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Mentalisieren in der Psychotherapie

vorgelegt von
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Liste der eingereichten wissenschaftlichen Veröffentlichungen

Die vorliegende Arbeit basiert auf den folgenden Publikationen, die im Appendix aufgeführt sind.

I. **Kornhas, L.A.**, Schröder-Pfeifer, P., Georg, A., Zettl, M. & Taubner, S. (2020). Prozess des Mentalisierens in einer mentalisierungsbasierten Langzeittherapie für Borderline-Persönlichkeitsstörungen. Psychotherapeut 65, 357–365. https://doi.org/10.1007/s00278-020-00451-9 ***(IF: 0.7)***

II. **Kasper, L. A.**, Hauschild, S., Schrauf, L. M., & Taubner, S. (2024). Enhancing mentalization by specific interventions within mentalization-based treatment of adolescents with conduct disorder. *Frontiers in Psychology*,*14*, 1223040. ***(IF: 3.8)***

III. Georg, A., **Kasper, L. A.**, Neubauer, A., Selic, M., & Taubner, S. (2024). Within- and between-session changes of maternal in-session reflective functioning in dyadic parent–infant psychotherapy. *Psychotherapy Research, 1-13.* https://doi.org/10.1080/10503307.2024.2323617 ***(IF: 3.9)***

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V. **Kasper, L. A.**, Hauschild, S., Berning, A., Holl, J. & Taubner, S. (2024). Development and validation of the Mentalizing Emotions Questionnaire: A self-report measure for mentalizing emotions of the self and other. *PLoS ONE, 19(5), e0300984. https://doi. org/10.1371/journal.pone.0300984* ***(IF: 3.7)***

Autor:innenbeiträge

I. **Kornhas, L.A.**, Schröder-Pfeifer, P., Georg, A., Zettl, M. & Taubner, S. (2020). Prozess des Mentalisierens in einer mentalisierungsbasierten Langzeittherapie für Borderline-Persönlichkeitsstörungen. Psychotherapeut 65, 357–365. https://doi.org/10.1007/s00278-020-00451-9

Eigener Beitrag: Konzepterstellung, Administration, Kodierung der Daten, Interpretation, Schreiben des Originalentwurfs sowie Überarbeiten und Korrigieren des Manuskripts.
Beiträge der Co-Autor:innen: Konzepterstellung (ST), Kodierung der Daten (MZ), Ressourcen und Supervision (ST), Methodik, Datenanalyse, Visualisierung, Schreiben des Originalentwurfs: Teile der Methodik und Ergebnisse (PSP), Interpretation (AG, ST), Überarbeiten und Korrigieren des Manuskripts (ST, AG, MZ).

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III. Georg, A., **Kasper, L. A.**, Neubauer, A., Selic, M., & Taubner, S. (2024). Within- and between-session changes of maternal in-session reflective functioning in dyadic parent–infant psychotherapy. *Psychotherapy Research, 1-13.*

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Supervision (AN, ST), Schreiben des Originalentwurfs (AG, MS), Überarbeiten und Korrigieren des Manuskripts (AG, AN, MS, ST).

IV. **Kasper**, L.A., Krivzov, J., Diederich, J., & Taubner, S. (under review). From Self to Others: Expanding the Therapeutic Zone of Proximal Development - A Metasynthesis of Mentalizing Change Facilitated by Psychotherapy.

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V. **Kasper, L. A.**, Hauschild, S., Berning, A., Holl, J. & Taubner, S. (2024). Development and validation of the Mentalizing Emotions Questionnaire: A self-report measure for mentalizing emotions of the self and other. *PLoS ONE, 19(5), e0300984.*

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Abkürzungen

AAI	Adult Attachement Interview
AMP	Allgemeines Modell der Psychotherapie
BPS	Borderline Persönlichkeitsstörung
CFI	Comparative Fit Index
fSKEPT	fokussierte Säuglings-Kleinkind-Eltern Psychotherapie
ICC	Intraklassenkoeffizient
MBT	Mentalisierungsbasierte Therapie
MEQ	Mentalizing Emotions Questionnaire
MfF	Mentalisierungsfördernde Fragen
N	Gesamtanzahl
RF	Reflective Functioning
RMSEA	Root mean square error of approximation
SRMR	Standardized Root Mean Squared Residual
TZPE	Therapeutische Zone der proximalen Entwicklung

Zusammenfassung

Mentalisieren beschreibt die Fähigkeit, mentale Zustände wie Gefühle, Gedanken und Bedürfnisse, die dem eigenen Verhalten und dem Verhalten anderer zugrunde liegen, wahrzunehmen und zu verstehen (Fonagy et al., 2002). Effektives Mentalisieren kann definiert werden als die Herstellung einer neuen, bedeutungsvollen Verbindung zwischen Kognition und Affekt, die die intrapsychische Funktionsweise verändert und dadurch neues Verhalten ermöglicht. In Psychotherapien wird Mentalisierung als potenzieller Wirkmechanismus diskutiert. Jedoch ist unklar, wie Mentalisieren sich über den Therapieverlauf hinweg entwickelt und wie es durch therapeutische Interventionen gezielt beeinflusst werden kann. Das Ziel der vorliegenden Arbeit ist es daher, mit Hilfe von insgesamt fünf empirischen Studien, modellhaft die Veränderung von Mentalisieren in der Psychotherapie im Rahmen eines Phasenmodells darzustellen, die Wichtigkeit der Differenzierung in die Dimensionspole Selbst und Andere herauszustellen und Implikationen für therapeutische Interventionen abzuleiten. Außerdem ist es ein Ziel dieser Arbeit einen Fragebogen zur Erfassung der Mentalisierung von Emotionen bezogen auf das Selbst und andere zu entwickeln und zu validieren, der zukünftig für die Prozessforschung eingesetzt werden kann.

In den Studien 1 und 2 wurde im Rahmen von Fallstudien untersucht, inwieweit therapeutische Interventionen zur Förderung des Mentalisierens von Patient:innen beitragen können. In Studie 1 wurden zwanzig Sitzungen einer erfolgreichen mentalisierungsbasierten Langzeittherapie mit einer Patientin mit Borderline Persönlichkeitsstörung analysiert. Die Mentalisierung der Patientin innerhalb der Therapiesitzungen wurden anhand der Reflective Functioning Skala (RF Skala) bewertet und anhand von Zeitreihenanalysen ausgewertet. Es konnte eine signifikante Steigerung des Mentalisierens über den Therapieverlauf festgestellt werden. Außerdem wurden in den Aussagen der Therapeutin Mentalisierungsfördernde Fragen kodiert. Hier konnte anhand von Modellen mit verteilten Verzögerungen gezeigt werden, dass Mentalisierungsfördernde Fragen als therapeutische Intervention über den gesamten Therapieverlauf zu einer signifikanten Steigerung des Mentalisierens führten. In Studie 2 wurde darauf aufbauend in einer Fallstudie mit drei Adoleszenten, die eine Störung des Sozialverhaltens aufwiesen, der Einfluss therapeutischer Interventionen auf das Mentalisieren der Patienten über den Therapieverlauf explorativ untersucht. Hierfür wurden je Patient fünf Therapiesitzungen analysiert. Dabei wurde jede Aussage der Adoleszenten hinsichtlich des Mentalisierens mit der RF Skala bewertet und für jede Aussage der Therapeutin mindestens eine therapeutische Intervention kodiert sowie einem Interventionslevel zugeordnet. Die

Analyse erfolgte deskriptiv und mit Hilfe exakter Fisher-Tests auf Basis von Monte-Carlo Simulationen. Die folgenden Interventionslevel haben sich dabei fördernd auf das effektive Mentalisieren der Patienten ausgewirkt: Supportiv & Emphatisch, Basismentalisierung & Affektmodus und Mentalisierung der Beziehung. Im Rahmen einer detaillierten Auswertung einzelner Interventionen haben sich die folgenden Interventionen als relevant für die Förderung des Mentalisierens herausgestellt: Mentalisierungsfördernde Fragen, Affektelaboration, empathische Validierung, Challenge, Themenwechsel, Patienten-Therapeuten Beziehung und Mentalisieren für den Patienten. Bemerkenswert war, dass sich die Interventionslevel und Interventionen im Zusammenhang mit effektivem Mentalisieren zwischen den Patienten unterschieden. Mögliche patientenspezifische Faktoren wie Arousal und Prämentalisieurngsmodi wurden diskutiert. Studie 3 widmet sich der Unterscheidung von Mentalisieren in die Dimensionspole Selbst und Andere. Dabei wurde die Entwicklung des Mentalisierens von Müttern innerhalb elf fokussierter Säuglings-Kleinkind-Eltern Psychotherapien jeweils bestehend aus 4 Sitzungen mit Hilfe von kumulativen ordinalen Regressionsmodellen untersucht. Zur Untersuchung der Entwicklung von Mentalisieren über die Therapie hinweg wurden die Aussagen der Mütter mithilfe der RF Skala bewertet. Außerdem wurde jede Aussage der Mütter anhand eines neu entwickelten Ratingsystems kodiert, wobei zwischen Mentalisieren bezogen auf das Selbst und Mentalisieren bezogen auf das Kind unterschieden wurde. Zu Beginn der Sitzungen war Mentalisieren bezogen auf das Kind signifikant niedriger als Mentalisieren bezogen auf das Selbst, jedoch nahm Mentalisieren bezogen auf das Kind über die Sitzung hinweg signifikant stärker zu. Insgesamt erhöhte sich das Mentalisieren signifikant innerhalb der vier Sitzungen. Die Ergebnisse von Studie 3 verdeutlichen die Wichtigkeit der Unterscheidung in Mentalisieren des Selbst und anderer, hier das eigene Kind, für die ganzheitliche Betrachtung des Mentalisierens. Studie 4 betrifft die Entwicklung eines transdiagnostischen und verfahrensübergreifenden Phasenmodells zur Beschreibung der Veränderung von Mentalisieren in der Psychotherapie. Im Rahmen einer Metasynthese wurden 20 publizierte Fallstudien analysiert und thematisch synthetisiert. Das Phasenmodell umfasst drei Phasen: (1) Erleben des Selbst in einer sicheren Beziehung, (2) Mentalisieren des Selbst und (3) Mentalisieren von Anderen. Über alle Phasen hinweg sind die therapeutische Beziehung und die therapeutische Zone der proximalen Entwicklung von Bedeutung, die einen mentalisierungsförderlichen Raum zur effektiven Entwicklung des Mentalisierens der Patient:innen beschreibt. In der therapeutischen Zone der proximalen Entwicklung wird eine Differenzierung der Entwicklungsschritte vorgenommen, die die Patient:innen alleine und mit Hilfe der Therapeut:innen erreichen können. Studie 5 befasst sich

mit der Entwicklung und Validierung eines Fragebogens (Mentalizing Emotions Questionnaire (MEQ)) zur Erfassung der Mentalisierungsfähigkeit im Hinblick auf Emotionen bezogen auf das Selbst und andere. Der MEQ beinhaltet in der validierten Fassung 16 Items und die drei Subskalen „Selbst“, „Kommunikation“ und „Andere“. Zur Validierung des neu entwickelten Fragebogens wurden zwei Stichproben (jeweils $N > 500$) erhoben und eine Exploratorische und Konfirmatorische Faktorenanalyse durchgeführt. Der MEQ erzielte im Hinblick auf Mentalisierung von Emotionen mit der Unterscheidung Selbst, Kommunikation und Andere akzeptable bis sehr gute psychometrische Werte mit einer klaren und theoretischen Faktorstruktur und einer sehr hohen internalen Konsistenz sowie guter Konstruktvalidität.

1. Einleitung

1.1. Ausgangssituation

Während die Wirksamkeit von Psychotherapie empirisch gut untersucht ist, ist über die Mechanismen der Veränderung, die in der Psychotherapie wirken, noch wenig bekannt (Cuijpers et al., 2019; Taubner et al., 2023). Kazdin (2007) definiert in diesem Zusammenhang Mechanismen als „the basis for the effect, i.e., the processes or events that are responsible for the change; the reasons why change occurred or how change came about" (S. 3). Diese Definition legt nahe, dass das Verständnis der Veränderungsmechanismen eine zwingende Voraussetzung für eine zielorientierte und erfolgreiche Psychotherapie ist. Im Rahmen der Analyse von Veränderungsmechanismen sind diese zunächst zu identifizieren. Anschließend ist zu ergründen, wie diese Veränderungsmechanismen sich im Verlauf einer Psychotherapie entwickeln und wie Einfluss darauf genommen werden kann.

Allgemeine Metamodelle zu Veränderungsmechanismen, wie beispielsweise die fünf Wirkfaktoren der Psychotherapie von Grawe (1997) und das Allgemeine Modell von Psychotherapie (AMP) von Orlinsky und Howard (1987), basieren auf Forschungsergebnissen der Prozessforschung. Problematisch an diesen Metamodellen ist, dass diese die Mechanismen der Psychotherapie zu oberflächlich beschreiben, um tatsächliche Veränderungsprozesse in der Psychotherapie ausreichend genau darstellen zu können. Die Theorie der fünf Wirkfaktoren der Psychotherapie (Grawe, 1997) setzt die fünf Faktoren untereinander in keinen ausreichenden Zusammenhang und verharrt in der Beschreibung der Veränderungsprozesse auf einer Makroebene. Das AMP wurde mehrfach erweitert sowie ergänzt (Orlinsky, 2009), dennoch beschreibt das AMP Veränderungsprozesse in der Psychotherapie lediglich deskriptiv und nicht präskriptiv. Eine präskriptive Beschreibung ist jedoch notwendig, um das gewonnene Verständnis der Veränderungsmechanismen für direkte Implikationen für die Praxis zu nutzen. Mikroprozesse zwischen Patient:innen und Therapeut:innen, die innerhalb einer Therapiesitzung und zwischen den Therapiesitzungen ablaufen, werden durch die allgemeinen Psychotherapiemodelle (Grawe, 1997; Orlinsky & Howard, 1987) nicht ausreichend berücksichtigt. Es können daher keine direkten therapeutischen Implikationen auf Sitzungsebene, der Mikroebene, abgeleitet werden.

Es wurde eine Vielzahl potenzieller Veränderungsmechanismen in der Psychotherapie auf Makro- und Mikroebene erforscht, wie unter anderem die therapeutische Allianz, Empathie und das Reparieren von Brüchen (Norcross & Lambert, 2018; Wampold, 2015). Hierzu gibt es bereits transtheoretische Modelle, in denen Implikationen für das therapeutische Arbeiten

aufgrund der Bedürfnisse und Zustände der Patient:innen aufgestellt wurden (Rafaeli & Rafaeli, 2024; Safran et al., 2011). Es ist jedoch noch nicht gelungen, die Makroebene mit der Mikroebene zu verknüpfen. Das bedeutet, dass allgemeine Implikationen über den Therapieverlauf (Makroebene) hinweg, wie z.B. phasenspezifische Implikationen, mit spezifischen Implikationen auf der Sitzungsebene bzw. der Patient:innen-Therapeut:innen Interaktion (Mikroebene) noch nicht hinreichend zusammengeführt wurden.

In den letzten zehn Jahren hat auch das Interesse am Konstrukt der Mentalisierung in der Psychotherapie erheblich zugenommen. Unabhängig von der therapeutischen Ausrichtung kann die Verbesserung von Mentalisierung als ein wesentlicher Mechanismus einer wirksamen Psychotherapie angesehen werden (Ludemann et al., 2021; Luyten et al., 2024). Hierfür fehlt es jedoch an einem Metamodell zu Mentalisieren in der Psychotherapie basierend auf Forschungsergebnissen mit Implikationen auf Makro- und Mikroebene, wie Therapiefoki und Interventionen für einzelne Therapiephasen und Therapiesitzungen.

1.1. Problemstellung und Zielsetzung

Kazdins (2007) Definition von Mechanismen in der Psychotherapie weist darauf hin, dass auf die Identifizierung eines Prozesses oder Ereignisses, das für eine Veränderung in der Psychotherapie verantwortlich ist, die Frage folgt, warum und wie diese Veränderung eintritt. Das Verständnis der Mechanismen therapeutischer Veränderungen und ihrer Entwicklung im Verlauf einer Psychotherapie ermöglicht die Anwendung klinischer Strategien zur Initiierung von Veränderungsprozessen. Dadurch können therapeutische Interventionen effektiver und effizienter gestaltet werden.

Bisher beruhen therapeutische Implikationen zur Förderung von Mentalisieren auf Interventionsebene ausschließlich auf theoretischen und klinischen Überlegungen und nicht auf empirischen Befunden. Bisherige Forschungsergebnisse zeigen grundsätzlich, dass sich Mentalisieren über die Psychotherapie hinweg entwickelt und durch die Patient:innen-Therapeut:innen-Interaktion beeinflusst wird. Bisher wurde nur eine Art von Intervention (Mentalisierungsfördernde Fragen) zur Förderung von Mentalisierung näher untersucht. Allerdings ist es fraglich, ob Mentalisieren allein durch diese Intervention gefördert werden kann. Es fehlen systematische Untersuchungen zur Förderung von Mentalisierung unter Einbeziehung maßgebender Faktoren. Diese Faktoren umfassen neben einer Bandbreite von therapeutischen Interventionen, die Unterscheidung in Selbst und andere auch potenzielle

phasenspezifische Wirkungen. Ergänzend hierzu fehlt es an Instrumenten zur Erfassung der Mentalisierung von Emotionen in Bezug zum Selbst und anderen.

In diesem Sinne ist es das übergreifende Ziel dieser Arbeit die Veränderung von Mentalisieren als potenziellen Veränderungsmechanismus in der Psychotherapie näher zu analysieren. Hierfür ist ein prozessbasiertes Verständnis notwendig, um die durch Psychotherapie angeregten Veränderungen von Mentalisieren auf einer Makro- und Mikroebene zu verstehen.

Für die Umsetzung einer solchen prozessbasierten Arbeit zur Untersuchung der Veränderung von Mentalisierung durch die Psychotherapie ist ein mixed-method Ansatz aus quantitativen und qualitativen Methoden unabdingbar. Im Detail sollen in der vorliegenden Arbeit nachfolgende wissenschaftliche Ergebnisse erzielt werden:

- Systematische Untersuchung des Einflusses von therapeutischen Interventionen auf das Mentalisieren von Patient:innen im Verlauf einer Psychotherapie (Studien 1 und 2)
- Systematische Untersuchung der Entwicklung von Mentalisieren bezogen auf das Selbst und bezogen auf andere im Verlauf einer Psychotherapie (Studien 3 und 4)
- Entwicklung eines Phasenmodells zur Beschreibung der Veränderung von Mentalisieren durch Psychotherapie auf Basis realer Therapieverläufe (Studie 4)
- Entwicklung und Validierung eines Fragebogens zur Erfassung der Mentalisierung von Emotionen bezogen auf das Selbst und andere (Studie 5)

1.2. Vorgehen und Aufbau der Arbeit

Nachfolgend wird das Vorgehen der vorliegenden Arbeit zur Lösung der zuvor beschriebenen Problemstellung erläutert. Dazu werden die einzelnen Kapitel dieser Arbeit und die Zusammenhänge zwischen diesen beschrieben.

Kapitel 2 fasst den Kenntnisstand zusammen. Dabei wird zunächst auf die Definition, Entwicklungspsychopathologie und die Erhebung von Mentalisierung eingegangen, Anschließend werden spezifische für diese Arbeit relevante Eigenschaften von Mentalisieren in der Psychotherapie erläutert. Es wird auf die Veränderung von Mentalisieren in der Psychotherapie eingegangen. Des Weiteren wird ein Überblick über Meta-Prozessmodelle des Mentalisierens und den Einsatz von therapeutischen Interventionen zur Förderung von Mentalisieren in der Psychotherapie gegeben.

In **Kapitel 3** werden fünf empirische Studien zusammengefasst, auf denen diese Arbeit begründet ist. In *Studie 1* wird zum einen Mentalisieren über die Psychotherapie hinweg untersucht und zum anderen die Wirkung der Intervention Mentalisierungsfördernde Frage auf Mentalisieren über den Psychotherapieverlauf hinweg analysiert. *Studie 2* knüpft daran an, indem der Einsatz einer Vielzahl an therapeutischen Interventionen innerhalb Psychotherapien herausgearbeitet wird und der Zusammenhang zwischen Interventionen, Interventionsleveln und effektivem Mentalisieren fokussiert wurde. In *Studie 3* wird eine differenzierte Analyse des Mentalisierens bezogen auf das Selbst und bezogen auf andere innerhalb der Therapiesitzungen und über den Therapieverlauf hinweg durchgeführt. In *Studie 4* wird die psychotherapeutische Veränderung des Mentalisierens therapieschulen- und störungsübergreifend im Verlauf ambulanter Psychotherapien anhand publizierter Einzelfallstudien im Rahmen einer Metasynthese qualitativ untersucht. Es wird ein Phasenmodell entwickelt, aus dem sich therapeutische Empfehlungen ableiten lassen. *Studie 5* befasst sich mit der Entwicklung und Validierung eines Fragebogens zur ökonomischen Erhebung der Mentalisierung von Emotionen in Bezug zum Selbst und zu anderen.

Kapitel 4 fasst die wesentlichen Ergebnisse der vorliegenden Arbeit zusammen und diskutiert diese. Es wird gesondert auf die Erkenntnisse bezogen auf die Makroebene (Therapieverlauf) und Mikroebene (Therapiesitzungen) des therapeutischen Arbeitens eingegangen. Zudem wird die Erfassung des Mentalisierens von Emotionen bezogen auf das Selbst und andere diskutiert. Abschließend werden die Limitationen der vorliegenden Arbeit diskutiert und ein Ausblick auf zukünftige Forschung gegeben sowie ein Fazit gezogen.

2. Mentalisierung

2.1. Definition

Mentalisieren ist die sozial-kognitive Fähigkeit „sich mentale Zustände im eigenen Selbst und in anderen Menschen vorzustellen“ (Fonagy et al., 2002, S. 31). Es beschreibt die Fähigkeit, sich mentalen Zustände wie Gefühle, Gedanken und Bedürfnisse, die dem eigenen Verhalten und dem Verhalten anderer zugrunde liegen, wahrzunehmen und zu verstehen (Fonagy et al., 2002). Erst durch den Einbezug der anderen unterscheidet sich Mentalisierung von reiner Reflexion (Fonagy et al., 2002; Fonagy et al., 1998). Mentalisierung bildet eine wichtige Basis für die Regulation der eigenen mentalen Zustände, unter anderem der Emotionsregulation (Jurist, 2005), und für interpersonale Beziehungen (Fonagy & Bateman, 2019). Für eine erfolgreiche Entwicklung von Mentalisierung in der frühen Kindheit bedarf es der Spiegelung

der eigenen Gefühle und Gedanken innerhalb einer sicheren und unterstützenden Bindungsbeziehung, die Epistemisches Vertrauen generiert (Fonagy et al., 2015). Unter Epistemischem Vertrauen ist das Vertrauen einer Person in die Relevanz von zwischenmenschlich übermittelten Informationen zu verstehen (Fonagy & Allison, 2014).

Mentalisierung ist ein mehrdimensionales Konzept: es kann (1) sich auf das Selbst oder andere beziehen, (2) sich auf Kognitionen oder Affekte fokussieren, (3) sich an internalen, physiologischen oder äußerlich sichtbaren Komponenten orientieren sowie (4) automatisch oder bewusst ablaufen (Fonagy & Bateman, 2019). Effektives Mentalisieren zeichnet sich dadurch aus, dass die acht Pole dieser vier Dimensionen (Selbst/Andere, Affektiv/Kognitiv, Internal/External, Automatisch/Explizit) jeweils flexibel angesteuert und in Balance gehalten werden können (Fonagy & Bateman, 2019).

2.2. Entwicklungspsychopathologie

Persönlichkeitspathologien sind durch starre und unangepasste Muster in Bezug auf das Selbst oder Beziehungsmuster zu anderen gekennzeichnet, die aufgrund der Unfähigkeit, flexibel auf die stochastische Natur von Interaktionen und Beziehungen zu reagieren, entstehen (Sharp & Bevington, 2022; Sharp et al., 2012). Der Beeinträchtigung von Mentalisierung wird eine wesentliche Rolle bei der Entwicklung und Aufrechterhaltung von psychischen Störungen zugeschrieben (Katznelson, 2014; Luyten et al., 2020; Luyten et al., 2024). Es besteht ein enger Zusammenhang zwischen Mentalisierung und den vier Persönlichkeitsfunktionen Identität, Selbststeuerung, Empathie und Nähe (Rishede et al., 2021; Zettl et al., 2020). Es konnte gezeigt werden, dass klinische Stichproben im Vergleich zu nicht-klinischen Stichproben eine signifikant geringere Fähigkeit zu Mentalisieren zeigen (Fonagy et al., 1996; Peters & Schulz, 2022). Darüber hinaus wird angenommen, dass eine verbesserte Mentalisierung mit einer allgemeinen Verbesserung der psychologischen Funktionsfähigkeit, wie z.B. mit einem geringeren Schweregrad der Depression, weniger interaktionellen Schwierigkeiten und allgemeinem Leidensdruck, einhergeht (Babl et al., 2022; Ekeblad et al., 2016; Levy et al., 2006; Taubner et al., 2011).

Die Fähigkeit zu Mentalisieren steht nach dem Schaltmodell (Fonagy & Luyten, 2009; Luyten et al., 2020) in Abhängigkeit zu den Faktoren Bindung und emotionaler Erregung: erst mit einem gewissen Grad an Bindung und emotionaler Erregung (Arousal) kann effektives Mentalisieren erreicht werden, wohingegen ein zu hoher Grad zu einem Verlust von Mentalisieren führt. Bei Menschen mit psychischen Störungen wird davon ausgegangen, dass sie schneller und häufiger als Gesunde an ihren individuellen Schaltpunkt gelangen, an dem es

zu einem Zusammenbruch des effektiven Mentalisierens kommt (Fonagy & Luyten, 2009). Insbesondere in der Psychotherapie, wenn Emotionen intensiviert werden, kann Mentalisierung zur Herausforderung werden (Greenberg & Pascual-Leone, 2006; Katznelson, 2014).

Bei Beeinträchtigungen von Mentalisierung wird davon ausgegangen, dass ein Mangel an Flexibilität zwischen den vier Dimensionen (Selbst/Andere, Kognitiv/Affektiv, Internal/External, Implizit/Explizit) besteht (Luyten et al., 2020). Die Abwesenheit von Mentalisieren wird als prämentalisierendes Denkmuster verstanden, das sich im Versuch die Umwelt zu verstehen auf einseitige, verzerrte Wahrnehmung oder eine ausschließliche Orientierung am Verhalten stützt. Die Prämentalisierung kann in drei Modi unterschieden werden: den Teleologischen Modus, den Äquivalenz Modus und den Als-Ob Modus (Fonagy & Bateman, 2019). Im teleologischen Modus werden Motive anderer ausschließlich an deren Handlung abgelesen, in der Psychischen Äquivalenz wird die innere Welt mit der Realität gleichgesetzt und im Als-Ob Modus fehlt die Verbindung zwischen der inneren und der äußeren Welt, sie sind voneinander entkoppelt.

Insgesamt kann die Mentalisierung als wertvolles transtheoretisches und transdiagnostisches Konzept zur Erklärung von Vulnerabilität und Psychopathologie sowie deren Behandlung angesehen werden (Luyten et al., 2020).

2.3. Erfassung von Mentalisierung

Mentalisierung ist ein komplexes, multidimensionales Konstrukt und daher schwierig in seiner Gesamtheit zu erfassen und zu messen (Luyten et al., 2011; Shaw et al., 2019). Der Goldstandard zur Erfassung von Mentalisierung ist die Reflective Functioning Skala (RF Skala) (Fonagy et al., 1998), wobei Mentalisierung anhand einer elf-Punkte Ratingskala im Kontext von Bindungsbeziehungen bewertet wird. Die Qualität des Mentalisierens wird auf einer beobachterbasierten Skala von -1 bis 9 kodiert, wobei -1 eine negative RF, 1 eine fehlende RF, 3 eine fragliche oder geringe RF, 5 eine normale RF, 7 eine ausgeprägte RF und 9 eine außergewöhnliche RF bedeutet. Die RF Skala wird auf transkribierte Interviews wie dem Adult Attachment Interview (AAI; George et al., 1996), einem Interview zu Bindungserfahrungen, oder Therapietranskripten (Huwe et al., 2024; Katznelson, 2014; Talia et al., 2019) angewendet. Im AAI werden lediglich einzelne Passagen für das RF Rating benutzt, in denen Mentalisierungsfördernde Fragen (MfF) mentalisierende Antworten fordern. Ein Beispiel einer MfF aus dem AAI ist: „*Fühlten Sie sich Ihrem Vater oder Ihrer Mutter näher? Woran lag das? Wenn Sie die Beziehung in Ihrer Kindheit einerseits zu Ihrer Mutter und andererseits die zu Ihrem Vater vergleichen, wie unterscheiden Sie sich voneinander?*“ (Frage 5). Die übrigen

Fragen im AAI werden als Mentalisierungszulassende Fragen klassifiziert und sollen lediglich mit in die Beurteilung der RF einbezogen werden, wenn ein bestimmtes Mindestmaß an Mentalisierung erreicht wird. Ein Beispiel hierfür aus dem AAI ist: *„Wenn Sie sich als Kind nicht wohl gefühlt haben, was haben Sie dann gemacht?“* (Frage 6).

Die Unterscheidung in diese zwei Fragetypen ist eine methodische Herausforderung bei der Kodierung von Therapietranskripten hinsichtlich RF, da fraglich ist, wie die Bildung der Kodiereinheiten für das RF Rating stattfindet. Zur Vereinheitlichung der Erfassung von RF in Therapietranskripten wurde das RF in-session Manual (Talia et al., 2015) konzeptualisiert. Dennoch werden in Studien unterschiedliche Methoden für die Segmentbildung zur Bewertung von RF in Therapietranskripten genutzt (Huwe et al., 2024).

Auffällig ist, dass RF gemessen anhand des AAIs deutlich höher ausfällt als RF gemessen anhand der Therapietranskripte (Huwe et al., 2024). Dies hängt vermutlich mit der Unterscheidung von Mentalisierungsfördernden und -zulassenden Fragen zusammen, aber auch damit, ob Mentalisierung als Eigenschaft oder Zustand erfasst wird (siehe 2.4.1).

Die Durchführung und Transkription von Interviews und Therapieprotokollen für die Anwendung der RF Skala ist sehr zeitaufwendig. Darüber hinaus erfordert eine reliable Kodierung mit der RF Skala eine umfassende Schulung. Daher wurde eine Vielzahl unterschiedlicher Fragebögen entwickelt, um Mentalisierung ökonomischer zu erfassen (Luyten et al., 2011). In Deutschland weit verbreitete Fragebögen zur Erfassung der Mentalisierung sind der Reflective Functioning Questionnaire (Spitzer et al., 2021), der Mentalizing Questionnaire (Hausberg et al., 2012) und der Certainty about Mental States Questionnaire (Müller et al., 2023), die jedoch bisher nicht mit der RF Skala validiert wurden. Außerdem werden in diesen Fragebögen wichtige Dimensionen und Facetten von Mentalisierung vernachlässigt. Lediglich der Certainty about Mental States Questionnaire unterscheidet in Mentalisierung bezogen auf das Selbst und andere (Müller et al., 2023). Jedoch erfasst keiner dieser Fragebögen die Mentalisierung von Emotionen in einer Subskala, wodurch diese wichtige Facette des Mentalisierungskonstrukts stark vernachlässigt wird (Fonagy et al., 2002).

2.4. Mentalisieren in der Psychotherapie

Das Konzept Mentalisierung entspringt der Psychoanalyse und wurde von Peter Fonagy und Mary Target an zeitgenössische empirische Entwicklungstheorien angeschlossen, wobei die emotionale Objektbesetzung und die Affektregulierung im Fokus stehen (Baron-Cohen et al., 1985; Fonagy et al., 2002).

Mit dem Ziel, Mentalisierung in der Psychotherapie explizit zu stärken, wurde die Mentalisierungsbasierte Psychotherapie (MBT; Bateman & Fonagy, 2016) entwickelt, die sich empirisch als wirksam für die Behandlung von Borderline-Persönlichkeitsstörungen (BPS) bestätigt hat (Storebo et al., 2020). MBT wurde ursprünglich zur Behandlung von BPS entwickelt (Bateman & Fonagy, 2016) und zählt zu einem der vier in Leitlinien empfohlenen Behandlungsformen für BPS (Lieb & Stoffers-Winterling, 2020). Das zentrale Merkmale der MBT ist die Nicht-Wissende Haltung der Therapeut:innen gegenüber den mentalen Zuständen der Patient:innen, womit das Mentalisieren der Patient:innen gefordert und gefördert wird. Über die Zeit wurde die MBT für eine Vielzahl an psychischen Störungen adaptiert (Bateman et al., 2023). Darüber hinaus wurde MBT bzw. das Konzept Mentalisierung in die Behandlung unterschiedlicher Altersgruppen integriert, wie z.B. der fokussierten Säuglings-Kleinkind-Eltern Psychotherapie (fSKEPT; Cierpka et al., 2017). In MBT und fSKEPT wird ein spezifischer Fokus auf die Förderung von Mentalisierung in spezifischen interpersonellen Kontexten etabliert und damit wesentlich zum Therapieerfolg beigetragen (Georg et al., 2019; Taubner, 2008). Wesentliche Ziele sind, die Patient:innen entweder vom nicht-Mentalisieren ins Mentalisieren zu bringen oder im Mentalisieren zu halten und es zu fördern. Die genauen Veränderungsmechanismen im Prozess des Mentalisierens sind jedoch nicht ausreichend untersucht.

2.4.1. Veränderung von Mentalisierung

Die Fähigkeit zu Mentalisieren wird unterschieden in die Komponente Eigenschaft (trait) und Zustand (state) (Fonagy et al., 2012). Mentalisierung erhoben mit dem AAI (George et al., 1996) erfasst eine dauerhafte und schwerer veränderbare Persönlichkeitseigenschaft, wohingegen Mentalisieren innerhalb von Therapiesitzungen einem Persönlichkeitszustand entspricht (Hörz-Sagstetter et al., 2015; Katznelson, 2014; Möller, 2018). Die Qualität beider Komponenten ist abhängig von bindungsbezogener emotionaler Erregung und interpersonellem Kontext (Fonagy et al., 2012) (siehe 2.2).

Die Mentalisierung im Sinne einer Eigenschaft, gemessen mit dem AAI vor und nach der Therapie, zeigt eine signifikante Verbesserung zum Psychotherapieende (Levy et al., 2006; Rudden et al., 2006). Allerdings ist hinzuzufügen, dass dies insbesondere für psychodynamisch orientierte Langzeit-Psychotherapien zu gelten scheint (Katznelson, 2014). Ergebnisse zur Steigerung von Mentalisieren als Zustand gemessen innerhalb der Therapiesitzungen über den Therapieverlauf hinweg sind inkonsistent (Babl et al., 2022; Fischer-Kern et al., 2015; Karlsson & Kermott, 2006; Taubner et al., 2011; Zeeck et al., 2022), wobei hier eine signifikante

Steigerung in der Verhaltenstherapie gezeigt werden konnte (Babl et al., 2022). Die Fokussierung auf Zustands-Prozesse ermöglicht es, die Mechanismen der Psychotherapie (Zilcha-Mano, 2021) bzw. in diesem Falle die Mechanismen des Mentalisierens genauer zu untersuchen.

Es wurde festgestellt, dass die Fähigkeit zu Mentalisieren innerhalb von Therapiesitzungen und über den Therapieverlauf hinweg stark fluktuiert (Babl et al., 2022; Hörz-Sagstetter et al., 2015; Zeeck et al., 2022). Dies könnte darauf hindeuten, dass Mentalisieren als Kompetenz nicht beständig, sondern nur bei Bedarf eingesetzt wird (Hörz-Sagstetter et al., 2015). Die Schwankungen stehen mit der Interaktion zwischen Patient:innen und Therapeut:innen sowie den therapeutischen Interventionen (siehe 2.4.3) in Zusammenhang (Hörz-Sagstetter et al., 2015; Kivity et al., 2021; Meier et al., 2022; Möller et al., 2017).

