.85, p<.001 for EC) [38].

In the current study, we aimed to evaluate the psychometric properties of the RPLS-5 with a larger sample of children, using methods from both *classical test theory (CTT)* as well as *item response theory (IRT).*

Methods

Sample

The total sample consisted of 473 children aged 3–96 months (M=32.64, SD=19.79; 201 girls). According to caregivers' reports, all children in the study were native Russian language speakers. Among them, the group of typically developing children (TD) included 224 children (M=27.36, SD=16.22; 109 girls). To assess the test performance in special populations, we included additional clinical and at-risk (AR) groups. The group of children residing in institutional care (IC) consisted of 100 children (M=23.58, SD=10.93; 41 girls). Another group of 42 included children with a history of IC but at the point of data collection, were being raised in foster families (FF; M=29.27, SD=11.67, 28 girls). A group of children with autism spectrum disorders (ASD) consisted of 72 children (M=58.97, SD=17.93; 19 girls). The sample also included 11 children with unspecified neurodevelopmental disorders (UNDD) (M=23.58, SD=24.38; 3 girls). Due to the small number of participants with UNDD, the data obtained from this group was not included in the group analyses.

The inclusion/exclusion criteria for TD, IC, and FF groups were as the following: absence of uncorrected hearing or sight problems; no diagnosed neurological disorder or neurological symptoms; absence of major genetic syndromes; no history of institutional care placement for the TD group, or at least 6 months of institutionalization for the IC and FF groups. The inclusion criterion for the ASD group was the presence of any pervasive developmental disorders according to the ICD-10.

Participants for the study were mainly recruited through several medical organizations, socio-psychological services, childcare institutions, and social networks.

Assessments

RPLS-5. The PLS-5 is an interactive, play-based assessment of language skills for children from birth to 7 years 11 months. The test includes the Auditory Comprehension (AC) and Expressive Vocabulary (EC) subscales, as well as the Language Sample Checklist, Articulation Screener Scale, and Home Communication Questionnaire. For the current study, we used only the AC and EC subscales.

The PLS-5 comprises 65 auditory comprehension and 67 expressive comprehension tasks to identify the child's language skills. Administration time usually ranges from 25 to 50 minutes, depending on the child's age. The PLS-5 uses a basal and ceiling rule. All items

are dichotomous. Passed items receive a score of "1"; items that are not passed are scored "0." For items administered to children from birth through age 2 years 11 months, the item scoring can be based on elicitation, observation, or caregiver report. The scores are summed for each subscale, and raw scores can be converted to norm referenced scores, including standard scores, percentile ranks, and age equivalents for AC and EC. The scores can be summed to calculate a norm-referenced total language score.

The PLS-5 has been translated and adapted to the Russian language by a group of experts in language development; the procedure is described in detail in Zhukova et al., 2016 [39]. Most of the tasks designed for children from birth to 3 years were not modified, as they assess universal, culture-free preverbal behavior and emerging language skills, such as eye contact, joint attention, gestural communication, and familiar object recognition. Changes were primarily made to tasks assessing phonological, grammar, and early literacy skills according to the phonology, grammar, and orthography of the Russian language. The pictures to the modified tasks were replaced with more corresponding ones in the Picture Manual.

CDI. To assess concurrent validity, we used the Russian adaptation of the MacArthur-Bates Communicative Development Inventories (CDI) [14], translated and normed in Russian by Tseitlin and colleagues [12]. The CDI are caregiver-informant checklists that evaluate a child's early communication and lexical skills. There are two age-specific versions: CDI Words and Gestures (CDI-WG) and CDI Words and Sentences (CDI-WS). CDI-WG is designed for children from 8 to 18 months and is focused on gestural communication and emerging receptive and expressive vocabulary. CDI-WS is designed for children from 18 to 36 months and assesses expressive vocabulary as well as early grammar.

Data analysis

To evaluate the psychometric properties of the RPLS-5, we analyzed the data using both CTT and IRT methods.

The plan of analysis was as follows: 1) describe the subscales and item characteristics across and within the study groups using CTT methods; 2) evaluate the concurrent validity of the RPLS-5 and CDIs; 3) investigate the dimensionality of the RPLS-5 subscales; 4) compare the 1- and 2-parameter logistic models regarding their fit to the data; and 5) examine the subscales and item functioning using the best fitting model.

The statistical analyses were performed in the R programming environment [23]. For descriptive and CTT analyses we used the psy [13]and CTT [36] packages. The IRT analysis was performed using the ltm [29] and mirt [6] packages.

CTT. CTT theory is based on the assumption that observed test scores are composed of a true score and a standard error of measurement, where the true and the error scores are independent [18]. Thus, it is often called the "true score model." CTT focuses on the entire test rather than separate items. CTT analyses are easy to perform and are widely used in psychometrics to measure and manage test performance data. However, the

psychometric properties measured using CTT methods depend on the sample characteristics and sample size.

To assess the reliability of the RPLS-5 subscales, as well as the whole test, we used the split half coefficient (after Spearman-Brown correction) and Cronbach's α. The obtained results were interpreted as unacceptable at $\alpha<0.70$, fair at values from 0.70 to 0.79, good at values from 0.80 to 0.89, and excellent at $\alpha>0.90$ [10]. Additionally, we measured inter-item and item-to-total correlations, item difficulty (within this framework, understood as the proportion of correct responses to the item), Cronbach's α if an item was deleted, and correlations between scores and chronological age. According to Piedmont [23], inter-item correlations within the range of 0.20 to 0.40 are considered optimal because, first, they indicate sufficient homogeneity in the measurement of the latent variable and, second, they have sufficiently unique variance and do not duplicate each other. The concurrent validity was measured as the correlation between the RPLS-5 and the CDI scores.

IRT. IRT, also known as the latent response theory, establishes a link between the properties of an instrument, the individual responding to the tasks, and the underlying trait being measured [33]. In general, it is based on generalized linear mixed models that allow precise measurement across the range of a latent trait at both the item and test levels. In contrast to CTT, IRT does not rely on the assumption of a linear association between the latent trait and the results of a test and is less dependent on sample characteristics and sample size [27]. The most popular IRT models can be categorized into 1-parameter logistic (1PL), 2-parameter logistic (2PL), and 3-parameter logistic (3PL) models, named according to the number of parameters used to model the characteristics of an item. The 1PL model describes test items in terms of only one parameter, e.g., item difficulty (the value of measuring ability, at which an individual has a 50% chance of passing or affirming that item). The 2PL model includes two item characteristic parameters, e.g., item difficulty and item discrimination (a measure of the item's ability to accurately differentiate between individuals with higher or lower levels of a latent trait). The 3PL model includes both characteristics of the item from the other models and, additionally, a pseudo-chance "guessing" parameter.

