The Nonverbal Behaviour Therapeutic Index (NBTI): Advancing Nonverbal Behaviour Analysis in Mental Health

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***Abstract*: Nonverbal behaviour plays a central role in therapeutic communication, yet existing models prioritise verbal interactions and provide limited guidance on nonverbal behaviour analysis. Current best practices rely heavily on intuitive interpretations of nonverbal cues, which undermines consistency and limits empirical grounding. This paper reviews the ways in which nonverbal behaviour analysis is represented in the literature and synthesises research across psychology, nonverbal communication and credibility analysis to develop the Nonverbal Behaviour Therapeutic Index (NBTI). The NBTI is a novel framework for systematically and explicitly integrating nonverbal behaviour analysis into mental health practice. Its conceptual foundations centre on the observation of indicators of changing arousal, cognition, and emotional processing (Nonverbal ACEs), which inform a psychoeducational feedback loop designed to enhance client self-awareness and self-regulation. Implications for clinical practice, alongside limitations and directions for future research are discussed.**

***Keywords*: Arousal, cognition, emotion, mental health, nonverbal behaviour, nonverbal communication, psychophysiology, therapy.**

1. Introduction

Nonverbal behaviour comprises communicative phenomena independent of linguistic aspects of speech, incorporating signals that transmit information intentionally and unintentionally (Hall, 2010). It has long been of interest to practitioners in various therapeutic settings, with researchers and therapists alike in agreement of the impact nonverbal behaviour has on therapeutic outcomes (Foley and Gentile, 2010). Despite the widespread recognition of the importance of nonverbal behaviour, it is often underutilised in therapeutic settings (Philippot et al., 2003; Guetterman et al., 2024), with priority in both research and practice given to verbal interactions and interventions (Del Giacco et al., 2019). The lack of standardisation across nonverbal behaviour analysis protocols (Jones and LaBaron, 2002) and the rise of pseudoscientific frameworks has limited the scope of nonverbal behaviour in applied contexts, such as therapy (Denault et al., 2020). This paper proposes a novel nonverbal assessment protocol that facilitates the ongoing integration of the rich and nuanced information nonverbal behaviour can offer in mental health settings to enhance therapeutic outcomes.

2. Literature Review

A. The Role of Nonverbal Behaviour in Therapy

Nonverbal sensitivity reflects an individual's ability to accurately read, decode and interpret the nonverbal behaviour of others, including elements such as gestures and facial expressions (Riggio and Darioly, 2016). Whereas, the dynamic process of attuning to a client's nonverbal behaviour is an integral component of developing rapport as part of the therapeutic alliance—a collaborative, trusting relationship characterised by mutual engagement and goal-directed behaviour within therapy (Pinsof and Catherall, 1986; Hill and O'Brien,1999). The therapist can use nonverbal signals to convey empathy, positivity and warmth, while fostering an environment of safety and acceptance (Foley and Gentile, 2010). Nonverbal responsiveness (the timely and appropriate reaction to another's communicative signals) and nonverbal synchrony (the temporal coordination of bodily movements) between therapist and client directly impacts therapeutic interactions, and involves elements such as nodding in response to a client's statement and the subtle mirroring of body postures (Nyman-Salonen et al., 2021). Furthermore, the therapist can utilise their own nonverbal communication to assist in co-regulating the client's affect and expression. For example, the therapist may adopt a more soothing vocal tone to assist the client in navigating a moment of emotional distress (Benecke et al., 2005). Nonverbal behaviour also plays an important role in setting and maintaining professional boundaries during sessions, as well as being the foundation of signalling positive intent during attempts to repair ruptures in therapeutic relationships (Friedman, 2020). However, explicit discussion, education, and interactive engagement with nonverbal cues remain limited in traditional therapeutic settings.