Bateman et al. (2023) beschreiben Mentalisierung als einen Muskel, der durch aktives Mentalisieren wie z.B. in der Psychotherapie, trainiert wird. Hier nehmen die Autoren Bezug zu Mentalisieren als Zustand. Es ist bisher nicht geklärt, ob das aktive Mentalisieren (Trainieren des Muskels) innerhalb einer Therapiesitzung zur Steigerung von Mentalisierung führt und ob diese Steigerung (Trainingseffekt) innerhalb einer Therapiesitzung bis zur nächsten Sitzung anhält.

2.4.2. *Meta-Prozessmodelle*

Mentalisierung wird als wichtiger Katalysator im therapeutischen Prozess gesehen, dessen Wiederherstellung und Förderung im engen Zusammenhang mit der Wiederherstellung und Förderung von Epistemischem Vertrauen steht (Fonagy et al., 2015; Fonagy et al., 2019; Luyten et al., 2024; Taubner & Sharp, 2024).

Es kann in drei Kommunikationssysteme zur Wiederherstellung und Steigerung von Mentalisierung unterschieden werden (Bo et al., 2022; Fonagy et al., 2015; Luyten et al., 2020; Luyten et al., 2024), die teilweise gleichzeitig oder in unterschiedlichen Reihenfolgen innerhalb von Psychotherapien auftreten können (Luyten et al., 2024): Im Kommunikationssystem 1 steht das Lehren und Lernen im Vordergrund, wobei Interventionen zur Förderung von Mentalisierung eingesetzt werden. Hier wird den Patient:innen das implizite oder explizite theoretische Modell, das ihrer psychischen Erkrankung zugrunde liegt, näher gebracht, um ihre Kapazität des Verstehens zu erhöhen. Die Kommunikation wird als bidirektional verstanden und überwindet die Epistemische Hypervigilanz. Dies erzeugt Selbstwirksamkeit und Autonomie, die wiederum Epistemisches Vertrauen aktivieren. Im Kommunikationssystem 2 liegt der Fokus auf der Wiederherstellung der Mentalisierung. Durch erhöhtes Epistemisches

Vertrauen wird Mentalisierung gefördert, das wiederum soziales Lernen ermöglicht. Es entsteht ein Kreislauf sozialer Salutogenese. Im Kommunikationssystem 3 liegt der Schwerpunkt auf der Anwendung des sozialen Lernens außerhalb des Therapieraumes, wobei Interventionen zur Förderung des Experimentierens in sozialen Situationen eingesetzt werden. Die Erfahrung der Patient:innen, von den Therapeut:innen mentalisiert zu werden sowie die Therapeut:innen selbst mentalisieren zu können (Erkennen von Intentionen), eröffnet die Kapazität, außerhalb des therapeutischen Umfeldes zu lernen. Dieses Modell (Luyten et al., 2024) beschreibt auf ausschließlich theoretischer Grundlage den Wirkmechanismus von Mentalisierung im therapeutischen Kontext, führt jedoch die konkrete Umsetzung im Sinne von spezifischen therapeutischen Interventionen durch die Therapeut:innen nicht näher aus.

Taubner und Sharp (2024) sehen im sozialen Kontext einer professionellen therapeutischen Beziehung besonders das implizit vermittelte Lernen (Epistemisches Vertrauen) als einen zentralen transtheoretischen Veränderungsmechanismus an. Die Autoren kombinieren Prinzipien der MBT (Bateman et al., 2023) und der Mediational Interventions for Sensitizing Caregivers (Sharp & Marais, 2022), um die Mikroprozesse in der Therapie durch Interventionen beobachtbar und steuerbar zu machen.

Es ist jedoch noch nicht ausreichend geklärt, in wie fern sich Mentalisieren als Prozess über den Verlauf einer Psychotherapie verändert. Zudem wurde die Veränderung von Mentalisierung bislang lediglich als globale Förderung oder Stärkung von Mentalisierung beschrieben, ohne auf einzelne Facetten des Konstruktes näher einzugehen.

Bateman et al. entwickelten 2023 das theoretisch fundierte Modell Modi der Erfahrung, wobei in einen Ich-Modus, einen Mich-Modus und einen Wir-Modus (I-, Me- und We-Mode) unterschieden wird. Demnach ist es innerhalb der MBT das Ziel, einen Wechsel vom Ich-Modus über den Mich-Modus zum Wir-Modus zu gestalten. Der Ich-Modus umfasst die Selbstwahrnehmung und die Entwicklung eines Selbstkohärenzgefühls („welche Art von Person bin ich?“). Im Mich-Modus wird auf die Beobachtung des Selbst („wie ich von anderen gesehen werde“) und anderer („wie ich andere sehe“) fokussiert. Das Prozessmodell wird an dieser Stelle von Choi-Kain et al. (2022) mit dem Du-Modus (You-Mode) ergänzt, der sich mit dem Mich-Modus überschneidet. Der Du-Modus beschreibt eine objektive Realität: die Sicht aus der Perspektive einer anderen Person auf das Selbst. Der Wir-Modus entspricht der Erarbeitung eins gemeinsamen Verständnisses von sich selbst und anderen. Im Wir-Modus sind Patient:in und Therapeut:in in der Lage, unterschiedliche Perspektiven von sich und anderen gleichberechtigt zu integrieren und zu akzeptieren. Der Wir-Modus wird nicht als das Ende eines Prozesses angesehen, sondern als Voraussetzung für ein erfolgreiches Zusammenarbeiten

in der Psychotherapie. Wichtig ist jedoch, dass diese Modi der Erfahrung von Bateman et al. (2023) ausschließlich auf theoretischen Überlegungen und nicht auf empirischen Erkenntnissen beruht. Dementsprechend ist die Aussagekraft des Modells für die Praxis nicht belegt. Im Weiteren werden im Rahmen des Modells keine konkreten therapeutischen Interventionen vorgeschlagen, es bleibt also unklar, wie genau ein Wechsel der Ich-, Mich- und Wir-Modi in der Psychotherapie erreicht werden kann.

2.4.3. Interventionen in der Psychotherapie

Zum Einsatz von Interventionen innerhalb der MBT existieren verschiedene theoretische Überlegungen. Im MBT Manual (Bateman & Fonagy, 2016) wird ein hierarchisches Schema zum Einsatz von Interventionen in Bezug zum Arousal-Niveau der Patient:innen vorgeschlagen. Wenn das Arousal hoch ist, sollten (1) supportiv-empathische Interventionen eingesetzt werden, damit sich die Patient:innen sicher und gehalten fühlen. Bei hohem Arousal können zudem Interventionen wie (2) Klärung, Elaboration und Challenge eingesetzt werden, um die Patient:innen zum Nachdenken über mentale Zustände anzuregen. Nur bei geringem Arousal werden Interventionen zur Förderung der (3) Basismentalisierung und Affektelaboration empfohlen, wobei Affekte und interpersonale Erfahrungen exploriert werden. Des Weiteren kann bei geringem Arousal (4) Mentalisierung der Beziehungen genutzt werden, um die Interaktionen zwischen Patient:innen und Therapeut:innen direkt zu adressieren. Ziel soll es sein, das Arousal der Patient:innen durch den Einsatz des passenden Interventionslevels soweit zu regulieren, dass Mentalisieren ermöglicht werden kann. Bisher gab es jedoch noch keine empirische Studie, die den Einsatz der Interventionslevel in Psychotherapien untersucht hat. Die Empfehlungen dieses hierarchischen Schemas (Bateman & Fonagy, 2016) basieren ausschließlich auf klinischen Überlegungen.

Konkrete Interventionen zur Wiederherstellung oder Steigerung von Mentalisieren werden innerhalb der MBT auf Grundlage der vier Dimensionen der Mentalisierung und der Prämentalisierungsmodi (siehe 2.4.2) empfohlen. Es gibt bisher jedoch noch keine empirische Bestätigung dieser Empfehlungen.

Auf Grundlage der vier Dimensionen werden bei Fixierung eines Pols entgegengesetzte Interventionen empfohlen, da eine Ausbalancierung der Pole bzw. ein flexibles Wechseln zwischen den Polen als effektives Mentalisieren angesehen werden (Luyten & Fonagy, 2015). Zum Beispiel wird davon ausgegangen, dass Personen mit BPS besonders implizit Mentalisieren mit ausgeprägtem Fokus auf andere sowie Affekte und hierfür insbesondere externale Anhaltspunkte nutzen (Fonagy & Luyten, 2012). Laut der MBT wäre es hier indiziert,

die Patient:innen zu unterstützen explizit zu Mentalisieren, indem das Selbst, Kognitionen und internale Reize fokussiert werden.

Im Zusammenhang mit den Prämentalisierungsmodi werden je nach Modi verschiedene Interventionen als hilfreich angesehen, um effektives Mentalisieren zu aktivieren (Bateman & Fonagy, 2016). Im Teleologischen Modus wird davon ausgegangen, dass ein inneres Bedürfnis maßgeblich für die Überbetonung der äußeren Welt im Gegensatz zur inneren Welt verantwortlich ist. Als Intervention hierzu wird vorgeschlagen, das Bedürfnis empathisch zu explorieren, zu validieren und einen affektiven Fokus auf das Dilemma des Tuns zu setzen. Im Äquivalenzmodus scheint ein innerer Affekt so groß zu sein, dass die äußere Welt mit der inneren Welt gleichgesetzt wird. Hier soll als Intervention die empathische Validierung des Affektes genutzt werden. Falls dies jedoch nicht zu Mentalisieren führt, soll zunächst ein Themenwechsel stattfinden, um in einem verwandten Themengebiet Mentalisieren herzustellen. Im Als-Ob-Modus sind Innen- und Außenwelt entkoppelt, es wird pseudo-mentalisiert, d.h. das Gesagte ist von einer affektiven Komponente losgelöst und bezieht sich nur auf Kognitives ohne tiefere Substanz. Hier empfiehlt es sich, Challenges einzusetzen, die die Patient:innen auf humorvolle Weise kurzzeitig aus dem Konzept bringen sollen und es dadurch schaffen, das Pseudo-Mentalisieren zu unterbrechen. Ebenfalls kann es hilfreich sein, die Patient:in-Therapeut:in-Beziehung zu fokussieren und Bezug zum Hier und Jetzt zu nehmen.

Ein besonderer Fokus in der MBT ist es, bestimmte Situationen, in denen es zu einem Bruch in der Mentalisierung (siehe 2.2) kam (z.B. bei selbstverletzendem Verhalten), kleinschrittig zu analysieren. Hier werden Interventionen, wie die Funktionelle Analyse oder der MBT-Loop, eingesetzt (Bateman et al., 2023). Diese komplexeren Interventionen verbinden die bereits beschriebenen Basisinterventionen zu einer Interventionsabfolge.

Insgesamt konnte gezeigt werden, dass eine Adhärenz zur MBT positiv mit Mentalisieren der Patient:innen innerhalb der Therapiesitzungen assoziiert ist (Möller et al., 2017). Jedoch sind die wissenschaftlichen Befunde zum Einsatz von Interventionen innerhalb der MBT oder Psychotherapien zur Steigerung von Mentalisieren bisher gering. Lediglich drei Subanalysen randomisierter kontrollierter Studien (Kivity et al., 2021; Meier et al., 2022; Möller et al., 2017) und eine kontrollierte Fallstudie (Georg et al., 2019) untersuchten systematisch den Zusammenhang zwischen mentalisierungsfördernden Interventionen und Mentalisieren innerhalb von Therapiesitzungen. Es wurde sich besonders auf MfF und deren Wirkung auf Mentalisieren konzentriert (Kivity et al., 2021; Möller et al., 2017). MfF entstammen konzeptuell der RF Skala (Fonagy et al., 1998) und sollen zur Förderung von

Mentalisieren beitragen. Es konnte gezeigt werden, dass MfF das Mentalisieren in den unmittelbaren Antworten der Patienten erhöhte (Kivity et al., 2021; Möller et al., 2017) und darüber hinaus eine herunter regulierende Wirkung auf das Arousal der Patient:innen zeigte (Kivity et al., 2021). In den Studien von Möller et al. (2017) und Kivity et al. (2021) wurde die Wirkung der MfF anhand einer größeren Stichprobe (N = 15; N = 88) jedoch mit einer geringen Sitzungsanzahl je Patient:in (N = 2; N = 3) untersucht. Dadurch konnten keine abgesicherten Aussagen zur Wechselwirkung von therapeutischen Interventionen und Mentalisieren über den Verlauf der gesamten Psychotherapie hinweg getroffen werden.

Den Fokus von MfF auf allgemein mentalisierungsfördernde Interventionen erweiternd, konzipierten Meier et al. (2022) 40 Interventionen basierend auf vier MBT-Prinzipien (Prozess, Nicht-Wissende Haltung, Affektfokus und Beziehung). Die Autoren untersuchten und bestätigten einen Zusammenhang zwischen der Häufigkeit der 40 mentalisierungsfördernden Interventionen und der Mentalisierung von 28 Patient:innen innerhalb jeweils drei Therapiesitzungen. Jedoch konnte aufgrund der ausgewählten Methodik lediglich festgestellt werden, dass die theoretisch konzipierten Interventionen das Mentalisieren stärken, nicht aber, welche dieser 40 mentalisierungsfördernden Interventionen besonders hilfreich sind.

In einer Fallstudie zur fSKEPT (Georg et al., 2019) wurden innerhalb der ersten und letzten Therapiesitzung drei Interventionen „Unterstützung des Elternteils durch das Anbieten psychologischer Funktionen (z.B. Mentalisieren für ihn/sie oder Strukturieren)“, „Ermutigung des Elternteils, über bedeutsame Themen, Ereignisse oder Erfahrungen zu berichten“ und „Wahrnehmen und Verbalisieren der affektiven Qualität in der beobachteten Beziehung“ am häufigsten in Zusammenhang mit effektiver Mentalisierung gesetzt.

Zusammenfassend ist festzuhalten, dass erste Studien gezeigt haben, dass Interventionen Mentalisieren innerhalb der Psychotherapie stärken können. Zunächst war jedoch einzig die MfF als spezifische Intervention systematisch untersucht worden (Kivity et al., 2021; Möller et al., 2017). Keine weiteren spezifischen Interventionen wurden ausreichend auf ihren direkten Einfluss auf Mentalisieren untersucht, wobei eine Bandbreite verschiedener Interventionstypen erarbeitet wurde, die mit Mentalisierungsförderung assoziiert sein können.

3. Empirische Studien

3.1. Studie 1: Prozess des Mentalisierens in einer mentalisierungsbasierten Langzeittherapie für Borderline-Persönlichkeitsstörungen – eine Fallstudie

In *Studie 1* (Kornhas et al., 2020; Appendix I) untersuchten wir im Rahmen einer detaillierten Einzelfallstudie die Veränderung von Mentalisieren innerhalb von Therapiesitzungen und über den Therapieverlauf hinweg sowie explorativ innerhalb bestimmter Themengebiete. Ein weiterer Schwerpunkt der Einzelfallstudie lag auf der Analyse des Zusammenhangs zwischen Mentalisieren und MfF.

Für die Einzelfallstudie analysierten wir je vier aufeinander folgende Therapiesitzungen aus fünf Phasen (insgesamt 20 Therapiesitzungen) einer erfolgreichen mentalisierungsbasierten Langzeittherapie mit einer Patientin mit BPS. Es handelte sich hierbei um eine naturalistische Therapie mit insgesamt 120 Therapiesitzungen über 2,5 Jahren, die zum Zeitpunkt der Erhebung noch nicht abgeschlossen war. Die Diagnosestellung am Anfang der Therapie erfolgte durch ein klinisches Urteil der behandelnden zertifizierten MBT-Therapeutin. Die Adhärenz der Therapiesitzungen wurden anhand der MBT-Adhärenz und Kompetenzskala (Bateman, 2020) geprüft und als ausreichend hoch befunden. Die auf videoaufgezeichneten Therapiesitzungen wurden zunächst transkribiert, randomisiert und in 3 Minuten lange Zeitsegmente unterteilt. Zudem wurde die Mentalisierung der Patientin mit der RF Skala (Fonagy et al., 1998) je Zeitsegment und für bestimmte Themengebiet kodiert. Reliable und zertifizierte RF Rater:innen führten das RF Rating und dessen Reliabilitätsprüfung bei vier der 20 Therapiesitzungen durch (ICC = .73). Im Rahmen einer Konsultation mit der Therapeutin konnten die folgenden sechs Kernthemengebiete innerhalb der Therapie identifiziert werden: Partner, Kinder, Jugendamt, Kernfamilie (Vater, Stiefvater, Mutter und Bruder), Selbst und Patientin-Therapeutin Beziehung. Die Zeitsegmente wurden ebenfalls auf diese sechs Themengebiete kodiert, wobei mehrfach Kodierungen je Segment aufgrund einer mehrfachen Nennung oder einer mangelnden Trennschärfe zwischen den Themen möglich waren. Zusätzlich dazu kodierten wir die MfF der Therapeutin und verzeichneten die Häufigkeiten je Zeitsegment.

Für die Auswertung führten wir eine Zeitreihenanalyse durch, in der 336 Zeitsegmente über 20 Therapiesitzungen ausgewertet und als lineare intervallskalierte Zeitvariable genutzt wurden. Hierdurch konnten wir prüfen, ob RF im Verlauf der Therapie zu- oder abnimmt. Zur Überprüfung der Wirkung der MfF auf die Mentalisierung berechneten wir Modelle mit

verteilten Verzögerungen (finite distributed lag models), die es ermöglichten, einen autoregressiven Einfluss von RF sowie einen verzögerten Einfluss von MfF auf dasselbe und das folgende Zeitsegment zu berücksichtigen. Die Themengebiete wurden explorativ deskriptiv anhand von Häufigkeiten analysiert.

Zum Zeitpunkt der Studie (2,5 Jahre nach Therapiestart) erfüllte die Patientin nicht mehr die Kriterien einer BPS. Die Diagnostik erfolgte per Fragebogen (Standardized Assessment of Severity of PersonalityDisorder; Olajide et al., 2018; Personality Inventory for DSM-5 - Brief Form; Zimmermann et al., 2014) und Interview (Strukturiert Klinisches Interview II; Fydrich et al., 1997).

Das Mentalisieren der Patientin steigerte sich signifikant über die Therapie hinweg, wobei sie zwischen und innerhalb der Sitzungen stark fluktuierte und in einem eher niedrigen Bereich verblieb. Mentalisieren nahm deskriptiv in jedem der Themenbereiche unabhängig von der relativen Häufigkeit, mit der es besprochen wurde, zu. Das deutet daraufhin, dass sich die Kompetenz des Mentalisierens themenübergreifend entwickelt. Auffällig wenig jedoch wurde die Therapeutin-Patientin Beziehung innerhalb der ausgewählten Therapiesitzungen thematisiert. Dieses Ergebnis steht im Widerspruch damit, dass Mentalisierung der Beziehung theoretisch einer wichtigen Intervention innerhalb der MBT entspricht (siehe 2.4.3). Folglich stellt sich die Frage, welche Rolle dieses Thema innerhalb einer mentalisierungsbasierten Therapie einnimmt. Im Weiteren konnten wir zeigen, dass MfF als therapeutische Intervention Mentalisieren über den gesamten Therapieverlauf explizit anregt und zu einer signifikanten ($\beta = 0.41$, $p \leq .001$) Steigerung des Mentalisierens führte. Diese Fallstudie ist die erste Studie, die die Wirkung der MfF über den Therapieverlauf hinweg belegt und damit die Wichtigkeit der MfF als hilfreiche Intervention zur Steigerung von Mentalisieren im therapeutischen Kontext unterstreicht.

3.2. Studie 2: Enhancing mentalization by specific interventions within mentalization-based treatment of adolescents with conduct disorder

In *Studie 2* (Kasper et al., 2024; Appendix II) haben wir im Rahmen einer Fallstudie mit drei männlichen Adoleszenten mit Störung des Sozialverhaltens (SSV) explorativ den Zusammenhang zwischen therapeutischen Interventionen und Mentalisieren im Therapieverlauf untersucht. Die Patienten entstammen einer Machbarkeitsstudie zur MBT für SSV (Hauschild et al., 2022). Sie entsprachen der typischen Zielgruppe der SSV (Symptomatik: Lügen und Gewalt), wiesen einen erfolgreichen Behandlungsverlauf auf (u.a. hinsichtlich ihrer

Diagnose) und wurden von einer zertifizierten MBT-Therapeutin, Supervisorin und Trainerin behandelt. Je Patient wurden fünf Therapiesitzungen (eine aus der ersten, drei aus der mittleren und eine aus der letzten Therapiephase) ausgewählt, transkribiert und für die Kodierungen randomisiert. Die Adhärenz wurde für vier der 15 Therapiesitzungen mit der MBT-Adhärenz und Kompetenzskala (Bateman, 2020) getestet und als ausreichend hoch befunden. Zur Kodierung der Mentalisierung wurde die RF Skala (Fonagy et al., 1998) für jede der Patientenaussagen eingesetzt. Die Anzahl der Aussagen variierte je Patient stark (N = 686-1602). Reliable und zertifizierte RF-Raterinnen führten das RF Rating und dessen Reliabilitätsprüfung bei zwei der 15 Sitzungen (ICC = 0.74 – 0.85) durch. In einem weiteren Schritt analysierten wir alle Aussagen mit einer RF $\geq$ 4 detailliert bzgl. Ihres Inhaltes und vorangegangener Interventionen. Hierfür definierten wir Sequenzen des effektiven Mentalisierens als Passagen von Aussagen, die inhaltlich zu einer Aussage mit RF $\geq$ 4 führten. Die Kodierung der Sequenzen des effektiven Mentalisierens fand im Rahmen einer Konsensbildung statt. Zur Kodierung der therapeutischen Interventionen wurde im Rahmen der Studie ein neues Interventionsmanual (MBT-Interventions Kodiermanual), welches 20 Interventionen umfasst, entwickelt und angewendet. Jeder Aussage der Therapeutin wurde mindestens einer Intervention zugeordnet. Zudem wurden den Interventionen die von Bateman und Fonagy (2016) konzipierten Interventionslevel (siehe 2.4.3) zugeordnet.

Der Einsatz der Interventionen und Interventionslevel über den Therapieverlauf hinweg wurde deskriptiv durch Häufigkeitsvergleiche untersucht. Zur Klärung der Frage, welche Interventionen und Interventionslevel je Patient im Zusammenhang mit effektivem Mentalisieren stehen, wurden exakte Fisher-Tests basierend auf Monte-Carlo Simulationen durchgeführt.

Wir konnten zeigen, dass über die Therapie hinweg die Interventionslevel zwischen den Patienten ähnlich häufig genutzt wurden, wobei die Interventionslevel Klarifizierung, Exploration und Challenge am häufigsten und das Interventionslevel Mentalisierung der Beziehungen am wenigsten genutzt wurden. Wir konnten deskriptiv keinen Trend der Verteilung des Einsatzes der Interventionslevel über die Therapie hinweg erkennen. Die Analyse des effektiven Mentalisierens zeigte einen patientenspezifischen Zusammenhang zwischen Interventionslevel und Interventionen auf die Steigerung des Mentalisierens. Insgesamt wirkten sich drei der vier Interventionslevel positiv auf effektives Mentalisieren aus: Supportiv & Emphatisch, Basismentalisierung & Affektelaboration und Mentalisierung der Beziehungen. Folgende Interventionen standen im Zusammenhang mit effektivem Mentalisieren: MfF, Affektelaboration (fragend und anbietend), empathische Validierung,

Challenge, Themenwechsel, Patienten-Therapeuten Beziehung und Mentalisieren für den Patienten.

Im Rahmen dieser Fallstudie wurde der Einsatz der Interventionslevel erstmals empirisch analysiert. Eine zentrale Erkenntnis dieser Studie ist, dass neben der MfF auch andere Interventionen einen signifikanten Einfluss auf das effektive Mentalisieren haben. Zu beachten ist, dass sich die positiv auf Mentalisieren auswirkenden Interventionen je nach Patient unterschieden. MfF war die einzige Intervention, die patientenübergreifend eine mentalisierungsfördernde Wirkung zeigte. Verschiedene Faktoren, die die patientenspezifische Wirkung von Interventionen beeinflussten wie Arousal, Prämentalisierungsmodi, therapeutische Beziehung oder auch Mentalisierungsniveau der Therapeutin werden diskutiert und sollten in zukünftigen Untersuchungen berücksichtigt werden.

3.3. Studie 3: Within- and between-session changes of in-session reflective functioning of mothers in dyadic parent-infant psychotherapy

In *Studie 3* (Georg, Kasper et al., 2024; Appendix III) untersuchten wir die Entwicklung von Mentalisieren auf Basis mehrerer Familientherapien. Gründe für den Beginn der Familientherapien waren Regulationsstörungen der Säuglinge und das Ziel der Verbesserung der kindlichen Symptomatik durch eine Steigerung des Mentalisierens der Eltern. Dabei nutzten wir ein randomisiert ausgewählte Teilstichprobe einer Wirksamkeitsstudie für fSKEPT (Georg et al., 2021) mit 11 Therapien bestehend aus je vier Therapiesitzungen. Das Ziel der Studie war die Untersuchung der Entwicklung des Mentalisierens der Eltern bzw. der Mütter (meist waren von den Eltern nur die Mütter anwesend) innerhalb und zwischen den Therapiesitzungen. Dabei wurde untersucht, ob sich die Mentalisieren im Allgemeinen verbessert, und, ob sich Mentalisieren bezogen auf das Kind stärker verbessert als Mentalisieren bezogen auf das Selbst.

Die auf Video aufgezeichneten Therapiesitzungen wurden transkribiert und für die Kodierungen randomisiert. Die Kodierung der Mentalisierung erfolgte je Aussage der Mütter durch zertifizierte und reliable RF-Rater:innen mit einer Reliabilitätsprüfung bei sieben der 44 Therapiesitzungen (ICC = 0.73). Für die Unterscheidung der Aussagen der Mütter in die Kategorien Selbst und Kind wurde ein neues Ratinginstrument entwickelt. Die Kodierung in Selbst und Kind erfolgte durch eine Raterin mit einer Reliabilitätsprüfung bei drei der 44 Therapiesitzungen (Cohens Kappa = 0.71).

Zur Untersuchung der Dynamiken von Mentalisieren innerhalb und zwischen den Therapiesitzungen wurden kumulative ordinale Regressionsmodelle unter Kontrolle der Wortanzahl verwendet.

Die Fähigkeit zu Mentalisieren verbesserte sich signifikant innerhalb der Therapiesitzungen. Zu Beginn der Sitzungen war Mentalisieren bezogen auf das Kind niedriger als Mentalisieren bezogen auf das Selbst, wobei sich innerhalb der einzelnen Therapiesitzungen Mentalisieren bezogen auf das Kind signifikant stärker verbesserte als Mentalisieren bezogen auf das Selbst. Außerdem nahm die Mentalisierung zwischen der ersten und zweiten Sitzung signifikant zu und zwischen der dritten und vierten Sitzung signifikant ab.

In der Therapieprozessforschung ist dies die erste Studie, die in Mentalisieren bezogen auf das Selbst und Mentalisieren bezogen auf andere (Kind) differenziert und systematisch untersucht. In jeder der vier Therapiesitzungen unterlag Mentalisieren einem dynamischen Veränderungsprozess. Ein zentrales Ergebnis der Studie ist, dass Mentalisieren bezogen auf das Selbst zu Beginn höher war als Mentalisieren bezogen auf das Kind, wobei sich Mentalisieren bezogen auf das Kind stärker als Mentalisieren bezogen auf das Selbst steigerte. Dies ist in Übereinstimmung mit den fSKEPT Therapiezielen, wobei die Art und Weise der Förderung des Mentalisierens bezogen auf das Kind weiterer Forschung bedarf. Es ist beachtenswert, dass während der Sitzungen eine Verbesserung des Mentalisierens beobachtet werden konnte, diese aber nicht bis zur nächsten Sitzung anhielt. Die Frage nach der Unterscheidung und dem Übergang zwischen Mentalisierung als Zustand und Eigenschaft sind noch nicht ausreichend erforscht.

3.4. Studie 4: From Self to Others: Expanding the Therapeutic Zone of Proximal Development – A Metasynthesis of Mentalizing Change Facilitated by Psychotherapy

In *Studie 4* (Kasper et al., under review; Appendix IV) war es unser Ziel, den Veränderungsprozess des Mentalisierens durch die Psychotherapie qualitativ im Rahmen einer Metasynthese zu untersuchen und in einem Phasenmodell abzubilden. Im Rahmen einer Metasynthese wurden neue theoretische Erkenntnisse zur Veränderung von Mentalisieren in der Psychotherapie anhand publizierter Fallstudien und deren empirischer, qualitativer Erkenntnisse gewonnen (Krivzov et al., 2021).

Bei der Auswahl der publizierten Fallstudien wurde der Fokus unabhängig vom Störungsbild der Patient:innen und Psychotherapieverfahren auf Fallstudien gelegt, die

Mentalisieren innerhalb ambulanter Psychotherapie für Erwachsene beschreiben. Zum Einschluss der Fallstudien nutzten wir drei Datenbasen, wobei wir 533 Studien bzgl. Ihres Titels und Abstracts screenten, davon 41 Studien als Volltext lasen und schlussendlich 20 Fallstudien (22 Patient:innenfälle) in unsere Analyse einschlossen. Die Auswahl der Studien erfolgte jeweils durch zwei Personen im Konsens. Die durchgeführte Metasynthese beruht auf einer thematischen Synthese, in der die systematische Kodierung der Daten und die Generierung von deskriptiven und dynamischen Themen stattfand. Wir entschieden uns für einen induktiven iterativen Ansatz, um Themen höherer Ordnung aus den Fallstudien generieren und eine Modelltheorie aufstellen zu können. Die Analyse der Fallstudien im Rahmen der Metasynthese erfolgte anteilig durch alle vier Autoren.

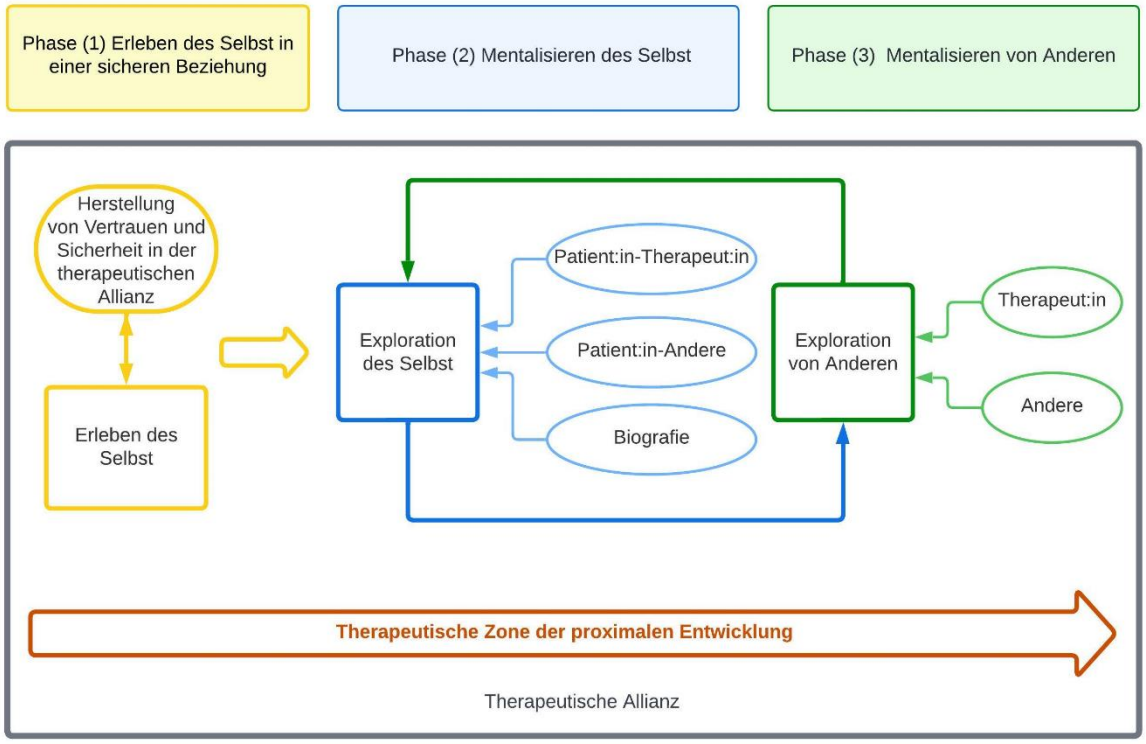

Abbildung 1. Phasenmodell zur Veränderung von Mentalisieren in der Psychotherapie

Das entwickelte Phasenmodell (Abbildung 1) beschreibt die Entwicklung von Mentalisieren in der Psychotherapie transdiagnostisch und verfahrensübergreifend unter Berücksichtigung der Patient:innen-Therapeut:innen Interaktion. Das Phasenmodell umfasst drei Phasen: (1) Erleben des Selbst in einer sicheren Beziehung, (2) Mentalisieren des Selbst und (3) Mentalisieren von Anderen. Zur Förderung des Mentalisierens der Patient:innen sollte sich der oder die Therapeutin über den Therapieverlauf betrachtet zunächst zurückhaltend verhalten und den Patient:innen Raum geben, sich selbst zu erleben und zu erfahren. In der ersten Phase liegt der Fokus auf der Erfahrung des Selbst. Hierzu zählen das Wahrnehmen,

Erkennen und Benennen von mentalen Zuständen. Hierfür werden Interventionen empfohlen, die die Selbsterfahrung fördern, wie beispielsweise empathische Validierungen. In der zweiten Phase liegt der Schwerpunkt auf einem tieferen Verständnis der mentalen Zustände, wozu Gründe und Ursachen der mentalen Zustände zählen. Hierfür können die Domänen Patient:in-Therapeut:in Beziehung, Patient:in-Andere Beziehung und Biografie genutzt werden. In der dritten Phase liegt der Fokus auf der Wahrnehmung und dem Verständnis der Ursachen der mentalen Zustände von anderen. Hierfür können die Domänen Therapeut:in und Andere (Familie, Freunde, Kolleg:innen etc.) genutzt werden. In der zweiten und dritten Phase wird den Therapeut:innen empfohlen, neue Perspektiven und Interpretationen einzubringen, wobei auch hier eine Paarung mit empathisch validierenden Interventionen und eine empathische Haltung förderlich sind. Weitere hilfreiche Interventionen sind: Spiegelung, Konfrontation, Einführung neuer Perspektiven, selektiv authentische Selbstoffenbarung und der Einbezug körperlicher Reaktionen oder Empfindungen der Patient:innen.

Die therapeutische Beziehung ist als Basis eines erfolgreichen kollaborativen therapeutischen Prozesses im gesamten Phasenmodell von großer Bedeutung. Erst bei ausreichendem Vertrauen gegenüber dem oder der Therapeut:in ist es Patient:innen möglich, über innere mentale Zustände zu sprechen. Außerdem ist für eine optimale Förderung der Patient:innen zu Mentalisieren die therapeutische Zone der proximalen Entwicklung (TZPE) von großer Wichtigkeit. Die TZPE beschreibt den Raum, in dem das Mentalisieren der Patient:innen effektiv gefördert werden kann. In der TZPE ist therapeut:innenseitig darauf zu achten, welche Entwicklungsschritte die Patient:innen alleine und mit Hilfe der Therapeut:innen erreichen können, ohne dass es zu einer Unter- oder Überforderung kommt. Insgesamt können im Phasenmodell Zusammenhänge zwischen der Entwicklung des Mentalisierens in der Psychotherapie und der frühen Kindheit gesehen werden.

Das neu entwickelte Phasenmodell stellt als erste Theorie zur psychotherapeutischen Veränderung von Mentalisieren basierend auf empirischen Befunden dar (siehe 2.4.2). Je Phase werden Empfehlungen für den Fokus der Therapie und für spezifische therapeutische Interventionen abgeleitet. Das Modell kann somit die Basis für zukünftige Forschung bilden sowie von Praktizierenden zur Konzeption von Psychotherapiesitzungen genutzt werden.