Given the independence of IRT from sample characteristics, all participants were included in the analysis. The latent dimensionality of the RPLS-5 subscales was examined with a modified parallel analysis (MPA). Subsequently, to choose the most appropriate model to fit the data, we estimated 1- and 2-parameter logistic models. The model fit was investigated based on the Akaike Information Criterion (AIC), Bayesian Information Criterion (BIC), Log-likelihood absolute parameters with a preference for lower values, along with the ANOVA and Bootstrap Likelihood Ratio Test (BLRT, n=1,000). The item fit statistics were analyzed based on the Orlando and Thissen's S-χ^2 item fit index. An item was flagged for misfit if the significance level for the S-χ^2 index was less than .05 [21].

In addition to the IRT assumption of unidimensionality, we tested the assumption of local independence using the Q_3 statistic with a critical value of |0.2| [9]. Then, the item difficulty and item discrimination were analyzed. The level of an item's complexity was assessed as relative, depending on the location of the function of the item on the scale of measured ability. When interpreting the values of the discriminatory parameter, the

following gradation was used: 0 — no; 0.01–0.34 — very low; 0.65–1.34 — moderate; 1.35–1.69 — high; above 1.70 — perfect [5].

Results

Descriptive statistics and CTT results

Table 1 displays the average raw scores and standard deviations generated by children in the RPLS-5 according to 8 age ranges, along with correlation coefficients between raw scores and the ages of participants.

Table 1

Average raw scores and standard deviations gained by children in PLS-5 according to 8 age ranges along with correlation coefficients between raw scores and an age of participants by groups

Age (months)	TD		IC		FF		ASD	
	AC	EC	AC	EC	AC	EC	AC	EC
0–11	15.3±2.4	17.2±3.6	13.7±1.7	15.1±3.6	11.3±2.6	12.2±2.9	NA	NA
12–23	23.6±5.5	23.5±3.1	20.3±4.5	19.6±4.2	24.2±8.0	22.5±1.6	8.0	8.0
24–35	35.0±7.1	30.3±7.1	29. 8 ±4.0	26.7±5.0	32.6±5.8	28.7±5.3	21.2±9.2	17.2±8.0
36–47	42.7±5.7	41.5±7.5	34.8±3.4	32.6±4.9	40.1±5.3	38.8±7.9	21.5±7.1	20.2±6.7
48–59	45.4±7.4	45.2±7.3	42.5±2.1	43.5±7.8	39.0	38.0	23.4±9.3	18.7±9.7
60–71	49.4±7.9	52.3±9.0	NA	NA	NA	NA	23.2±10.0	22.8±8.6
72–83	63.0	61.0	NA	NA	NA	NA	32.1±10.0	25. 0±8.6
84–95	50.8±8.0	56.3±7.0	NA	NA	NA	NA	28.4±15.8	22.9±12.3
Correlation between age and raw scores	0.90***	0.87***	0.94***	0.87***	0,83***	0.31**	0.36**	0.30**

Notes. AC — the Auditory Comprehension scale; EC — the Expressive Communication scale; TD — the Typical Developing group, IC — the Institutional Care group, FF — the Foster Family group, ASD — Autism Spectrum Disorder group, NA — Not Available (as a value could not be calculated). * — p<.05; ** — p<.01, *** — p<.001.

While 18 age ranges were used in the original validation study, we decided to reduce them in this study because of the lack of participants in some ranges. From this table, it can be seen that for TD, IC, and FF groups, AC and EC raw average scores systematically increase with age. At the same time, for the ASD group, the trend is less unequivocal, likely

due to the heterogeneity of language abilities in this group. However, the correlation analysis reveals a statistically significant relationship between age and raw scores for both scales in all groups, although it is weaker for the FF in EC and for ASD in both domains. A comparison of the results between the TD and at-risk subgroups (see Supplemental Tables 1-2 at https://osf.io/tq3pa/?view_only=e513d5557a304f0baa04adba76c31a1b) has revealed that in most age ranges children from the IC and ASD subgroups obtained lower scores on both scales. For IC, the effect sizes were statistically significant and ranged from moderate to large (Cohen's d ranged from 0.55 to 1.54); for ASD, effect sizes were large for all age ranges (Cohen's d ranged from 1.83 to 3.43), but for children aged 24 to 35 months the difference in AC was not significant (t=2.93 (3.26), p>.06). The large, but not significant effect was also found for children from the FF up to 11 months in AC (t=3.17 (3.34), p<.05, d=1.83 [0.74; 2.92]), but no differences were found for older children from this group.

Cronbach's alpha values were excellent across all subscales and groups, ranging from 0.94 to 0.96 (Table 2). Inter-item correlations ranged from 0.28 to 0.33 for AC and from 0.27 to 0.30 across subgroups, indicating that both scales have sufficient homogeneity in the measurement of the investigated constructs, a sufficient unique dispersion, and do not duplicate each other.

Table 2

Internal consistency values and average inter-item correlations for the Auditory Comprehension and Expressive Communication scales

Scale-group	Split-half reliability	Cronbach's α	Average Inter item correlation
AC-TD	0.98	0.96	0.28
AC-IC	0.98	0.94	0.30
AC-FF	0.98	0.95	0.33
AC-ASD	0.98	0.95	0.30
AC-Total	0.98	0.95	0.26
EC-TD	0.98	0.96	0.29
EC-IC	0.97	0.94	0.27
EC-FF	0.98	0.95	0.30
EC-ASD	0.98	0.94	0.30
EC-Total	0.98	0.96	0.28

Notes. AC — the Auditory Comprehension scale; EC — the Expressive Communication scale; TD — the Typical Developing group, IC — the Institutional Care group, FF — the Foster Family group, ASD — Autism Spectrum Disorder group.

Item descriptives displayed in Supplemental Table 3 (available at: https://osf.io/tq3pa/?view_only=e513d5557a304f0baa04adba76c31a1b) demonstrate that the exclusion of any of the items of AC and EC does not result in any increase in the internal consistency of either of the subscales (Cronbach's alpha values for all items on both scales remain at 0.96). The frequency of correct answers on items varied for both subscales. As seen in Supplemental Tables 4-6 (available at: https://osf.io/tq3pa/?view_only=e513d5557a304f0baa04adba76c31a1b) for both scales, items at the beginning of the scales are the easiest, and all/most of the participants completed them; also, as the item number increases the frequency of correct answers decreases, with the most difficult items at the end of the scales.

The matching results of the RPLS-5 and CDIs via the correlation analysis show a positive and statistically significant relationship between composite scores of these instruments (r=0.77 (98), p<.001; r=0.83 (220), p<.001 for CDI-18 and CDI-36 respectively), this relationship was also found for each PLS subscale and CDI composite scores (r=0.78 (98), p<.001 for AC and CDI-18; r=0.64 (98), p<.001 for AC and CDI-36; r=0.75 (220), p<.001 for EC and CDI-18; r=0.83 (220), p<.001 for EC and CDI-36).