Nonverbal behaviour forms a prominent part of Mental State Examinations (MSE), which serve a diagnostic purpose as part of a holistic assessment to identify and monitor alterations in mental status or assess changes in a client's condition (Norris et al., 2016). Within individual sessions, nonverbal behaviour analysis can reveal incongruences between a client's verbal statements and their body posture, gestures or facial expressions, which may suggest a discrepancy between their

intended communication and their true emotional state (Gorawara-Bhat et al., 2017). Ekman and Friesen (1974) describe this as 'nonverbal leakage,' for example, when an individual verbally claims calmness while simultaneously clenching their fist and exhibiting an angry facial expression. Similarly, the therapist can identify changes in nonverbal behaviour in response to specific stimuli which may suggest resistance or discomfort, enabling the therapist to adjust their approach or intervention to align with the client's readiness (Burgoon et al., 1996). While therapists often notice and respond intuitively to overt contradictions between verbal and nonverbal behaviour, specialised training is limited (Mariska and Harrawood, 2013; Ogden and Fisher, 2015; Metin and Doğan, 2025). As a result, practitioners' baseline nonverbal understanding can vary widely, increasing the risk that subtle cues will be overlooked. This highlights nonverbal behaviour as an underused resource with the potential to advance therapeutic assessments and interventions, while maximising therapists' existing skillsets.

B. Current Trends

An examination of several foundational texts detailing best practice highlights the limited consideration nonverbal behaviour receives during therapist education. Beck's (2020) 'Cognitive Behavioural Therapy: Basics and Beyond' has sold approximately one quarter of a million copies and the publishers highlight how this text supports thousands of students each year throughout their educational journey. However, an examination of the 550 pages produces only six, one line references to nonverbal behaviour, with no elaboration of the skills and knowledge required to accurately and scientifically assess nonverbal cues. Similarly, Kazantis et al.'s (2017) 'The Therapeutic Relationship in Cognitive Behaviour Therapy' references two single line entries in relation to nonverbal behaviour. Wright et al. (2017) in their widely popular textbook 'Learning Cognitive Behavioural Therapy' makes references to nonverbal behaviour on three pages within their 443-page text. In contrast, Mozdzierz et al. (2014) seek to develop a clinician's non-linear thinking capacities, and highlight nonverbal behaviour as a key contributor to this process. While the authors emphasise the importance of nonverbal behaviour in these sections, there is a lack of structured guidance on how to analyse nonverbal behaviour rigorously and scientifically. The limited representation of nonverbal behaviour in core texts suggests that students may have little exposure to its systematic analysis within their education.

The use of textbooks is only one component of a student's training. Counselling and psychotherapy degree courses involve a substantial amount of in-person, practical work to help students develop their therapeutic skills (BACP, 2025). Nonverbal behaviour is typically addressed within core counselling skills—such as active listening—with learning consolidated through role-play and experiential exercises (Liness et al., 2019). However, formal standalone training that synthesises the diverse literature on nonverbal behaviour is rare, highlighting a gap in therapist education. It is proposed here that a structured, evidence-based framework could be incorporated into therapist training to enhance nonverbal awareness.

Supervision sessions with senior practitioners form a cornerstone of therapist training throughout their education, and typically continue for the duration of a therapist's career as part of their ongoing professional development. This commonly involves case study reflections and examining audio recordings of real client sessions (Shepherd et al., 2009). While this improves the skill of the therapist in delivering their verbal assessments and interventions, it inhibits the development of nonverbal behaviour strategies. More recently, there is a growing trend for supervision to include video recordings of client sessions, whereby nonverbal behaviour can be observed and explored with the supervising therapist (Kennedy et al., 2023). However, this can trigger learner anxiety due to fear of negative feedback and can result in therapists delaying, avoiding or excusing the use of video (Topor et al., 2018). Equipping therapists with a structured nonverbal framework may build confidence in therapeutic application, thereby reducing apprehension around video review, alleviating learner anxiety, and maximising the effectiveness of supervision.