3.5. Studie 5: Development and validation of the Mentalizing Emotions Questionnaire: A self-report measure for mentalizing emotions of the self and other

In *Studie 5* (Kasper et al., 2024; Appendix V) haben wir den Fragebogen Mentalizing Emotions Questionnaire (MEQ) zur Erfassung von Mentalisierung von Emotionen des Selbst und anderer entwickelt und validiert. Mentalisierung von Emotionen und die Unterscheidung in die Dimensionspole Selbst und Andere wurde bisher in der Erhebung von Mentalisierung vernachlässigt (siehe 2.3). Der MEQ zielte darauf ab diese Lücke zu schließen. Hierfür wurden zwei Untersuchungen mit jeweils N > 500 durchgeführt.

Für die Entwicklung des Fragebogens MEQ wurden in einem mehrstufigen Peer-Review-Verfahren Items zur Mentalisierung von Emotionen formuliert. Hierzu wurden die Dimension Selbst und andere sowie drei Komponenten (Identifizieren, Verarbeiten und Kommunizieren), die essenziell für die Mentalisierung von Emotionen sind, berücksichtigt: Identifizieren bezieht sich auf das Wahrnehmen und Benennen von Emotionen in Bezug auf sich selbst und andere; Verarbeiten bezieht sich auf ein tieferes Verständnis der Ursachen und Gründe von Emotionen in Bezug auf sich selbst und andere; Kommunizieren bezieht sich auf das Kommunizieren eigener mentalisierter Emotionen bzw. den Austausch über die Gefühle anderer. Bei der Formulierung der Items wurden die Mentalisierungsmerkmale der RF Skala (Interesse, Perspektiven, Akzeptanz, Veränderlichkeit) berücksichtigt und damit eine enge Verbindung zum Goldstandard der Erfassung von Mentalisierung hergestellt.

Zunächst wurde der neu entwickelte Fragebogen im Rahmen einer Exploratorischen Faktorenanalyse auf seine Fragebogenstruktur hin untersucht. Die Exploratorischen Faktorenanalyse indizierte eine drei-Faktorenstruktur mit 16 Items und einem Gesamtfaktor. Die drei Faktoren entsprechen den Skalen Selbst, Kommunikation und Andere und werden in der Gesamtskala Mentalisierung von Emotionen vereint. Die Skala Selbst erfasst das Identifizieren und Verarbeiten von Emotionen, die Skala Kommunikation beschreibt das Mitteilen der eigenen mentalisierten Emotionen gegenüber anderen und die Skala Andere vereint das Identifizieren und Verarbeiten von Emotionen in Bezug zu anderen. Der MEQ zeigte akzeptable bis sehr gute psychometrische Werte mit einer sehr hohen internalen Konsistenz und guter Konstruktvalidität.

In der zweiten Untersuchung wurde die Faktorenstruktur anhand einer Konfirmatorische Faktorenanalyse bestätigt (CFI = .959, RMSEA = .078, SRMR = .04) und auf ihre psychometrischen Eigenschaften geprüft, wobei diese eine exzellente internale Konsistenz (α

= .92 - .95) und gute Validität zeigte. Es konnten Zusammenhänge zwischen dem MEQ und bereits vorhandenen Fragebögen zur Mentalisierung, Epistemischen Vertrauen und Emotionen gezogen werden. Zudem lieferte der MEQ über andere Mentalisierungsfragebögen hinaus inkrementelle Validität über das eng verwandte Konstrukt Empathie.

Der MEQ ist ein valides, reliables und ökonomisches Instrument zur Erfassung der Mentalisierung von Emotionen. In einem nächsten Schritt sollte die Reliabilität des MEQ anhand der RF Skala gemessen werden. Weiterentwicklungen des MEQ als Verlaufsinstrument sind ebenfalls erstrebenswert.

4. Diskussion

Das übergreifende Ziel dieser Arbeit war es, Mentalisierung als potenziellen Veränderungsmechanimus in der Psychotherapie detailliert zu analysieren. Es sollte ein Verständnis über die Entwicklung von Mentalisieren sowie ein Verständnis der therapeutischen Veränderung von Mentalisieren im Verlauf der Psychotherapie erarbeitet werden.

Im Rahmen der vorliegenden Arbeit wurden fünf empirische Studien durchgeführt. Es war uns möglich auf der Makroebene eine modellhafte Darstellung der Veränderung von Mentalisieren in der Psychotherapie im Kontext des zeitlichen Verlaufs über die Therapie hinweg (Studien 1 bis 4) und auf der Mikroebene spezifische therapeutische Interventionen zur Förderung von Mentalisieren zu erarbeiten (Studien 1 und 2). Es konnten auf der Makro- und Mikroebene verschiedene wichtige Faktoren herausgearbeitet werden, wie z.B. die therapeutische Allianz oder die TZPE (Studien 2 und 4). Ebenfalls war auf der Makro- und Mikroebene zu sehen, dass eine Differenzierung des Mentalisierens in die Dimensionspole Selbst und Andere wichtig ist (Studien 3 bis 5). Zudem wurde ein Fragebogen zur Erfassung der Mentalisierung von Emotionen bezogen auf das Selbst und andere entwickelt und validiert, der zukünftig für den Einsatz in der Prozessforschung angepasst werden kann (Studie 5).

4.1. Makroebene: Betrachtung des Therapieverlaufs

In der vorliegenden Arbeit wurde auf Makroebene untersucht, wie sich Mentalisieren im Verlauf der Therapie verändert, wie sich der Einsatz von therapeutischen Interventionen und Interventionsleveln über die Therapie hinweg gestaltet, ob Therapiephasen im Verlauf der Therapie erkennbar sind und wie diese sich charakterisieren lassen.

Es konnte festgestellt werden, dass Mentalisieren über die Psychotherapie hinweg Schwankungen unterworfen ist (Studien 1 bis 3). In Studie 1 konnte über den Verlauf der

Therapie eine signifikante Steigerung festgestellt werden, jedoch wurden methodisch die zeitlichen Abstände zwischen den Sitzungen nicht berücksichtigt. In Studie 3 konnte unter Berücksichtigung der zeitlichen Abstände zwischen den Sitzungen keine Steigerung über die Therapie hinweg gezeigt werden. Bei einem Vergleich der Studie 1 und 3 ist zu beachten, dass es sich um unterschiedliche Therapieformen mit unterschiedlichem Fokus und unterschiedlicher Dauer handelt: Studie 1 bildet eine Langzeittherapie (über 120 Sitzungen) und Studie 3 eine Kurzzeittherapie (4 Sitzungen) ab.

Die Studienlage zum Einfluss von Therapieverfahren und Therapiedauer auf die Steigerung von Mentalisieren deutet darauf hin, dass besonders psychodynamische Langzeittherapien zur Förderung von Mentalisierung beitragen (Katznelson, 2014). Es wird davon ausgegangen, dass über einen längeren Zeitraum hinweg die therapeutische Unterstützung die Verbesserung der autonomen Entwicklung der Patient:innen stimuliert (Stiles et al., 2016). Daher wird angenommen, dass über die Zeit hinweg das Niveau der TZPE in Bezug auf Mentalisieren steigt (Stiles et al., 2016). Das Konzept der TZPE konnte bisher in einer Vielzahl von Psychotherapien identifiziert werden (Gabalda & Stiles, 2013; Meystre et al., 2014; Stiles et al., 2016; Wang & Xiang, 2022), unter anderem auch im Bereich des Mentalisierens (Diamond et al., 2003; Folmo et al., 2019; Taubner & Sharp, 2024). Die TZPE umfasst den Bereich, in dem therapeutisch effektiv gearbeitet werden kann und ist dadurch auf der Makro- und der Mikroebene von Bedeutung (Studie 4). Die Unterstützung durch die Therapeut:inen ermöglicht es den Patient:innen, Schritte in der Entwicklung der Mentalisierung zu bewältigen, die sie alleine nicht hätten bewältigen können. Die TZPE könnte als Erklärungsansatz für die Steigerung des Mentalisierens vor allem in Langzeittherapien dienen. Positiv auf die Steigerung können sich insbesondere ein hohes Grundniveau der Patient:innenfähigkeiten (z.B. Mentalisierung), eine starke therapeutische Förderung (z.B. Therapie-Fokus, Einsatz von Interventionen) und eine gute Arbeits-Atmosphäre (z.B. therapeutische Beziehung) auswirken (Studie 4).

Explorativ wurde untersucht, wie sich Mentalisieren innerhalb verschiedener Themen im Verlauf einer Psychotherapie entwickelt (Studie 1). Es konnte festgestellt werden, dass trotz unterschiedlicher Häufigkeit, mit der die Themen in der Therapie besprochen wurden, Mentalisieren innerhalb aller Themen zunahm. Somit kann die Hypothese aufgestellt werden, dass sich Mentalisieren als Kompetenz themenunabhängig entwickelt. Dies sollte in zukünftigen Studien geprüft werden.

Anhand der Häufigkeiten der Interventionslevel über den Therapieverlauf hinweg konnten in Studie 2 keine Therapiephasen erkannt werden. Jedoch konnte festgestellt werden, dass über

alle Sitzungen und Patienten hinweg das am häufigsten eingesetzte Interventionslevel Klarifizierung, Exploration und Challenge und das am wenigsten eingesetzte Interventionslevel Mentalisierung der Beziehung war. Entsprechend der hierarchischen Ordnung der Interventionslevel (siehe 2.4.3) würde dies bedeuten, dass Interventionen, deren Einsatz bei hohem Arousal empfohlen wird, besonders häufig und Interventionen, deren Einsatz bei niedrigem Arousal empfohlen wird, seltener eingesetzt wurden. In zukünftigen Studien wäre es wichtig, das Arousal der Patient:innen mit zu erheben, um mögliche Zusammenhänge analysieren zu können.

In Studie 4 konnten wir jedoch drei Therapiephasen herausarbeiten: (1) Erleben des Selbst in einer sicheren Beziehung, (2) Mentalisieren des Selbst und (3) Mentalisieren von Anderen. Für jede Phase lassen sich unterschiedliche therapeutische Schwerpunkte und Interventionsempfehlungen für eine effektive Förderung des Mentalisierens in der Psychotherapie ableiten. Dies geht einher mit der TZPE, die die Abhängigkeit der Wirksamkeit von Interventionen zur Förderung des Mentalisierens von phasen- und personenspezifischen Merkmalen betont (Studie 4). Eine Ausnahme hierbei bilden jedoch die MfF, die in jeder Therapiephase (Studien 1 und 4) eine mentalisierungsfördernde Wirkung zeigte. In bisherigen Studien war die Wirkung der MfF lediglich in Therapieausschnitten und nicht über den gesamten Therapieverlauf hinweg getestet worden (Kivity et al., 2021; Möller et al., 2017).

In der ersten Phase, Erleben des Selbst in einer sicheren Beziehung, steht zum einen das Herstellen von Vertrauen und Sicherheit in der therapeutischen Allianz und zum anderen das Erleben des Selbst im Vordergrund. Die Relevanz einer vertrauensvollen therapeutischen Allianz als Basis des therapeutischen Arbeitens wird unter anderem von Sylvestre und Gobeil (2020) gestützt. Zur Unterstützung der Patient:innen in ihrem Erleben des Selbst wird die Identifikation von mentalen Zuständen fokussiert, welche das Wahrnehmen, Erkennen und Benennen von mentalen Zuständen durch die Patient:innen umfasst. Allgemein sollten die Therapeut:innen in dieser Phase eine wertschätzende validierende Haltung einnehmen und ggf. eigene Ansichten und Interpretationen zurückhalten. Es zeigte sich zudem, dass auch konkrete Hilfestellungen durch die Therapeut:innen das Epistemische Vertrauen aktiv fördern konnten (Studie 4).

In der zweiten und dritten Phase, Mentalisieren des Selbst und Mentalisieren von Anderen, wird ein tiefgreifender Prozess des Verstehens der Ursachen und Gründe hinter einem spezifischen Verhalten und mentalen Zuständen angestrebt (Studie 4). Die Wichtigkeit der Differenzierung des Mentalisierens in Selbst und andere konnte in den Studien 3 bis 5 gezeigt werden. In der fSKEPT (Studie 3) wurde die Phase des Erlebens des Selbst in einer sicheren

Beziehung und die Phase Mentalisieren des Selbst verkürzt bzw. übersprungen, da der Fokus direkt auf das Mentalisieren von Anderen (das Kind) gelegt wurde. Eine gegenseitige Beeinflussung der beiden Dimensionspole Selbst und Andere ist anzunehmen. Wir gehen davon aus, dass erst eine ausreichende Mentalisierung des Selbst vorliegen muss, um andere mentalisieren zu können (Studie 4). Diese Annahme wird von Dimaggio et al. (2008) gestützt. Ist es den Patient:innen möglich andere zu mentalisieren, ist anzunehmen, dass im weiteren Verlauf der Psychotherapie flexibel zwischen der zweiten und dritten Phase gewechselt werden kann (Studie 4). Zwischen den Polen Selbst und Andere mit einer zunehmenden Flexibilität wechseln zu können, entspricht einer hohen Mentalisierungsleistung. Somit sprechen unsere Ergebnisse gegen die MBT-Theorie zu den Konterbewegungen innerhalb der Mentalisierungsdimensionen (siehe 2.4.3), zumindest bei schwacher Mentalisierung am Beginn einer Therapie. In der Phase des Mentalisierens des Selbst und der Phase des Mentalisierens von Anderen können zur Förderung des Mentalisierens die gleichen Interventionen eingesetzt werden, wobei eine unterschiedliche Fokussetzung erforderlich sein kann (Studie 4). Wichtige Interventionen in der Exploration des Selbst und anderer sind: Spiegelung, Konfrontation, Einführung neuer Perspektiven, selektiv authentische Selbstoffenbarung und der Einbezug körperlicher Reaktionen oder Empfindungen der Patient:innen. Zudem erzeugte in der Phase des Mentalisierens des Selbst die Intervention Deutung gepaart mit einer empathischen Validierung im Gegensatz zur ersten Phase aus Sicht der Therapeut:innen eine positive Reaktion bei den Patient:innen.

Das in Studie 4 entwickelte Phasenmodell weist Ähnlichkeiten zum Modell Modi der Erfahrung von Bateman et al. (2023) (siehe 2.4.2) auf: Das Erleben des Selbst und das Mentalisieren des Selbst umfassen unter anderem die Selbstwahrnehmung sowie die Entwicklung eines Selbstkohärenzgefühls und sind damit vergleichbar mit dem Ich-Modus. Der Mich-Modus, der die eigene Perspektive auf andere und die Perspektive anderer auf das Selbst integriert, kann dem Mentalisieren des Selbst und Mentalisieren von Anderen zugeordnet werden. Es ist jedoch zu betonen, dass Mentalisieren von Anderen ein tieferes mentalisierendes Verständnis erfordert. Ein wichtiger Faktor des Phasenmodells ist der kollaborative Ansatz zwischen Therapeut:innen und Patient:innen, welcher eng verknüpft mit der TZPE ist. Beispielsweise sollten die Therapeut:innen die Reaktionen der Patient:innen auf ihre Interventionen miteinbeziehen. Dieser kollaborative Ansatz stärkte das Mentalisieren und konsolidierte das Gefühl des Verstanden Werdens. Dies ist vergleichbar mit dem Wir-Modus (Bateman et al., 2023), in dem während der Therapie gemeinsame Aufmerksamkeit und Verstehen in Bezug auf mentale Zustände erarbeitet werden soll.

4.2. Mikroebene: Betrachtung einzelner Therapiesitzungen

In der vorliegenden Arbeit wurde auf der Mikroebene untersucht, wie sich das Mentalisieren im Verlauf von Therapiesitzungen verändert, wie Mentalisieren sich differenziert in die Dimensionspole Selbst und Andere entwickelt und welche spezifischen therapeutischen Interventionen zur Förderung effektiven Mentalisierens beitragen,

Die Fähigkeit zu Mentalisieren fluktuierte innerhalb der Therapiesitzungen (Studien 1bis 3). Dennoch konnte in Studie 3 innerhalb der Therapiesitzungen eine Steigerung des Mentalisierens festgestellt werden. Erstmalig wurde innerhalb von Therapiesitzungen Mentalisieren in die Dimensionspole Selbst und Andere (hier das Kind) unterschieden (Studie 3). Es konnte gezeigt werden, dass zu Beginn der Therapiesitzungen die Fähigkeit, das Selbst zu mentalisieren, größer war als die Fähigkeit, das Kind zu mentalisieren. Allerdings erfolgte innerhalb der Therapiesitzungen eine stärkere Steigerung des Mentalisierens bezogen auf das Kind im Vergleich zum Mentalisieren bezogen auf das Selbst. Diese Entwicklung entspricht den Therapiezielen der fSKEPT, welche auf die Steigerung des Mentalisierens der Eltern in Bezug auf das Kind abzielen. Diese Ergebnisse aus Studie 3 legen nahe, dass eine Differenzierung des Mentalisierens in die Dimensionspole Selbst und Andere innerhalb von Therapiesitzungen je nach Therapiefoki von Relevanz ist. Es kann die Hypothese aufgestellt werden, dass Mentalisieren sich dimensionsabhängig (Selbst vs. Andere) entwickelt (Studien 3 und 4). Dies ist in zukünftigen Studien zu prüfen.

Lag der Schwerpunkt in den Studien 1 und 3 unter anderem darauf, zu untersuchen, ob Mentalisieren über den Verlauf der Therapie bzw. innerhalb der Therapiesitzungen zunimmt, wird der Schwerpunkt in Studie 2 auf die Analyse einzelner Sequenzen des effektiven Mentalisierens gesetzt.

Wir entwickelten mit einem induktiven und deduktiven Ansatz ein MBT-Interventions-Kodiermanual mit insgesamt 20 Interventionen, die Interventionsleveln (siehe 2.4.3) zugeordnet wurden (Studie 2). Die vier Interventionslevel (siehe 2.4.3) wurden in Studie 2 bei allen Patienten über alle Sitzungen hinweg ähnlich häufig eingesetzt, jedoch erwiesen sich bei den Patienten in Bezug auf effektives Mentalisieren unterschiedliche Interventionslevel und Interventionen als nützlich. Effektives Mentalisieren zeigte sich bei Interventionsleveln, die mit geringem und hohem Arousal assoziiert sind. Die einzige Intervention, die in Studie 2 bei allen drei Patienten im Zusammenhang mit effektivem Mentalisieren stand, war die MfF: Zwei Patienten zeigten effektives Mentalisieren bei MfF in Bezug auf Emotionen und der dritte

Patient bei MfF in Bezug auf Kognitionen. Dementsprechend sollte, unter Berücksichtigung der Ergebnisse auf Makroebene (siehe 4.1), die Fokussierung der MfF an die Dimensionspole Kognitiv und Affektiv sowie Selbst und andere unter Einbezug der jeweiligen TZPE der Patient:innen angepasst werden (Studien 2 und 4). Das bedeutet, dass die von den Patient:innen geforderte Mentalisierungsleistung mit einer spezifischer Fokussetzung für die Patient:innen herausfordern aber nicht überfordernd sein sollte. Die Wichtigkeit der MfF zur Förderung von Mentalisieren deckt sich mit Studie 1 sowie den Studien von Kivity et al. (2021) und Möller et al. (2017). Neben der MfF zeigten je Patient unterschiedliche Interventionen einen Zusammenhang zu effektivem Mentalisieren (Studie 2): empathische Validierung, Themenwechsel, Challenge, Affektelaboration, Mentalisierung für Patient:innen und Mentalisierung der Beziehung. Die Intervention Mentalisieren für die Patient:innen wurde ebenfalls in einer Einzelfallstudie zu einer fSKEPT als hilfreiche Intervention zur Förderung von Mentalisieren angesehen (Georg et al., 2019). Entgegen dieser empirischen Befunde steht der theoretische Ansatz der MBT, der sich gegen das Mentalisieren für die Patient:innen ausspricht (Bateman & Fonagy, 2016). Anders stellt es sich mit der Intervention Mentalisierung der Beziehung dar: theoretisch (Bateman & Fonagy, 2016) und empirisch (Studien 2 und 4) zeigt sie sich als äußert effektiv und wird jedoch in den hier untersuchten Stichproben nur selten eingesetzt (Studien 1 und 2). Eventuell ist die Häufigkeit des Einsatzes von Mentalisierung der Beziehung therapeut:innenspezifisch (Karterud et al., 2013). Die in den Studien 1 und 2 untersuchten Psychotherapien wurden von derselben Studientherapeutin durchgeführt. Unter der Annahme, dass Mentalisierung der Beziehung bei geringem Arousal eingesetzt werden soll (siehe 2.4.3), ist denkbar, dass das Arousal der Patient:innen in Studien 1 und 2 zu hoch war.

Eng mit Arousal verbunden sind die Prämentalisierungsmodi (siehe 2.2). Auffällig ist, dass Interventionen, die theoretisch zur Unterbrechung der Prämentalisierungsmodi führen, im Zusammenhang mit effektivem Mentalisieren standen.

Die in Studie 2 festgestellte patientenspezifische Wirkung der Interventionen deckt sich mit der Annahme der TZPE, dass die Wirkung der Interventionen abhängig von Patient:innenmerkmalen sind (Studie 4). Als mögliche Patient:innenmerkmale können das Niveau des Mentalisierens bzw. die Prämentalisierungsmodi der Patient:innen, das Arousal und das Persönlichkeitsfunktionsniveau diskutiert werden (Studien 2 und 4). Ebenfalls kann es sein, dass die Qualität der therapeutischen Allianz und therapeut:innenspezifische Merkmale von Bedeutung sind, wie das Mentalisierungsniveau der Therapeut:innen (Studie 4). Diamond et al. (2003) stellen die Hypothese auf, dass für eine optimale Förderung des Mentalisierens der

Patient:innen die Therapeut:innen ihr Mentalisieren so weit an die der Patient:innen anpassen sollten, dass sie den Patient:innen nur geringfügig voraus sind. Dies würde wiederum dazu passen, dass eine erfolgreiche therapeutische Arbeit am oberen Rande der TZPE der Patient:innen stattfinden sollte, ohne diese zu überschreiten (Studie 4). Dies deckt sich mit den Ergebnissen anderer Studien (Folmo et al., 2019; Ribeiro et al., 2013). Wenn therapeutische Interventionen die TZPE überschreiten und damit für die Patient:innen überwältigend sind, können Brüche in der therapeutischen Beziehung eintreten oder es kann sich eine oberflächliche Zustimmung bzw. Hypermentalisierung bei den Patient:innen einstellen (Studie 4). Es wird angenommen, dass eine Unterschreitung der TZPE einer Unterforderung der Patient:innen entspricht, so dass hierbei mit keinem therapeutischen Fortschritt zu rechnen ist (Stiles et al., 2016).

4.3. Erfassung des Mentalisierens von Emotionen auf Makro- und Mikroebene

Im Rahmen dieser Arbeit entwickelten und validierten wir den MEQ, einen Fragebogen zur Erfassung der Mentalisierung von Emotionen des Selbst und anderer. Die Wichtigkeit der Differenzierung in die Dimensionspole Selbst und Andere wird im Manual der RF Skala mehrfach betont (Fonagy et al., 1998) und wird zudem durch unsere Ergebnisse der Studien 3 und 4 gestützt. Darüber hinaus werden in der Psychotherapie sowohl Emotionen als auch Kognitionen im Sinne eines tieferen Verstehens als wichtige Komponenten der Veränderung angesehen (McCarthy et al., 2017). Der MEQ schließt eine Lücke der bisherigen Erhebungsinstrumente der Mentalisierung (siehe 2.3).

Der MEQ besteht aus 16 Items mit drei Skalen: Selbst, Kommunikation und Andere. Die Skala Selbst umfasst die Identifikation (Wahrnehmen, Erkennen und Benennen) und das Verarbeiten (Ursache und Gründe) von Emotionen in Bezug zum Selbst. Die Skala Andere umfasst die Identifikation und das Verarbeiten von Emotionen in Bezug zu anderen. Die Skala Kommunikation bezieht sich auf das Mitteilen und Sprechen über die eigenen mentalisierten Emotionen mit anderen. Zusammengenommen bilden die drei Skalen die Gesamtskala Mentalisierung von Emotionen. Der MEQ ist ein valides und reliables Instrument zur Erfassung der Mentalisierung von Emotionen.

Es können Parallelen zwischen dem MEQ und dem Phasenmodell (Studie 4) gezogen werden. Die Skala Selbst kann in Verbindung mit der Anfangsphase und der Entwicklungsphase in Bezug zum Selbst und die Skala Andere in Verbindung mit der Entwicklungsphase in Bezug zu anderen des Phasenmodells gesetzt werden. Die Skala Kommunikation findet sich im Phasenmodell und allgemein in der Psychotherapie indirekt in

der Kommunikation zwischen Therapeut:innen und Patient:innen wieder. Hier ist zu vermuten, dass zusätzlich Epistemisches Vertrauen von großer Bedeutung ist, um anderen eigene Emotionen und mentale Zustände mitzuteilen (Fonagy & Allison, 2014). Jedoch ist zu beachten, dass sich der MEQ ausschließlich auf Emotionen und nicht auf allgemein mentale Zustände bezieht.

Der MEQ eignet sich zur Erfassung der Mentalisierung von Emotionen in Bezug zum Selbst und anderen, beispielsweise als Instrument einer Vergleichsmessung vor und nach Psychotherapien oder zwischen Patient:innen (Makroebene). Zukünftig wäre eine Validierung des MEQ anhand der RF Skala als Goldstandard der Erfassung von Mentalisierung wünschenswert. Ebenfalls ist es vorstellbar, den MEQ mit seinen drei Skalen als Verlaufsinstrument (Patient:innen und Therapeut:innen Version) weiterzuentwickeln und zu validieren, um zusätzlich den Prozess des Mentalisierens von Emotionen (als Zustand) bezogen auf das Selbst, andere und die Kommunikation mit dem oder der Therapeut:in über die Psychotherapie hinweg erfassen zu können (Mikroebene).

4.4. Limitationen

Als Limitation dieser Arbeit sind die Limitationen der einzelnen Studien sowie die Limitation der Reichweite der integrierten Ergebnisse der einzelnen Studien zu sehen.

In den Studien 1 bis 3 ist die Patient:innenanzahl relativ gering. Zudem ist die geringe Therapiesitzungsanzahl in Studien 2 und 3 kritisch zu betrachten. Die geringe Patient:innen- oder auch Therapiesitzungsanzahl erlaubt jedoch eine explorative Aufstellung neuer Theorien. Aus ökonomischer Sicht waren eine größere Stichprobe und die Abbildung des gesamten Therapieverlaufs aufgrund des sehr aufwendigen RF Ratings und Kodierens von Interventionen oder der Differenzierung in Selbst und Kind (Studien 1, 2 und 3) nicht umsetzbar. Aufgrund der gewählten Methodik der Zeitreihenanalyse wird der zeitliche Effekt zwischen den verschiedenen Therapiephasen und Therapiesitzungen in Studie 1 vernachlässigt. In Studie 2 wurden die kodierten Interventionen den Interventionsleveln zugeordnet, obwohl bisher keine explizite Nennung von Interventionen je Interventionslevel existiert. Hier sollte eine weitere Überprüfung der Zuordnung der Intervention Klarifizierung erfolgen, die sich als Intervention in Studie 2 auf Fakten und nach Interpretation der Interventionslevel auf mentale Zustände bezieht. In Studien 2 und 3 wurden zwei neue Kodiermanuale entwickelt, die eine weitere Testung und Validierung benötigen, vorzugsweise anhand bereits etabliertet und valider Instrumente. Eine weitere Limitation der Studien 1 und 2 ist der fehlende Einbezug von

weiteren potenziell wichtigen Faktoren, die die Wirkung von Interventionen auf die Mentalisierung beeinflussen können, wie beispielsweise die therapeutische Beziehung, das Arousal, Prämentalisierungsmodi sowie das Mentalisierungsniveau der Therapeut:in.

Die Metasynthese (Studie 4) beansprucht keine Repräsentativität, da dazu zunächst eine Prüfung des neu entwickelten Phasenmodells erforderlich ist. Die inkludierten Fallstudien weisen eine geringe Störungs- und Verfahrensvielfalt auf, so dass die Aussagekraft über psychodynamische Therapien für Persönlichkeitsstörungen hinaus eingeschränkt ist.

Zur Entwicklung und Validierung des MEQ (Studie 5) entschieden wir uns aus ökonomischen Gründen für eine Rekrutierung über einen Panel Anbieter, welches das Risiko einer limitierten Generalisierung in sich birgt. Die internale Konsistenz des Gesamtfaktors weist möglicherweise auf potenzielle Redundanz hin. In Bezug zur inkrementellen Validität sollten die Ergebnisse vor dem Hintergrund eines möglichen Typ 1 Fehlers interpretiert werden. Die inkrementelle und konvergente Validität sollte vorzugsweise mit der RF Skala getestet werden.

Insgesamt können keine Aussagen über kausale Zusammenhänge gemacht werden. Es existiert eine dynamische Wechselwirkung zwischen einzelnen Faktoren. Für eine Integration der Studien 1 bis 4 ist als Limitation zu benennen, dass in den Studien 1 bis 3 unterschiedliche Patient:innengruppen eingeschlossen wurden: Adoleszente (Studie 2) und Erwachsene (Studien 1 und 3) mit dem Unterschied, dass in Studie 3 die Eltern der eigentlichen Patient:innen untersucht wurden. Es kann als kritisch betrachtet werden, dass in den Fallstudien (Studien 1 und 2) dieselbe Therapeutin die Psychotherapien durchführte. Dadurch konnte die Therapeut:innenvarianz gering gehalten werden, aber auch therapeut:innenspezifische Charakteristika möglicherweise überschätzt werden. In Studie 1 wurde im Vergleich zu den Studien 2 und 3 eine andere Methodik der RF in-session verwendet: Im Studie 1 wurden 3-Minuten Segmente zur Kodierung verwendet, wohingegen in Studien 2 und 3 Aussage für Aussage analysiert wurde. Dies beeinträchtigt die Vergleichbarkeit der Studien. Es zeigte sich wiederholt, dass RF in-session sehr niedrig ist und eine geringe Varianz aufweist (Huwe et al., 2024). Eine Kodierung jeder Aussage in der Therapiesitzung ist einerseits praktikabel, um direkte Zusammenhänge zwischen Aktion und Reaktion der Patient:innen und Therapeut:innen im Therapiegeschehen besser erfassen zu können. Andererseits besteht dabei die Gefahr Mentalisieren zu gering einzuschätzen. Denn viele Aussagen sind als nicht-mentalisierend einzustufen, gehören aber zu Therapiesitzungen allgemein dazu (z.B. faktische Erklärungen, Zustimmung, Organisatorisches).

4.5. Zukünftige Forschung

Zukünftige Studien sollten die Replizierbarkeit des Phasenmodells anhand von empirischen Studien mit qualitativer und quantitativer Evaluation prüfen. Zudem sollten die mentalisierungsfördernde Wirkung von Interventionen unter Einbezug wichtiger Faktoren untersucht werden. Besonderes Interesse sollte hier Interventionen zur Durchbrechung der Prämentalisierungsmodi gelten. Dazu könnten größer angelegte naturalistische oder experimentelle Studien, spezifische Dismantling-Studien oder Experimente durchgeführt werden.

Allgemein ist ein transtheoretischer und transdiagnostischer Ansatz mit einer großen Stichprobe wünschenswert. Dismantling Studien könnten nach dem Vorbild von Ullberg et al. (2015) die in dieser Arbeit extrahierten Interventionen prüfen. In Dismantling-Studien muss sich jedoch auf die Analyse einer spezifischen Intervention festgelegt werden, daher könnten sich hierfür z.B. Mentalisierung der Beziehung oder Mentalisieren für den Patienten anbieten. Für die Testung der Interventionen auf ihre mentalisierungsfördernde Wirkung im Rahmen eines Experiments können erste Ansätze aus Talia, Kasper et al. (preprint) entnommen werden. In experimentellen Studien ist es von Interesse neben den Interventionen und den Therapiephasen weitere Einflussfaktoren systematisch zu untersuchen. In naturalistischen und experimentellen Studien könnten die videoaufgezeichneten Therapiesitzungen angepasst an die Fragestellung kodiert werden.

Zur Analyse der Interventionen sind die Kodierung des RF in-session je Aussage der Patient:innen und der Interventionen mit dem MBT-Interventions Kodiermanual sowie die Bildung effektiver Mentalisierungssequenzen zu empfehlen. Das MBT-Interventions Kodiermanual ist zunächst zu validieren. Bei der Analyse anhand der RF in-session sollte die Wortanzahl kontrolliert und der potenzielle Einfluss der Aussagenanzahl untersucht werden. Die folgenden Faktoren scheinen die Wirkung von Interventionen auf das Mentalisieren zu beeinflussen und sollten daher bei der Analyse berücksichtigt werden: TZPE, Arousal, Prämentalisierungsmodi, therapeutische Allianz, Mentalisierungsnievau der Therapeut:in. Vorstellbar sind hierbei Erhebungen über den Therapieverlauf hinweg anhand Fragebögen oder Kodierungen videoaufgezeichneter Therapiesitzungen, um die Zusammenhänge zwischen den Einflussfaktoren, Mentalisieren und Interventionen detaillierter zu analysieren.

Zur Analyse der TZPE kann jede Therapeut:innen Aussage mit dem Therapeutic Collaboration Coding System (Ribeiro et al., 2013) kodiert werden. Dadurch kann festgestellt

werden, ob die Interventionen im Bereich der TZPE liegen oder für die Patient:innen unter- oder überstimulierend sind. Für den Einbezug des Arousals können die Patient:innenaussagen nach dem Vorbild von Kivity et al. (2021) akustisch enkodiert werden oder nach dem Vorbild von Strifler und Diamond (2024) mit der Client Emotional Arousal Scale III-Revised (Warwar & Greenberg, 1999) kodiert werden. Zur Erfassung der Prämentalisierungsmodi kann die Modes of Mentalization Scale (Gagliardini & Colli, 2019) verwendet werden, welche je Aussage der Patient:innen kodiert werden kann (Gagliardini et al., 2020). Die therapeutische Allianz ist durch Selbstbericht aus Patient:innensicht (Session Alliance Inventory - Patient Version; Falkenström et al., 2015) und Therapeut:innensicht (Working Alliance Inventory-Short Form Revised – Therapist Version; Hatcher & Gillaspy, 2006) sowie objektiv durch Kodierung der auf videoaufgezeichneten Therapiesitzungen (Working Alliance Inventory – Short Form - Oberserver Version; Tichenor & Hill, 1989) erhebbar. Das Mentalisierungsnievau der Therapeut:innen kann durch die RF in-session je Aussage erfasst werden.

Zur Analyse der Phasen des Phasenmodells sind drei Ansätze möglich: eine Weiterentwicklung des MEQ als Verlaufsinstrument (Patient:innen und Therapeut:innen Version), RF Differenzierung in Selbst und andere sowie die Entwicklung und Validierung eines neuen Kodiermanuals. Der MEQ in Form eines Verlaufsinstrumentes könnte von Patient:innen und Therapeut:innen unimttelbar nach den Therapiesitzungen ausgefüllt werden, so dass die Komponenten Selbst, Andere und die Kommunikation zwischen Patient:in und Therapeut:in in Bezug zu mentalisierten Emotionen therapiesitzungsbezogen erfasst werden können. Mit der Therapeut:innen Version wäre neben dem Selbstbericht auch ein Fremdbericht möglich. Hiermit könnte aber nicht ausreichend zwischen Phase 1 (Erfahrung des Selbst) und Phase 2 (Exploration des Selbst) differenziert werden. Im Weiteren läge der Fokus ausschließlich auf Emotionen, so dass kognitive Inhalte vernachlässigt werden würden. Für diesen Ansatz müsste der MEQ in-session zunächst entwickelt und validiert werden. Eine objektive Differenzierung zwischen Selbst und anderen kann die Differenzierung der RF in die Komponenten Selbst und andere bieten. Hiermit wäre es aber nur möglich, die Mentalisierungsqualität bezogen auf das Selbst und bezogen auf andere zu erfassen. Eine Phaseneinteilung wäre nicht möglich. Als dritter Ansatz ist daher die Entwicklung und Validierung eines Kodiermanuals zur Phaseneinteilung denkbar. Wichtig wäre es im Zuge der Untersuchung des Phasenmodells die TZPE und therapeutische Allianz zu erfassen.