IRT analysis

Auditory comprehension. In order to avoid errors associated with zero or near-zero variance in the proceeding of IRT analysis, items with the frequency of correct and incorrect answers lower than 4 (see Supplemental Table 4 at https://osf.io/tq3pa/?view_only=e513d5557a304f0baa04adba76c31a1b) were excluded.

The MPA indicated that the second eigenvalue of the observed data is substantially larger than the second eigenvalue of the data under the assumed 1PL model (Table 3), indicating that the unidimensionality assumption has been met and unidimensional IRT models can be applied to the data.

IRT model-fit assessment revealed that the data showed a significantly better fit to the 2PL model compared to the 1-PL model (LRT=529.57, df=54, p<.001, for BLRT p<.001). The AIC, BIC, and LogLikelihood also favored the 2PL model (Table 3). The individual item-fit values are provided in the online supplemental materials (see Supplemental Table 6 at https://osf.io/tq3pa/?view_only=e513d5557a304f0baa04adba76c31a1b). In the 1PL model, 11 items were potentially misfitted to the data; in the 2PL model, the number of items with poor fit was lower (items № 10, 11, 16, 25, 26, 51). Thus, we proceeded with further analyses using the 2PL model.

Examination of the residual correlation matrix based on Q_3 statistics revealed potential local dependence between the following pairs of items: 6-7 (0.23), 7-9 (0.24), 9-10 (0.30), 6-12 (0.23), 12-16 (-0.31), 18-21 (0.26), and 24-26 (-0.29). However, as the number of potentially violated pairs was small (0.47%) and these “red flag” items assess different receptive skills typically developing in close age periods, we determined that there was sufficient evidence to support the assumption of local independence for the whole subscale to proceed further analysis of model parameters.

Table 3

Model fit criteria and comparison observed versus resampled eigenvalues for 1PL and 2PL models

Model fit criteria	Auditory comprehension		Expressive communication	
	Model		Model	
	1PL	2PL	1PL	2PL
AIC	9878.22	9456.65	8950.75	8055.39
BIC	10111.13	9914.15	9187.70	8520.97
Log-likelihood	-4883.11	-4618.32	-4418.38	-3915.70
Unidimensional testing	-	-	-	-
Second eigenvalues of the observed data	2.51	2.51	NA	1.74
Average of second eigenvalues in Monte Carlo samples (n=100)	2.11	2.89	NA	1.68
Comparison observed versus resampled eigenvalue	0.27	0.66	NA	0.45

Notes. AIC — Akaike Information Criterion, BIC — Bayesian Information Criterion, 1PL — 1-parameter logistic model, 2PL — 2-parameter logistic model.

In the 2PL model, the difficulty of the items (see Supplemental Table 6 at https://osf.io/tq3pa/?view_only=e513d5557a304f0baa04adba76c31a1b) consistently ranged from the easiest at the beginning to the most difficult at the end of the AC subscale (b parameters were from -2.745 to 2.065). The discrimination parameters across the items ranged from high to perfect values, indicating a high capacity to differentiate individuals in the wide range from low to high latent ability (i.e., language comprehension functions).

The Item Characteristic Curves (ICCs) of all the items (Figure 1) indicate that the probability of completing items successfully increased with the increase of the latent trait. At the same time, the larger the item number, the higher the required latent trait ability for the probability of giving a correct answer.

The Test Information Function (TIF), along with the standard error measure and reliability curve (Figure 2) for the overall AC, demonstrates that the scale measured language comprehension with at least 90% reliability for theta values of about -2.5 to 2.5 SD, while the most information (i.e., ability of the subscale to differentiate individuals with

the highest precision) is provided for individuals with ability levels of about 1.8. At this point, the standard error is the lowest, and the information is the highest, indicating that AC better discriminates individuals at higher ability levels. For individuals with severe problems in language comprehension, as well as with highly skilled individuals, the subtest has the lowest precision. The marginal estimate of empirical reliability for the 2PL model of AC is high (0.98) and close to the CTT-based estimates reported above.

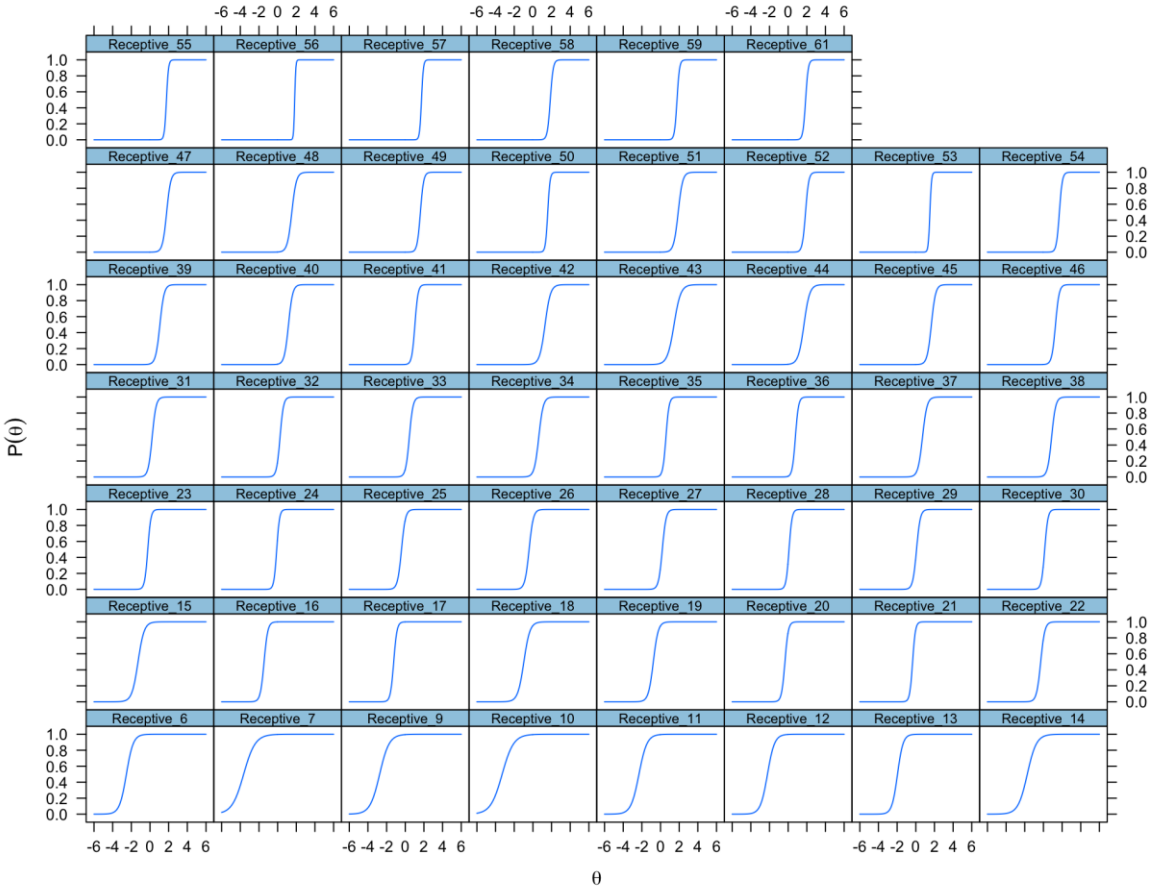

Figure 1. Item Characteristic Curves for Auditory Comprehension Scale

Expressive communication. Based on the frequency of correct and incorrect answers (see Supplemental Table 5 at https://osf.io/tq3pa/?view_only=e513d5557a304f0baa04adba76c31a1b), items № 1-5, 53-54, 61-63, and 65 were excluded from the further IRT analysis because of near zero variance.