The bias toward verbal content in therapeutic settings is reflected in the literature. Beck (2011) outlines that Cognitive Behavioural Therapy (CBT) employs structured verbal tools, such as thought records, cognitive restructuring exercises, and self-report questionnaires to identify and modify maladaptive thought patterns and behaviours. For example, therapists may ask clients to articulate their automatic thoughts or rate their anxiety levels verbally, using these responses to guide interventions. Lambert and Ogles (2004) note that CBT programmes typically involve verbal exchanges to review homework and engage in reflective questioning. In terms of psychotherapy, Shedler (2010) describes how psychodynamic therapy focuses on verbal narratives, such as free association or dream analysis, to uncover unconscious conflicts and facilitate insight. Gabbard (2014) emphasises that psychodynamic interactions are oriented toward the interpretation of clients' verbal responses to identify patterns of transference, resistance or repressed emotions. The authors state that while nonverbal behaviours may contribute to these interpretations, they are typically secondary to verbal narratives.

The prioritisation of verbal content in therapy is understandable, given its role in cognitive insight, emotional catharsis, and resilience development (Peterson and Seligman, 2004; Grosse Holtforth et al., 2006). However, while verbal content is fundamental to therapeutic practice, its dominance risks overshadowing the value of nonverbal behaviour, which is estimated to comprise nearly 60% of human communication (Burgoon et al., 2011). As Ekman and Friesen (1969) demonstrated, nonverbal cues—such as facial expressions, gestures, and posture—often conveys spontaneous emotional information that clients may not express verbally, highlighting the limitations of a linguistic focus. Furthermore, Burgoon et al.

(1996) report nonverbal cues are processed more rapidly than verbal content. The immediacy of nonverbal behaviour enables therapists to gain insight into the underlying emotional state of the client, as cognitive rationalisation or social desirability bias often influences verbal replies (Beltrani, 2025). This is particularly valuable for clients who struggle to verbalise emotions due to issues such as trauma, cultural barriers, or alexithymia (Matsumoto, 2006). Knapp et al. (2013) emphasise the role that nonverbal behaviour has in shaping the meaning of our communicative messages, while reporting that understanding its impact on human interaction is crucial in clinical contexts.

C. Nonverbal Emphasis in Experiential and Somatic Therapies

In contrast to cognitively oriented models, experiential approaches emphasise nonverbal behaviour as a core feature of therapeutic work. Mindfulness-based interventions seek to aid the user in developing greater bodily awareness and emotional regulation through attending to psychophysiological processes (Burzler et al., 2019). Whereas, other models—such as gestalt therapy— encourage the introspective investigation of nonverbal cues and incorporate these directly into the therapeutic interventions themselves (Joyce and Sills, 2018), although they generally lack rigorous scientific validation. More recently, however, novel therapeutic models grounded in neuroscience propose the use of verbal prompts to stimulate the client's physical hypothalamic–pituitary–adrenal axis responses, with practitioners primed to pay attention to specific nonverbal responses, such as "a sharp intake of breath, head tilt, muscle tension, pupil dilation and eyes fixating on a specific point in space" (Hudson and Johnson, 2021, p. 5). The authors propose these nonverbal cues reflect the activation of specific emotional memories and provide practitioners with an opportunity to use nonverbal interventions to decouple the memory from the neurological reaction, thereby facilitating the resolution of chronic stress patterns (Hudson and Johnson, 2022). These innovative developments highlight the potential for nonverbal behaviour to be an integral component of assessment and intervention protocols.

Body-orientated therapeutic models such as Somatic Experiencing (SE; Levine et al., 2018) centre specifically on nonverbal behaviour. SE is a mindfulness-based trauma approach where the primary objective is to guide clients to complete self-protective motor responses that were ineffective or incomplete during the original moment of trauma, thus facilitating the release of suppressed survival energy at the root cause of the presenting issue (Payne et al., 2015). SE showcases the value of tracking and engaging the client with their nonverbal behaviours. However, SE's specific theoretical focus on trauma restricts its broader application, as individuals more frequently seek therapy for concerns such as anxiety, depression, stress, life transitions, and relationship difficulties (BACP, 2025).