In experimentellen Studien wäre es wünschenswert eine Vorher-Nachher Testung durchzuführen, um die gemessenen Patient:innenzustände während der Therapie mit

Patient:inneneigenschaften vor und nach der Therapie sowie Therapieergebnissen in Verbindung zu setzen. Es sollte in diesem Zuge stärker zwischen der Mentalisierung als Eigenschaft und als Zustand differenziert werden. Diese Unterscheidung ist für die Erforschung der Mentalisierung als Konstrukt und Prozess von großer Wichtigkeit. Bislang existiert keine zufriedenstellende Erklärung des Zusammenhangs dieser beiden Arten der Mentalisierung. Die Metapher der Mentalisierung als Muskel (Bateman et al., 2023) erweist sich in seiner jetzigen Ausführung als unzureichend, um das Phänomen adäquat erklären zu können. Es ist ungeklärt, wie sich Mentalisierung als Zustand entwickelt, ob es einen Übergang zwischen Zustand und Eigenschaft gibt und wie sich ein solcher Übergang gestalten könnte. In zukünftiger Forschung zur Untersuchung von Mentalisierung als Eigenschaft und Zustand sind daher folgende Faktoren innerhalb einer Vorher-Nachher Testung von Interesse: Mentalisierung erfasst anhand des AAI (George et al., 1996) und des MEQ (Studie 5), das Persönlichkeitsfunktionsniveau, beispielsweise erhoben mit dem Level of Personality Functioning Questionnaire (Spitzer et al., 2021), Epistemisches Vertrauen, beispielsweise erhoben mit dem Epistemic Trust, Distrust and Credulity (Nolte et al., under review) und die Symptomschwere.

4.6. Fazit

Das Ziel dieser Arbeit war es, ein Verständnis der Entwicklung von Mentalisieren in der Psychotherapie und der therapeutischen Veränderungen von Mentalisieren zu entwickeln, um klinische Strategien zur Initiierung von Veränderungsprozessen formulieren und therapeutische Interventionen effektiver und effizienter gestalten zu können (Kazdin, 2007). Bisher existierten lediglich theoretisch abgeleitete Modelle zu Mentalisieren und dessen Stärkung in der Psychotherapie. Untersuchungen von Psychotherapien zur Förderung von Mentalisieren vernachlässigten bisher den Einsatz von Interventionen zur Stärkung von Mentalisieren, den Einbezug von Therapiephasen und -foki sowie die Unterscheidung in die Dimensionspole Selbst und Andere. Es gelang in der vorliegenden Arbeit Mentalisieren in der Psychotherapie anhand fünf empirischer Studien auf einer Makro- und Mikroebene zu analysieren und Implikationen für die Wissenschaft sowie die Psychotherapie abzuleiten.

Mentalisieren in der Psychotherapie manifestiert sich in einem variierenden, dynamischen Zustand. Im Rahmen der vorliegenden Arbeit stellen wir die Hypothese auf, dass der Fokus nicht auf einer allgemeinen Steigerung des Mentalisierens über den Therapieverlauf hinweg oder innerhalb der Therapiesitzungen, sondern auf dem Traning von effektivem Mentalisieren liegen sollte: Es sollte darauf abgezielt werden, einzelne Momente der Mentalisierungssteigerung und den Wechsel von mentalen Zuständen zu fördern. Der Fokus

sollte auf der Initiierung und Stärkung der Mentalisierung von spezifischen Aspekten des Lebens, die bisher nicht mentalisiert wurden (z.B. Selbst- oder Fremdgefährdendes Verhalten), gelegt werden. Mit Hilfe der Therapeut:innen soll eine Förderung des Mentalisierens stattfinden, die autonome Entwicklungsprozesse des Mentalisierens der Patient:innen anregen sollen.

Das neu entwickelte Phasenmodell mit seinen drei Phasen kann zur Behandlungsplanung und zur Einschätzung des Therapiefortschrittes genutzt werden. Unter anderem können aus dem Phasenmodell der therapeutische Fokus, die zu verwendenden therapeutischen Interventionen und die Indikation der Therapiedauer (Langzeit oder Kurzzeit) für Psychotherapien abgeleitet oder überprüft werden. Es zeigte sich, dass eine Differenzierung des Mentalisierens in die Dimensionspole Selbst und Andere zum einen im Therapieverlauf und innerhalb der Therapiesitzungen für eine effiziente Förderung des Mentalisierens und zum anderen bei der Erfassung der Mentalisierung von Emotionen für eine ganzheitliche Erfassung des Mentalisierungskonstrukts von Bedeutung ist.

Die Intervention MfF zeigte patient:innenübergreifend und über die gesamte Therapie hinweg eine mentalisierungsfördernde Wirkung, wobei in eine kognitive und affektive Fokussetzung unterschieden werden kann. Diese Ergebnisse sprechen dafür, dass MfF für die Mehrheit der Patient:innen eine mentalisierungsfördernde Wirkung aufweisen. Die Auswahl und der Einsatz weiterer Interventionen zur Förderung von effektivem Mentalisieren sollten gemäß der TZPE an phasen- und patient:innenspezifsiche Merkmale angepasst werden. In zukünftiger Forschung sollte auf verschiedene hier wichtig erscheinende Patient:innenmerkmale (Arousal, Prämentalisierungsmodi), Therapeut:innenmerkmale (Mentalisierungsniveau) und die therapeutische Beziehung eingegangen werden. Zur Personalisierung von Psychotherapien könnten bestimmte Patient:innenmerkmale mit spezifischen Interventionen verknüpft werden und so spezifische Behandlungsprofile erstellt werden.

Durch die Entwicklung und Validierung des MEQ, eines Fragebogens zur Erfassung der Mentalisierung von Emotionen mit den Skalen Selbst, Kommunikation und Andere, konnten wir eine wichtige Lücke in der Erhebung der Mentalisierung und ihrer Facetten schließen. Eine Weiterentwicklung des MEQ zu einem Verlaufsinstrument erscheint sehr vielversprechend für die weitere Erforschung des Mentalisierens in der Psychotherapie.

Zurückkehrend zu Kazdins (2007) Definition konnten wir ein besseres Verständnis zu Mentalisierung als potenziellen Veränderungsmechanismus in der Psychotherapie gewinnen und offene Forschungsfelder identifizieren, deren Erforschung zu einem noch umfassenderen

Verständnis des Mentalisierens in der Psychotherapie, dessen Entwicklung und Veränderung beitragen können.

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Appendices

Appendix I: Studie 1

Kornhas, L.A., Schröder-Pfeifer, P., Georg, A., Zettl, M. & Taubner, S. (2020). Prozess des Mentalisierens in einer mentalisierungsbasierten Langzeittherapie für Borderline-Persönlichkeitsstörungen. Psychotherapeut 65, 357–365. https://doi.org/10.1007/s00278-020-00451-9

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Prozess des Mentalisierens in einer mentalisierungsbasierten Langzeittherapie für Borderline-Persönlichkeitsstörungen

Eine Fallstudie

Mentalisieren beschreibt die Fähigkeit, sich selbst von außen und andere von innen zu sehen. Im Rahmen der Mentalisierungsbasierten Therapie (MBT) wurden, zur Förderung des Mentalisierens und zur Reduktion psychischer Symptome, verschiedene therapeutische Interventionen konzeptualisiert. Bisher ist jedoch noch nicht ausreichend geklärt, wie sich der Prozess des Mentalisierens über den Therapieverlauf verändert und inwiefern therapeutische Interventionen konkret zur Förderung des Mentalisierens beitragen.

Mentalisieren

Mentalisieren beschreibt die Fähigkeit, das eigene und das Verhalten anderer in Bezug auf psychische Zustände (z. B. Bedürfnisse, Wünsche und Gefühle) zu verstehen (Fonagy et al. 2002). Es bildet einen wichtigen Bestandteil bei der Regulierung eigener psychischer Zustände, sozialer Interaktionen und von Beziehungen. Aufgrund der Wichtigkeit zwischenmenschlicher Konflikte im Kontext psychischer Störungen gilt fehlendes Mentalisieren als Risikofaktor bei der Entstehung psychischer Störungen (Volkert et al. 2019).

Typische Symptome der Borderline-Persönlichkeitsstörung (BPS), wie selbstverletzendes oder suizidales Verhalten, emotionale Instabilität und Beziehungskonflikte, werden als Folgen verminderten Mentalisierens angesichts emotionaler Erregung gesehen. In verschiedenen Studien zeigte sich, dass insbesondere Patienten mit einer BPS eine geringe Mentalisierungsfähigkeit aufweisen (Fischer-Kern et al. 2010; Gullestad et al. 2013; Levy et al. 2006). Die Mentalisierungsbasierte Therapie (MBT) wurde von Bateman und Fonagy (2004) zur Behandlung von BPS mit dem Ziel entwickelt, Mentalisieren von Patienten mit BPS zu stärken und dadurch ihre Symptome zu reduzieren. Zur Wiederherstellung bzw. zur Förderung des Mentalisierens werden in der MBT entsprechend dem aktuellen Mentalisierungsniveau des Patienten verschiedene therapeutische Interventionen angewandt. Mittlerweile gilt die MBT als empirisch anerkanntes Verfahren zur Behandlung von BPS (Storebø et al. 2020). Besonders die Behandlung sowie die Therapieforschung zu Persönlichkeitsstörungen, wie der BPS, sind aufgrund der hohen Prävalenzraten und der lebenslangen sozialen und beruflichen Beeinträchtigungen (Zanarini et al. 2012) sowie der reduzierten Lebenserwartung (Fok et al. 2012) von großer Bedeutung.

Mentalisieren wurde bereits in verschiedenen Studien als Mediator und Veränderungsmechanismus innerhalb von Psychotherapien untersucht (Katznelson 2014). Dabei konnte ein Zusammenhang zwischen der Steigerung von Mentalisieren und der Verbesserung der allgemeinen psychischen Verfassung gezeigt werden (Ekeblad et al. 2016; Müller et al. 2006; Taubner et al. 2011). Allerdings ist es für ein verbessertes Verständnis der therapeutischen Veränderung essenziell, die zugrunde liegenden Therapieprozesse genauer zu verstehen (Kazdin 2003). Dafür untersuchten verschiedene Autoren (Josephs et al. 2004; Hörz-Sagstetter et al. 2015; Kornhas et al. 2019) im Rahmen kontrollierter Fallstudien die Mentalisierungsfähigkeit innerhalb psychodynamischer Psychotherapien über die Therapiesitzungen hinweg in Bezug zur Symptomveränderung. Es konnte eine Symptomreduktion sowie eine fluktuierende Zunahme des Mentalisierens gezeigt werden, wobei der Prozess des Mentalisierens stark von der Therapeut-Patient-Interaktion geprägt schien. Den Prozess des Mentalisierens über den Therapieverlauf hinweg stellten Hörz-Sagstetter et al. (2015) bisher am ausführlichsten mit der Analyse von 2 Patienten mit je 10 Sitzungen innerhalb von 4 Therapiephasen einer psychoanalytischen Langzeittherapie dar.

Jedoch wurden in den genannten Fallstudien (Josephs et al. 2004; Hörz-Sagstetter et al. 2015; Kornhas et al. 2019) keine konkreten Interventionen zur An-

regung bzw. zur Veränderung der Mentalisierungsfähigkeit herausgearbeitet und weitergehend untersucht. Nach Kenntnis der Autoren fokussierten erst 2 Studien den Einfluss von therapeutischen Interventionen auf die Veränderung von Mentalisieren innerhalb von Psychotherapiesitzungen (Kivity et al. 2019; Möller et al. 2017). Dabei konnte gezeigt werden, dass mentalisierungsfördernde Interventionen eine höhere Mentalisierungsfähigkeit in den darauffolgenden Patientenreaktionen hervorrufen. Als Basis dieser Untersuchungen diente zum einen die Analyse von 15 Patienten mit je einer Therapiesitzung innerhalb von 2 Therapiephasen (Möller et al. 2017) und zum anderen die Analyse von 88 Patienten mit je einer Therapiesitzung innerhalb von 3 Therapiephasen (Kivity et al. 2019). Ein Ziel dieser Fallstudie ist es, diese Ergebnisse, d. h. die Steigerung der Mentalisierungsfähigkeit durch eine mentalisierungsfördernde Intervention, zu replizieren und zu untersuchen, wie sich dieses Phänomen über den Therapieverlauf hinweg verhält. Besonders die Untersuchung der Intervention über den Therapieverlauf hinweg ist wichtig für das Verständnis des Therapieprozesses und die Weiterentwicklung von Therapiemanualen. Daran anknüpfend ist ein weiteres Ziel dieser Studie, für ein besseres Verständnis des Therapieprozesses, den Mentalisierungsprozess über den Therapieverlauf hinweg möglichst differenziert darzustellen. In diesem Zusammenhang soll der Mentalisierungsprozess zusätzlich innerhalb verschiedener, in der Therapie behandelter, Themengebiete untersucht werden. Dieser Punkt ist besonders zur Untersuchung der allgemeinen bzw. der spezifischen Mentalisierungsprozesse sowie für die Fokussetzung innerhalb der Therapie relevant.

Demnach erfolgt in dieser Fallstudie zum einen eine ausführliche Darstellung der intrapersonellen Prozesse des Mentalisierens über den Therapieverlauf hinweg, und zum anderen wird der Einfluss einer mentalisierungsfördernden Intervention auf die Mentalisierungsfähigkeit untersucht. Insgesamt soll dadurch eine Basis geschaffen werden, auf der neue inhaltliche Hypothesen generiert werden und durch die Erprobung von Instrumenten eine Grundlage für groß angelegte Studien geschaffen wird.

Studiendesign und Untersuchungsmethode

Fragestellung

In der vorliegenden Studie wird der Verlauf des Mentalisierens innerhalb einer mentalisierungsbasierten Langzeittherapie zur Behandlung der BPS untersucht. Erstens wird analysiert, wie Mentalisieren sich innerhalb einzelner Sitzungen sowie über den Therapieverlauf hinweg entwickelt. Zweitens wird der Einfluss mentalisierungsfördernder Fragen (MfF) auf die Mentalisierungsfähigkeit untersucht. Zusätzlich dazu wird explorativ die Entwicklung des Mentalisierens innerhalb bestimmter Themengebiete näher betrachtet.

Studienablauf

Durchgeführt wurde die Therapie von einer durch das Anna Freud Zentrum zertifizierten MBT-Therapeutin. Als Grundlage der Studie diente eine naturalistische mentalisierungsbasierten Therapie einer Patientin mit BPS. Die Therapie umfasste 2,5 Jahre mit 120 Therapiesitzungen im Einzelsetting, die durch Familiengespräche ergänzt wurden. Aufgrund der Dauer und der fehlenden Gruppengespräche entspricht diese Therapie nicht den MBT-Standards. Die Eingangsdiagnostik erfolgte durch ein klinisches Urteil während einer stationären Behandlung sowie zu Beginn der Therapie durch die behandelnde Therapeutin. Für die Analyse wurden die 120 Therapiesitzungen in 5 gleich große Therapiephasen aufgeteilt und aus jeder dieser Phasen jeweils 4 aufeinanderfolgende Therapiesitzungen ausgewählt. Der Abstand zwischen den ausgewählten Therapieblöcken wurde gleich groß gehalten. Die Therapiesitzungen wurden anhand des Adherence-and-Competence-Manuals von Bateman (2018) geprüft und als adhärent beurteilt. Die 20 videoaufgezeichneten Therapiesitzungen wurden transkribiert und randomisiert, bevor die Kodierung des Mentalisierens, der behandelten Themengebiete und der MfF erfolgte. Das Transkribieren der Therapiesitzungen erfolgte mithilfe der Software F4transkript. Die Kodierung der Reflective Functioning Scale (RFS) für die 20 transkribierten Therapiesitzungen erfolgte durch die Erstautorin (L.K.); der vierte Autor (M.Z.) führte eine Reliabilitätsprüfung bei 20 % der Therapiesitzungen durch. Beide „Reflective-Functioning"(RF)-Rater wurden von der Letztautorin (S.T.) trainiert und sind zertifizierte sowie erfahrene RF-Rater. Als Abschlussdiagnostik wurde eine ausführliche Abklärung der Symptomatik und Persönlichkeitsstörungen vorgenommen. Der Symptomschweregrad wurde anhand der Kurzform der Symptom-Checkliste (SCL-K 9; Klaghofer und Brähler 2001) und des Patientengesundheitsfragebogens (PHQ-D; Löwe et al. 2002) gemessen. Die Diagnostik von Persönlichkeitsstörungen und -merkmalen wurde anhand des Strukturierten Klinischen Interviews zur Diagnose von Achse-II-Störungen (SCID-II; Wittchen et al. 1997), die Standardisierte Bewertung des Schweregrads von Persönlichkeitsstörungen (SASPD; Moran et al. 2003) und des Persönlichkeitsinventars für DSM-V-Kurzform (PID-5-BF; Krueger et al. 2013) erfasst.

Reflective Functioning Scale

Die RFS (Fonagy et al. 1998) ist ein empirisch fundiertes Maß zur dimensionalen und kategorialen Erfassung der Mentalisierungsfähigkeit. Sie ermöglicht ein strukturiertes Assessment der Reflexionsfunktion auf einer 11-stufigen Skala. Es werden das Ausmaß und die Qualität erfasst, mit der bindungsbezogene Erfahrungen auf der Grundlage eines mentalen Verständnisses reflektiert werden können (Taubner 2015). Die Skala zur Bewertung des RF reicht von –1 (negativ) bis hin zu 9 (außergewöhnlich). Die Kodierung wird anhand der folgenden Dimensionen bewertet: (1) das Bewusstsein einer Person für die Natur von mentalen Zuständen; (2) das explizite Bemühen, die dem Verhalten zugrunde liegenden mentalen Zustände zu verstehen; (3) die Anerkennung von Entwicklungsaspekten von mentalen Zuständen; und (4) das Bewusstsein um die menta-

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Prozess des Mentalisierens in einer mentalisierungsbasierten Langzeittherapie für Borderline-Persönlichkeitsstörungen. Eine Fallstudie

Zusammenfassung

Hintergrund. Mentalisieren ist die Fähigkeit, über sich selbst und andere unter Zuhilfenahme psychischer Zustände zu reflektieren. Die Mentalisierungsbasierte Therapie (MBT) wurde für die Behandlung der Borderline-Persönlichkeitsstörung (BPS) entwickelt und hat sich als wirksam erwiesen. Allerdings sind die genauen Veränderungsmechanismen in der MBT nicht ausreichend untersucht. Ein Forschungsansatz ist die Untersuchung der Veränderung von Mentalisieren, operationalisiert durch die Reflective Functioning Scale (RFS), innerhalb von Therapiesitzungen.
Material und Methode. Diese Fallstudie basiert auf einer erfolgreichen mentalisierungsbasierten Langzeittherapie mit einer BPS-Patientin. „Reflective Functioning" (RF) wurde innerhalb und über mehrere Therapiesitzungen im Verlauf sowie in Bezug auf spezifische Themengebiete untersucht. Zudem wurde der Zusammenhang zwischen RF-Veränderungen und dem Einsatz mentalisierungsfördernder Fragen (MfF) analysiert. Für die Kodierung wurden 20 Therapiesitzungen aus 5 Therapiephasen selektiert und in Zeitsegmente unterteilt.
Ergebnisse. Die Ergebnisse zeigen, dass die Fähigkeit zu mentalisieren über den Gesamtverlauf der Behandlung trotz Fluktuationen hinweg signifikant zunahm. Mentalisieren steigerte sich in jedem der Themengebiete, unabhängig von der relativen Häufigkeit, mit der ein Themengebiet besprochen wurde. Zudem trugen MfF signifikant zur Steigerung der Mentalisierungsfähigkeit bei.
Schlussfolgerung. Die Studie impliziert, dass bei der Patientin trotz Fluktuationen die Kompetenz des Mentalisierens themenübergreifend stetig zunahm. Die Steigerung des Mentalisierens durch MfF unterstreicht die Wichtigkeit von therapeutischen Interventionen in diesem Prozess. Diese Fallstudie kann als Modell für größer angelegte prozessfokussierte Studien dienen, um den Einfluss therapeutischer Interventionen auf die Veränderung von Mentalisieren innerhalb des Therapieverlaufs besser zu verstehen.

Schlüsselwörter

Psychotherapie · Veränderungsmechanismus · Psychotherapeutische Prozesse · Behandler-Patient-Beziehungen · Outcome- und Prozess-Assessment, Gesundheitsversorgung

Process of mentalization in a mentalization-based long-term therapy for borderline personality disorders. A case study

Abstract

Background. Mentalizing is the ability to reflect on oneself and others with the help of mental states. Mentalization-based therapy (MBT) was developed for the treatment of borderline personality disorder (BPD) and has proven to be effective; however, the exact change mechanisms in MBT have not been sufficiently investigated. A research approach is the investigation of changes of mentalization within therapy sessions, operationalized by the reflective functioning scale (RFS).
Material and methods. This case study was based on a successful long-term MBT with a BPD patient. The course of reflectiv functioning (RF) alterations within and over several therapy sessions in the course of therapy was investigated as well as in relation to specific topics. In addition, the relationship between RF changes and the use of mentalization-enhancing questions (MEQ) was analyzed. For the coding 20 therapy sessions were selected from 5 therapy phases and divided into time segments.
Results. The results show that the ability to mentalize significantly increased over the total course of the treatment despite fluctuations. Mentalization increased in each of the subject areas, regardless of the relative frequency with which a subject area was discussed. In addition, MEQ significantly contributed to an increase in the ability to mentalize.
Conclusion. The study implies that despite fluctuations, the patient's competence in mentalizing steadily increased across all topics. The increase in mentalization through MEQ underlines the importance of therapeutic interventions in this process. This case study serves as a basis for larger process-focused studies for a better understanding of the influence of therapeutic interventions on mentalization during the course of therapy.

Keywords

Psychotherapy · Change mechanism · Psychotherapeutic processes · Professional-patient relations · Outcome and process assessment, health care

len Zustände des Interviewers (Fonagy et al. 1998). Die RFS kann für eine Vielzahl von Interviewmethoden verwendet werden. Außerdem wurde die Skala bereits in zahlreichen Untersuchungen an Transskripten von Therapiesitzungen angewandt (Talia et al. 2019).

Für die Kodierung der RFS wurden RF-Werte für einzelne Segmente der Therapiesitzungen sowie ein Gesamtwert pro Therapiesitzung gebildet. Die Unterteilung der Therapiesitzungen erfolgte in 3-minütige Segmente, wobei in jedem Segment der höchste Grad an vorliegendem Mentalisieren bewertet wurde. Zur Bildung eines Gesamtwerts pro Therapiesitzung wurde ein Algorithmus angewendet. Dabei wurden jeweils die niedrigsten 20 % der RF-Segmentbewertungen ausgeschlossen und anschließend ein Durchschnittswert der eingeschlossenen RF-Segmentwerte genommen. Der sich aus dieser Berechnung ergebende Wert orientiert sich somit in Richtung der Maximalwerte von RF, die eine Person pro Segment erzielt.

Mentalisierungsfördernde Fragen

Mentalisierungsfördernde Fragen bezeichnen Fragen des Therapeuten, die eine mentalisierende Antwort des Patienten fordern, in dem sie den Patienten

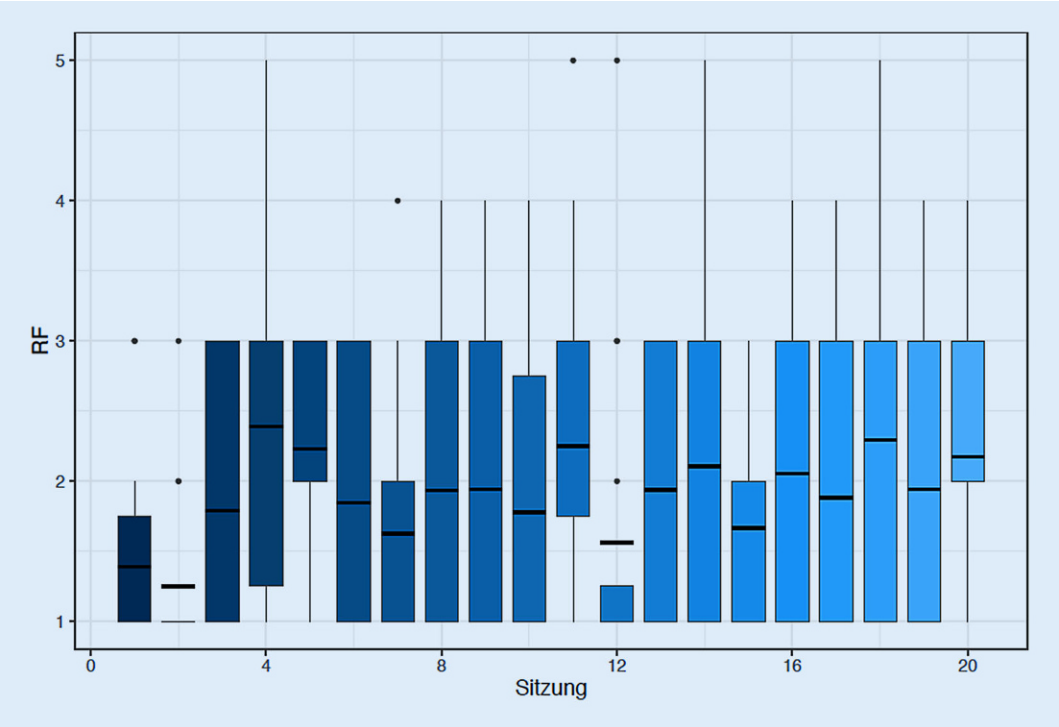

Abb. 1 ◀ Mittelwerte der „Reflective Functioning" (*RF*) über den Therapieverlauf. Reflective Functioning wurde für je 4 Therapiesitzungen zu 5 Messzeitpunkten einer mentalisierungsbasierten Langzeittherapie kodiert

dazu anregen, mentale Zustände zu erforschen und eine mentalisierende Perspektive einzunehmen (z. B. „Wie haben Sie das erlebt? Wie, denken Sie, war das für Ihr Gegenüber?"). Mentalisierungsfördernde Fragen werden zur Beurteilung des Mentalisierens im Rahmen des Adult Attachment Interview (George et al. 1985), das ebenfalls zur Erfassung der RFS dient, verwendet und sind ebenfalls als eine wichtige Intervention der MBT zu verstehen.

Innerhalb der transkribierten 20 Therapiesitzungen wurde jede Aussage der Therapeutin als mentalisierungsfördernd oder nicht charakterisiert und pro Dreiminutenzeitsegment dichotom als *nichtmentalisierungsfördernd* oder *mentalisierungsfördernd* codiert.

Themengebiete

Anhand der Therapiesitzungen wurden Kernthemen herausgearbeitet, die wiederholt intensiv über den Therapieverlauf hinweg zwischen der Patientin und der Psychotherapeutin besprochen wurden. Anschließend wurden diese ausgewählten Themen mit der behandelnden Therapeutin rückbesprochen, um die Wichtigkeit der Themenbereiche abzugleichen. Daraus ergaben sich die Themenbereiche Partner, Kinder, Jugendamt, Kernfamilie (Vater, Stiefvater, Mutter und Bruder) und Selbst sowie Patientin-Therapeutin-Beziehung. Für jede der Therapiesitzungen wurde jedes Zeitsegment inhaltlich mindestens einem dieser 6 Themen zugeordnet. Mehrfach Zuteilungen konnten auftreten, da innerhalb der Dreiminutensegmente mehrere Themen aufkommen konnten oder die Themen nicht eindeutig trennscharf waren.

Statistische Auswertungen

Um die Frage zu beantworten, ob MfF einen Einfluss auf das RF haben, wurden „finite distributed lag models" berechnet. Diese Methode zur Auswertung von Zeitreihen kann sowohl einen möglichen autoregressiven Einfluss von RF berücksichtigen als auch einen verzögerten Einfluss von MfF auf die noch kommenden Äußerungen der Patientin. Zu diesem Zweck wurden 336 Messzeitpunkte über 20 Therapiesitzungen ausgewertet und als lineare intervallskalierte Zeitvariable genutzt. Hierdurch wird für die Stationäritätsannahme von Zeitreihenanalysen kontrolliert und getestet, ob das RF im Laufe der Therapie zu- oder abnimmt. Außerdem wurde die Dummy-kodierte Variable *MfF* als explorativer Prädiktor für RF der Modelgleichung hinzugefügt. Ein Plot der Residuen gegen die gefitteten Werte wies nicht auf nichtkonstante Fehlervarianz hin. Gleichermaßen war die visuelle Inspektion des QQ-Plots unauffällig und zeigte keine bedeutende Abweichung von der Normalverteilungsannahme. Da die Daten von Therapievideos kodiert wurden, gab es keine fehlenden Werte. Das Programm R (Version 3.6.1 R Development Core Team, 2008) wurde für alle Analysen genutzt.

Ergebnisse

Patienteninformation

Frau F.[1] war zu Beginn der Therapie 22 Jahre alt, besuchte die Berufsschule und lebte mit ihrem damaligen Partner zusammen. Ebenfalls im Haushalt lebte ihr Sohn (2 J.), wobei eine Inobhutnahme durch das Jugendamt drohte. Grund zur Therapievorstellung war eine Anschlusstherapie an eine stationär psychiatrische Behandlung, in der eine BPS bei der Pati-

[1] Der Name ist geändert. Die Einwilligung zur Fallstudie und Falldarstellung liegt vor.

Tab. 1 Schätzungen des „distributed lag model" zu „Reflective Functioning" (*RF*) innerhalb von Therapiesitzungen, bezogen auf mentalisierungsfördernde Fragen (*MfF*)

	RF innerhalb der Therapiesitzungen		
	B	**SE**	***p***
(Achsenabschnitt)	0,978	0,268	**<0,001**
Zeit über die Sitzungen	0,001	0,000	0,059
MfF	0,412	0,124	**0,001**
MfF, L1	0,214	0,126	0,091
MfF, L2	−0,062	0,123	0,614
Messpunkte	336		

B Regressionskoeffizient; *SE* Standardfehler; *p* Signifikanzwert; *L1* „lag 1", im darauffolgenden Segment; *L2* „lag 2", im zweiten Segment danach

enten diagnostiziert wurde. Frau F. zeigte starke Impulsdurchbrüche, eine hohe Affektinstabilität und Schwierigkeiten in der Emotionsregulation. Zudem persistierten selbstverletzendes Verhalten und ein Muster von instabilen und intensiven zwischenmenschlichen Beziehungen. In der ersten Therapiephase verlor sie das Sorge- und Umgangsrecht für ihr Kind. Im Verlauf der Therapie setzte sie sich stark dafür ein, dieses wiederzuerlangen, jedoch erfolglos. Während der Therapie durchlebte Frau F. mehrere Beziehungen, die teils von Gewalterfahrungen geprägt waren. Während der Therapie konnte sie das selbstverletzende Verhalten sowie ihren Drogenkonsum beenden. Die stark ambivalente Beziehung zu ihrer Mutter und ihrem Bruder waren für sie von großer Bedeutung, besonders als ihre Mutter an Krebs erkrankte. Der Patientin gelang es, ihre Ausbildung als Kindergärtnerin fortzusetzen, und sie wurde erneut Mutter, wobei sie das Sorge- und Umgangsrecht für ihr zweites Kind behalten konnte. Nach 2,5 Jahren Behandlung erfüllte Frau F. nicht mehr die Kriterien der BPS (SCID-II). Es lagen keine auffälligen Merkmalsdomänen der Persönlichkeit vor (PID-5-BF) und sie zeigte keinen hinreichenden Schweregrad für eine Persönlichkeitsstörung (SASPD). Zudem entsprach ihr Symptomschweregrad den Alters- und Geschlechtsnormen (SCL-K 9; PHQ-D).

Mentalisierungsfähigkeit über den Therapieverlauf hinweg sowie im Zusammenhang mit mentalisierungsfördernden Interventionen

In **Abb. 1** ist die Verteilung des RF innerhalb einer Sitzung über den Therapieverlauf, gruppiert nach Therapiesitzungen, zu sehen. Die schwarzen Balken stellen den Sitzungs-RF-Wert dar, wie er mit dem RF-Algorithmus berechnet wird. Während eine Verbesserung des RF v. a. im Vergleich der ersten 4 Sitzungen zu den letzten Sitzungen zu sehen ist, ist der Bereich des RF eher klein und bleibt meist innerhalb von 1,00–3,00 (abwesendes bis niedriges Mentalisieren). Insgesamt steigt der RF-Mittelwert von 1,47 auf 2,43, und nimmt einen kubischen Verlauf.

Im Durchschnitt werden pro Sitzung 5,3 MfF gestellt, mit einem Range von 3,0 bis 10,0. Diese sind mit einem signifikant höheren RF-Niveau im selben Segment (0,41) und einem höheren, aber nichtsignifikanten, RF-Niveau (0,21) im nächsten Segment verbunden (**Tab. 1**).

Explorative Analyse der Themengebiete

Aufgrund der geringen Messzeitpunkte (56 bis 160 Segmente/Themengebiet) und mangelnden konzeptuellen Trennschärfe zwischen den Themengebieten erfolgt lediglich eine explorative Auswertung der Daten (**Tab. 2**). Das prozentuale Vorkommen der Themengebiete innerhalb der 20 Therapiesitzungen schwankt je nach Themengebiet zwischen 16,7 und 47,6 %, wobei die Patientin-Therapeutin-Beziehung deutlich weniger im Fokus steht als z. B. das Thema Partner. Zudem sind größere Unterschiede in der Häufigkeit der gestellten MfF pro Themengebiet zu erkennen (16,1–39,7 %). Hierbei kann ein Schwerpunkt auf der Exploration des Selbst (39,7 %), der eigenen Kinder (35,8 %) und der Paarbeziehungen (32,5 %) beobachtet werden. Die durchschnittlichen RF-Werte der Themengebiete über 20 Therapiesitzungen hinweg betragen zwischen 1,63 (Jugendamt) und 2,03 (Partner).

Zur Verdeutlichung der MfF und des RF ist in **Tab. 3** eine kurze Therapiesequenz aus der letzten Therapiephase abgebildet. In dieser Sequenz beschreibt die Patientin ihre Mutter und ihren Stiefvater als Einheit, zu der sie sich lange nicht dazugehörig fühlte. Sie nimmt Bezug darauf, dass ihre Mutter an Krebs erkrankte und die Chemotherapie nicht gut vertrage. In diesem Beispiel zeigt die Patientin einen RF-Wert von 5, der eindeutigem bzw. durchschnittlichem Mentalisieren entspricht.

In **Abb. 2** ist das Vorkommen der Themengebiete pro Sitzung über den Therapieverlauf hinweg abgebildet. Die Häufigkeit zwischen und innerhalb der Themengebiete über den Therapieverlauf hinweg fluktuiert stark.

In **Abb. 3** ist der durchschnittliche RF-Wert der Themengebiete innerhalb der verschiedenen Therapiephasen zu sehen. Insgesamt ist zu erkennen, dass das RF innerhalb aller Themengebiete zunimmt. Dennoch unterscheiden sich das Niveau und der Verlauf des RF zwischen den Themengebieten. Außerdem kommt es teilweise innerhalb der Themengebiete im Rahmen der verschiedenen Therapiephasen zu Schwankungen. Es ist zu beachten, dass die Veränderungen der RF-Werte in einem sehr geringen Wertebereich (1,38–2,34) liegen.

Werden die Häufigkeiten der Themengebiete (**Abb. 2**) und deren RF-Niveau (**Abb. 3**) betrachtet, ist zu sehen, dass z. B. die Häufigkeit der Patientin-Therapeutin-Beziehung über den Therapieverlauf hinweg stabil bleibt sowie im Vergleich zu den anderen Themen eher gering ausfällt, wie auch die Häufigkeit der MfF (**Tab. 2**), und dennoch eine Steigerung des Mentalisierens zu sehen ist.