The results of the MPA were not statistically significant (Table 2), meaning that the unidimensionality assumption was met.

Comparison of the 1PL and 2PL models based on the analysis of variance revealed that the latter exhibited a better fit (LRT=1005.362, df=55, p<.001, for bootstrap LRT p<.001) and absolute model fit indices (Table 2). The p-values associated with the S-χ^2 fit statistics ranged from 0.0000001 to 0.98, with an average p-value of 0.25 for the 1Pl model and from 0.00036 to 0.94 (M=0.60) for the 2PL model. A comparison of the number of

misfit items was not possible (as 2PL model fit statistics could not be calculated for 9 items); however, taken together, the results favor the 2PL model.

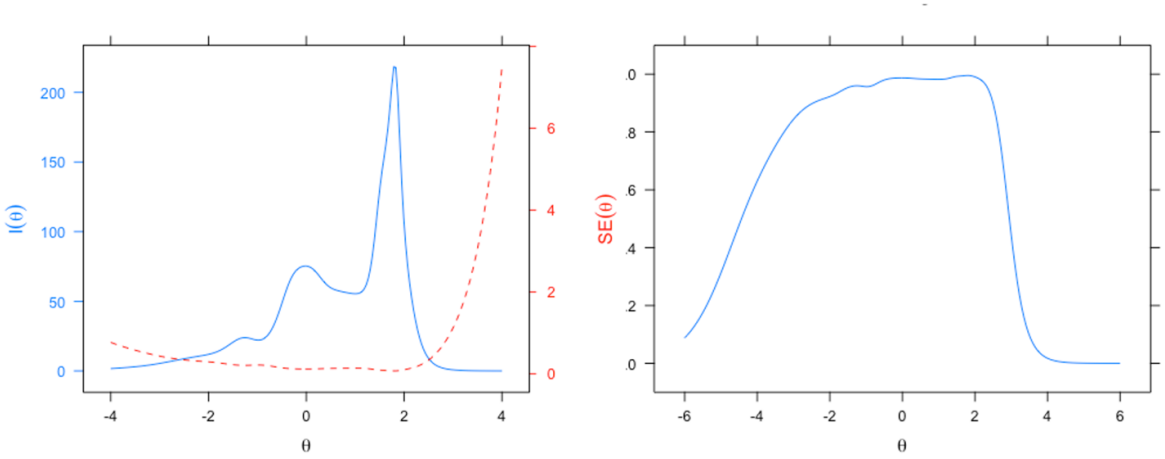

Figure 2. Test Information Function (left panel) and Test Reliability Curve (right panel) for the Auditory Comprehension Scale

As in the case of AC, only 8 of 1,485 item pairs (0.54%) had Q_3 values above |0.2|: 6-10 (-0.31), 7-10 (-0.21), 11-14 (-0.29), 13-17 (-0.25), 16-21 (-0.24), 19-22 (0.22), 19-25 (0.31), 20-25 (0.22). All assess different milestones of expressive communications, typically emerging in close periods of early development. So that the assumption of local independence for the whole EC subscale could be accepted.

In the 2PL model, the discrimination parameters ranged from high to perfect values ($2.16<\alpha<24.77$), indicating the potentially good diagnostic validity of EC. The difficulty of the items ranged from -2.38 to 1.67, with the easiest items located at the beginning of the scale and the most difficult ones at the end (all item parameters are presented in Supplemental Table 6 at https://osf.io/tq3pa/?view_only=e513d5557a304f0baa04adba76c31a1b).

A visual analysis of the ICCs (Figure 3) shows that most of the items exhibit similar patterns: the probability of a correct answer increases with increased levels of the latent ability, and upon reaching a certain level that differs for each item, it sharply increases, after which the probability no longer depends on the growth of the ability. Notably, as for items № 58-60, 64, and 66, the α-parameters were more than 20, and its ICCs are the sharpest: after distinguishing some points along with the ability scales, they are seemed to vertical line. That means that to the left of these points, the probability of a correct answer is near zero, to the right — the probability increases sharply to 1, so that these items make no distinction between those whose ability level is below or above a certain level of the ability).

TIF with the standard error and reliability curve (Figure 4) of overall EC reveals that the subtest measured expressive language skills with at least 90% reliability for theta values from -2.2 to 2.6 SD; outside this range, the standard error sharply increases. At the same time, the TIF has several peaks. Surprisingly, the most information is distinguished for individuals with an ability level around of 2.2 SD. Thus, EC has the lowest reliability for

individuals with severe problems in expressive communication and for those with extremely high language expertise. In general, the marginal estimate of empirical reliability for the 2PL model EC is excellent (0.98).