Sensorimotor Psychotherapy (SP; Ogden and Fisher, 2015) adopts a 'directed' mindfulness-based body approach to working with trauma and attachment issues. SP employs a tripartite therapeutic framework, with the first stage focused on strengthening internal and external resources, particularly somatic capacities. Stage two focuses on reorganising the physical impact of traumatic and attachment memories, with an emphasis on body-based interventions, and the final phase targets changing core beliefs and understanding how physical patterns contribute to habitual relational behaviour (Ogden and Fisher, 2015; Ogden and Minton, 2000). SP promotes the concept of 'embedded relational mindfulness' (ERM; Ogden, 2014), the shared, interactive process where the therapist guides the client to specific aspects of their internal present experience. ERM involves the therapist making 'contact' with the client's sensorimotor responses through verbal statements and cultivating the client's ability to precisely articulate their internal bodily states. This mindful observation and sequencing of bodily sensations supports the down-regulation of physiological arousal, enabling subsequent cognitive and emotional processing (Ogden and Minton, 2000). Although ERM provides a framework through which insights from psychophysiology and nonverbal behaviour research can be integrated into therapeutic practice, SP is a specialised psychological approach; with professional certification generally requiring several years of structured, progressive training. Moreover, SP demands extensive training across diverse somatic and cognitive therapeutic principles, creating substantial educational and financial barriers that restrict the broader adoption of nonverbal behaviour strategies in therapeutic and personal development contexts.

D. Nonverbal Behaviour Analysis in Therapy Research

The Communicative Modes Analysis System in Psychotherapy (CMASP; Del Giacco et al., 2019) was designed to facilitate the dual analysis of verbal and nonverbal content during psychotherapy research. This detailed instrument analyses verbal, vocal and interruption behaviours across 33 categories. While valuable for research purposes, the intricate coding and intensive time requirements limit its use to psychotherapy research rather than real-time, live application. The Body Formation Coding System (BFCS; Geissmann et al., 2019) was developed to assess engagement and alliance in therapy by analysing nonverbal cues such as body positioning, movements, and physical orientation within the therapeutic triad. While valuable in assessing a client's readiness to interact and level of emotional engagement, this model is designed for observational analysis of video data rather than live use in real-world settings. More recently, the Psychotherapist's Nonverbal Coordination Scale (PNC; Catay et al., 2025) provides a validated means to assess the psychotherapist's skill in nonverbal synchrony during therapy. However, this model is not designed to assess or interpret the client's nonverbal behaviours and therefore is limited in scope. Collectively, these models showcase the value of nonverbal behaviour analysis in the therapeutic context, but highlights the difficulty in applying

such models in real-time and in naturalistic settings.

The Non-Verbal Behaviour Analyser (NovA; Baur et al., 2013) is an open-source software platform that uses video-based analysis and artificial intelligence (AI) to code nonverbal behaviours in psychotherapy sessions. It provides both continuous and event-based coding of nonverbal cues and has been validated with empirical session data (Terhürne et al., 2022). Emerging models are growing in sophistication and providing real-time analysis of valence and arousal, and relate multiple data points to therapeutic outcomes, symptom levels, and therapist ratings. The integration with technology has led to the development of systems such as 'ReflectLive' (Faucett et al., 2017), software capable of sensing and providing real-time feedback on nonverbal behaviours during video-based clinical consultations. Research indicates that access to real-time nonverbal feedback facilitates more empathic, patient-centred communication in telehealth visits and enhances patient satisfaction (Rahmanti et al., 2025). While these models do provide real-time feedback which can be effectively used by the practitioner, their reliance on technology and AI limits their practical application in many therapeutic settings and does not directly rely on the knowledge or skill of the therapist. Furthermore, the nonverbal cues are not assessed in terms of their potential communicative function or meaning, thereby failing to capture much of the value nonverbal cues can offer.