Tab. 2 Deskriptive Daten der Themengebiete

Themengebiete	Häufigkeit der Themengebiete		Häufigkeit der MfF innerhalb der Themengebiete		Durchschnittlicher RF-Wert über den Therapieverlauf
	Absolut	Prozent (%)	Absolut	Prozent (%)	
Kind	120	35,7	43	35,8	1,95
Partner	160	47,6	52	32,5	2,03
Pat.-Th.-Bez.	56	16,7	9	16,1	1,79
Selbst	63	18,8	25	39,7	1,98
Jugendamt	70	20,8	19	27,1	1,63
Kernfamilie	91	27,1	31	34,1	2,18

Absolute Häufigkeit entspricht der Anzahl der kodierten Segmente
MfF mentalisierungsfördernde Fragen, ***Pat.-Th.-Bez.*** Patientin-Therapeutin-Beziehung, ***RF*** „Reflective Functioning"

Tab. 3 Beispielsequenz zur Veranschaulichung der mentalisierungsfördernden Frage (*MfF*) und des „Reflective Functioning" (*RF*)

		MfF/RF
Therapeutin	Aber was macht den Unterschied, dass Sie sich jetzt als Teil dieser Einheit fühlen?	MfF
Patientin	… Das war das erste Mal, dass sie mich weinen gesehen haben, und dann haben sie mir gesagt, dass sie das Gefühl haben, dass es mir egal ist, was mit meiner Mutter passiert. … und dann habe ich ihnen gesagt, dass das nicht wahr ist … Ja, und seitdem, da sie wissen, dass es mir nicht egal ist und es nicht so ist, wie sie dachten – also normalerweise war ich immer gefühlskalt bei dem Thema – jetzt ist es viel besser. Meine Mutter versucht jetzt, mit mir zu reden oder an meiner Seite zu stehen, ja	5 (eindeutige/durchschnittliche RF)

Zur besseren Veranschaulichung ist das RF für das einzelne Statement angegeben

Diskussion

Interpretation der Studienergebnisse

Diese Fallstudie beleuchtet den Prozess des Mentalisierens über den Therapieverlauf hinweg, im Zusammenhang mit MfF und innerhalb bestimmter Themengebiete. Grundlage der Untersuchung bildet eine adhärente und erfolgreiche mentalisierungsbasierte Therapie mit einer BPS-Patientin. Die Analyse des Therapieverlaufs zeigt, dass die Mentalisierungsfähigkeit der Patientin in Form eines kubischen Verlaufs signifikant zunimmt. Das bedeutet, dass zu Anfang der Therapie die Mentalisierungsfähigkeit schneller ansteigt, über den Verlauf leicht abnimmt und gegen Therapieende erneut ansteigt. Insgesamt befinden sich die RF-Werte bei der Patientin innerhalb der Therapiesitzungen in einem niedrigen Bereich (abwesend bis niedriges Mentalisieren). Dabei entspricht die beobachtete Steigerung der RF-Werte dem mittleren Zuwachs des Mentalisierens in psychodynamischen Therapiestudien (Kivity et al. 2019; Hörz-Sagstetter et al. 2015). Im Mittel entsprechen die beobachteten RF-Werte den Ergebnissen klinischer Stichproben mit BPS-Patienten (Möller et al. 2017; Fischer-Kern et al. 2010, 2015; Levy et al. 2006). Trotz signifikanter Steigerung des Mentalisierens sind substanzielle Schwankungen innerhalb der Therapiesitzungen und der Therapiephasen zu verzeichnen. Dieses Phänomen der Mentalisierungsfluktuation innerhalb Therapiesitzungen wurde bereits von Hörz-Sagstetter et al. (2015) thematisiert, die Mentalisieren innerhalb von Therapiesitzungen als zeitlich variierenden Zustand beschreiben (Persönlichkeits-State). Diesem Verständnis nach wird Mentalisieren als Kompetenz nicht beständig, sondern nur bei Bedarf eingesetzt. Insgesamt bleibt die Mentalisierungsfähigkeit der Patientin trotz Remission der BPS und einer weitgehenden Stabilisierung im niedrigen Bereich. Es kann vermutet werden, dass durch die Mentalisierungssteigerung ein kritischer Grenzwert des Mentalisierens überschritten wurde, mit dem eine verbesserte Symptomatik trotz geringem Mentalisierungsniveau möglich ist (Levy et al. 2006). Zusätzlich können weitere mögliche Veränderungsmechanismen nicht ausgeschlossen werden.

Im Weiteren kann durch die Einteilung der Therapiesitzungen in Themenbereiche gezeigt werden, dass trotz unterschiedlicher Häufigkeit der Themenbesprechungen rein deskriptiv Steigerungen des Mentalisierens in jedem der Themengebiete zu beobachten sind. Das impliziert, dass die Mentalisierungsfähigkeit sich als Kompetenz themen- und beziehungsunabhängig entwickelt. Auffällig wenig wurde innerhalb der Therapie die Patientin-Therapeutin-Beziehung besprochen, trotz ihrer wesentlichen Bedeutung. *Mentalisieren der Beziehung* wird ebenfalls explizit als eine MBT-Intervention klassifiziert (Bateman 2018), sodass sich die Frage stellt, ob eine vermehrte Fokussierung dieser sich auf die Entwicklung der Mentalisierungsfähigkeit zusätzlich positiv auswirken würde.

Weiterhin zeigte sich in der vorliegenden Studie, dass Mentalisieren durch den Einsatz der MfF als therapeutische Intervention explizit angeregt wird. Es kommt durch MfF zur signifikanten Steigerung des Mentalisierens in denselben Therapiesegmenten. Damit konnten die Ergebnisse von Möller et al. (2017) und Kivity et al. (2019), die ebenfalls nach MfF eine Steigerung des Mentalisierens in der Behandlung von BPS-Patienten feststellten, repliziert werden. Darüber hinaus zeigt die vorliegende Studie, dass dieser positive Einfluss von MfF auf Mentalisieren

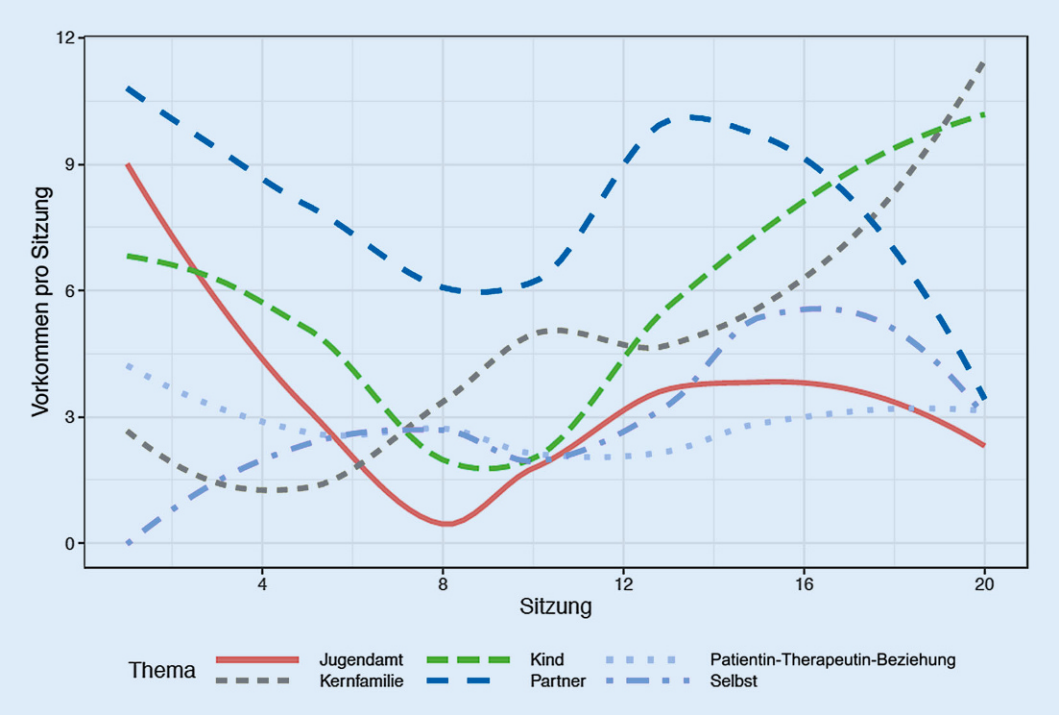

Abb. 2 ◀ Häufigkeit der Themengebiete über den Therapieverlauf. Pro Themengebiet ist das Vorkommen pro Sitzung (Anzahl der kodierten Segmente) über den Therapieverlauf zu sehen

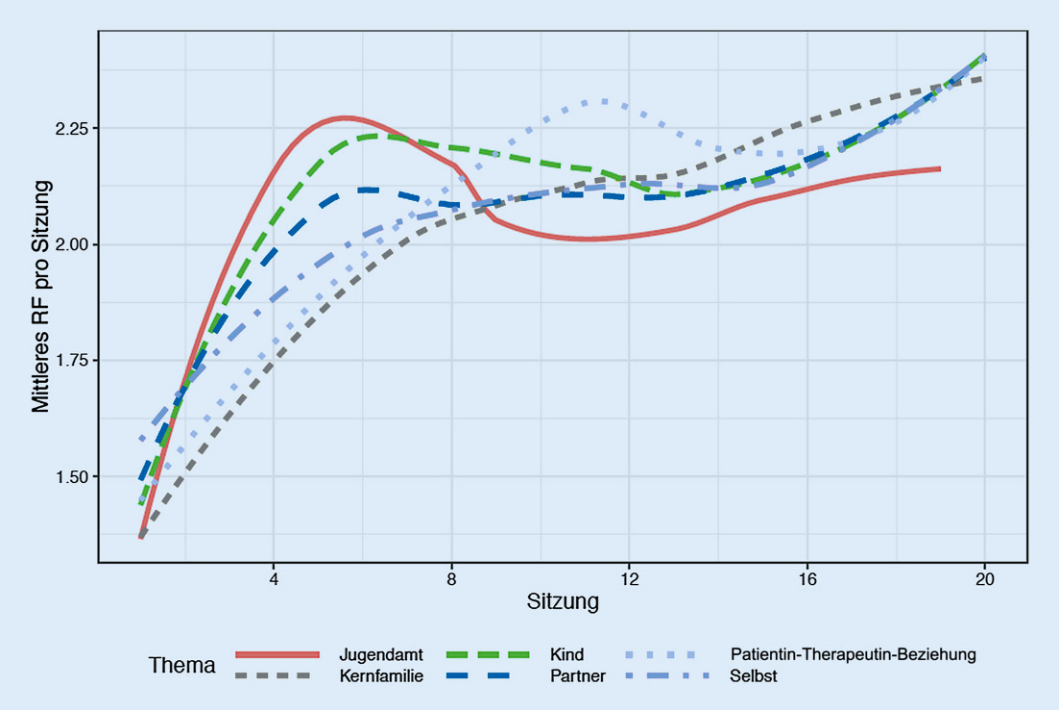

Abb. 3 ◀ Verlauf des „Reflective Functioning" (*RF*) der Themengebiete über den Therapieverlauf. Abgebildet ist der durchschnittliche RF-Wert pro Sitzung für die verschiedenen Themengebiete über den Therapieverlauf hinweg

während des gesamten Therapieverlaufs gegeben ist.

Limitationen

Die Ergebnisse der Studie müssen aufgrund des Einzelfalls mit Bedacht interpretiert werden, sodass keine allgemein gültigen Schlussfolgerungen gezogen werden können. Hierbei sind die naturalistische mentalisierungsbasierte Therapie, die nicht den expliziten MBT-Standards entspricht, und die fehlende standardisierte Eingangsdiagnostik zu beachten. In Bezug auf die Kodierung der Therapiesitzungen sind die Abstände der zeitlichen Segmente zu diskutieren. In den bisherigen Studien zum Mentalisieren innerhalb Therapiesitzungen wurden verschiedene Methoden der Erfassung genutzt (Talia et al. 2019). Erstrebenswert wäre jedoch eine einheitliche Anwendung. Gegebenenfalls würde sich für die Untersuchung der MfF eine Statement-

by-Statement-Erfassung des Mentalisierens, wie bereits von anderen Autoren (Kivity et al. 2019; Möller et al. 2017) eingesetzt, besser eignen. Zudem sind die Analysen des Mentalisierens über den Therapieverlauf kritisch zu betrachten, da die Berechnungen ohne weitere Berücksichtigung der zeitlichen Abstände zwischen den Sitzungen und der Therapiephasen, verwendet wurden. Generell stellen die ausgewählten Sitzungen nur eine Auswahl aller Therapiesitzungen dar.

Resümee und Ausblick

Trotz bestehender Limitationen ist darauf zu verweisen, dass es sich um die erste kontrollierte Fallstudie handelt, die Mentalisieren zu 20 Zeitpunkten in einer mentalisierungsbasierten Langzeittherapie untersucht und dabei in verschiedene Themengebiete unterscheidet sowie die Auswirkung von MfF einbezieht. Dadurch können intrapersonelle Veränderungen in der Mentalisierungsfähigkeit exemplarisch in großer Ausführlichkeit dargestellt werden.

Aufgrund dieser kontrollierten Fallstudie kann für groß angelegte Studien empfohlen werden, für die Untersuchung des Therapieprozesses möglichst kleine Segmente, wie z. B. Statement-by-Statement, auszuwählen, neben MfF weitere wichtige therapeutische Interventionen (z. B. Mentalisieren der Beziehung) einzubeziehen sowie die Symptom- und Persönlichkeitsstrukturveränderungen zwischen den Therapiesitzungen bzw. -phasen und die Wirkungen auf Bereiche außerhalb der Therapie zu untersuchen. Zudem sollten die Patientenzahl deutlich vergrößert und Standardbedingungen eingeführt werden, wie z. B. eine zeitliche Limitation und Gruppengespräche. Zukünftig sollen so der Prozess und die Funktion des Mentalisierens als Veränderungsmechanismus, eingeleitet durch therapeutische Interventionen, innerhalb der Psychotherapie genauer untersucht werden.

Fazit für die Praxis

- **Im Verlauf der Langzeittherapie einer Patientin mit Borderline-Persönlichkeitsstörung (BPS) lassen sich Verbesserungen des Mentalisierens in den Therapiesitzungen abbilden.**
- **Mentalisierungsfördernde Fragen stimulieren Prozesse des Verstehens von mentalen Zuständen und fördern einen Zuwachs an Mentalisierungsfähigkeiten.**
- **Die Verbesserung des Mentalisierens innerhalb bestimmter Themengebiete ist deskriptiv nicht mit der Häufigkeit der Besprechung des jeweiligen Themas verbunden.**
- **Trotz kontinuierlicher Verbesserungen des Mentalisierens sind Fluktuationen innerhalb von verschiedenen Themengebieten und Therapiesitzungen sowie zwischen den unterschiedlichen Therapiephasen zu erwarten.**

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Einhaltung ethischer Richtlinien

Interessenkonflikt. L.A. Kornhas, P. Schröder-Pfeifer, A. Georg, M. Zettl und S. Taubner geben an, dass kein Interessenkonflikt besteht.

Alle beschriebenen Untersuchungen am Menschen wurde im Einklang mit nationalem Recht sowie gemäß der Deklaration von Helsinki von 1975 (in der aktuellen, überarbeiteten Fassung) durchgeführt. Von der Patientin liegt eine Einverständniserklärung vor.

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Vertrauensvolle Zusammenarbeit fördert den Therapieerfolg

Eine vertrauensvolle Beziehung und eine gezielte Zusammenarbeit zwischen Therapeut und Patient sind für die erfolgreiche Behandlung psychischer Erkrankungen zentral. Und es lohnt sich, früh damit anzufangen. Dies zeigt eine Task Force der American Psychological Association (APA) unter der Leitung von Psychologieprofessor Christoph Flückiger der Universität Zürich (UZH) in einer Serie von Metastudien.

Die Beziehung zwischen Arzt respektive Therapeut und Patient sowie ihr Einfluss auf den Behandlungserfolg wurde in der Medizin lange vernachlässigt. Seit einigen Jahren rückt sie jedoch stärker in den Fokus des Interesses. »Bei der Behandlung psychischer Erkrankungen ist diese Therapiebeziehung besonders bedeutsam«, sagt Christoph Flückiger, Professor für Allgemeine Interventionspsychologie und Psychotherapie an der Universität Zürich. »Denn der Therapieprozess kann unangenehme Gefühle aktivieren und von Patientinnen und Patienten eine bewusste, intensive Auseinandersetzung mit dem eigenen Erleben und Verhalten erfordern.«

Unter Flückigers Leitung und mit Beteiligung von Forschenden aus 17 Ländern hat eine Taskforce der American Psychological Association (APA) eine Serie von Metaanalysen durchgeführt: Untersucht wurden knapp 400 empirische Studien zum Zusammenhang von Therapiebeziehung und Behandlungserfolg. Die Auswertungen zeigen, dass sich die Qualität der Therapiebeziehung in fast allen bestehenden Studien als robuste Prognose für den Therapieerfolg erwies und zwar über die verschiedenen Therapieansätze, Erfolgmessungen, Patientencharakteristika und Länder hinweg.

Bedeutung der Arbeitsallianz ist nicht nur eine Begleiterscheinung

»Psychische Störungen werden dann besonders erfolgreich behandelt, wenn Therapeutin und Patientin innerhalb einer vertrauensvollen Beziehung zielgerichtet zusammenarbeiten«, fasst Flückiger zusammen. Innerhalb dieser therapeutischen «Arbeitsallianz», verständigen sich die beiden Seiten über die Aufgaben, das Vorgehen und die Ziele der Therapie und arbeiten gemeinsam auf diese hin.
In der wissenschaftlichen Debatte zum Thema wurde verschiedentlich die Vermutung geäußert, dass die Arbeitsallianz und der damit zusammenhängende Therapieerfolg bloß eine Begleiterscheinung anderer Faktoren seien. Als mögliche Einflüsse wurden zum Beispiel frühere Behandlungserfahrungen, Symptomstärke, die therapeutische Ausrichtung oder auch die Fortschritte während Therapieprozesses diskutiert. Die Taskforce um Christoph Flückiger fand jedoch keinerlei Hinweise darauf, dass diese Faktoren die Bedeutung der Arbeitsallianz für den Therapieerfolg schmälern könnten.

Frühe Therapiephase ist entscheidend

Was die Ergebnisse hingegen unterstreichen, ist, dass die frühe Phase der Therapie für den Behandlungserfolg entscheidend ist. »In dieser frühen Phase stehen Symptomschwere und Arbeitsallianz in einem positiven wechselseitigen Verhältnis zueinander, was häufig zu einer Aufwärtsspirale führt«, führt Flückiger aus. Sprich: Eine starke vertrauensvolle Beziehung zwischen Therapeut und Patient hilft, die Symptome zu reduzieren, was umgekehrt wiederum die therapeutische Beziehung stärkt.
»Unsere Studien liefern den Nachweis, dass es sich lohnt, in eine in eine respektvolle, vertrauensvolle therapeutische Zusammenarbeit zu investieren«, so Flückiger, »gerade auch in der Behandlung psychischer Erkrankungen.«

Originalpublikation: Flückiger, C., Rubel, J., Del Re et al. (2020). The reciprocal relationship between alliance and early treatment symptoms: A two-stage individual participant data meta-analysis. Journal of Consulting and Clinical Psychology, 88 (9), 829-843. DOI: 10.1037/ccp0000594

Quelle: Universität Zürich [www.media.uzh.ch/de.html, 18.08.2020]

Appendix II: Studie 2

Kasper, L. A., Hauschild, S., Schrauf, L. M., & Taubner, S. (2024). Enhancing mentalization by specific interventions within mentalization-based treatment of adolescents with conduct disorder. *Frontiers in Psychology*,*14*, 1223040.

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Enhancing mentalization by specific interventions within mentalization-based treatment of adolescents with conduct disorder

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Objective: Mentalization is discussed as a mechanism of change in psychotherapy due to its positive effects on psychological functioning. In order to specifically apply mentalization-based interventions, a better understanding of the relationship between interventions and in-session mentalization is needed. The study aimed to explore the association between interventions and effective mentalizing.

Method: Fifteen therapy sessions of three therapies with male adolescents with conduct disorder were transcribed and rated with the Reflective Functioning (RF) Scale and a newly developed Mentalization-based Treatment (MBT) intervention coding manual. The coded interventions were categorized into intervention levels according to the MBT manual. Fisher's exact tests were performed to test differences in frequencies of interventions in high-RF sequences (RF score $\geq$ 4) compared with remaining therapy sequences (RF score $\leq$ 3).

Results: Specific MBT interventions such as demand questions, affectelaboration, empathic validation, change of subject, challenge, patienttherapist relation and mentalizing for the patient were related to effective mentalizing. Moreover, intervention levels such as supportive & empathic, basic- mentalizing & affect mode and relational mentalizing were positively associated with effective mentalizing.

Conclusion: MBT interventions seem to promote effective mentalizing at various intervention levels. Interventions that enhance effective mentalizing seem to be patient specific. In line with MBT theory, their effect on effective mentalizing might depend on various variables, such as the patients' arousal and pre-mentalizing mode.

KEYWORDS

mentalization, reflective functioning, in-session, interventions, conduct disorder, psychotherapy process

Introduction

Conduct disorder

Conduct Disorder (CD) is described as repetitive and chronic patterns of aggressive behavior toward people, animals, or other people's property, norm-violating behavior, and cheating or stealing according to the Diagnostic and Statistical Manual of Mental Disorders-5 (DSM-5; American Psychiatric Association, 2013). The global prevalence of CD in youth is estimated to be 2 to 10% with an increased prevalence in boys compared to girls (Costello et al., 2003; Ravens-Sieberer et al., 2008; Petermann and Petermann, 2013; Polanczyk et al., 2015). In addition, the likelihood of people with CD developing antisocial personality disorder (ASPD) is increased (Ridenour et al., 2002; Lahey et al., 2005; Pardini and Frick, 2013). ASPD is characterized by antisocial behavior, delinquency and recklessness as well as a lack of empathy, a lack of guilt and an inability to maintain relationships (Vloet et al., 2006).

Empirical studies have found evidence for reduced mentalizing abilities in adolescents with disorders of conduct and emotions (Cropp et al., 2019b) as well as in young and adult violent offenders (Taubner, 2008b; Möller et al., 2014; Newbury-Helps et al., 2017). Mentalizing describes the ability to imagine mental states in one's self and in other people to explain behavior (Fonagy et al., 2002). In detail, this refers to imagining mental processes, such as thoughts, feelings, desires, beliefs, or needs, which enables individuals to explain and predict behavior to some extent (Fonagy et al., 2002; Allen et al., 2008). Mentalizing was identified as a protective factor against externalizing behaviors such as aggression and delinquency (Taubner et al., 2016; Morosan et al., 2020). Therefore, it is hypothesized that the promotion of mentalizing addresses a fundamental psychopathological mechanism of CD. As a result, Mentalization-based Treatment (MBT) was proposed to be a suitable treatment for individuals with CD (Taubner et al., 2021). Within MBT for adolescents with CD (MBT-CD), a particular focus is put on the development of an understanding of interpersonal situations and emotions, as well as understanding specific triggers and mentalization breakdowns associated with antisocial and aggressive behavior (Taubner et al., 2021). MBT-CD aims to achieve a promotion of adolescents' emotion regulation and increase their scope of action through enhancing effective mentalizing (Hauschild et al., 2023). However, how effective mentalizing can be promoted during therapy sessions still remains an open question.

Mentalization in psychotherapy

Overall, MBT specifically aims to maintain an optimal level of emotional arousal to explore feelings and mental states as well as their influence on relationships (Taubner and Sevecke, 2015; Taubner et al., 2019). It is assumed that some activation of attachment, which is closely related to arousal, is necessary for effective mentalizing. If the activation of attachment or arousal is too low or too high, effective mentalizing fails and pre-mentalization sets in (Bateman and Fonagy, 2016). Process recommendations in MBT suggest to interrupt patients' pre-mentalizing modes, manage patients' arousal and establish accurate mentalization. Regarding the patients' arousal level four intervention levels (supportive & empathic; clarification, exploration & challenge; basic-mentalizing & affect mode; relational mentalizing) have been suggested (Bateman and Fonagy, 2016). MBT can be applied to a variety of clinical disorders, but these core principles of MBT remain similar (Lemma et al., 2010; Luyten et al., 2012; Weijers et al., 2016).

Enhanced mentalization is assumed to be related to a general improvement of psychological functioning as lower depression severity, less interpersonal problems, general distress (Levy et al., 2006; Taubner et al., 2011; Ekeblad et al., 2016; Babl et al., 2022). Therefore, mentalization is highly relevant for psychotherapeutic processes and discussed as a mechanism of change (Katznelson, 2014). Effective mentalizing can be defined as the establishment of a new, meaningful connection between cognition and affect that alters intrapsychic functioning and thus enables new behavior (Taubner, 2008a). It can be hypothesized that MBT, with its specific focus on fostering mentalizing skills, establishes effective mentalizing in specific interpersonal contexts and thus contributes significantly to the therapeutic success (Taubner, 2008a). However, the exact mechanisms of change during the process of mentalization remain to be investigated (Volkert et al., 2019).

By focusing on state-like processes, it is possible to examine mechanisms of psychotherapy in more detail (Zilcha-Mano, 2021). Mentalizing measured within therapy sessions seems to correspond to a personality state, whereas mentalizing measured with the Adult Attachment Interview (George et al., 1996) depicts an enduring and more difficult to change personality trait (Hörz-Sagstetter et al., 2015). Consistent with this, it was found that mentalizing fluctuates strongly within therapy sessions, particularly in association with therapeutic interventions (Hörz-Sagstetter et al., 2015; Möller et al., 2017; Kornhas et al., 2020; Kivity et al., 2021; Meier et al., 2023). It is emphasized that future studies should examine which interventions specifically enhance mentalizing (Hörz-Sagstetter et al., 2015).

Mentalization enhancing interventions

To the best of our knowledge, only three sub-analyses of randomized controlled trials and two controlled case studies examined the association between mentalization enhancing interventions and mentalizing within therapy sessions so far (Möller et al., 2017; Georg et al., 2019; Kornhas et al., 2020; Kivity et al., 2021; Meier et al., 2023). In these studies, mentalization was measured with the Reflective Functioning Scale (RF Scale, Fonagy et al., 1998) for each statement within the patients' speech (Möller et al., 2017; Georg et al., 2019; Kivity et al., 2021) or for each three-minutes segment of the therapy session based on the patient's statements within these segments (Kornhas et al., 2020; Meier et al., 2023).

Möller et al. (2017) investigated whether the therapists' use of interventions that are fundamental to MBT was associated with patients' mentalizing in psychotherapy sessions. Therapy transcripts of 15 patients with two psychotherapy sessions each were used. Frequency and quality of interventions critical to MBT as assessed with the MBT adherence and competence scale (Karterud et al., 2013) were positively associated with mentalizing within therapy sessions. In addition, the authors classified therapists' statements as demanding mentalizing ("*why do you think your boyfriend said that?*") or permitting mentalizing ("*tell me more about what you did around that time.*") and found

that the use of demand questions increased mentalizing in patients' immediate responses (Möller et al., 2017).

Building on this, Kivity et al. (2021) analyzed 205 transcripts of psychotherapy sessions from 88 patients. Demand questions resulted in increased mentalizing in the patients' immediate responses compared to the permit questions. Moreover, demand questions had a down-regulatory effect on patients' arousal (Kivity et al., 2021).

Limiting the analyses not only to demand questions, Meier et al. (2023) conceptualized 40 mentalization enhancing interventions referring to four MBT principles (process, not knowing stance, affect focus and relationship). To assess the relation between the mentalization enhancing interventions and mentalization, 84 therapy sessions from 28 patients were analyzed. The frequency of mentalizing enhancing interventions in proportion to mentalizing non-enhancing interventions was related to the patients' mentalizing within therapy sessions (Meier et al., 2023). However, only using the proportion of mentalizing enhancing interventions no conclusion about the influence of individual interventions could be drawn. It can only be concluded that the theoretically conceived interventions strengthen mentalizing, but not which of these 40 mentalization enhancing intervention is particularly helpful.

To investigate the relation between demand questions, content themes and mentalization over the course of a long-term therapy with a patient with Borderline personality disorder, 20 therapy sessions at five time points were randomly selected (Kornhas et al., 2020). As expected, demand statements resulted in the patients' higher mentalizing responses. Furthermore, the patient's statements per three-minute segment were divided into important recurring themes. Despite its essential importance within MBT, the patient-therapist relationship was rarely discussed.

In a case study of focused parent-infant psychotherapy with a depressed mother, relevant moments during patient's increased mentalizing were analyzed (Georg et al., 2019): Three interventions such as "supporting the parent by means of offering psychological functions (e.g., mentalizing for him/her or structuring)," "encouraging the parent to report on significant themes, events or experiences" and "perceiving and verbalizing the affective quality in the observed relationship" were most frequently observed in effective mentalizing sequences.

From the perspective of adolescent patients with CD first indications regarding the acceptance of individual interventions could be found (Hauschild et al., 2021). With the help of the qualitative analysis of therapy evaluation interviews it became apparent that the patients appreciated "having someone to talk to." They also found it helpful to gain new perspectives and to reflect on their own behavior. Patients stated that they gained "more self-control through improved insight." At the same time, some patients in the study found the questioning technique irritating. Therefore, it is particularly relevant to understand which interventions within the treatment of adolescents with CD can be considered helpful in terms of increasing mentalization.

Aim of the study

The importance of better understanding the process of mentalization within the therapy has been pointed out repeatedly (Hörz-Sagstetter et al., 2015; Volkert et al., 2019). For this, the question of the association between therapeutic interventions and change in mentalization is important. Initial studies have shown that interventions can strengthen mentalization. On the one hand, a large number of interventions were combined and tested (Meier et al., 2023), whereby no conclusions can be drawn about specific interventions. On the other hand, the intervention of the demand question to strengthen mentalization was emphasized several times (Möller et al., 2017; Kornhas et al., 2020; Kivity et al., 2021). Aside from demand questions, no specific other interventions have been examined with regard to their direct relation to mentalization except for a case study on parent infant therapy (Georg et al., 2019). Thus, a variety of interventions central to MBT have been neglected in empirical studies. It cannot be assumed that the intervention demand question can solely improve mentalization. Furthermore, to the authors' knowledge, there are no data on the design of interventions over the course of therapy, whether, for example, certain phases of intervention or intervention level can be identified.

In the current study, two research questions will be addressed in an explorative approach:

(1) Which intervention levels (supportive & empathic; clarification, exploration & challenge; basic-mentalizing & affect mode; relational mentalizing) are used in MBT-CD over the course of therapy?
(2) Which specific interventions and intervention levels are related to enhance effective mentalizing throughout the therapeutic process in MBT-CD?

To answer these research questions a comprehensive qualitative and quantitative approach is required. In order to implement the research project, we selected a small number of patients and a relatively sizeable number of therapy sessions per patient in order to be able to map the course of therapy. In this way, the change in intervention levels over the course of therapy can be illustrated. To identify the wide range of used interventions in therapy sessions an inductive and deductive approach was taken. The interventions were coded statement by statement using verbatim transcript analogous to the RF coding procedure in order to observe associations between them.

A multi-patient case study was chosen to capture the uniqueness of interventions and to identify patterns between interventions and mentalization across patients. This study is intended to generate initial hypotheses about the use of interventions and intervention levels over the course of therapy as well as the association of interventions and mentalization in an exploratory approach.

Methods

Procedure

The psychotherapy cases used for the current study were part of a feasibility and pilot study for MBT-CD (Hauschild et al., 2023). The study was approved by the Ethics Committee of the Heidelberg University Medical Faculty (Germany; S-534/2016) and registered at clinicaltrials.gov (NCT02988453). The study design is presented in detail in Taubner et al. (2021). Three patients treated by the same therapist were chosen from the trial: on the one hand, because they were characteristic for the MBT-CD target group in terms of typical symptoms (lying, violence) and

showed a successful outcome in terms of change in diagnosis and, on the other hand, to reduce therapist variance and to build kind of a prototype for MBT-CD by only using data from a highly skilled MBT supervisor and trainer. Per patient, five therapy sessions were selected over the course of therapy: one session at the beginning, three sessions from the middle and one session from the last third of therapy. The selection was based on time points of each therapy session in relation to the total amount of therapy sessions. Therapy sessions were transcribed verbatim using the software F4transcript (autotranscription, version 6.2.6) and randomized between patients and time points to ensure a blinded coding of the patients' statements with the RF Scale (Fonagy et al., 1998) and of the therapist's statements with a newly developed intervention coding guide (Kasper et al., 2023) (Supplementary material S1). To analyze moments of effective mentalizing, RF scores (≥ 4) and the associated interventions were used to capture high-RF sequences.

Therapist

The therapy was provided by an experienced psychotherapist for adults, adolescents, and children with specializations in psychodynamic psychotherapy (ST). The therapist is certified as a supervisor and trainer for MBT by the Anna Freud Centre London (AFC) and developer of MBT-CD. Adherence of therapy sessions to MBT was assessed in four of the total of 15 (26.7%) therapy sessions by using Bateman (2018) Adherence and Competence Scale (MBT-AC). Adherence was existent with an average score of 5.2 according to the MBT-AC manual (Bateman, 2018). Adherence ratings were performed by three raters to confirm inter-rater reliability (SH and two other reliable MBT-AC rater), which was average (Koo and Li, 2016) using a two-way mixed, absolute agreement, with an ICC of 0.72.

Patients

The patients were three males: Thomas,[1] 17 years old at therapy start, with a treatment duration of 18 months and 45 therapy sessions; Steven, 16 years old at therapy start, with a treatment duration of 24 months and 59 therapy sessions; Noah, 18 years old at therapy start, with a treatment duration of 22 months and 56 therapy sessions.

Diagnostics were performed pre and post therapy by using the Clinical Interview for DSM-5 (SCID-II; Fydrich et al., 1997) and the Mini-International Neuropsychiatric Interview for Children and Adolescents (Mini-Kid; Sheehan et al., 2010). Thomas fulfilled the criteria for Oppositional Defiant Disorder (ODD) and Attention Deficit Hyperactivity Disorder (ADHD). Steven met criteria for CD and Obsessive-Compulsive Disorder. Noah met the criteria for Borderline and Antisocial Personality Disorder (ASPD).

Further the Global Assessment of Functioning (GAF; Hall, 1995) was collected pre and post treatment. The GAF measures the general level of functioning in the areas of psychological, social, and occupational functioning. It ranges from 1 (lowest level of functioning) to 100 (highest level of functioning). All three adolescents showed a score between 45 and 49 (Thomas: 49; Steven: 46; Noah: 45).

In addition, mentalizing ability was assessed before and after treatment using the Brief Reflective Functioning Interview (BRFI; Rudden et al., 2005). The BRFI is a semi-structured interview designed for the assessment of mentalization with the RF-Scale (Fonagy et al., 1998). The instrument consists of 11 open questions that ask respondents to reflect on their attachment relationships. Thomas showed an RF score of 2 (lacking to low mentalizing), Steven showed an RF score of 3 (low mentalizing) and Noah showed an RF score of 5 (ordinary mentalizing). 2 of the 6 (30.3%) BRFIs were performed by two raters to confirm inter-rater reliability (LK and another reliable RF rater), which was excellent (Koo and Li, 2016) using a two-way mixed, absolute agreement, with an ICC of 1.

Treatment

MBT-CD included one weekly individual session and one monthly family session over the course of therapy. To provide a personalized treatment, duration and number of individual or family sessions was tailored to each participant. MBT-CD started with two psychoeducational sessions for the adolescent and their family on mentalizing and reciprocal effects of difficulties with mentalizing and handling emotionally challenging situations. MBT-CD is described in more detail in Hauschild et al. (2023).

Measures

The Reflective Functioning Scale (RF scale)

The RF Scale (Fonagy et al., 1998) is an 11-point rating scale for the assessment of mentalizing in the context of attachment relationships. The observer-based scale is applied to transcribed interviews such as the Adult Attachment Interview (George et al., 1996) or the Brief Reflective Functioning Interview (Rudden et al., 2005) or therapy transcripts (RF in-session). "This rating applies to passages in response to demand questions, or whenever (in the rater's view) there is an implied demand for a mentalizing response to a probe" (Fonagy et al., 1998, p. 28). The quality of mentalizing is coded from-1 to 9 (exceptional RF), whereby −1 means negative RF, 1 means lacking RF, 3 means questionable or low RF, 5 means ordinary RF, 7 means marked RF and 9 means exceptional RF. The Coding is made regarding four dimensions: (1) awareness of the nature of mental states, (2) effort to understand mental states underlying the behavior, (3) recognition of the developmental aspects of mental states, and (4) ability to reflect on mental states in relation to the interviewer or therapist (Fonagy et al., 1998). All ratings of RF were performed by reliable and certified RF raters.