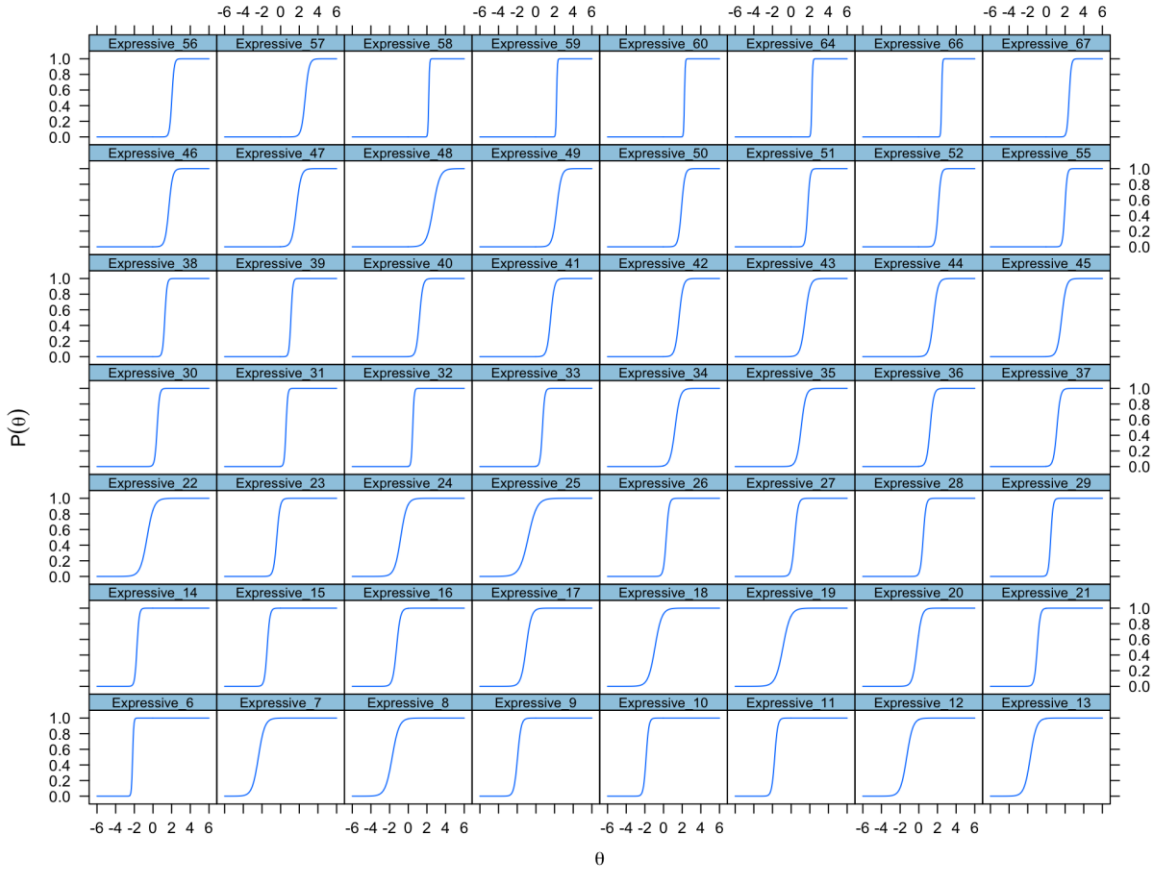

Figure 3. Item Characteristic Curves for Expressive Communication Scale

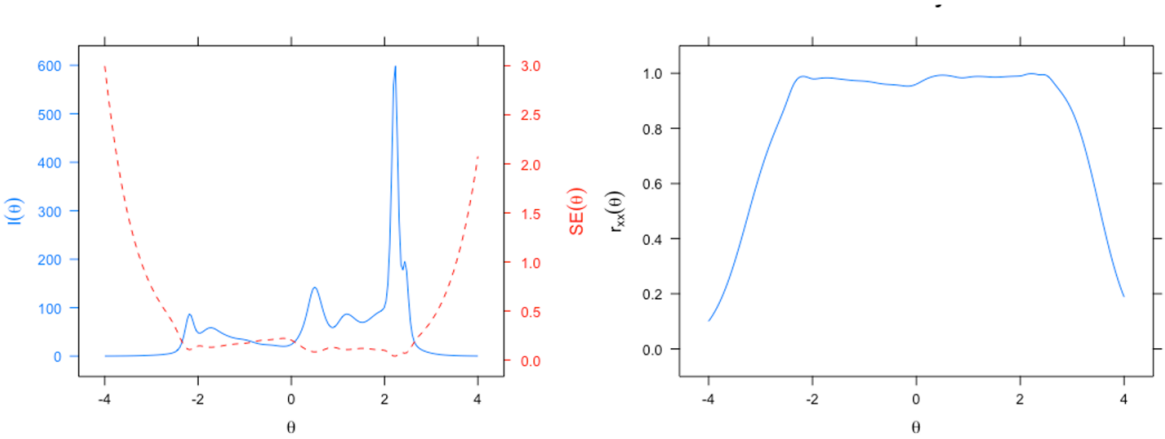

Figure 4. Test Information Function (left panel) and Test Reliability Curve (right panel) for the Expressive Communication Scale

Discussion

Currently, in Russia, there is an acute shortage of valid and evidence-based standardized instruments for assessing potential language disorders in preschool children [2]. This could lead to mis- or under-diagnoses. Consequently, a significant number of children with language impairments may not receive timely and appropriate interventions, which decreases their potential for better prognoses. Moreover, the lack of such tools significantly limits our ability to compare data from Russian-language samples with results from other language groups. This study of the psychometric parameters of the Russian-language version of the PLS-5, using both CTT and IRT approaches, is a major step towards filling this gap.

The analysis of internal consistency, inter-item, and item-total correlations, as well as the analysis of changes in internal consistency in the case of a deleted item, demonstrates that from the standpoint of CTT, both RPLS-5 scales are highly reliable and comparable with the original PLS-5 [41]. Also, the results of the correlation analysis revealed a statistically significant relationship between both scales and the age of participants, which reflects the tests' ability to differentiate children by age. Between-group comparisons show that children brought up in orphanages exhibit lower levels of ability according to both RPLS-5 scales in comparison with neurotypical peers under 4 years old raised in biological families. Children with ASD also scored lower on both subtests. Since deviating patterns in language development are common, both among children with a history of institutionalization [40] and those with ASD [17; 20], the results support the ability of both RPLS-5 scales to identify potential disability in the language domain. The fact that no statistically significant differences were found between children raised in foster families and their neurotypical peers from biological families is consistent with findings that when children are adopted in early childhood, the negative effects of institutionalization can be smoothed out [37]. At the same time, it should be noted that since conducting a comparative study was not the goal of this work, the described conclusions should be interpreted with caution.

The correlation analysis of the RPLS-5 results and CDI questionnaires shows a statistically significant positive relationship between the instruments, which also attests to the validity of the RPLS-5.

According to the results of the IRT analysis, the difficulty of items in both scales ranged from very easy to very difficult, reflecting the fact that the PLS-5 is designed for a wide age range. In addition, the difficulty of the items in general consistently increased with the increase in the number of the item, which reflects the appropriate hierarchical organization of the RPLS-5, as task complexity increases in accordance with age expectations. At the same time, a number of fluctuations are found that indicate that the permutation of some items (through sorting items from the smallest to largest b parameters) could possibly improve the reliability of the RPLS-5. The discrimination parameters across the items of both scales ranged from high to perfect values, indicating a high capacity to differentiate individuals from low to high receptive and expressive language abilities. At the same time, some items located at the end of the EC scale (№ 58-

60, 64, and 66) demonstrated unusually high values of the α-parameters. This may be influenced by the underrepresentation of children between the ages of 6.5 and 8 (the age range that these tasks are aimed at) in the sample that was included in the analysis. On the other hand, it may also be associated with the fact that, since the PLS-5 is limited to the age of 8 years when appropriate development is achieved, this scale loses its differentiating ability for older children. The lowest reliability of the RPLS-5 is found for individuals with severe problems in the language domain and for those with extremely high language expertise. In general, marginal estimates of empirical reliability for the 2PL model for both scales are excellent, that is comparable with results obtained with CTT and with reliability of the original version of PLS-5.