E. Nonverbal Behaviour Analysis in Deception Detection

When considering nonverbal behaviour in a wider context, alternative disciplines, such as the field of deception detection, illuminate the depth and nuance that nonverbal behaviour analysis provides. Lopez et al. (2016) developed the Nonverbal Behaviour Analysis Matrix (NBAM). The authors provide a structured and scientifically grounded protocol for systematically analysing nonverbal behaviour, emphasising multichannel observation, baseline analysis, and contextual interpretation to identify incongruent or potentially deceptive behaviours in forensic investigations and security settings. NBAM incorporates extensive research from fields such as communication, psychology, anthropology, and linguistics to explore the impact of nonverbal behaviour on human interactions. NBAM has applications in forensic psychiatry (Depalmas et al., 2020), and while it can be applied in other psychological contexts—such as therapy—it is primarily applied through the detailed analysis of various audiovisual materials in different contexts and different time intervals. Moreover, it is recommended that real-time application is conducted by trained professionals working in teams (Lopez et al., 2016), limiting its application in therapy settings.

Behaviour analysis models designed for real-time application include Lansley's (2017) 'Six Channel Analysis in Realtime' (SCAnR). The SCAnR framework provides 27 criteria across six channels of human communication (face, body, voice, interactional style, content and psychophysiology). The system seeks to identify 'points of interest' whereby an individual's behaviour is perceived as being incongruent with one or more aspects of their account (their story of events), baseline or context (Lansley, 2017). The model deploys a '3-2-7 algorithm' to streamline decision-making whereby users attend to clusters of 'points of interest' across communication channels within 7 seconds of a probe/question (Archer and Lansley, 2015). The model's numerous strengths relate to its scientific grounding, its focus on psychophysiological signals and its real-time application. While its use certainly has merit as a behaviour analysis tool in mental health contexts, it is primarily designed for high stakes deception detection and credibility assessment settings.

An exploration of the literature indicates that nonverbal behaviour remains underutilised in traditional therapy models. While most authors acknowledge its value, there is limited specialised training to support therapists in integrating nonverbal behaviour analysis throughout the therapeutic process. Experiential and body-centred models do incorporate nonverbal cues and demonstrate their effectiveness, yet they are restricted in scope and often pose substantial training barriers. Various psychotherapy research tools utilise the analysis of nonverbal behaviour, but rely on post-session video analysis—impractical for live clinical use. Wider afield, the domains of deception detection and forensic psychiatry provide scientific models for analysing the consistency, veracity and communicative function of nonverbal behaviour in a systematic way, but require extensive, frame-by-frame analysis or a team of professionals to implement. Leading behaviour analysis models offer the capability to conduct real-time assessments grounded in scientific evidence and centred on verified psychophysiological signals, but which focus on behavioural inconsistencies and have a primary orientation toward credibility assessments. This paper proposes a novel method of therapeutic assessment that enables individual practitioners to incorporate the detailed analysis of nonverbal behaviour, including its communicative properties and associated psychophysiological signals, in real time, while integrating seamlessly into the practitioner's existing skillset.

3. The Nonverbal Behaviour Therapeutic Index (NBTI)

A. Conceptual Foundations

The NBTI is a novel, evidence-based assessment framework that enables practitioners to track and engage with clients' nonverbal behaviour consistently throughout therapy sessions. The NBTI synthesises insights from nonverbal behaviour research, credibility assessment models, real-time behaviour analysis systems, sensorimotor psychotherapy, and novel nonverbal therapeutic interventions, combining these into a protocol specifically adapted for traditional therapeutic settings. The assessment utilises scientifically validated behavioural and psychophysiological indicators across 10 channels of communication to engage the client in an introspective and psychoeducational feedback loop to improve emotional awareness and self-regulatory skills. It is proposed that by observing and engaging the client across three fundamental

categories, markers of changing arousal, cognition and emotional processing, the practitioner gains a deeper understanding of the client's inner psychological and physiological processes, while proactively using these signals to guide the client toward new awareness, insight and wisdom.