RF in session

To capture RF within therapy transcripts, the RF in-session manual (Talia et al., 2015) was designed, which divides the patient's statements into 150-word sections and scores them for RF. In contrast, in this study each patient statement was rated: per therapy session each statement made by the patients was coded blinded for stage of therapy and patient assignment with the in-session RF Scale (Talia et al., 2015). In psychotherapy, it is the failure to respond to an implicit

1 Names have been changed.

TABLE 1 Example of a high-RF sequence including the intervention levels and the patients' RF.

Intervention levels	RF	Therapist/ Patient	Statement	High-RF sequence
Supportive & empathic		T:	*"And I would like you to write down what you think and not to write down what you think the others want to hear."*	
	RF of 1	P:	*"Yes."*	
Clarification, exploration & challenge		T:	*"Do you think that's possible? Because based on the sheets you gave me, I had the feeling that there's a lot on there what the others want to hear and not necessarily what you think."*	Start
	RF of 3	P:	*"Hm, that's just how it goes with me, also at home. I say – so when I'm in conflict as well – I say what they want to hear."*	
Supportive & empathic		T:	*"Yes."*	
	RF of 1	P:	*"So that everybody agrees like that."*	
Clarification, exploration & challenge		T:	*"So that there is peace."*	
	RF of 1	P:	*"Yes."*	
Supportive & empathic		T:	*"I understand that too."*	
	RF of 4	P:	*"Because if I then open my mouth against it, then I know that it ends in stress, because then they have not heard what they want to hear."*	End

demand (given by the context of the therapy session) or explicit demand (in a demand question) that can be scored with less than a score of 3. For two of the fifteen (13.3%) sessions, a second RF rating was performed (LK, SH). Inter-rater reliability for the RF score was good (Koo and Li, 2016) using a two-way random, absolute agreement, with an ICC of 0.74–0.85.

High-RF sequences

We defined effective mentalizing during therapy as sequences where high RF is present. According to the RF Scale a score below 4 indicates low to negative RF and a score equal and above 4 indicates ordinary to high RF (Fonagy et al., 1998). Thus, all statements with an RF greater than or equal to 4 were analyzed in detail for content and prior interventions. Sequences were chosen as paragraphs that consist of the content that lead to effective mentalizing as documented by the high-RF. All interventions during this sequence were assessed. These sequences are referred to as high-RF sequences and were defined in consensus ratings (LK, LS). Table 1 illustrates a high-RF sequence with its starting and ending point from Thomas. In this example, it is a great achievement for the patient to communicate his own mental states such as convictions and motives to the therapist. However, it is important to emphasize that mental states are attributed to the parents with too much certainty and thus no opaqueness is given.

MBT interventions coding manual

The coding manual for the therapist's interventions was newly developed based on interventions of the MBT Adherence and Competency Scale (Bateman, 2018) and MBT manuals (Bateman and Fonagy, 2016; Taubner et al., 2019) by three clinical experts (LK, SH, ST). LK and SH have been trained in MBT by AFC certified MBT trainers. This deductive approach was complimented by an inductive approach in order to achieve an exhaustive coding of each statement made by the therapist. The MBT interventions coding manual (Kasper et al., 2023) (see Supplementary material S1 for definitions and examples of the interventions) includes 20 interventions. The coding of each therapist statement was performed after training (LS). It was allowed to code more than one intervention per statement. In case of ambiguity, decisions were always made in consensus. For three of the fifteen (20%) sessions, a second rating was performed. For testing inter-rater reliability with Cohen's Kappa the multiple interventions per statement were translated into agreement or disagreement. The inter-rater reliability for the intervention coding was based on the 20 individual interventions per statement and was substantial at kappa 0.61 (Landis and Koch, 1977).

The interventions were categorized according to the MBT manual (Bateman and Fonagy, 2016) by three clinical experts (LK, SH, ST). The MBT manual (Bateman and Fonagy, 2016) describes a hierarchical structure of interventions, which is related to patients' general emotional distress (arousal) (Figure 1).

When the arousal level is high, *supportive-empathic* interventions should be used to make the patient feel safe and comfortable. Interventions such as *clarification, exploration and challenge* can be used to encourage thinking about mental states. Only with a low arousal level, interventions aiming to encourage *basic mentalization* are recommended, in which affects and interpersonal experiences are explored. Furthermore, *relational mentalizing* can be used to directly address the interaction between therapist and patient.

16 interventions were summarized into the four intervention levels "supportive & empathic," "clarification, exploration, challenge," "basic mentalizing & affect mode" and "relational mentalizing" according to Bateman and Fonagy (2016) (Table 2). Four Interventions such as small talk, nonverbal, organizational and not classified (only 0.9%) were summarized into a fifth category "basic communication." When the multiple intervention codings per statement differed in their corresponding intervention level, the intervention level of lower security with high arousal was chosen (in descending order: "relational mentalizing," "basic mentalizing & affect mode," "clarification, exploration, challenge," "supportive & empathic"). The multiple intervention codings rarely differed in their corresponding intervention level.

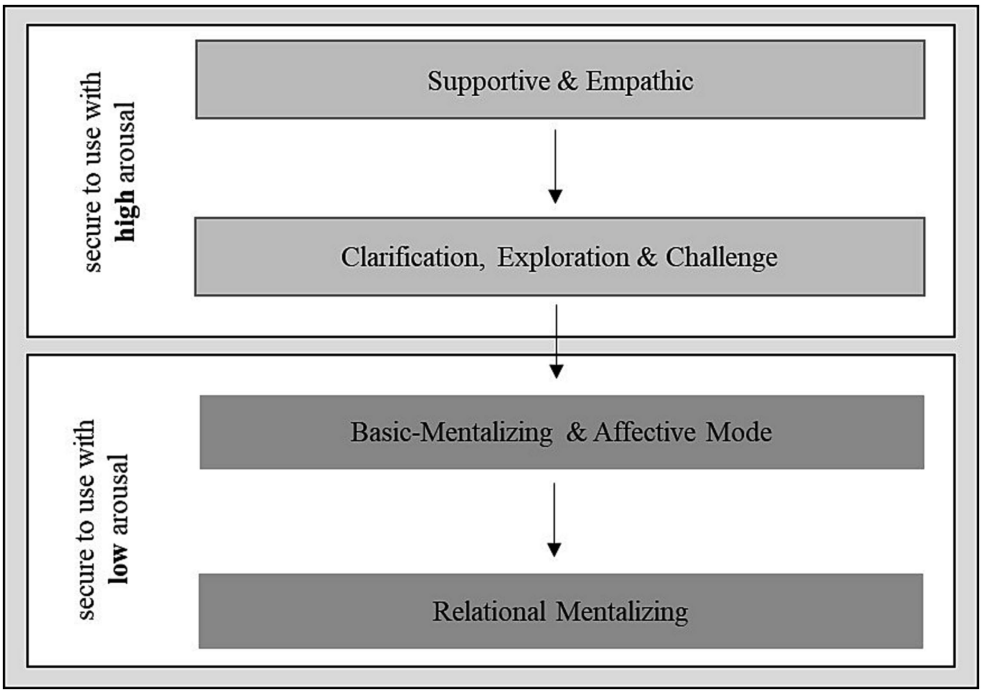

FIGURE 1
Categories of intervention levels according to the MBT-manual by Bateman and Fonagy (2016). Adapted from Taubner et al. (2019).

TABLE 2 Interventions divided in intervention levels according to the MBT-manual (Bateman and Fonagy, 2016).

Intervention levels	Interventions
Supportive & empathic	Empathic validation Affirmation In general Regarding mentalization Self-revelation Psychoeducation/Advice Consent/Note
Clarification, exploration & challenge	Clarification (fact oriented) Stop/Stand/Rewind Change of subject Challenge Paraphrase/Interpretation Demand questions (internal cognitive processes)
Basic-mentalizing & affect mode	Offering a new perspective Mentalizing for the patient Affect-elaboration Demand Offer
Relational mentalizing	Therapist-patient-relation Affect focus

Data analysis

Data were analyzed using the statistical program SPSS (IBM, version 28). Frequencies and percentage frequencies as well as mean values of the RF scores per patient in overall and per session were calculated. Percentage frequencies of intervention levels and interventions were calculated per patient across all sessions as well as in the high-RF sequences. RF scores and their distribution were analyzed descriptively.

To address the first research question, which intervention levels (supportive & empathic; clarification, exploration & challenge; basic-mentalizing & affect mode; relational mentalizing) are used in MBT-CD over the course of therapy, the intervention levels' distributions were analyzed descriptively.

To address the second research question, which specific interventions and intervention levels are related to enhance effective mentalizing throughout the therapeutic process in MBT-CD, Fisher's exact tests were used due to the large number of interventions to be tested and the low frequencies of the respective interventions in connection with effective mentalizing. Fisher's exact tests were performed to test the differences in frequencies of interventions as well as intervention levels between high-RF sequences (RF score ≥ 4) and remaining therapy sequences (RF score ≤ 3). Because of cell frequencies less than 5, the p value was estimated with Fisher's exact test using Monte Carlo simulation. One Fisher's exact test was performed for each of the interventions and intervention levels per patient and standardized residuals z were calculated. The residuals indicate if interventions occur more frequently or less frequently than statistically expected in the sequences with high or low RF. Using the standardized residuals, conclusions can be drawn about which intervention or intervention level contributed to the potential association (Field, 2013). Effect sizes were calculated using Cramer's V and assessed according to Cohen (1988) for Fisher's exact tests with degrees of freedom equal to 2: a value of Cramer's V within the range of 0.07–0.21 indicates a small effect, a value within the range of 0.21–0.35 a medium effect, and a value larger than 0.35 a large effect.

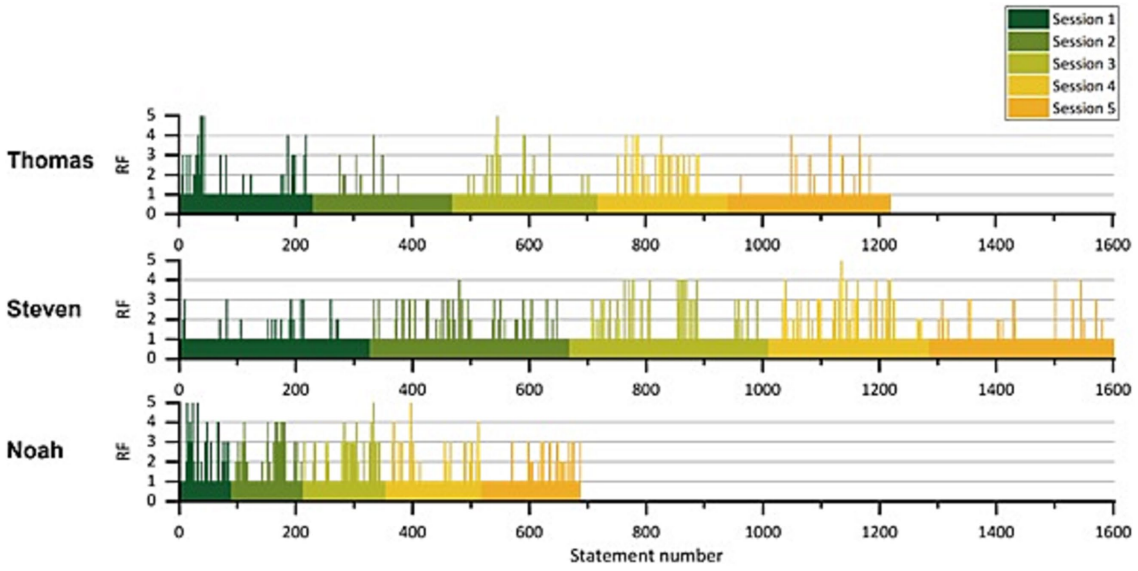

FIGURE 2
Reflective functioning per patient over the course of therapy.

Results

Patients' diagnosis and general outcomes post treatment

Thomas met criteria for ADHD, Steven met criteria for Obsessive-Compulsive Disorder and Noah did no longer fulfill criteria of Borderline and Antisocial Personality Disorder (ASPD) by the end of therapy. Regarding the GAF, all three adolescents improved at the end of therapy with 85 for Thomas, 60 for Steven and 81 for Noah.

In terms of mentalization level measured with the BRFI (Rudden et al., 2005), Thomas increased to an RF score of 3 (low mentalizing), Steven showed no improvement between surveys with a constant RF score of 3 (low mentalizing) and Noah showed no improvement with a constant RF score of 5 (ordinary mentalizing).

Reflective functioning in session

In total, 3,506 patients' statements were coded with the RF-Scale (Fonagy et al., 1998). Overall, RF in-session scores ranged from 1 to 5. Negative mentalizing (RF = −1) and above average mentalizing (RF > 5) did not occur within the selected sessions. Analyzing the course of RF scores descriptively within the sessions and across the sessions per patient (Figure 2), fluctuations can be traced. There were noticeable differences in the numbers of statements per patient: Thomas having 1,218 statements, Steven 1,602 statements and Noah 686 statements.

Thomas and Steven showed an average RF score of 1.2 and Noah an average RF score of 1.40. As the majority of patients' statements (87.9%) were rated with an RF score of 1 (absent mentalizing). Thomas and Steven showed a higher RF value than 1 in 9.1 and 10.1% of their statements, whereas Noah mentalized twice as often with an RF score higher than 1 (22.4%).

High-RF

High-RF scores (ordinary mentalizing) made up a total of 1.9% of all adolescents' statements. Thomas showed in 2% of all his statements high-RF scores, Steven in 1.3% and Noah in 3.2%.

Distribution of the intervention levels

Descriptive analysis of the percentage frequency of the four intervention levels and the category basic communication per patient per session over the course of therapy (Figure 3) showed that the distribution of intervention levels differed per patient between sessions but also between patients. Across all patients clarification, exploration & challenge was used most frequently (Thomas 35.2 to 54.8%; Steven 37.0 to 46.2%; Noah 36.7 to 58.5%) and relational mentalizing was used least frequently (Thomas 0 to 5.2%; Steven 0 to 1.5%; Noah 0 to 0.8%). There was no clear trend in the frequency of supportive & empathic (Thomas 12.9 to 29.4%; Steven 16.2 to 36.7%; Noah 10.1 to 24.9%) and basic-mentalizing & affect mode (Thomas 10.9 to 28.7%; Steven 9.1 to 31.8%; Noah 16.6 to 31.5%) and basic communication (Thomas 8.3 to 26.2%; Steven 7.5 to 26.6%; Noah 0 to 21.9%) across patients and course of therapy.

The intervention levels' distribution combined across all five therapy sessions was similar for each patient (Figure 4). Across all patients and sessions, the percentage frequency of supportive & empathic was 16.0 to 22.5%, clarification, exploration & challenge was 42.9 to 50.9%, basic-mentalizing & affect mode was 16.4 to 23.0%, relational mentalizing was 0.1 to 1.1%, and basic communication was 9.9 to 14.9%. The ranking of the intervention levels' use was similar between patients.

Interventions and intervention levels in high-RF sequences

In 40 cases, patients' high-RF statements were directly preceded by the therapist's associated content intervention. In 27 cases, it took

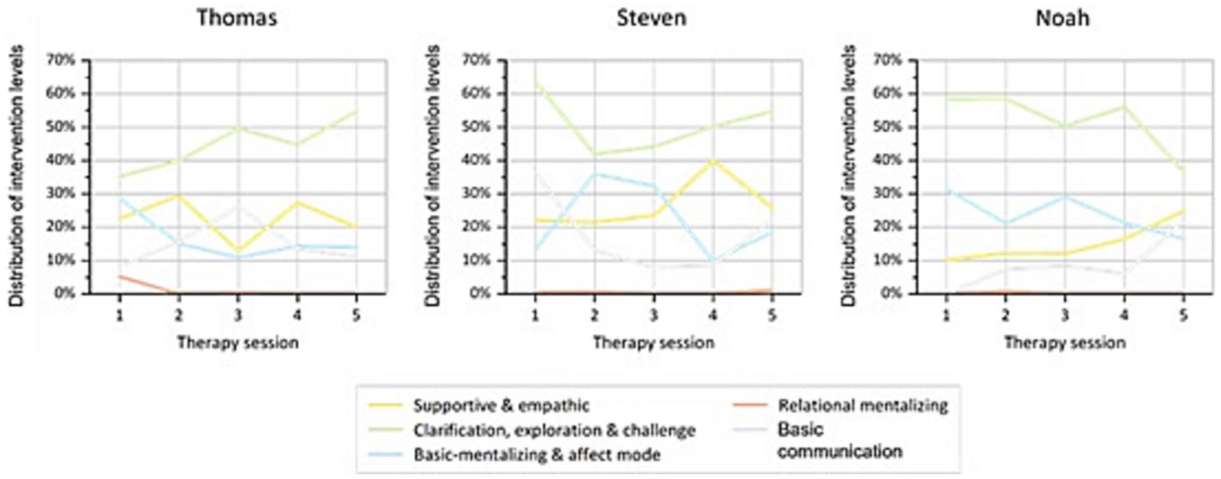

FIGURE 3
Distribution of the intervention categories used in each therapy session per patient.

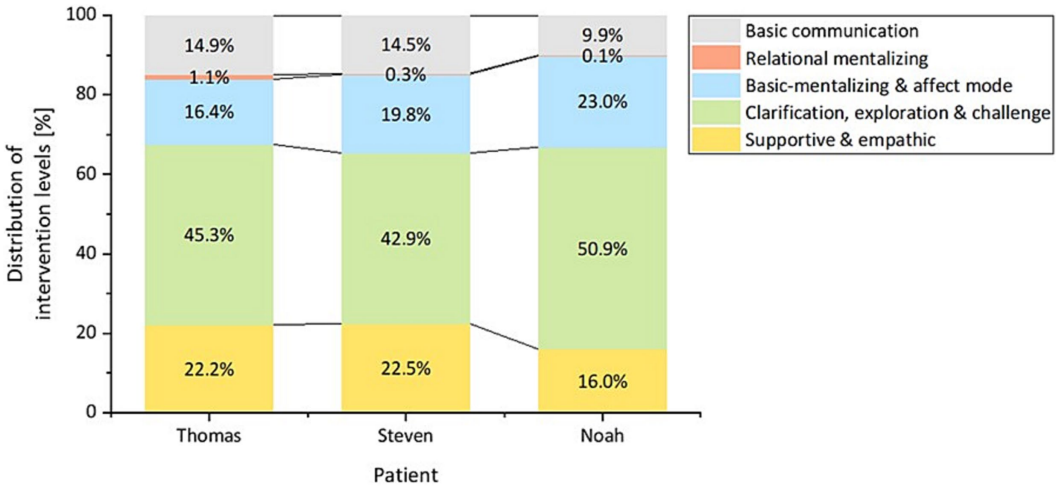

FIGURE 4
Distribution of the overall used intervention levels per patient.

2 to 7 therapeutic interventions for the patient to show a content related high-RF score. 4.2% of therapeutic interventions across all sessions and patients ($n = 153$) were connected to the high-RF sequences.

The patients were analyzed as individual cases regarding their intervention and intervention level frequency differences within high-RF sequences. For each patient, a Fisher's exact test was performed for the interventions and the intervention levels within high-RF sequences (≥ 4) in comparison to sections with low-RF values (< 4). All three adolescents showed a statistically significant association between certain interventions or intervention levels and high-RF sequences.

Interventions

Investigating interventions within high-RF sequences (≥ 4) and sections with low-RF values (< 4), for Thomas a large effect was evident ($V = 0.41$), for Steven a small effect ($V = 0.19$) and for Noah a medium effect ($V = 0.28$).

In Table 3 interventions associated with high-RF sequences per patient using the standardized residual z are illustrated. For Thomas, a significant association with high-RF sequences was shown for the interventions change of subject ($z = 2.4$, $p < 0.05$), affect-elaboration (demand) ($z = 5.6$, $p < 0.001$), and patient-therapist relationship ($z = 12.0$, $p < 0.001$). For Steven, the interventions mentalizing for the patient ($z = 2.5$, $p < 0.05$), empathic validation ($z = 4.1$, $p < 0.001$), and affect-elaboration (demand) ($z = 3.7$, $p < 0.001$) became significant. For Noah, demand mentalizing ($z = 3.7$, $p < 0.001$), challenge ($z = 3.1$, $p < 0.01$), and affect-elaboration (offer) ($z = 2.9$, $p < 0.01$) were significantly related to the high-RF sequences. A negative correlation was found with the intervention small-talk for Steven ($z = 2.0$, $p < 0.05$) as well as clarification for Steven ($z = -2.4$, $p < 0.05$) and Noah ($z = -2.3$, $p < 0.05$).

Table 4 shows examples of the interventions significantly positively associated with effective mentalizing.

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TABLE 3 Interventions with at least one significant association with high-RF per patient across the five sessions.

Interventions		Clarification	Demand mentalizing	Mentalizing for the patient	Empathic validation	Change of subject	Challenge	Affect-elaboration (demand)	Affect-elaboration (offer)	Patient-therapist relationship	Small-talk
Stand. Residuum z	Steven	**−2.4**	−0.7	**2.5**	**4.1**	−0.8	−0.6	**3.7**	−0.4	-	**−2.0**
	Thomas	−1.8	1.4	1.7	−0.9	**2.4**	−0.5	**5.6**	0.9	**12.0**	−1.4
	Noah	**−2.3**	**3.7**	1.4	0.2	−0.6	**3.1**	1.5	**2.9**	-	−1.9

Standardized residual $z > |1.96|$ is significant at $p < 0.05$, $z > |2.58|$ at $p < 0.01$, and $z > |3.29|$ at $p < 0.001$. Significant results have been highlighted.

Intervention levels

Investigating intervention levels within high-RF sequences (≥ 4) and sections with low-RF values (< 4), for Thomas a medium effect was evident ($V = 0.26$), for Steven a small effect ($V = 0.13$) and for Noah a small effect ($V = 0.14$).

In Table 5 intervention levels associated with high-RF sequences per patient using the standardized residual z are illustrated. For Thomas, a significant association of the high-RF sequences was shown with relational mentalizing ($z = 8.3$, $p < 0.001$), for Steven with supportive & empathic ($z = 3.4$, $p < 0.001$), and for Noah with basic-mentalizing & affect mode ($z = 2.6$, $p < 0.01$). A negative correlation was found with the intervention level clarification, exploration & challenge ($z = -2.3$, $p < 0.05$) and basic communication ($z = -2.1$, $p < 0.05$) for Steven.

Discussion

The goal of the multiple MBT-CD case study was an exploratory investigation of therapeutic interventions categorized to intervention levels regarding a general use and their percentage frequencies over the course of therapy. Furthermore, the study aimed to analyze the influence of specific interventions on effective mentalizing. Over the course of therapy, a similarly frequent use of intervention levels between patients was shown. Across all patients and sessions the most frequently used intervention level was clarification, exploration & challenge and the least frequently used was relational mentalizing. This was also evident in the patients' individual sessions, although there were differences between therapy sessions per patient and between patients. There was no clear upward or downward tendency visible in the intervention levels' frequencies of use across the course of therapy. A variety of interventions, such as demand questions, affect-elaboration, empathic validation, challenge, change of subject, patient-therapist relation and mentalizing for the patient, were successfully used to enhance the patients' effective mentalization. Regarding intervention levels, supportive & empathic, basic-mentalizing & affect mode and relational mentalizing were positively related to effective mentalizing. Interventions and intervention levels enhancing effective mentalizing seem to be patient-specific and might depend on various variables, such as the patients' arousal and pre-mentalizing mode or therapists' mentalizing.

In order to analyze interventions in MBT-CD and their specific relation to effective mentalizing, three patients were selected. The patients are characteristic for MBT-CD target group in relation to their symptoms and show a good treatment outcome regarding their diagnosis. However, two of three patients did not show an improvement in their mentalization, measured with the BRFI (Rudden et al., 2005), at the end of therapy. Only Thomas´ mentalizing level, being the lowest mentalizing level of all patients (absent to lacking) at baseline, was increased to the low level at the end of therapy. Thomas ($RF_{pre} = 2$, $RF_{post} = 3$) and Steven ($RF = 2$) correspond to the average low mentalizing level ($RF = 2.6$) of violent adolescents (Taubner et al., 2010) showing a partial understanding of intentions of self and others. Noah stood out with an ordinary mentalizing level ($RF = 5$) showing a consistent model for thoughts and feelings of self and others, which is above the average mentalizing level of healthy adolescents ($RF = 3.17–4.7$) (Taubner et al., 2013; Borelli et al., 2015; Cropp et al., 2019a). Overall, it should be emphasized that only

TABLE 4 Examples of interventions successfully used to enhance the patients' effective mentalization.

Interventions	Examples
Demand questions	Therapist: *"Ok, do you have any idea why you pushed him, although you knew that you could not allow yourself to do anything- regarding the risk of being expelled from school?"*
Affect-elaboration	Therapist: *"And then so you have a feeling about it? Can you describe that?* "(demand phrasing) Therapist: *"But I think between this "I am insecure with you "and "I need security very urgently "- in between there is somehow anger or resentment or something? "*(offering phrasing)
Empathic validation	Therapist: *"I understand, but so okay. I really understand the despair. I also understand the anger and I understand your effort not to freak out – to regulate yourself, to control yourself."*
Challenge	Patient: *"It seems that way to me. I suppress it immediately. So when I have pain, I just make it go away inside me. They just go away like that."* Therapist: *"How do you do that, please? Can you teach me to do that?" (laughs)*
Change of subject	Therapist: *"So Christmas was boring, okay. How was it in the family? How is it in the family at all?"*
Patient-therapist-relation	Therapist: *"But then – what just happened here between us – this pattern repeats itself inside you?"*
Mentalizing for the patient	Therapist: *"So they invest in you and then you also feel somehow valuable and think to yourself, yes, and now I'll really join in. Maybe that was the idea?"*

TABLE 5 Intervention levels with at least one significant association with high-RF per patient across the five sessions.

Intervention levels		Supportive & empathic	Clarification, exploration & challenge	Basic-mentalizing & affect mode	Relational mentalizing	Basic communication
Stand. Residuum z	Steven	**3.4**	**−2.3**	1.6	−0.4	**−2.1**
	Thomas	−1.4	−0.2	1.6	**8.3**	−1.7
	Noah	−1.7	−0.1	**2.6**	−0.2	−1.5

Standardized residual $z > |1.96|$ is significant at $p < 0.05$, $z > |2.58|$ at $p < 0.01$, and $z > |3.29|$ at $p < 0.001$. Significant results have been highlighted.

Thomas showed an improvement in mentalization compared to before and after therapy. Nevertheless, there was an improvement in the diagnosis for all three adolescents, so the relationship between mentalization and treatment outcome should be investigated in further studies in more detail.

Aiming to understand the mechanisms of MBT the study furthermore focused on mentalizing as a state during therapy sessions. Overall, there was an above-average frequency of absent mentalizing. Within therapy sessions, all three adolescents showed similar lacking to low mentalizing, mentioning mental states with some evidence of consideration of mental states without explicitness. Noah mentalized twice as often as the other two patients, whereby he used mental states to explain behavior in an accurate way. It should be noted that every statement made by patients, and not just statements related to demand questions, were rated using the RF Scale (Talia et al., 2015). The assessment of monosyllabic responses or the mere absence of mentalizing when not prompted by the therapist may have led to an underestimation of patients' mentalizing ability. However, to examine the relationship between each possible therapist intervention and patient mentalizing, it was necessary to assess each patient statement. Within sessions and across sessions fluctuations of mentalizing were visible as in other studies (Hörz-Sagstetter et al., 2015; Kornhas et al., 2020; Kivity et al., 2021). This underlines the hypotheses that mentalizing rather is a state than a trait during therapy sessions. It can be assumed that it is not in general about a mentalizing increase within therapy sessions or over the course of therapy, but about the production of moments in which mentalizing is increased and thus consequently an inner change of mental states takes place when effective mentalizing is generated. More precisely, it is about strengthening the mentalization of certain aspects of life that could not be mentalized before, such as certain triggers (When do they become violent? What are the catalysts?).

Use of intervention levels

To examine if specific therapeutic interventions are used in MBT-CD, an exhaustive rating instrument was developed. Subsequently, the 22 interventions of the coding instrument were transformed into Bateman and Fonagy's (2016) four-level model, requiring the incorporation of basic communication as an additional category including interventions such as non-verbal response, small talk, and session organization. Based on the MBT manual (Bateman and Fonagy, 2016), the use of intervention levels is adjusted to the patient's arousal state following a hierarchical order. Accordingly, if arousal is high, the following intervention levels should be used in the following order: supportive & empathic; clarification, exploration & challenge. If arousal is low, the following intervention levels should be used in the following order: basic-mentalizing & affect mode; relational mentalizing. According to the MBT manual (Bateman and Fonagy, 2016), relational mentalizing should only be used, when the patient is in a state of effective mentalizing. In the current study, the patients' percentage frequencies of intervention levels were similar across the sessions, although the percentage frequencies of intervention levels per session differed between and within patients. Across all patients and sessions, the most frequently used intervention level was clarification, exploration & challenge and the least frequently used intervention level was relational mentalizing. This pattern of use

was also evident in the patients' individual sessions. There was no clear progression in the intervention levels' frequencies. Since the intervention levels supportive & empathic as well as clarification, exploration & challenge were frequently used, it can be assumed that high arousal was present in the patients at the time of use. This conclusion is consistent with the theoretical background of the intervention levels (Bateman and Fonagy, 2016). To test this assumption, arousal should be included in future studies.

Overall, all theoretically anticipated levels of the model (Bateman and Fonagy, 2016) were used within the therapy sessions. However, use of the relational mentalizing level was conspicuously low (0.1–1.1%), although relational mentalizing is known to be a core element of MBT. This result is similar to the findings of a study of a mentalization based long-term treatment for an adult patient with borderline personality disorder, which was carried out by the same study therapist (ST) (Kornhas et al., 2020). In addition, previous studies of adult populations have also found that this intervention despite its importance is not very frequently used compared to other MBT interventions (Karterud et al., 2013; Simonsen et al., 2018). Over the course of this treatment, the patient-therapist relationship was rarely a subject of conversation. On the one hand, these results might be explained by the patients´ arousal being too high or the patients´ mentalizing being too low. On the other hand, the therapist, despite a general adherence to the MBT manual (Bateman and Fonagy, 2016), might have hardly used relational mentalizing as an intervention. This hypothesis is supported by a study by Karterud et al. (2013), whereas the low use of patient-therapist intervention appeared to be therapist-specific. If this is the case, special therapist training for this kind of intervention might be needed.

Effective mentalizing

Of particular interest for understanding mentalizing processes and their mechanisms of change are sequences of high mentalizing. In these moments, a patient's mentalizing space expands and effective mentalizing possibly occurs (Allen et al., 2008). Accordingly, moments with above-average mentalizing resemble an effective mentalizing experience. In order to obtain a better understanding of interventions related to effective mentalizing, a sequence of content-related interventions prior to high mentalizing was formed and analyzed. High mentalizing was positively related to the intervention affect-elaboration in all three cases, whereby Steven and Thomas benefitted from a demanding and Noah from an offering phrasing. However, Noah significantly responded to demand questions aiming at cognitive internal processes with high mentalizing. It can therefore be concluded that for all three adolescents demand questions play an important positive role regarding high mentalizing, either related to cognitive or affective internal processes. This supports the assumption that demand questions are an important intervention within MBT in theory and practice and increase mentalizing (Möller et al., 2017; Kornhas et al., 2020; Kivity et al., 2021).

Furthermore, in the current study, other interventions aside demand questions were related to high mentalizing and therefore support results from Meier et al. (2023). Specific interventions such as affect-elaboration (offering), challenge, change of subject, patient-therapist relation, empathic validation and mentalizing for the patient were associated with high mentalizing. Thus, it can be postulated that MBT interventions can indeed promote effective mentalizing at various intervention levels. Although intervention levels were used similarly frequent per patient over the course of therapy, individual differences regarding effective mentalizing-promoting interventions can be identified. It can be assumed that the patient-specific use of the interventions prior to effective mentalizing is related to the patients' arousal level and pre-mentalizing mode. Depending on the patient's pre-mentalizing mode, specific intervention are suggested to establish mentalizing (Bateman and Fonagy, 2016). Interventions which were positively associated to high mentalizing, such as change of subject, challenge and empathic validation, belong to interventions challenging pre-mentalizing. Another intervention positively associated with high mentalizing was mentalizing for the patient. While the MBT manual advises not to mentalize for the patients, but rather use questions and statements to encourage the patient to mentalize (Bateman and Fonagy, 2016), mentalizing for the patients has been related to improving mentalizing before (Georg et al., 2019). Mentalizing for the patient can entail the risk that the patient pseudo-mentalizes, i.e., goes along with what the therapist says and reflects mental states without emotional coherence. On the other hand, the therapist's ability to draw out subdominant aspects of the patient's narrative is increasingly seen as part of establishing a sense of 'we' and epistemic trust within the therapy. The patient-therapist relation was significantly positively associated with high mentalizing. This intervention was hardly used, but if so, it had a great effect on mentalizing. Knowing that this intervention is only used when the patient is in a mentalizing state (Bateman and Fonagy, 2016) and considering its high effect on mentalizing, the question is raised, whether working on the therapeutic relationship would also be effective when the patient is not in a mentalizing state. It might be beneficial to challenge the patients' comfort zone with a clear therapeutic stance to foster the therapeutic process as seen in a study on patients with borderline personality disorder (Folmo et al., 2019). Supporting this approach, it has been shown in a dismantling study of depressive adolescents that the exploration of the adolescents' relations to the therapist amplified the effects of short-term psychoanalytic psychotherapy on their depressive symptoms (Ullberg et al., 2015). In addition, interventions with regards to the patient-therapist relation seemed to be especially important for patients with long-standing, more severe interpersonal problems in a dismantling study of one year psychodynamic adult-therapies (Hoglend et al., 2008). Furthermore, three out of four levels of the manual based model (Bateman and Fonagy, 2016) were significantly positively related to higher mentalizing in a patient-specific manner: supportive & empathic; basic- mentalizing & affect mode; relational mentalizing. Concluding, effective mentalizing can occur through each of these three MBT intervention levels in Bateman and Fonagy (2016) adolescents with CD.

In contrast, clarification, exploration & challenge and basic communication as well as the interventions clarification and small-talk were significantly negatively associated with high mentalizing for two patients. This can be caused by the fact that clarification focusses on facts to get a better understanding of the patients' narratives, whereas this definition of clarification is not consistent with the MBT manual (Bateman and Fonagy, 2016). Therefore, it can be assumed that a lot of non-mentalizing report about scenes, etc. is included in clarification. It could also be that clarification might be signaling epistemic distrust of the patient (i.e., "what you say is not making much sense and I need to know more in order for me trust you"). This

is particularly important for the patient group with CD, as they are particularly vulnerable in terms of not being believed and trusted (Talia et al., 2021). The definition of clarification should be specified more clearly in further studies.

However, non-significant or negative significant relations do not allow to assess whether these interventions or intervention levels are in general ineffective to increase mentalizing, since the causal dependence is not known. Furthermore, it is conceivable that a variety of interventions, which are not associated with high mentalizing, are important for understanding what is being said or for building a sustainable relationship. Particularly for young adults with higher arousal, the intervention small talk could be anxiety-reducing and pave the way for a trusting relationship.

Moreover, there are some additional factors that could contribute to the interaction between therapeutic interventions and effective mentalizing. It is of interest to examine whether different interventions or intervention levels are used depending on the patient's arousal level. This could also test the hypothesis of the MBT manual (Bateman and Fonagy, 2016) according to which intervention levels are used depending on the patient's arousal. Inspired by Kivity et al. (2021) it is of interest to analyze the interaction of patients' arousal, mentalizing and a range of therapeutic interventions. To capture arousal, patients' talking turns could be acoustically encoded (Kivity et al., 2021). In addition, it seems to be important to include the mentalizing level of the therapist in future investigations because the patients' mentalizing was found to increase when the therapist uses a similar mentalizing level compared to that of the patients (Diamond et al., 2003; de la Cerda and Dagnino, 2021). Therefore, it might be beneficial to tailor interventions to the patient's level of mentalizing (Diamond et al., 2003; Kasper et al., in prep)[2]. Two other important points within MBT are to counterbalance imbalances of patients' mentalization dimensions (implicit/explicit, self/other, cognitive/affective, internal/external) and to contrast patients' pre-mentalizing modes. It can be assumed that these also influence the choice of interventions and thus an increase in effective mentalizing.