It is also worth noting that the attempt made in this study to assess the psychometric indicators of the RPLS-5 using an IRT approach is the first for PLS-5 as far as we know. However, we also indicate several limitations of this study. First, although we ascertained a large sample, the distribution of age in the sample was not even, and some of the age groups were smaller than intended or used at the validation of the original PLS and its subsequent versions. This limitation especially influences the results obtained from the descriptive and CTT analyses and the number of items included in the IRT analysis. Next, since the sample included children not only with normative language development but also children from at-risk groups, it can be assumed that the RPLS-5 may exhibit differential functioning in different subgroups. Differential analysis for the likelihood of such distortions remained outside the scope of this study but represents a focus for the future. Future directions should also include an analysis of the test-retest reliability.

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Information about the authors

Oksana I. Talantseva, Researcher, Center for Cognitive Sciences, Sirius University of Science and Technology, Federal territory "Sirius", Russia; Research Engineer, Laboratory of Translational Developmental Sciences, Saint-Petersburg State University, Saint-Petersburg, Russia, ORCID: https://orcid.org/0000-0002-7555-1216, e-mail: talantseva.oi@talantiuspeh.ru

Iuliia O. An, Research Engineer, Laboratory of Translational Developmental Sciences, Saint-Petersburg State University, Saint-Petersburg, Russia, ORCID: https://orcid.org/0000-0002-4695-7065, e-mail: iuliia.o.an@gmail.com

Marina A. Zhukova, PhD (Psychology), Research Fellow, Laboratory of Translational Developmental Sciences, Saint-Petersburg State University, Saint-Petersburg, Russia; Senior Research Fellow, Center for Cognitive Sciences, Sirius University of Science and Technology, Federal territory "Sirius", Russia; Research Assistant, Department of Psychology, University of Houston, Houston, TX, USA; ORCID: https://orcid.org/0000–0002–3069–570X, e-mail: marina.zhukova@times.uh.edu

Anna N. Trubitsyna, Researcher, The Center for Behavior Analysis, Institute of Psychology and Medicine, Novosibirsk State University, Novosibirsk, Russia, ORCID: https://orcid.org/0000-0002-3702-4693, e-mail: atrubicyna@ngs.ru

Anastasiya V. Teedemaa, Psychologist, The Center for Behavior Analysis, Institute of Psychology and Medicine, Novosibirsk State University, Novosibirsk, Russia, ORCID: https://orcid.org/0000-0002-1982-3555, e-mail: belkavkolese@mail.ru

Elena L. Grigorenko, PhD (Psychology, Behavioral Genetics), Hugh Roy and Lillie Cranz Cullen Distinguished Professor of Psychology, University of Houston, Houston, TX, USA; Adjunct Senior Research Scientist, Moscow State University for Psychology and Education, Moscow, Russia; Professor and Acting Director, Center for Cognitive Sciences, Sirius University of Science and Technology, Federal territory "Sirius", Russia; Research Certified Professor, Baylor College of Medicine, Houston, TX, USA; Adjunct Professor, Child Study Center and Adjunct Senior Research Scientist, Haskins Laboratories, Yale University, New Haven, CT, USA, ORCID: https://orcid.org/0000-0001-9646-4181, e-mail: elena.grigorenko@times.uh.edu

Информация об авторах

Таланцева Оксана Игоревна, исследователь, Научный центр когнитивных исследований, Научно-технологический университет «Сириус», ФТ «Сириус», Россия; инженер-исследователь, лаборатория междисциплинарных исследований развития человека, Санкт-Петербургский государственный университет, Санкт-Петербург, Россия, ORCID: https://orcid.org/0000-0002-7555-1216, e-mail: talantseva.oi@talantiuspeh.ru

Ан Юлия Олеговна, инженер-исследователь, Лаборатория междисциплинарных исследований развития человека, Санкт-Петербургский государственный университет, Санкт-Петербург, Россия, ORCID: https://orcid.org/0000-0002-4695-7065, e-mail: iuliia.o.an@gmail.com

Жукова Марина Андреевна, кандидат психологических наук, научный сотрудник, Лаборатория междисциплинарных исследований развития человека, Санкт-Петербургский государственный университет, Россия; старший научный сотрудник, Научный центр когнитивных исследований, Научно-технологический университет «Сириус», ФТ «Сириус», Россия; ассистент-исследователь, департамент психологии, Хьюстонский университет, Хьюстон, Техас, США; ORCID: https://orcid.org/0000–0002–3069–570X, e-mail: marina.zhukova@times.uh.edu

Трубицына Анна Николаевна, исследователь, Центр прикладного анализа поведения, Институт медицины и психологии, Новосибирский государственный университет, Новосибирск, Россия, ORCID: https://orcid.org/0000-0002-3702-4693, e-mail: atrubicyna@ngs.ru

Теедемаа Анастасия Владимировна, психолог, Центр прикладного анализа поведения, Институт медицины и психологии, Новосибирский государственный университет, Новосибирск, Россия, ORCID: https://orcid.org/0000-0002-1982-3555, e-mail: belkavkolese@mail.ru

Григоренко Елена Леонидовна, PhD (психология, поведенческая генетика), заслуженный профессор психологии Хью Рой и Лилли Кранц Каллен, Хьюстонский университет, Хьюстон, Техас, США; ведущий научный сотрудник, Московский государственный психолого-педагогический университет, Москва, Россия; профессор и и.о. директора, Научный центр когнитивных исследований, Научно-технологический университет «Сириус», ФТ «Сириус», Россия; профессор, Медицинский колледж Бейлора, Хьюстон, Техас, США; адъюнкт-профессор, Центр исследований детства и Лаборатории Хаскинса, Йельский университет, Нью-Хейвен, Коннектикут, США, ORCID: https://orcid.org/0000-0001-9646-4181, e-mail: elena.grigorenko@times.uh.edu

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Proposing a Model-Based Addition of Risk and Protective Factors to the Evaluation of Displaced Youth

Amanda Venta
University of Houston, Houston, TX, USA,
ORCID: https://orcid.org/0000-0002-1641-123X, e-mail: aventa@uh.edu

Immigrant youth displaced from their homes are at great risk for developing emotional and behavioral symptoms and, therefore, they often present for assessment services in school, medical, and justice settings. The aim of this report is to describe unique, evidence-based risk and protective factors for psychopathology relevant to this client group including risk factors at the individual, family, and community levels that occur during premigration, perimigration, and postmigration. Adding assessment of these factors to a solid foundation of evidence-based assessment will enhance the breadth and depth of psychodiagnostic evaluations of immigrant youth. Protective factors, particularly family relationships, school connections, and peer support, must also be considered, as protective factors can be used to provide recommendations for services and interventions that capitalize upon existing sources of resilience. In addition to presenting a conceptual model and reviewing common risk and protective factors in the extant literature, this report closes with sample measures that can be quickly and easily added to an existing psychodiagnostic battery in order to tailor the assessment to immigrant youth.