The three broad categories of arousal, cognition and emotional processing—collectively referred to as Nonverbal ACEs—represent a simple framework for describing the underlying mechanisms responsible for unpleasant somatic sensations, disturbing thinking patterns and distressing emotional experiences, all primary challenges addressed in therapy (Palmieri et al., 2022). For example, elevated arousal, reflective of increased activation of the autonomic nervous system, often corresponds with anxiety, hypervigilance, or emotional overwhelm (van der Kolk, 2014). Changes in cognition, reflected through more effortful processing (higher cognitive load) may manifest during challenging aspects of therapy, such as confronting cognitive biases or adopting different perspectives (Beard, 2011). Finally, emotional processing in the form of facial expressions can inform the practitioner of the intensity of affect and can readily be observed during recall of painful experiences (Ellgring, 2007).

Nonverbal ACEs are assessed across various nonverbal behaviour channels, whereby each channel serves as the observational interface for Nonverbal ACE detection. The behavioural channels are: face, oculesics, posture, gestures, psychophysiology, vocalics, haptics, proxemics, appearance and verbal content. The verbal channel data is analysed for its form, structure, and delivery patterns as opposed to its semantic or narrative content (i.e., what is being said). These pragmatic concepts (e.g. evasiveness) serve as psycholinguistic markers of changing arousal, cognition or emotional processing (Vrij et al., 2000). In this way, verbal behaviour serves as a nonverbal proxy—a measurable behavioural output shaped by internal processes.

Each construct within the NBTI assessment framework is observable across multiple behavioural channels. For example, arousal can be observed through changes in facial colouration (face), pitch (vocalics) and adaptors (gestures). The cross-channel visibility enables robust behavioural triangulation, making the Nonverbal ACEs concept suitable for real-time and retrospective analysis alike. Observing clusters of nonverbal behaviours (Nonverbal ACEs) enhances confidence in the accuracy of behavioural interpretation (Archer and Lansley, 2015).

B. The Psychoeducational Feedback Loop (PFL)

The NBTI encourages practitioners to maintain present-centred, non-judgemental awareness throughout the session, emphasising curious observation of the client's behaviour. Observation has long been recognised as a foundational therapeutic skill, serving as an essential process through which clinical data are gathered and therapeutic decisions formulated (Schlessinger et al., 1968). Building on this principle, therapists proactively seek to cultivate curiosity, which enhances therapeutic engagement and insight while encouraging clients to adopt a curious mindset that facilitates deeper self-discovery (Brewer and Giommi, 2025). The practitioner is tasked with observing the client and noticing the presence of Nonverbal ACEs in response to specific stimuli; thereby initiating a feedback loop where real-time assessment informs real-time psychoeducation and intervention. This may involve the interruption of the client's narrative or the Nonverbal ACE may be discussed at the completion of the client's conversational turn. The 'observation' and 'noticing' stages are initially driven by the practitioner. However, with practice, clients progressively become more aware of their own sensorimotor responses and proactively contribute to the process (Hudson and Johnson, 2021). This fosters a collaborative effort to address the presenting issue while empowering the client to develop greater self-awareness.

Aligning with the principles of neurolinguistic communication models and ERM (Ogden, 2014; Wood, 2006), once a Nonverbal ACE has been detected, the spotlight of awareness is directed towards the client's nonverbal behaviour. The practitioner assists the client to connect to the nonverbal cue by asking neutral, open-ended, curiosity-focused, reflective questions that encourage the acknowledgement, introspection and verbalisation of bodily processes/responses. In contrast to SP, the practitioner's primary objective is to support the client in recognising a salient change, rather than having the process directed by the therapist. The 'connect' phase establishes the client's awareness of the identified fluctuation from their baseline behaviour and brings the specific nonverbal cue into focus. Williams (2023) demonstrated that the use of reflective questions increases clients' emotional expressiveness and deepens affective exploration, thereby enhancing insight and self-understanding.