Limitations

Results obtained in the exploratory, multiple case study should be regarded as promising initial indications for further research and theory building. However, number of patients and selected therapy sessions are to be named as a limitation, since no generalizable statements can be made thereby. Furthermore, three therapies of only one therapist were used to minimize therapist variance. However, despite recognition as an MBT therapist and proven adherence to the sessions, individual characteristics in the implementation of MBT may play a role.

Overall, the MBT interventions coding manual (Kasper et al., 2023) was newly developed and requires further validation. As part of the exploratory approach, the coded interventions were assigned to Bateman and Fonagy's (2016) model by consensus of three raters. In particular, the very high number of the intervention clarification may have had an impact on the evaluation of the intervention level clarification, exploration & challenge and is not consistent with the original definition of clarification by Bateman and Fonagy (2016). Furthermore, interventions can often be interrelated. Therefore, it is artificial to build high mentalizing sequences in order to analyze the interventions that enhance mentalization. It could also be that even the best mentalizing intervention will not lead to improved RF in the context of a poor therapeutic relationship. As previously discussed, other factors seem to play an important role that were not included in the study like patients' pre-mentalizing modes and arousal level as well as therapist mentalizing and quality of the patient-therapist relation.

Research and clinical implications

Identifying effective therapy components is necessary to improve therapy and corresponding manuals (Kazdin, 2003). Regarding MBT this means to better understand the mentalizing process. For this purpose, a uniform approach to mentalizing assessment is desirable to ensure comparability between studies which analyze in-session mentalizing processes. Previous studies have used different ways to capture mentalizing within therapy sessions using the RF scale, whereby the patients' talking unit varied greatly (Talia et al., 2019). To examine a patients' mentalizing level in response to prior interventions, the approach of coding statement-by-statement (Möller et al., 2017; Kivity et al., 2021) was proven appropriate. However, the strong differences in statement numbers between patients were striking. The unequal statement numbers and their meaning in therapy should be considered in more detail in further research. The methodological implementation of using high mentalizing scores and forming sequences represents a promising approach for investigating interventions related to effective mentalizing.

Overall, interventions used in therapy should be investigated in more detail, focusing on interventions positively related to effective mentalizing besides demand questions: Firstly, affect-elaboration with an offering phrasing; secondly, relational mentalizing, because of its rare use despite its importance within MBT; thirdly, mentalizing for the patient to clarify its role within MBT; fourthly, interventions potentially related to pre-mentalizing modes, such as change of subject, challenge and empathic validation. Future studies should aim at dismantling interventions by controlling their use like it has been demonstrated for transference interpretations (Ullberg et al., 2015). In general, the additional factors pre-mentalizing mode, patients' arousal, and therapists' mentalizing level are recommended to be considered in further investigations of interventions within MBT. This aligns with the recommendations of Meier et al. (2023), who also highlight the importance of additional factors, including patient-therapist relation.

Specific MBT interventions can be associated with effective mentalizing. Clinically, the most promising interventions might be demand questions, affect-elaboration (offering and demanding

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phrasing), change of subject, challenge, patient-therapist relation, empathic validation and mentalizing for the patient. However, interventions that promote high mentalizing sequences may differ between patients. Accordingly, therapists need to tailor interventions individually to identify those interventions that promote effective mentalizing.

Data availability statement

The datasets presented in this article are not readily available because as this is sensitive patient information no data can be disclosed. Requests to access the datasets should be directed to Lea.Kasper@med.uni-heidelberg.de.

Ethics statement

The studies involving humans were approved by the Ethics Committee of the Heidelberg University Medical Faculty (Germany). The studies were conducted in accordance with the local legislation and institutional requirements. Written informed consent for participation in this study was provided by the participants and their legal guardians.

Author contributions

LK: conceptualization, writing – original draft, and project administration. LK, SH, and ST: methodology and writing – review & editing. ST: resources and supervision. LK and LS: formal analysis, investigation, data curation, and visualization. All authors have read and agreed to the published version of the manuscript.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

Supplementary material

The Supplementary material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2023.1223040/full#supplementary-material

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Appendix III: Studie 3

Georg, A., **Kasper, L. A.**, Neubauer, A., Selic, M., & Taubner, S. (2024). Within- and between-session changes of maternal in-session reflective functioning in dyadic parent–infant psychotherapy. *Psychotherapy Research, 1-13.* https://doi.org/10.1080/10503307.2024.2323617

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Research Article

Within- and between-session changes of in-session reflective functioning of mothers in dyadic parent–infant psychotherapy

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Abstract

Objective: This study investigated if in-session reflective functioning (RF) of mothers improved between and within sessions of brief dyadic focused parent–infant psychotherapy (fPIP) for the treatment of regulatory disorders in infants.

Method: In-session RF was coded for 44 therapy sessions from $N = 11$ mothers randomly selected from a RCT on the efficacy of fPIP as part of secondary analyses. A new rating system distinguished self-focused and child-focused in-session RF. Cumulative ordinal regression models were applied to analyze the dynamics of in-session RF within and across sessions, controlling for word count of each statement.

Results: While in-session RF improved significantly within sessions, between-session RF improved significantly only in the second session compared to the first with a significant decrease observed in the last session. Child-focused in-session RF was significantly lower than self-focused in-session RF at the beginning of the sessions but improved significantly stronger than self-focused in-session RF during sessions.

Conclusions: In-session RF (particularly in child-focused statements) can be regarded as a dynamic change process relevant within each session of dyadic fPIP. Improvements made on a session-by-session basis may not be maintained until the next session. Implications for practitioners and in-session RF research are discussed.

KEYWORDS: In-session reflective functioning; mentalizing; parent–infant psychotherapy; change process; regulatory disorders

Clinical or methodological significance of this article: The study is the first to investigate in-session Reflective Functioning of mothers as a process of psychodynamic-based dyadic parent–infant psychotherapy. Changes across all sessions and changes within sessions were examined to obtain a more accurate picture of the change processes. According to the results, in-session RF (particularly child-focused) reflects more a within-session process as opposed to a between session process. The results have implications for in-session RF research and practice of dyadic parent–infant psychotherapy.

Infant and toddler regulatory disorders like excessive crying, sleeping, and feeding disorders are a common concern of parents and increase the risk for childhood behavioural problems (Galling et al., 2023). Early regulatory disorders are associated with high distress of their caregivers, they typically affect the parent–infant relationship (Skovgaard et al., 2007), and, moreover, they are associated with dysfunctional parenting strategies and abuse (Reijneveld et al., 2004).

A range of interventions have been developed to help parents and their infants aiming at improving the parent–child relationship, promoting secure attachment development, and reducing infant symptoms (Barlow et al., 2015; Sleed et al., 2023). Some of the dyadic interventions targeting parent and

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infant together focus on enhancing parental mentalizing (Barlow et al., 2021), which is a parents' capacity to make sense of the infant's thoughts, emotions, and intentions, and to reflect on his or her own internal mental experiences referring to the child (Luyten et al., 2017). Mentalizing lays the foundation for sensitive responsiveness and secure attachment (Zeegers et al., 2017). It has been suggested that enhancing parental mentalizing is a common process of change in early interventions (Barlow et al., 2021) that contributes to more attuned parent–infant interactions and thus promotes child attachment development and infant symptom reduction. However, even though some dyadic interventions explicitly target parental mentalizing, the respective change process during treatment has not been addressed in quantitative research.

A recent study investigated the efficacy of a brief dyadic (or triadic, involving two caretakers) intervention for the treatment of infant regulatory disorders, utilizing a standard paediatric treatment as control condition (Georg et al., 2021). Focused Parent–Infant-Psychotherapy (fPIP; Cierpka et al., 2017) aims at reducing regulatory symptoms and parental distress and fostering the parent–infant relationship. Like other psychodynamic-based parent–infant psychotherapy (PIP) models, fPIP targets parents' representation of their infant and explores links between parents' own attachment experiences and their current relationship with their child. The intervention comprises an expressive and a supportive treatment strategy, which is adapted to lower personality functioning. In both intervention types, enhancing parents' ability to mentalize the child is thought to be the key for change (Georg et al., 2019). For example, by utilizing video-assisted interventions, therapists encourage parents to think about their infants' internal world during positive interactions, explore parental thoughts and feelings, and relate these reflections to the parents' internal working model. Understanding the meaning of the child's signals has also been one of the central processes according to retrospective accounts of mothers who participated in fPIP (Georg et al., 2022). The aim of this study is to quantitatively investigate the nature of change of mentalizing of parents in fPIP for the treatment of regulatory disorders.

Parental Reflective Functioning as an Outcome of Early Interventions

Overall evidence from early intervention research supports the notion that improvements of parental mentalizing are an outcome of early interventions. Parental reflective functioning is the manifestation of parental mentalizing in language, typically operationalized by applying the Reflective Functioning scale (RF scale, Fonagy et al., 1998) to transcripts of the Parent Development Interview (PDI-RF, Slade et al., 2005) or by a self-report questionnaire such as the Parental Reflective Functioning Questionnaire (PRFQ, Luyten et al., 2017). In a meta-analysis of findings from six studies on dyadic parent–infant interventions, Barlow et al. (2021) found a nonsignificant but trend-level improvement of PDI-RF from before to after treatment in the intervention group (SMD = −0.46, CI [−0.97, 0.04], p = 0.07). Despite this rather small change, this result is encouraging because, given the nature of the scale, small improvements already reflect a clinically meaningful change (Sleed et al., 2020). Further support stems from intervention studies using the PRFQ. For example, Zimmer-Gembeck et al. (2019) found a decrease on the prementalizing scale (i.e., impaired mentalizing) in caregivers of children with externalizing behaviours. Likewise, in the randomized controlled trial (RCT) of fPIP, a statistical trend-level effect pointing to decreased prementalizing compared to treatment as usual was found (Georg et al., 2021). The change in prementalizing remained stable at the 12-months follow-up (Georg et al., 2023).

Some studies further differentiated two facets of parental RF: one related to the self as a parent (self-focused RF) and the other related to the child (child-focused RF). The notion of a self–other dimension is based on the conceptualization of mentalizing as a multidimensional construct with different dimensions or polarities subserved by distinct underlying neural circuits (Luyten et al., 2020). Studies that separated self- and child-focused RF in their outcome measures came to inconclusive results. For example, a treatment for foster parents (Adkins et al., 2018) and adoptive parents (Bammens et al., 2015) led to significant enhancements of overall parental RF as well as self-focused and child-focused RF. In three studies on the efficacy of ongoing adapted versions of the Mothering from the Inside Out (MIO) intervention, Suchman et al. (2011) found enhancements only in self-focused PDI-RF in mothers enrolled in substance-use treatment, while mothers involved in mental health services improved in global and child-focused PDI-RF (Suchman et al., 2016). In a psychosocial risk sample, global, self-, and child-focused PDI-RF improved significantly (Suchman et al., 2020). These inconclusive results are possibly due to different samples and foci of interventions. For example, therapists working with substance abusing mothers

may focus on enhancing self-focused RF due to the difficulties in stress regulation (Suchman et al., 2018), while enhancing child-focused RF may be more relevant in mothers involved in mental health services who have a higher risk for internalizing symptoms (e.g., anxiety, depression) (Suchman et al., 2016).

These results demonstrate that parental RF can be improved by early interventions. However, there is the need for further research on the question to what extent improvements occur when assessed during treatment and how these changes are achieved. Observer-based research on in-session change of RF is one way to move the field towards a better understanding of the involved mechanisms and temporal course of change. While parental RF may qualify as a common factor in early interventions, research points to different facets such as self- and child-focused RF that may change differently over time depending on the type of intervention and the population.

In-session changes in RF have been subject of investigations in adult psychotherapy. Compared to the interview measure (e.g., RF rated based on the Adult-Attachment Interview; AAI; George et al., 1996), in-session RF reflects a state variable and assesses reflective capacities in a narrative actively constructed in the interaction with a therapist (Katznelson, 2014). Each statement or coding block of the patient's narrative is rated with the RF scale, providing a large number of measurement points per session and an overall score for each session (Talia et al., 2015, 2019). Compared to applying an interview-based measure, in-session RF may better track changes over time and avoid habituation and fatigue effects likely related to applying the same interview protocol repeatedly over the course of the treatment (Talia et al., 2019). To the best of our knowledge, the only study that addressed changes in in-session RF of mothers during an ongoing dyadic treatment using multiple measurement points was a single case study (Georg et al., 2019). Therefore, we briefly outline research on in-session RF in adult psychotherapy.

In-session Reflective Functioning in Adult Psychotherapy Research

In-session changes of RF have recently gained increased attention in psychotherapy research in adult patients. In an early account of this approach, Karlsson and Kermott (2006) found no increase of average RF assessed in three sessions over the course of a brief treatment. Later studies, by using multiple in-session RF assessments per session, came to different results. Babl et al. (2022) examined the change of in-session RF in four sessions over the course of integrative cognitive–behavioural therapy (CBT) for the treatment of depression and anxiety disorders and found a significant small improvement. Zeeck et al. (2022) reported higher average in-session RF scores in a focused psychodynamic-based treatment (FPT) compared to CBT in treating anorexia nervosa; however, in-session RF did not increase significantly in the three selected sessions. Some studies demonstrated a relation between change of in-session RF and treatment outcomes (Zeeck et al., 2022) as well as subsequent lower arousal in patients with borderline personality disorder following higher in-session RF-scores (Kivity et al., 2021). In addition, several studies found a relation between specific interventions or more frequent interventions and subsequent in-session RF (Kivity et al., 2021; Meier et al., 2023; Möller et al., 2017).

Despite some inconsistencies, these results overall further add to the notion that mentalizing may be a common factor in psychotherapy (Allen, 2013), but also suggest that more research on mechanisms of change in mentalization-based therapy (MBT) and beyond are needed (Luyten et al., 2020). Additionally, the studies relied on the basic assumption that in-session RF develops from session to session (e.g., Babl et al., 2021; Zeeck et al., 2022), thereby not considering the change that likely occurs within sessions.

To address the current lack of evidence on change of in-session RF in PIP, this study aims at investigating the research question if in-session RF of mothers significantly improved between and within sessions of fPIP. Further, as fPIP has a focus on increasing parental mentalizing of their child, we expected changes to occur mainly in child-focused RF as opposed to self-focused RF. We hypothesized to find significant increases of in-session RF within (1a) and between (1b) sessions. Furthermore, we expected larger increases of child-focused (vs. self-focused) in-session RF within (2a) and between (2b) sessions.

Method

The study is a secondary analysis of therapy sessions in a subsample of mothers who received fPIP within the research project "The Efficacy of a Brief Parent–Infant Psychotherapy for the Treatment of Early Regulatory Disorders: A Randomized Controlled Trial." The single-site RCT was conducted in the Outpatient Department for Family Therapy at the University Hospital in Heidelberg (Georg et al.,

2021). The approval for research in this sample was obtained from Medical Faculty of Heidelberg University (No. S-541/2013 approved November 4, 2013).

Sampling Procedures

In the RCT, families were included if they had provided informed consent and if their child fulfilled diagnostic criteria for persistent excessive crying, sleeping, feeding, or sensory processing disorders. The detailed procedure of the recruitment as well as inclusion and exclusion criteria can be obtained from Georg et al. (2021). From the 81 mother–infant dyads who received fPIP within the RCT, data of $N = 11$ (13.6%) were used for this study due to the time-consuming transcription and rating procedures involved. The cases were randomly drawn from a subsample of $N = 41$ cases, of whom all therapy sessions were available on video, leading to a total of 44 therapy sessions. The video-recorded therapy sessions were transcribed verbatim and subsequently rated.

Participant Characteristics

The mean age of the children (eight girls, three boys) was 8 months ($SD = 4.67$). A night waking disorder was the most frequent diagnosis with 81.8% ($n = 9$), followed by a sleep onset disorder (72.7%, $n = 8$), regulatory disorders of sensory processing (27.3%, $n = 3$), feeding disorders (18.2%, $n = 2$), and persistent excessive crying disorder (18.2%, $n = 2$). All mothers were of German origin with a mean age of $M = 35.91$ ($SD = 3.73$). The Parent–Infant Relationship Global Assessment Scale ($M = 7.73$, $SD = 0.9$) reflected perturbed relationship qualities on average. A full description of the descriptive and clinical characteristics of the subsample and the entire sample of the RCT can be found in the supplement (Appendix A).

Intervention Characteristics

All selected cases received four sessions during a 12-week treatment phase according to the fPIP manual (Cierpka et al., 2017). The first session had a duration of 90 min, and the three following sessions had a duration of 50 min each. The implementation rate was higher compared to the full sample that had a mean of $M = 3.69$ ($SD = 0.83$) sessions completed (Georg et al., 2021). In seven cases (63.6%) a second caretaker (i.e., father) participated in at least one session. All cases were rated as adherent according to observer-based adherence rating. Pre- and post-intervention data are displayed in Table I. Descriptively the changes in the sample mean values are comparable with the results of the RCT. PRFQ-data of the subsample was not available as the PRFQ was only implemented later during the recruitment process for the RCT.

Measures

Reflective Functioning Scale. The RF-scale rates the degree to which the speaker is able to understand their own and other people's behaviour as a function of underlying mental states and is based on the dimensions (a) awareness about the nature of mental states, (b) explicit effort to tease out mental states underlying behaviour, (c) recognition of the developmental nature of mental states, and (d) recognition of the probable mental states of the interviewer (Fonagy et al., 1998). Ratings are done on a 11-point scale from "−1" (anti-reflective) to "9" (exceptionally reflective) applied to transcribed interviews such as the AAI (George et al., 1996) or therapy transcripts (in-session RF). Evidence for the construct validity of measuring in-session RF was provided by Talia et al. (2019).

Each statement made by the participant was coded with the RF scale (Fonagy et al., 1998). The ratings were performed by a reliable and certified AAI-RF rater (second author) blind to session numbers and participant. In 15.9% of the sessions (seven out of 44 sessions), a second rating was performed by another certified AAI-RF rater external to the project. Inter-rater reliability for the RF-score was

Table I. Pre- and post-intervention data on primary and secondary outcomes ($N = 11$).

	Pre		Post	
Measure	*M*	*SD*	*M*	*SD*
QCFS	2.20	0.20	2.00	0.19
SCL-GSI	0.76	0.49	0.51	0.47
SCL-DE	14.36	8.41	10.55	10.80
PSI	136.55	25.71	127.36	41.62
MSES	32.54	3.50	33.09	5.32
EA-Parent	23.61	3.16	24.09	2.62
EA-Child	9.05	2.56	14.27	2.77

Note. EA-Child = Composite Child score of the Emotional Availability Scales; EA-Parent = Composite Parent score of the Emotional Availability Scales; MSES = Maternal Self-Efficacy Scale; QCFS = Questionnaire for Crying, Feeding and Sleeping; SCL-DE = Depression scale of the Symptom-Check-List-90R-S; SCL-GSI = General Severity Index of the Symptom-Check-List-90R-S; PSI = Parenting Stress Index.

good (Koo & Li, 2016) using a two-way random, absolute agreement, with an intraclass correlation of 0.73.

Self-Focused and Child-Focused RF. A new rating instrument was developed to distinguish self- and child-focused RF based on the definition of Suchman et al. (2010) where self-focused RF was defined as "mentalization about one's own wishes, intentions and emotions and their influence on mother–child interactions" and child-focused-RF as "mentalization about the child's wishes, intentions and emotions and their influence on mother–child interactions" (p. 10). The rating discriminates between the three categories: *self*, *child*, and *other topic* (unrelated to self or child). Each statement was assigned to only one category. Appendix B (Supplement) depicts the details of the coding system. A psychology student (master level) and the first author (AG) jointly developed the scoring system and adapted it in an iterative process by applying the system using in-session data from two sessions of the RCT, discussing the results, and making adjustments. After finalizing the rating system, the student rated the remaining transcripts alone. To determine inter-rater reliability of the category coding, in 6.8% of the sessions (3 out of 44), a second rating was performed (AG). The raters of the category coding were not trained in AAI-RF and were blind to session number, participant, and the RF-score. Inter-rater reliability was substantial with Cohens Kappa $\kappa = 0.71$ (Landis & Koch, 1977).

Word Count per Statement. To control for potentially confounds with word count, the total number of words of each statement was calculated and included in all analyses.

Statistical Analyses

To analyze the dynamics of in-session RF within and across sessions, cumulative ordinal regression models were applied (Liddell & Kruschke, 2018). Cumulative ordinal regression models assume that the observed ordinal dependent variable, in this case in-session RF, is categorized from the underlying latent and continuous variable (Bürkner & Vuorre, 2019). The latent RF variable was operationalized through the RF scale where the assumption of an interval scaled variable is at least questionable since, for example, the difference from a four to a five on the RF scale is hardly comparable or has a different meaning than the difference between a five and a six, which is why we decided to perform our analysis with this model. To account for the dependencies between observations (repeated in-session RF values obtained from the same individuals), we included the person identifier as a factor (represented by ten dummy-coded variables) in all models (Bollen & Brand, 2010). This approach was chosen over multilevel modelling given the small number of participants in the sample (cf., McNeish et al., 2017).

Three different models were conducted. In the first model (hypotheses 1a/1b), RF was predicted by the following predictors: (a) the session number (session number, S-NR), coded as a factor with session 1 as the reference category; (b) the number of words (word count, WC; the word count for each statement was divided by the maximum word count across all data points and the resulting variable was z standardized); and (c) the number of statements per session (statement number, ST-NR). The variable ST-NR was coded from 0 (the first statement within each session) to 1 with increments in 1/k, where k is the maximum number of total statements within a given session across all data of participants and sessions minus 1 (in the present data: $k = 972$). Hence, the effect of the predictor ST-NR represents the estimated change in RF with each additional statement within the session (divided by $k = 972$ to avoid numerically small parameter estimates and thereby facilitate parameter estimation). The second and third model aim to differentiate whether the change in in-session RF was stronger for child-focused content than for self-focused content (hypotheses 2a/2b). Therefore, in the second model, we added the dichotomous predictor rating child versus self (rating child-self, R-CS) to Model 1. This variable was coded as 0 for all statements that related to the child, and 1 for all statements that related to the speaker herself (i.e., the mother). Note that statements that were coded to relate to neither the child nor the mother were removed for the analyses in Models 2 and 3. An interaction term of the variable R-CS with either S-NR (Model 2) or ST-NR (Model 3) was added to test whether changes across (Model 2) or within (Model 3) sessions in RF differed for child-focused content and self-focused content.

To control for the skewed distribution with inflated values at the extreme end of the RF scale, we used the cloglog link function. The models with the cloglog link[1] (Model 1: LOOIC = 9356.3, SE = 159.9; Model 2: LOOIC = 8767.5, SE = 146.4; Model 3: LOOIC = 8760.8, SE = 146.5) exhibited better fit compared to alternatives with a probit link function (Model 1: LOOIC = 9450.9, SE = 162.5; Model 2: LOOIC = 8835.6, SE = 148.6; Model 3: LOOIC = 8831.0, SE = 148.6).

All statistical analyses were performed with RStudio version 2022.02.1 using R version 4.2.0 (R Core Team, 2022). The scripts for the analysis can be obtained from https://osf.io/vf8u5/. To run ordinal regression models the package brms (Bürkner, 2017) was used. Parameters were interpreted as statistically significant, if their associated 95% credible interval (CI) did not include zero.

Results

Across all individuals and sessions, the number of statements included in the analyses was $N = 7393$. The number of statements per individual across all four sessions ranged from 464 to 972. The number of statements per session ranged from 97 to 296. In-session RF ranged from 1 to 6 ($M = 1.36$, $SD = 0.77$) across all statements from all individuals in this sample. The most frequent rating was a RF score of 1 (78%), whereas only 3 (0.04%) of the statements were rated with a RF score of 6. Table II depicts the descriptive statistics for in-session RF.

The word count of statements averaged $M = 29.0$ ($SD = 44.09$) and varied from 0 to 493. Across all statements, there were $n = 3335$ (45.1%) self-focused and $n = 2967$ (40.1%) child-focused statements, and $n = 1091$ (14.8%) statements related to another topic.

Effects on In-session RF Between and Within Sessions

Table III displays the outcomes of the simple ordinal model to examine hypotheses 1a and 1b. The value Rhat and the effective sample size were sufficient and indicated that model-fitting algorithm converged to the underlying values (Bürkner, 2017). We found significant positive changes on RF from session 1 to session 2 ($b = 0.14$), no significant change from session 1 to session 3 ($b = 0.05$), and a significant decrease from session 1 to session 4 ($b = -0.18$). Statements comprising more words were statements rated with a higher level of RF ($b = 0.57$). Within sessions, the level of RF increased ($b = 0.30$) significantly.

We exploratively applied further contrasts to Model 1 between the sessions (session 2 vs. session 3; session 2 vs. session 4; session 3 vs. session 4). There were significant differences between session 2 and 3 ($b = -0.08$, 95% CI [−0.01, −0.16]), between session 2 and 4 ($b = -0.32$, 95% CI [−0.24, −0.40]), and between session 3 and 4 ($b = -0.23$, 95% CI [−0.16; −0.33]), indicating a decrease of general RF between those sessions. Overall, this pattern showed that RF increased from session 1 to session 2 and decreased afterwards; RF was lower in session 4 than in session 1.

Table II. Descriptive statistics of in-session RF scores per session, separately for self- and child-focused statements.

	General RF		RF in self-focused statements		RF in child-focused statements	
Session	*M*	*SD*	*M*	*SD*	*M*	*SD*
1	1.40	0.82	1.54	0.95	1.37	0.75
2	1.41	0.80	1.59	0.96	1.32	0.63
3	1.37	0.82	1.55	1.02	1.32	0.68
4	1.23	0.57	1.29	0.63	1.22	0.56

Note. RF = reflective functioning.

Effects on Child-Focused and Self-Focused In-session RF Between Sessions

Table IV displays the second conducted model, which includes the interaction effect of S-NR and R-CS (hypotheses 2a). Similar to the first model, the model-fitting algorithm converged to the underlying values. S-NR variables in this case mean that child-focused RF did not significantly increase in

Table III. Simple ordinal model (Model 1).

Predictor	Estimate	95% credible interval	Bulk ESS	Tail ESS
First threshold (coded as Intercept [1])	**0.42**	[0.31, 0.52]	1625	2415
Second threshold (coded as Intercept [2])	**0.92**	[0.81, 1.02]	1672	2657
Third threshold (coded as Intercept [3])	**1.60**	[1.49, 1.71]	1833	2723
Fourth threshold (coded as Intercept [4])	**2.29**	[2.15, 2.44]	2376	2917
Fifth threshold (coded as Intercept [5])	**3.28**	[2.94, 3.64]	4832	3334
S-NR2	**0.14**	[0.06, 0.21]	4087	3213
S-NR3	0.05	[−0.02, 0.13]	4115	3584
S-NR4	**−0.18**	[−0.26, −0.11]	4137	3333
WC	**0.57**	[0.54, 0.61]	5246	3394
ST-NR	**0.30**	[0.16, 0.44]	5313	3394

Note. The predictor ID is not listed since it is not relevant to interpret the outcome; S-NR = session-number; WC = word count; ST-NR = statement number; ESS = effective sample size. Significant results are presented in bold.

Table IV. Ordinal model including the interaction between R-CS and S-NR (Model 2).

Predictor	Estimate	95% credible interval	Bulk ESS	Tail ESS
First threshold (coded as Intercept [1])	**0.38**	[0.26, 0.51]	2193	2558
Second threshold (coded as Intercept [2])	**0.91**	[0.78, 1.03]	2232	2701
Third threshold (coded as Intercept [3])	**1.61**	[1.48, 1.74]	2396	3101
Fourth threshold (coded as Intercept [4])	**2.31**	[2.15, 2.48]	3119	3486
Fifth threshold (coded as Intercept [5])	**3.29**	[2.97, 3.66]	4847	3297
ST-NR	**0.26**	[0.10, 0.41]	5036	3212
S-NR2	0.08	[−0.04, 0.19]	2942	2922
S-NR3	0.02	[−0.10, 0.13]	2979	2881
S-NR4	**−0.19**	[−0.31, −0.07]	3131	2812
R-CS	**0.16**	[0.06, 0.26]	2277	2514
WC	**0.53**	[0.49, 0.56]	5792	3249
S-NR2 × R-CS	0.08	[−0.07, 0.24]	2733	2640
S-NR3 × R-CS	0.04	[−0.11, 0.20]	2780	2814
S-NR4 × R-CS	−0.04	[−0.20, 0.13]	2668	2846

Note. The predictor ID is not listed since it is not relevant to interpret the outcome; S-NR = session-number; WC = word count; ST-NR = statement number; R-CS = rating child vs. self; ESS = effective sample size. Significant results are presented in bold.

Table V. Ordinal model including the interaction between R-CS and ST-NR (Model 3).

Predictor	Estimate	95% credible interval	Bulk ESS	Tail ESS
First threshold (coded as Intercept [1])	**0.44**	[0.31, 0.56]	1810	2532
Second threshold (coded as Intercept [2])	**0.96**	[0.84, 1.09]	1896	2636
Third threshold (coded as Intercept [3])	**1.67**	[1.53, 1.80]	2034	2993
Fourth threshold (coded as Intercept [4])	**2.36**	[2.20, 2.53]	2432	2697
Fifth threshold (coded as Intercept [5])	**3.35**	[3.01, 3.72]	2984	3484
ST-NR	**0.44**	[0.22, 0.66]	2643	3099
R-CS	**0.28**	[0.18, 0.39]	2516	3103
WC	**0.53**	[0.50, 0.56]	4571	3328
S-NR2	**0.12**	[0.04, 0.20]	3837	3160
S-NR3	0.04	[−0.04, 0.12]	3561	2971
S-NR4	**−0.21**	[−0.30, −0.13]	3989	2964
ST-NR × R-CS	**−0.32**	[−0.61, −0.03]	2186	2662

Note. The predictor ID is not listed since it is not relevant to interpret the outcome; S-NR = session number; WC = word count; ST-NR = statement number; R-CS = rating child vs self; ESS = effective sample size. Significant results are presented in bold.

session 2 or 3 compared to session 1 ($b = 0.08$, $b = 0.02$) but significantly decreased in session 4 compared to session 1 ($b = -0.19$). No differences in the between-session change for self- versus child-focused RF were found.

Effects on Child-Focused and Self-Focused In-session RF Within Sessions

Table V displays results for Model 3, which includes the interaction effect of ST-NR and R-CS in order to test hypothesis 2b. The model-fitting algorithm converged to the underlying values. The main effect for ST-NR indicates that child-focused RF significantly increased within sessions ($b = 0.44$). The interaction between ST-NR and R-CS indicates that the within-session increase was significantly weaker for self-related content compared to child-related content ($b = -0.32$). The main effect of R-CS indicates that at the beginning of a session, self-focused RF was significantly higher compared to child-focused RF ($b = 0.28$).

Figure 1 shows the trend of in-session RF in each of the four sessions in statements regarding the self (red line) versus statements regarding the child (blue line).

Discussion

This study investigated if in-session RF of mothers improved between and within sessions of brief dyadic PIP (i.e., fPIP) for the treatment of regulatory disorders in infants. Our hypotheses were only partly confirmed: While in-session RF increased significantly within sessions (hypothesis 1b), we found across-session increase only from session one to session two (hypothesis 1a). After session two, in-session RF decreased until it reached its lowest scores at the fourth and last session. Within sessions, in-session RF improved more strongly for child-

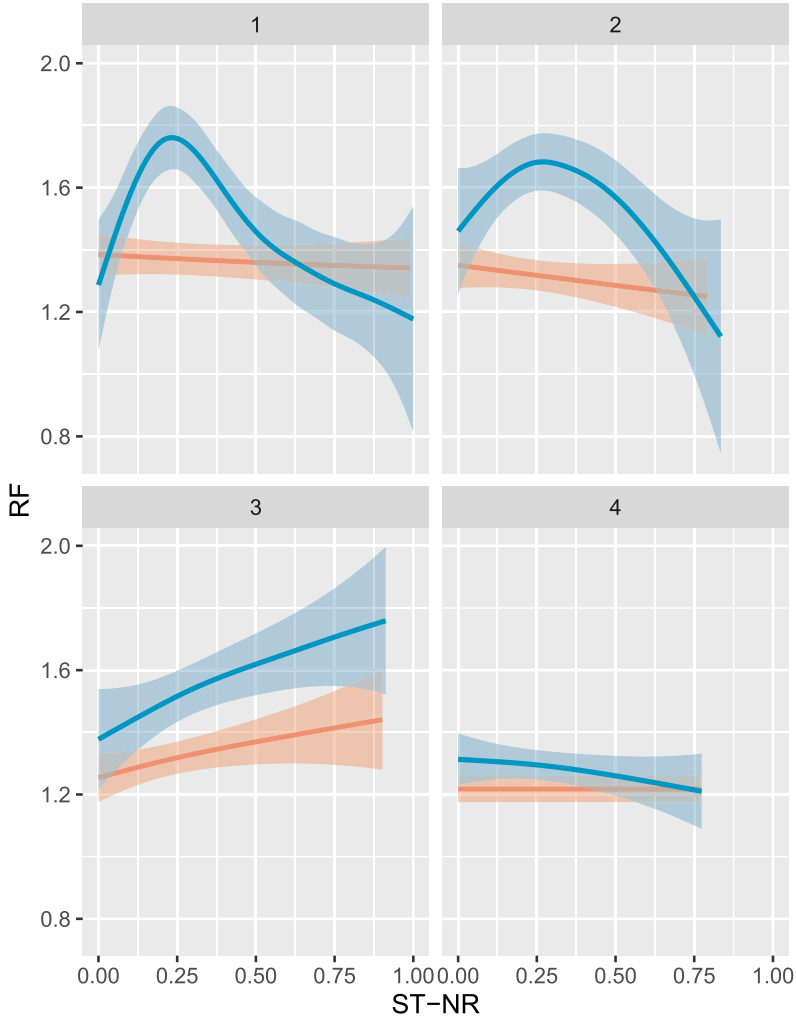

Figure 1. Trend of in-session RF in each of the four sessions.
Note: This figure demonstrates the trend of in-session RF in each of the four sessions of fPIP in statements regarding the self (red line) versus statements regarding the child (blue line). ST-NR is coded from 0 to 1 with increments in 1/k, where k is the maximum number of total statements within a given session across all data of participants and sessions minus 1. RF = Reflective-functioning; ST-NR = Statement number.

focused statements (hypothesis 2b) but there were no meaningful differences in between-session changes for child-focused versus self-focused in-session RF (hypothesis 2a). Overall, our results demonstrate that RF can be regarded as a dynamic process relevant within each session of dyadic PIP and that in-session RF changes nonlinearly over the course of treatment. Within sessions, the mothers' discourse changed towards having a better mental representation of their child, yet this positive change was not upheld across sessions.

Change of In-session RF Between Sessions

Contrary to our expectation, we did not observe a significant improvement of in-session RF across the four sessions of fPIP, neither on the global score nor separately for self- and child-focused statements. Our results are partly in line with the inconclusive findings of previous studies. While for example, Babl et al. (2022) reported an average small change in in-session RF by 0.02 *SD*s per session in integrative CBT, Zeeck et al. (2022) even observed a slight decrease of in-session RF per session over the course of CBT and FPT. Based on the more inconsistent results for a change of RF in shorter treatments (e.g., Babl et al., 2022; Karlsson & Kermott, 2006) compared to longer treatments (e.g., Fischer-Kern et al., 2015; Taubner et al., 2011), it is possible that given the very brief intervention, mothers' RF did not change significantly. This, however, stands in contrast to the small before–after changes observed in early dyadic interventions

(Barlow et al., 2021) as well as data from the RCT demonstrating a nonsignificant trend in terms of a decrease of prementalizing following fPIP compared to TAU (Georg et al., 2021), suggesting that there is a trait-like change in parental RF following treatment. According to our results, however, the trait-like change observed in fPIP may not be observable on a session-by-session basis or may occur later after the treatment has ended. Future studies should investigate the relationship between in-session changes of RF and their effect on trait variables of parental RF. Furthermore, the RF-scale and the self-report measure PRFQ represent different facets of RF (and there is evidence, for example, that the PRFQ-scales and PDI-RF do not fully correlate, Carlone et al., 2023). To avoid confounding of measurement instrument and time of assessment, future studies of change in RF of parents during treatment should conduct repeated assessments of self-report and observer-based parental RF.