Keywords: Assessment, immigrant, adolescent, displaced youth, evidence-based.

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Теоретическая модель для оценки факторов риска и защитных факторов при работе с молодыми иммигрантами

Бента А.
Хьюстонский университет, Хьюстон, Техас, США,
ORCID: https://orcid.org/0000-0002-1641-123X, e-mail: aventa@uh.edu

Молодые иммигранты, вынужденные покинуть свои дома, подвергаются большому риску развития эмоциональных и поведенческих симптомов, и поэтому они часто обращаются за диагностическими услугами в школьные, медицинские и судебные учреждения. Целью данной статьи является описание уникальных, основанных на фактических данных факторов риска и защитных факторов психопатологии, имеющих отношение к данной группе клиентов, включая факторы риска на индивидуальном, семейном и общественном уровнях, которые возникают до, во время и после миграции. Добавление оценки этих факторов к прочной основе доказательной диагностики повысит широту и глубину психодиагностических оценок молодых иммигрантов. Необходимо также учитывать защитные факторы, в частности, семейные отношения, связи в школе и поддержку сверстников, поскольку защитные факторы могут использоваться для предоставления рекомендаций по терапии, использующей существующие ресурсы. В дополнение к представлению концептуальной модели и обзору общих защитных факторов и факторов риска в существующей литературе эта статья завершается примерами показателей, которые можно быстро и легко добавить к существующей психодиагностической батарее, чтобы адаптировать метод диагностики к работе с молодыми иммигрантами.

Ключевые слова: диагностика, иммигрант, подросток, миграция молодежи, доказательная психология.

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Youth who are displaced from their home countries due to regional violence, persecution, and economic hardship has been the subject of widespread international research efforts aimed at identifying risk and protective factors for psychopathology [15; 35]. Much of this research is summarized in Reed and colleagues' [15; 35] Conceptual Framework to Understand the Ecological and Chronological Determinants of Mental Health in Forcibly Displaced Children (Figure 1). This ecological systems theory model [8] was empirically derived based on research with more than 11,500 youth immigrants and is a useful organizational tool for planning psychological assessments with this population. In particular, this report utilizes this model as a framework for organizing a psychodiagnostic evaluation of emotional and behavioral symptoms in youth displaced by migration.

There is a pressing need for mental healthcare among displaced youth globally. In the U.S., public policy debates surged regarding "exponential growth" in the arrival of Central American adolescents to the U.S. [36], with an estimated 131% increase between 2015 and 2016 [44]. These concerns remain, with large numbers of Central American adolescents seeking asylum in the U.S. currently. Likewise, studies of youth outside the U.S. who are displaced due to regional violence, war, economic hardship, or other danger [13; 15; 35] unequivocally reveal very elevated rates of both emotional and behavioral symptoms.Thus, it is likely that mental health practitioners will find themselves serving immigrant youth who have displayed concerning emotional and/or behavioral symptoms in the school

setting; following a referral from a parent or physician; or as part of the juvenile justice system. The foundational principles of evidence-based assessment with youth certainly apply to this population and include proper documentation of informed consent and assent; assurances of confidentiality as appropriate and in compliance with mandatory reporting guidelines for abuse/neglect and danger to self/others; selection and use of evidence-based measures that have been psychometrically vetted and are appropriate in scope, language, and age-range; accurate scoring of measures given to multiple informants (e.g., youth, parent, and teacher); diagnostic formulation that considers the developmental stage of the client; and timely, written feedback in the form of an assessment report. However, beyond these standards for proper assessment, the psychodiagnostic assessment of immigrant youth requires additional consideration of their unique circumstances. In particular, the assessment should include evidence-based risk and protective factors known to be relevant to this population. In the sections that follow, these factors will be briefly reviewed, and sample measures for their assessment will be summarized.

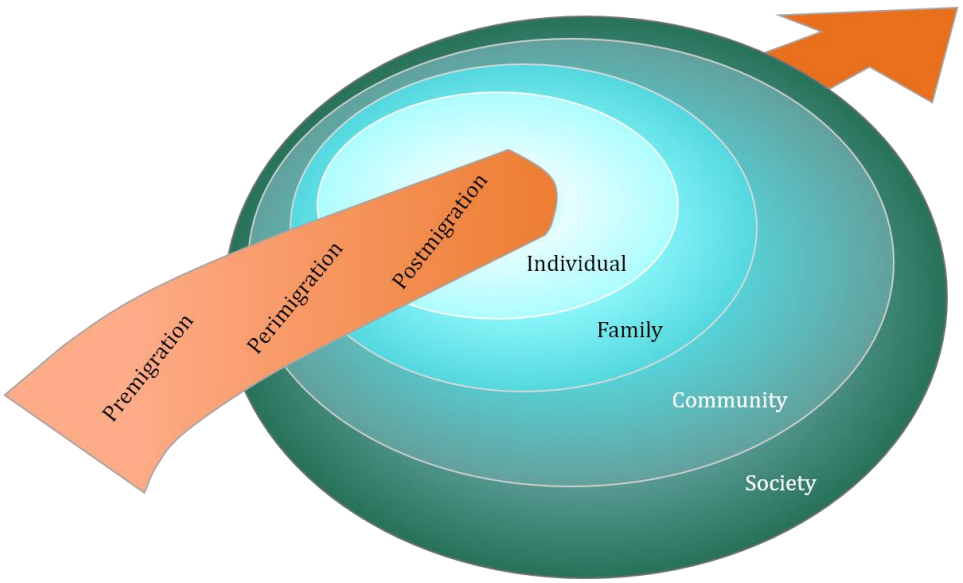

Figure 1. Reed and colleagues' conceptual framework [34]

Evidence-Based Risk & Protective Factors

Guided by Reed and colleagues' [15; 35] model of risk and protective factors for displaced youth, the assessment of various evidence-based risk factors should be standard in psychodiagnostic evaluation of immigrant youth. Indeed, these risk factors were selected from extant empirical research with displaced youth around the world, highlighting their importance in this population. When considering what risk factors to evaluate, clinicians should bear in mind that risk for psychopathology cuts across the individual, family, community, and societal levels and across premigration, perimigration, and postmigration stages. That is, a thorough psychodiagnostic assessment would at least screen for the possibility of, for example, exposure to violence premigration and perimigration, considering events affecting both the individual being assessed and their family members. Table 1 summarizes evidence-based risk factors to consider for inclusion in a psychodiagnostic evaluation, as well as supporting evidence.