Following the client's awareness of, and effective connection with the Nonverbal ACE, the practitioner transitions into a mode of enquiry, inviting the client to articulate any internal, non-observable thoughts or sensations associated with the nonverbal cue. This process enables clients to differentiate arousal states from intense emotions, thereby fostering safety and psychological distance (Ogden and Fisher, 2015). The collaborative approach further engages the client in a curiosity-driven exploration, expanding introspective capacity and metacognitive awareness. The 'enquiry' stage facilitates exploration of the personal meaning or origin of the sensations, supporting narrative integration, resilience, and personal insight (Puder et al., 2018).

The practitioner may subsequently transition into a mode of education. Here, the practitioner shares, teaches and discusses the known psychological and/or physiological mechanisms potentially underlying the observed behaviour, before enquiring once again as to the personal relevance or significance of those teachings to the client's specific situation. The 'education' phase fosters insight by linking observed behaviour to established mechanisms and enhancing self-awareness. Psychoeducation has been shown to empower

clients by strengthening their sense of agency and self-efficacy (Miller, 2016). For example, a client may verbally reference a specific individual who they work with, and while doing so, immediately begin to rub the palms of their hands on their thighs while simultaneously displaying increased body tension. The practitioner observes and notices the presence of specific Nonverbal ACEs across two channels of communication, and uses reflective questions to connect the client to their nonverbal response. Once both practitioner and client are mutually exploring the Nonverbal ACE, the practitioner enquires as to the possible meaning of the palm rub/body tension. This invites the client to acknowledge and reflect on their psychological and physiological processes, cultivating a deeper examination of their responses. If the client is unaware of the meaning of the action, the practitioner may share that, for example, sweaty hands, sometimes reflective of increased arousal following the perception of a potential threat, are often alleviated by the rubbing of the palms on the thighs. The client may then be asked to repeat the sequence (describing the work colleague) and notice if any of the same or similar responses occur. Following this psychophysiological education, further enquiry encourages the client to reflect on their perceptions and associations related to that colleague. The enquiry may unearth a hidden emotional charge relating to that individual, or the client may connect their response to someone meaningful from their past, thus realising the source of the increased bodily activation. This can then be addressed in the session by a variety of interventions based on the practitioner's individual training.

Drawing these components together, the NBTI can be defined as "*a multimodal assessment framework for observing, interpreting, and engaging with fluctuations in verbal and nonverbal behaviour across ten communication channels. Grounded in the Nonverbal ACEs model—which tracks markers of arousal, cognition, and emotional processing—it provides a structured, research-informed approach to real-time therapeutic feedback and intervention*". The NBTI adopts the Observe, Notice, Connect, Enquire/Educate approach (ONCE technique) and can be embedded within the practitioner's existing skillset. This enables professionals across a wide range of approaches to incorporate nonverbal behaviour analysis without requiring comprehensive revision or restructuring of their practice.

4. Discussion

A. Clinical Implications

The application of the NBTI provides a framework that enables practitioners to track fluctuations in their clients psychological and physiological processes in real-time. It strengthens therapists' capacity for nonverbal sensitivity by drawing on the extensive literature in nonverbal behaviour, while also encouraging the use of psychoeducation to help clients develop greater self-awareness and empowerment. The PFL assists the client to continually integrate their cognitive processes with their sensorimotor responses—reflecting principles of embodied cognition (Shapiro, 2019)—and encourages the curious exploration of psychophysiological signals. Exploring Nonverbal ACEs can serve multiple, often co-occurring functions that contribute to therapeutic progress. These include: increasing bodily awareness (Burzler et al., 2019); cultivating tolerance of uncomfortable sensations with mindful, nonjudgemental awareness (Siegel, 2010); and initiating transderivational searches to ascribe personal meaning or identify the origin of a nonverbal response (Lankton, 2024).

The relative simplicity of the NBTI assessment protocol ensures that even basic training in the behavioural and physiological markers of arousal, cognition and emotional processing allows practitioners to rapidly integrate this assessment technique into their therapeutic toolkit for the benefit of their clients. The simple execution and rapid implementation of the protocol minimises learner anxiety and offers practitioners a means of quickly experiencing the benefits nonverbal behaviour analysis can bring to their practice. Furthermore, the extensive body of research exploring each of the ten channels provides the opportunity to discover the intricacies of nonverbal behaviour in much greater depth through ongoing study.

B. Limitations

Patterson et al. (2023) criticise of the imprecise nature of nonverbal behaviour analysis, emphasising that behavioural cues lack a standard definition that remains consistent across contexts. The authors report pseudoscientific approaches which ascribe concrete meaning to a particular cue are misleading. This argument is relevant to the NBTI as practitioners must be mindful that their observations and analyses represent only potential hypotheses for the observed behaviour. It is essential that these hypotheses are validated through the enquiry phase and that educational components are shared wisely. Otherwise, it is possible that practitioners may project their perceptions onto the client, falsely attributing meaning where there is none and risk damaging the therapeutic alliance. However, while many nonverbal cues are polysemous, scientific research aids us in analysing specific cues with greater degrees of confidence, whereas the nonverbal behaviour literature gives us various means of decoding other cues, albeit not exactly. For example, a practitioner may have greater confidence that a noticeable shift in breathing mechanics—from relaxed abdominal breathing to rapid, accessory muscle chest breathing—occurring after a question about a painful past experience, indicates activation of the sympathetic nervous system's fight-or-flight response, a hypothesis supported by validated scientific evidence (Lorig, 2007). Moreover, the practitioner may notice the client's posture becomes slumped and withdrawn when discussing their role in a particularly distressing situation. The literature suggests specific body postures (e.g. contracted postures) can be reflective of attitudinal changes (Cuddy et al., 2018), and this may inform the subsequent connect and enquiry phases. While it could not

be said with certainty the displayed postural shift necessarily means that the client is experiencing a specific emotion such as guilt or shame, the practitioner's awareness of the literature serves as an evidence-based filter through which to assess behaviour, while remaining open to alternative hypotheses (e.g. the client's back was aching which led to a compensatory postural adjustment). The curious and non-judgemental approach of the practitioner and the ongoing attitude of enquiry is paramount in conducting effective assessments.

The NBTI is an adaptable assessment tool that integrates explicit analysis and education of nonverbal behaviour with traditional cognitive approaches to enhance therapeutic outcomes.. The framework also offers a valuable means of maintaining the flow and direction of therapy sessions. However, the NBTI is not an intervention protocol and is not designed as a comprehensive assessment (e.g., of verbal responses); rather, it functions as an adjunct to the therapist's existing practice and skillset. While some experiential approaches incorporate nonverbal behaviour as an intervention (Hudson and Johnson, 2021), other approaches, such as SE and SP, incorporate the tracking of nonverbal cues within a broader, specialised psychotherapeutic framework. The NBTI is a generic model designed to easily integrate into any personal development or therapeutic approach.

5. Conclusion

Research into nonverbal behaviour has accelerated rapidly since the 1960s, and the literature provides a rich and diverse knowledge-base through which to analyse human communication (Patterson et al., 2023). However, its explicit application in traditional therapeutic contexts remains relatively limited in scope and firmly secondary to verbal interactions and interventions. This author argues this represents an underutilised resource for therapists. Evidence from diverse disciplines, models, and therapeutic interventions underscores the potential value of integrating nonverbal behaviour analysis more fully within therapeutic practice, but a lack of standardised frameworks specific to mental health and challenges with accessibility have, to-date, presented significant obstacles to its greater inclusion. The NBTI offers an evidence-based, methodical assessment that is simple to implement and which can be seamlessly integrated into a wide variety of therapeutic approaches. The NBTI aims to increase therapists nonverbal awareness and responsiveness, while empowering clients through a collaborative journey of personal discovery. This paper presents the first iteration of the model, with further theoretical and empirical work required to refine frameworks, expand the evidence base, and stimulate academic discourse.

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