Table 1

Reed and colleagues'risk factors for psychopathology among displaced youth and supporting empirical evidence [15; 35]

	Premigration	Perimigration	Postmigration
Individual	Exposure to Violence [2; 12; 18; 28; 31; 41; 42; 45; 50]	Exposure to violence [2; 12; 18; 28; 31; 41; 42; 45; 50] Increased age [18; 21; 39; 51] Female-Internalizing [9; 12; 28; 41] Male-Externalizing [28; 33]	Increased age [18; 21; 39; 51] Female-Internalizing [9; 12; 28; 41] Male-Externalizing [28; 33] Educational performance [21]
Family	Exposure to violence [3; 4; 50]	Separation from caregivers [6; 17; 47; 49]	Absence of 1+ caregiver [37; 43] Low socioeconomic status [41]
Community			Increased acculturation [38]

Of these, it is important to note that exposure to violence and trauma affects a large number of immigrant youth and their families and is associated with significant mental health concerns as well as disruption in daily functioning for parents and youth [30; 46]. For this reason, proper assessment of both previous traumatic events, using a standardized event listvia questionnaire or interview, andsymptoms of posttraumatic stress are critical in immigrant youth. Determining how current emotional and behavioral symptoms relate temporally to traumatic exposures helps clinicians avoid confusing a posttraumatic reaction with another psychiatric illness like psychosis or developmental delay. Indeed, there are ample case examples of clinicians who have misdiagnosed immigrant youth because they failed to consider the role of trauma exposure and posttraumatic distress in shaping their clinical presentation [e.g., 29].

In addition to assessing the unique risk factors that affect immigrant youth, an informed clinician will also assess how protective factors in the premigration and postmigration environments might buffer the effects of risk factors and be capitalized upon in psychological treatment. Indeed, assessment of protective factors at all stages may also be useful for ascertaining the larger picture of immigrant youths' functioning. Many premigration protective factors, like a secure attachment with early caregivers, may, in fact, continue to offer protection for youth, buffering the effects of risk factors or aiding in the acculturation process postmigration [46]. Based on the broader literature bases on psychopathology in African, Asian, and Central American youth, three postmigration protective factors consistently emerge and are proposed for inclusion in a thorough psychodiagnostics assessment: family functioning, peer support, and school engagement. Prior research is presented in Table 2.

Table 2

Prior Research on Protective Factors

Family Functioning	Mother-child relational difficulty increased risk[1]; Unaccompanied migration increased risk [6]; Family support reduced risk[7]; Unaccompanied migration increased risk [11]; Maternal apathy increased risk [14]; Family separation increased risk [17]; Family relations associated with traumatic exposure [20]; Paternal loss increased risk [21]; Family separation or discord increased risk [22]; Low support environment and unaccompanied migration increased risk [23]; Increased parental support reduced risk [25]; Maternal communication reduced risk [32]; Family cohesion reduced risk[3], Parental loss/separation increased risk [45]; Low family connectedness increased risk [41]; Secure parental attachment reduced risk [46]; Increased parental attachment reduced risk [48]
School Engagement	Perceived school safety reduced risk [17]; Educational involvement and peer involvement reduced risk [21]; School belonging reduced risk [24]; Low neighborhood attachment, School connectedness increased risk [41]; Increased school engagement reduced risk [48]
Peer Support	Peer contact reduced risk [4]; Peer support reduced risk [7]; Social support reduced risk [14]; Peer and friend support reduced risk [25]; Increased social support reduced risk [40]; Increased peer attachment reduced risk [48]

Sample Measures and Conclusions

Prior research clearly indicates the increased risk for psychopathology among immigrant youth and the importance of assessing a number of risk factors that are overrepresented in this population, including, among others, exposure to violence and separation from caregivers. At the same time, immigrant youth are often resilient despite exposure to staggering rates of risk, and empirical research suggests that resilience is associated with interpersonal connections in family, school, and peer contexts. With this empirical background in mind, we recommend that a psychodiagnostics assessment of emotional and behavioral symptoms in immigrant youth utilize the foundational principles of evidence-based assessment and assess the aforementioned risk and protective factors directly. Mental health screening may be undertaken using the Strengths and Difficulties Questionnaire [19], which has been translated into many languages and has undergone psychometric evaluation with multiple samples, including immigrant youth. Exposure to violence may be assessed using a questionnaire of exposure to potentially traumatic events, like the 15-item UCLA PTSD Index Trauma Screen [34] querying violent robbery, family abuse, non-family abuse, domestic violence, community violence, sexual violence, assault, and combat, as well as a posttraumatic distress measure with youth and caregiver versions like the Child PTSD Symptoms Scale [16]. Both measures can be completed in just a few minutes and have been translated into multiple languages. Importantly, published data on these instruments are lacking, although psychometric evaluation of the Child PTSD

Symptoms Scale was recently undertaken by Marshall and Venta [27] with a sample of recently immigrated youth in the U.S. Separation from caregivers and other risk factors can be assessed during a semi-structured clinical interview or with an interview designed specifically for use with migrant youth [10]. Interpersonal protective factors can be assessed using a questionnaire-based measure like the Inventory of Parent and Peer Attachment[5], which is available in the public domain and has been translated into numerous languages to assess parent and peer communication, alienation, and trust and has been examined in families separated by migration [47]; a school engagement assessment (like the Engagement vs. Disaffection with Learning Scale [26]); or querying interpersonal support during a clinical interview.

By adding only a few brief questionnaires, like these, to an existing assessment battery or tailoring clinical interviewing to the aforementioned risk and protective factors, clinicians can better capture the unique risk and protective profile of immigrant youth, providing a more accurate and thorough psychodiagnostics assessment and avoiding the common pitfalls of misdiagnosis. Enhancing the evidence-based assessment of immigrant youth displaced from their homes is important given their great risk for developing emotional and behavioral symptoms and the likelihood of presenting for assessment services in school, medical, and justice settings. In this brief report, we describe unique, evidence-based risk and protective factors for psychopathology relevant to this client group based on Reed and colleagues' [15; 35] Conceptual Framework to Understand the Ecological and Chronological Determinants of Mental Health in Forcibly Displaced Children. Adding assessment of these factors to a solid foundation of evidence-based assessment will enhance the breadth and depth of psychodiagnostic evaluations of immigrant youth.

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Information about the author

Amanda Venta, PhD (Psychology), Associate Professor, Department of Psychology, University of Houston, Houston, TX, USA, ORCID: https://orcid.org/0000-0002-1641-123X, e-mail: aventa@uh.edu

Информация об авторе

Аманда Бента, PhD (психология), доцент, департамент психологии, Хьюстонский университет, Хьюстон, Техас, США, ORCID: https://orcid.org/0000-0002-1641-123X, e-mail: aventa@uh.edu

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