It is important to consider that low mean in-session RF scores between $M = 1.22$ and $M = 1.41$ were observed at all measurement points which is significantly lower compared to other in-session RF studies (e.g., Babl et al., 2022; Zeeck et al., 2022). One possible explanation is that parents of children with regulation disorders are often preoccupied with environmental factors that could possibly explain or influence child behaviour (e.g., a specific bedtime routine or a particular type of cradle), thereby likely contributing to overall low in-session RF. A small increase in in-session RF in this population may be therefore particularly meaningful. On a measurement level, however, the RF score probably does not detect small changes expectable on a session-by-session basis (Babl et al., 2022). The underlying continuous variable represents (large) qualitative differences, and it is possible that an adapted version of the RF scoring with a higher resolution is needed to better capture the in-session changes in our study.

Our results could also mean that psychodynamic-based fPIP, which is not primarily MBT-based, does not sufficiently improve RF across sessions. It is an open question if increasing (trait) parental RF is a common factor in PIP or rather an MBT-specific factor (Barlow et al., 2021). In an MBT-based parenting programme, mentalizing-promoting interventions were related to pre–post improvements of self-focused parental RF even when controlled for therapists' fidelity to alliance building and behavioural guidance (Suchman et al., 2018), pointing to an MBT-specific factor. However, some evidence from intervention studies in adult populations support the notion of a common factor probably specific to psychodynamic therapy. For example, Katznelson et al. (2020) drawing on AAI-RF data confirmed that increasing RF is an outcome of psychodynamic (vs. CBT) interventions. Likewise, Zeeck et al. (2022) reported on higher in-session RF scores in psychodynamic compared to other interventions. Based on these results, we would expect that a psychodynamic intervention such as fPIP does increase in-session RF of parents and further research is needed on the effect of distinct interventions on in-session RF within brief dyadic PIP.

Despite the lack of a continuous change across sessions, we found a significant enhancement observed from session 1 to session 2 indicating that mothers mentalized more in the second session. It is possible that the different aims of the respective sessions and primary interventions according to the fPIP manual (Cierpka et al., 2017) partly explain this difference. According to the manual, the focus of the second session lies on the parents' internal working models. The interventions aim at the dismantling of parental projections onto the child and the initiation of a differentiation process. In the first session, however, foremost a detailed clinical assessment takes place covering e.g., child regulatory symptomatology or pregnancy and birth. The different aims and foci of the sessions most likely go hand in hand with differences in the frequency of RF-demanding interventions, which have been demonstrated to foster in-session RF in adult populations (e.g., Kivity et al., 2021) and parenting interventions (Suchman et al., 2018), and that could contribute to a session effect on mothers' RF. Future studies based on our results may empirically investigate the association of specific fPIP interventions and in-session RF scores.

Following this reasoning, however, it is surprising that session three did not significantly differ from the first session in enhancing in-session RF. In addition, our explorative analysis showed that in-session RF even decreased significantly in the third session compared to the second session. According to the manual (Cierpka et al., 2017) in the third session, therapists encourage parents to review and reflect on the changes made up to that point, e.g., by reflecting on new experiences in parent–child interactions, but also to address the problems that have not changed yet, thereby possibly entailing RF-demanding interventions. However, it is possible that compared to session two, session three is more about reconciling changes on the behavioural level and not about understanding underlying mental states of parents and child. Based on the results, it is possible that fPIP stimulates in-session RF to a certain point without having a lasting effect that would also be visible in subsequent sessions.

Strikingly, in the fourth and last session we observed a significant decrease in in-session RF. It is possible that at the end of the treatment therapists refrain from elaborating the topics further and therefore, use less RF-demanding interventions. Similarly, parents may not openly reflect on their experiences because they are already anticipating the end of the therapeutic relationship. This observation is further supported by a single case study, where a considerable drop of in-session RF was observed in the last session (Georg et al., 2019), which was interpreted as the mother being satisfied with what she had achieved. Comparable results from in-session RF studies are not available because the studies used only a selection of sessions and omitted the last one. However, our results may be interpreted as consistent with Zeeck et al.'s (2022) finding of a reduction of RF across sessions.

Change of In-session RF Within Sessions

In-session RF of mothers increased significantly within each session of fPIP. It is possible that the therapists were working towards reinforcing RF in relation to a particular problem within the parent–child relationship that was the focus of this session. For example, by pointing out the child's signals and asking about child mental states during the session or by observing and discussing the child's signals via video recordings, the mother's perspective on the child's current behaviour is likely to be broadened. This process is in line with a relevant experience of fPIP described by mothers, leading in their view to an increased understanding of the meaning of the child's signals and acceptance of difficult child behaviours, which they considered to be helpful outcomes of fPIP (Georg et al., 2022). Working from minute to minute to increase RF during a session is well in line with the latest recommendations in MBT, in which training the "mentalizing muscle" (p. 98) to help modify how to approach interpersonal difficulties is central (Bateman et al., 2023).

The process of enhanced in-session RF within sessions could also be interpreted as a result of mothers' ongoing engagement process in the therapeutic work. Given that the intervention was brief, sometimes with a couple of weeks between sessions, mothers probably needed some time to warm up and engage in openly reflecting about themselves and their child. Previous qualitative results demonstrated that engaging in therapy and being open to an ambiguous therapeutic process was an important process in fPIP (Georg et al., 2022).

As hypothesized, when analyzed separately for child- and self-focused statements, in-session RF in child-focused statements increased significantly and more strongly than self-focused statements. This is in line with the aim of fPIP to increase child-focused RF. Further studies showed that mothers of infants with regulatory disorders had more difficulties in mentalizing their child compared to a comparison group in terms of more prementalizing (Georg et al., 2018). The findings of this study confirm the results by observing therapy narratives and point to more difficulties of mothers in mentally representing the child compared to the self. According to our results, the difficulties in mentalizing the child could be a promising target of each session of (f)PIP aiming at the development of a more mental representation of their child thereby facilitating sensitive caretaking and child secure attachment development (Suchman et al., 2018; Zeegers et al., 2017).

Overall, our results demonstrate that despite an increase of in-session RF (particularly child-focused) in each session, the improvements made on a session-by-session basis may not be lasting. In fact, fPIP does not contribute to a stable increase of RF measured within sessions. More recent conceptualizations of mentalizing stressed its characteristic as a dynamic state- and context-dependent process (Luyten et al., 2020). In line with this conceptualization, we argue that dyadic (f)PIP with a focus on relationship-specific RF and by working directly with parent and infant together, gives ample opportunities to work on parental RF processes ongoing during parent–child interactions and therefore enhances parental RF. According to our results, this could be more reflected in the within-session changes of (child-focused) RF. With other words the results demonstrate that training the "mentalizing muscle" is a dynamic in-session process in fPIP that does not necessarily lead to measurable, steadily increasing muscle growth.

Based on our results, clinicians who aim at enhancing in-session RF of parents in fPIP may differentiate long-term therapeutic goals and strategies from within-session processes and goals. Some sessions will not contribute to increasing momentary RF of mothers albeit a possible effect of the intervention on trait parental RF once the treatment ended. Moving towards the end of the intervention, clinicians may observe a decline in in-session RF, which does, however, not necessarily mean that the treatment was ineffective in achieving overall fPIP goals. In addition, we encourage clinicians to observe and distinguish enhancements of self- and child-focused RF on a session-by-session basis and following specific interventions.

Strengths and Limitations

The strengths of this study are the use of an extensive observer-based assessment of in-session RF covering

the entire sessions, thereby reflecting the entire therapeutic process. Further, we developed and applied a new rating system that distinguishes between self- and child-focused statements, and we controlled for word count of each statement. Lastly, we distinguished between- and within-session changes of in-session RF which allows for a more nuanced understanding of the change processes during and across therapy sessions.

Some limitations of our study need to be considered when interpreting the results. First, the generalizability of our results is limited due to the small sample size. Although participants' demographic and clinical characteristics of the subsample appear similar to the larger sample of the RCT (Georg et al., 2021), it is an assumption that the cases are representative of that sample. Further, generalizability is restricted because of the setting of the RCT design, which limits heterogeneity within the group of participants, which was further restricted by the selection of participants that relied on fully attended treatments. Future studies should include a larger sample in the setting of a naturalistic intervention study. A larger sample size would allow for greater generalizability and examination of potential heterogeneity in change trajectories between participants and would provide higher statistical power. As to the latter point, we hasten to add, however, that the large number of data points per participants accumulated to more than 7000 data points that were used for our analyses, which likely resulted in adequate precision for parameter estimates and statistical power. Secondly, this is the first study that distinguished two poles of self- and child-focused RF in participants' in-session narratives. While the consideration of a multidimensional construct of mothers' RF is a strength, the assessment of in-session self- and child-focused RF needs to be validated with an established measure of parental RF (e.g., PDI-RF). The addition of a relationship category to the rating system could reflect the change processes in fPIP in an even more differentiated way. Fourthly, word count had a significant positive effect on in-session RF in all our models. The results demonstrate that in-session RF is a variable associated with the lengths of participants' discourse in treatment and should therefore encourage future studies to control for word count to not confound lengths of statements with in-session RF. Lastly, the design of the study does not permit causal interpretations. Even when directly observing changes during sessions, which are usually highly influenced by the interventions and the patient–therapist interactions (e.g., Kivity et al., 2021), we cannot know whether the changes are the result of the time spent in the intervention or, for example, a natural process occurring in the participants. The theoretical considerations on a possible effect of specific interventions according to the fPIP manual on parental in-session RF needs to be taken with caution. Given the fidelity observed in all treatments, we are confident that, overall, the therapists adhered to the manual. Future studies that want to explore these relations empirically would need to relate specific interventions to in-session RF scores. Several fPIP interventions (e.g., verbalizing the affective quality of the observed relationship[s]) would be candidate interventions for this purpose (Georg et al., 2019). Further, without examining the relationship to outcomes in an experimental design (Falkenström et al., 2017), we do not know whether in-session RF is a process that is relevant to fPIP in terms of the desired therapeutic outcomes either. Future research expanding on the results of this study should involve predictors of change (i.e., specific interventions or individual-level variables like baseline PDI-RF), examine process–symptom connections dynamically over time, and lastly combine the knowledge to distinct pathways of profiles, procedures, processes, and outcomes (Huibers et al., 2021). In this vein, more research on self- and child-focused RF may help to personalize treatments to samples or individuals.

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Supplemental data

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Note

[1] LOOIC scores can be interpreted in the same way as the Akaike Information Criterion or the Bayesian Information Criterion in the way that a lower score indicates a better model fit (Bürkner & Vuorre, 2019).

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Appendix IV: Studie 4

Kasper, L.A., Krivzov, J., Diederich, J., & Taubner, S. (under review). From Self to Others: Expanding the Therapeutic Zone of Proximal Development - A Metasynthesis of Mentalizing Change Facilitated by Psychotherapy. [*Manuscript under review for publication in Psychotherapy*]

From Self to Others: Expanding the Therapeutic Zone of Proximal Development - A Metasynthesis of Mentalizing Change Facilitated by Psychotherapy

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Abstract

Objective: Mentalization is discussed as a mechanism of change in psychotherapy, however little is known about the psychotherapeutic change in mentalization over the course of therapy. In this study, the change of mentalization facilitated by psychotherapy is analyzed qualitatively. *Method:* We conducted a metasynthesis of 20 published case studies of psychotherapies describing mentalization in psychotherapy from various mental disorders and therapy schools. Thereby, we used an inductive approach and thematic synthesis. *Results:* Results show a phase model with three phases: (1) experiencing self in a secure relationship, (2) mentalizing self as well as (3) mentalizing others. In addition, a trustworthy therapeutic alliance and therapeutic zone of proximal development are of importance throughout the whole progress of mentalization in psychotherapy. *Conclusion:* This is the first theory of psychotherapeutic change of mentalization based on empirical findings from case studies. For each phase, a focus of therapy and specific interventions are recommended.

Key Words: Mentalization – reflective functioning – interventions – psychotherapeutic change – therapeutic alliance – therapeutic zone of proximal development

Clinical or Methodological Significance of this Article

Question: How does psychotherapy facilitates change in mentalization? Findings: In this metasynthesis, we develop a phase model of change in mentalizing facilitated by psychotherapy. Meaning: The phase model shows the importance of therapeutic alliance and staying in the patients' therapeutic zone of proximal development (TZPD). Depending on the stage of therapy and the patients's TZPD, the therapeutic focus should be on the experience of the self, the exploration of the self or of others in order to effectively enhance the development of mentalization. Next steps: It is the first case study-based theory of the psychotherapeutic change of mentalization with explicit clinical recommendations. Future studies are needed to replicate the phase model in experimental psychotherapy studies.

Introduction

The efficacy of psychotherapy is empirically well analyzed, however the mechanisms of change of psychotherapy are still poorly understood (Cuijpers et al., 2019; Taubner et al., 2023). Mechanisms of change are theoretically postulated targets that facilitate therapeutic change (Falkenstrom et al., 2020). In order to understand changes stimulated by psychotherapy, a process-based understanding is required (Kazdin, 2003; Kazdin, 2008). Hereby, after identifying the mechanisms of change, the question arises as to how these mechanisms develop in the course of therapy. An example of a process model from developmental psychology that can be applied to the therapeutic context is the zone of proximal development (Vygotsky, 1978). The therapeutic zone of proximal development describes the gap between the patients' developmental level determined by their own independent problem solving and the patients' potential developmental level as determined in collaboration with a therapist (Stiles et al., 2016). By understanding the mechanisms that explain therapeutic change and its development during psychotherapy, clinical strategies can be applied to initiate change processes. (Kazdin, 2008).

Common mechanisms of change in psychotherapy resemble the black box analogy, including the therapeutic alliance that has the most robust effect on outcome (Norcross & Lambert, 2018). Various additional factors are discussed as potential mechanisms of change, including mentalization. In the last decade, interest in the construct of mentalization has increased significantly within psychotherapy. Improving mentalization can be considered an essential mechanism of effective psychotherapy independent of therapeutic orientation (Ludemann et al., 2021; Luyten et al., 2024). Mentalization is the ability to imagine mental states underlying one's own behavior as well as the behavior of others. Reflecting and imagining mental states refers to thoughts, feelings, desires, beliefs, and needs (Fonagy et al., 2002). A lack of mentalization is a significant contributing factor in the development and maintenance of mental disorders. (Bateman & Fonagy, 2010; Taubner et al., 2019). Overall, clinical samples

show significantly lower mentalizing compared to nonclinical samples (Fonagy et al., 1996). Moreover, mentalizing shows a negative correlation with all aspects of personality functioning (Zettl et al., 2020) . Overall, mentalization can be seen as a valuable transtheoretical and transdiagnostic concept for explaining vulnerability and psychopathology as well as its treatment (Luyten et al., 2020). However, the question how mentalization progresses over the course of psychotherapy remains.

Aiming for an explicit increase of mentalization within psychotherapy, Mentalization-based Treatment (MBT) (Bateman & Fonagy, 2016), was developed and shows efficacy empirically (Storebo et al., 2020). A new model was suggested by (Bateman et al., 2023) to describe how mentalization changes in psychotherapy as modes of experience. Bateman et al. (2023) distinguish between the I-mode, the me-mode and the we-mode. The I-mode describes self-awareness, about how a person sees themselves ("What kind of person am I?") and addresses the development of self-coherence. The me-mode combines "How I am seen by others." and "How I see others." and presents the self or others as objects of observation. The you-mode introduced by (Choi-Kain et al., 2022) overlaps with the me-mode as it describes an objective reality: the view from the perspective of another person. The we-mode is seen as an entry point that focuses on collaborating a shared understanding of the self and the other. In we-mode, we are able to integrate or accept different perspectives between us and others with equal validity. In successful therapy that aims at enhancing mentalization a shift from I-mode to we-mode should take place (Bateman et al., 2023). However, this process model is solely based on theoretical considerations and not based on systematic empirical findings.

In order to investigate the process of therapeutic changes in mentalizing, more detailed analysis in the form of qualitative research is needed. Case studies have the advantage of providing detailed information about the process over the course of therapeutic development. Thus, case studies provide a suitable starting point to learn about interventions, stance and timing that facilitate therapeutic change (Fishman, 2016). For this reason, case studies allow

for conclusions regarding specific dynamics as interventions for relevant changes in the therapeutic process (McLeod & Elliott, 2011; Stiles et al., 2015). The topic of changes in mentalization has been addressed in several case studies (Fischer-Kern et al., 2015; Hauschild et al., 2022; Josephs et al., 2004; Kasper et al., 2024; Kornhas et al., 2020; Kornhas et al., 2019). Nevertheless, it remains unclear how psychotherapeutic processes are related to changes in mentalization in detail: can the process be divided into phases with different foci and interventions? To answer these questions, isolated case studies can only provide a limited approach. Instead, the synthesis of individual case studies and their results using a metasynthesis methodology, combines data richness of case studies and enables conclusions to be drawn about the processes as a whole. Metasyntheses integrate empirical, qualitative findings from multiple studies on a particular topic with the aim of generating new theoretical insights from the accumulation of existing case study findings (Krivzov, Hannon, et al., 2021). Therefore, metasynthesis of multiple case studies is a valuable approach for process-oriented research questions (Thorne, 2017). A metasynthesis based on thematic synthesis involves the systematic coding of data and the generation of descriptive and analytical themes. It is an inductive approach, which is critical given the aim of generating higher order themes from individual case studies (Thomas & Harden, 2008).

Aim of this Study

This metasynthesis focuses on changes in mentalization during psychotherapy across therapy schools and mental disorders. Therefore, we formulated the following research question:

How is change of mentalizing facilitated by psychotherapy? Are there specific phases in the process and if so, how are these phases characterized?

An explorative inductive procedure with an open research question was chosen in order to be able to include all possible therapeutic aspects, external factors, and changes in mentalization identified in the course of the metasynthesis.

Methods

Procedure

Inclusion criteria were developed, appropriate search terms were formulated, and suitable databases were decided upon (Barroso et al., 2003; Lachal et al., 2017). The search results were first screened by reading the title and abstract. Based on the inclusion criteria, inappropriate studies were excluded and the remaining articles were read in full text and rescreened for fit (Krivzov, Baert, et al., 2021; Lachal et al., 2017). For the papers included in this study, a review of the characteristics as well as their quality was conducted (Lachal et al., 2017; Walsh & Downe, 2005). An iterative process (Krivzov, Baert, et al., 2021; Walsh & Downe, 2005) based on Thematic Synthesis (Thomas & Harden, 2008) was used to analyze the papers by the research team. We used Enhancing Transparency in Reporting the Synthesis of Qualitative Research (ENTREQ) as a guide to report the essential elements that should compose a synthesis of qualitative evidence (Tong et al., 2012).

Research Team

The research group consisted of the authors of this paper: LK is a psychodynamically oriented psychological psychotherapist with six years of clinical experience, a certified MBT therapist and Reflective Functioning (RF) rater; JK is a psychodynamically oriented psychologist with three years of clinical experience and an expert in the field of metasyntheses; JD is a psychology student (master level); ST is a psychodynamically oriented psychological psychotherapist with 19 years of clinical experience and an expert of the construct of mentalization as an MBT therapist, supervisor and trainer, and RF rater (since 2005).

Inclusion Criteria

The following five inclusion criteria were applied. (1) The single case describes a psychotherapy process. (2) The single case depicts an individual therapy. (3) The patient described is at least 18 years old. (4) The treatment process is described sufficiently qualitatively. (5) The article is written in German or English. Number 4 required a subjective

assessment of whether the description of the therapy process is sufficient, which was achieved by a collaborative discussion of LK, JK and JD.

Search Strategy and Search Terms

The literature search was conducted in three databases: PubMed, PsycINFO, and the Single Case Archive. In order to find relevant single case studies for the research question, three sets of search terms were formulated: set one consisted of "treatment" and/or "therap" and/or "psychotherap"; set two of "case stud" or "case report" or "qualitative stud" or "single case"; set three of "mentali" or "reflective function". The papers should be in English or German. Set one and two were used to narrow results to psychotherapeutic case studies in the PubMed and PsycINFO databases. The search terms were marked with an asterisk (*) to search for all possible endings (Nordhausen & Hirt, 2020). The sets should be mentioned in the title or abstract of the paper. The Single Case Archive is a database for single case studies specifically for psychotherapy (Meganck et al., 2022), therefore only the third set of search terms was used. The set should be mentioned in the topic of the paper.

Study Selection

Figure 1 shows the PRISMA flow diagram (Page et al., 2021) to provide an overview of the selection of single case studies included. In total, the database search on February 23rd, 2024 yielded 533 results; screening was performed by two individuals (LK, JD and a bachelor level psychology student) for each case. After an exclusion of 490 papers and 2 papers not possible to retrieve, 41 papers were fully read and screened for fit by two researchers each (LK, JD and JK). As a result, 20 studies were included in the metasynthesis.

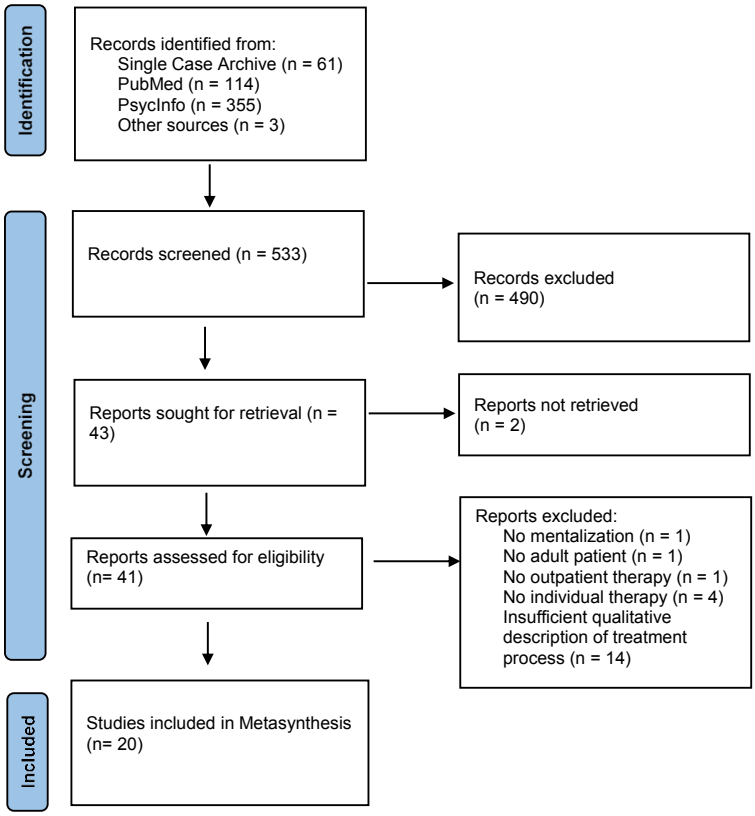

Figure I. Overview of the selection procedure (PRISMA flow diagram, adapted from Page et al., 2021.

Quality Assessment

A review of the quality of single case studies in metasyntheses is considered important for the explicit presentation of theoretical and methodological aspects of single case studies (Lachal et al., 2017; Walsh & Downe, 2005). The review of the individual case studies quality primarily provides an overview and is not a reason to exclude individual case studies (Lachal et al., 2017). Since there is no clear consensus on quality criteria and the number of single-case studies is usually limited, more emphasis should be placed on inclusivity and maximizing the available data (Lachal et al., 2017; Walsh & Downe, 2005). The assessment of the quality of single case studies beyond general inclusion criteria essentially depends on the exact question of the metasynthesis to be performed. Therefore, matching criteria from the Checklist for Case Reports (Moola et al., 2020), Critical Appraisal Skills Programme Qualitaitve Studies Checklist (CASP-UK, 2018), Inventory of Basic Information in Single Cases (Meganck et al., 2017) and Evaluation Tool for Qualitative Studies (Long & Godfrey, 2004) were combined, adjusted, and

additional criteria were included to obtain a coherent quality overview for this metasynthesis. The quality assessment was carried out by the first (LK) and third author (JD). The cases exhibited overall satisfactory quality based on the conjoint criteria for metasyntheses (Supplement 1).

Data Analysis

The single case studies were analyzed using MAXQDA software (VERBI Software, 2021) and coded with the research question in mind. We adapted the inductive coding system based on thematic synthesis as described by Krivzov, Baert, et al. (2021) as well as Thomas and Harden (2008). The coding system was developed inductively from the data. The entire research team was involved in the analysis of the 20 included studies; each case study was analyzed by at least two researchers, with LK analyzing 20 studies, JD analyzing 12, JK and ST each analyzing four. Initially, the researchers analyzed the case studies independently, later findings and implications for the research questions were continuously discussed. In addition to coding within the papers, mindmaps and timelines were created to depict the process of therapy with interventions, patient responses, and changes in the mentalizing ability. JK and ST, being senior researchers, supervised this process. For the first seven case studies (Brent, 2009; Diamond et al., 2008; Kernberg et al., 2008; Lunn et al., 2016; Misso et al., 2019; Ringel, 2009; Salvatore et al., 2012), in-depth process analyses were conducted, based on which concordant and discordant dynamics were compiled and discussed (Krivzov, Hannon, et al., 2021). This resulted in the initial classification into superordinate categories or themes of the therapeutic process. Subsequently, the draft of the themes was tested on another five case studies (Fonagy & Target, 2000; Griffies, 2010; Merced, 2015; Seligman, 2007; Target, 2016). The process analyses were continuously accompanied by discussions in the whole research group and corresponding adjustments of the topic classification.

In terms of theory-building (Krivzov, Baert, et al., 2021; Stiles et al., 2015) the researchers developed a phase model based on the topic classification, which made assumptions

about specific dynamics, temporal processes and interrelationships of the different topics. In a final step, the last eight case studies were included (Gunderson et al., 2007; Higa & Gedo, 2012; Høgenhaug et al., 2021; Markowitz et al., 2020; Pinter, 2016; Quadrio & Haas, 2014; Rachman et al., 2009; Træsdal, 2013) and the existing phase model was evaluated against them. The analysis was an iterative process leading to multiple times adjustments of the phase model in different stages. Every adjustment of the model was followed by re-analysis of the original papers. In the end all 20 case studies were analyzed using the final phase model. Finally, the researchers separately filled in a table to estimate the extent to which each individual case study supported the assumptions of the phase models' elements. Whereas each case did not necessarily contain all elements of the model, the researchers reached a consensus that the model covered the variety of individual development pathways and provided a necessary abstraction (Krivzov, Baert, et al., 2021; Stiles et al., 2015). To support the development of the emerging theory, the construct was repeatedly presented and discussed outside the research group among colleagues in psychology and psychotherapy.

Results

Case Studies

The characteristics of the case studies can be found in Supplement 2. The information of the case studies characteristics was sometimes imprecise, e.g. the age was described as mid-20s., and in some places, there was no information at all. The 20 case studies included a total of 22 patients (15 female, 7 male) with an approximate average age of 34 years (range 20s to 50s; two did not specify). Overall, there was a range of mental disorders, with five of the patients having comorbidities (not reported here): There were ten patients with personality disorders and one patient with personality disorder tendencies only; four patients with explicit trauma history, with two explicitly mentioning post-traumatic stress disorder; one patient with depressive disorder; three patients with schizophrenia, psychosis or delusional disorder; one patient with bulimia nervosa; one patient with bipolar disorder; one patient with fibromyalgia;

one patient with unspecified disorder. The patients were all treated in individual outpatient psychotherapy, whereby therapy schools differed: there were 19 psychodynamic psychotherapies (14 non-manualized, two Transference-Focused Psychotherapies, three Mentalization-Based Treatments or Mentalization oriented psychotherapies), two Cognitive-Behavioral Psychotherapies (Metacognitive Psychotherapies, Metacognitive Interpersonal Psychotherapy) and one from another therapy school (Interpersonal Psychotherapy). Some of the patients received additional pharmacological treatment, group therapy or psychoeducation. The average psychotherapy duration was 4.3 years (range 3.5 months to 10 years; four did not specify). Eleven of the therapies had already been completed, three of the therapies had not yet been completed and eight did not specify. The frequency of the individual therapy sessions varied from one to four times a week: six therapies had sessions once a week; two therapies twice a week; two therapies four times a week; four therapies changed their session intensity during treatment and eight therapies did not provide any information on session frequency.

Phase Model

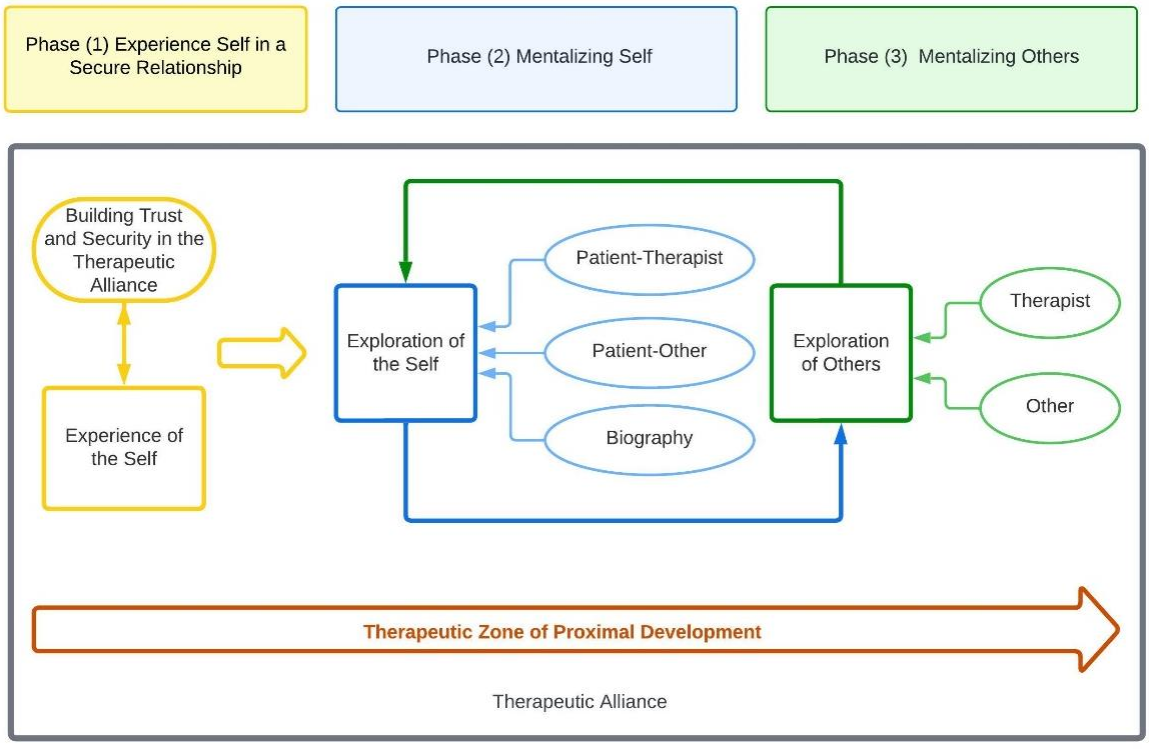

Figure II. Phase model of change in mentalization facilitated by psychotherapy.

The phase model of change in mentalization facilitated by psychotherapy (Figure 2) was developed on the basis of the 20 case studies, although not all topics or phases of the model can be found in every case study (Supplement 3). The whole phase model is embedded in a trusting therapeutic alliance. The therapeutic alliance is assumed to form the basis for mentalization: not only that patients develop the ability to mentalize but dare to talk to their therapists about their mental states. Overall, the phase model consists of three phases: (1) *experiencing self in a secure relationship* with the components establishing trust and security in the therapeutic alliance and experience of the self, (2) *mentalizing self* in relation to the therapist, others and biography, and (3) *mentalizing others* in relation to the therapist and others. In addition, the therapeutic zone of proximal development is important throughout the phase model.

Experiencing Self in a Secure Relationship

Therapeutic Alliance. In the first phase, the therapeutic alliance laid the foundation for enhancing mentalization and a functioning psychotherapy. Especially, if a difficult initial dynamic was already apparent at the beginning of therapy, the establishment of security and trust was extremely important. Particularly difficult initial dynamics occurred, when the patient's behavior illustrated fundamental maladaptive tendencies in the patient's perception and transferences that prevented the emergence of trust in the therapist [2, 4, 6, 8, 11][1]. Here, it was important to focus on the therapeutic alliance and disconfirm the harmful expectations to enable trust building [2, 4, 8]. Aside from clarifying the trustworthiness of the therapist, the therapeutic alliance should not be discussed in the initial phase of therapy, since this was more likely to lead to ruptures [16, 19]. In these cases, the therapeutic relationship was strengthened by not focusing on it. Rather, the emphasis in the phase of experiencing self in a secure relationship was on focusing on the self and its perception.

[1] The numbers in square brackets indicate the number of the case study in which the theme has been found from Supplement 2.

Experience of the Self. In this phase, the patient should get the chance to experience him- or herself unbiased [1, 2, 4-6, 9, 11, 13, 15- 20]. The therapists' main focus was on perceiving and validating the patient's mental states. It was not about giving the patient insight, but to engage the patient in a process being aware of their mental states. However, it was also considered helpful if the patient received concrete help from the therapist with specific difficulties [5, 13, 14]. As, for example, the patient Ellen [5] felt depressed and anxious at the thought of having to leave her group therapy. Her therapist encouraged her to talk about it with her group therapist, but being aware of her shame, he offered to help her to do so. This helped to build trust and security in the therapeutic relationship.

In several case studies, it was found that a trusting connection with the therapist was best established when the focus was on the patient's mental states [1, 9, 13, 15, 16, 19, 20]. It was important to provide the patients with enough space for their own experiences [15, 20]. In addition, they should be validated without interpretations by the therapist [1, 9, 13, 15, 16, 19, 20]. It seemed beneficial for the therapist to actively withhold their interpretations and expressions in order to give patients a non-judgmental space to explore themselves [1, 19].

> I imaged that James, in sitting in the chair he thought was mine, was expressing his interest in getting close to me. But, perhaps, given his history of being harmed in close relationships to caregivers, in becoming somewhat aware of his wish for closeness, he became scared, and the thought of the need to escape. I said nothing further. (Brent, 2009, p. 810)

Instead of interpretations, neutral remarks with an invitation for the patient to express their own thoughts were useful [1, 19]. However, if interpretations or confrontations were used at this early stage of the therapy, negative reactions of the patients were observed, for example, they were unresponsive or felt ambushed and betrayed by the therapist [4, 5, 9, 18-20]. Perhaps the therapists' feeling of helplessness and frustration at not being able to help the patients quickly enough also contributed to these premature interventions [9, 16].

> The therapist tried to engage Joyce [the patient] in a reflection, to demonstrate how she might use the session to promote more understanding of her role in interpersonal interactions, but these efforts were generally unsuccessful. For example, in this session, the therapist asked if there might be something about Joyce herself that "invites" or "allows" comments from other people, anything that might be a signal for others to "overstep her boundaries". Joyce at first responded by agreeing that other had suggested she might stop "getting tattooed," but then diverted into an angry tirade, stating: *Why, Why can't I be me?* (Lunn, 2016, p. 210)

When the therapist proceeded too prematurely, it also occurred that patients confirmed with the therapist without thinking it or feeling it for themselves. For instance, Mr. W. [4], a very conformist patient, superficially joined in with the therapist's assertion, but internally did not have the cognitive and emotional space available to explore himself. Only when the therapist withheld his own opinion and focused on the mental states expressed by the patient, it was possible for the patient to feel safe in the relationship. Furthermore, he was then able to see and experience his own mental states independently of others (the therapist). Target [19] stated it in the words of her supervisor as follows: "Leave yourself out of it, you're right about the transference but she is not there yet, focus on what she is feeling now, get her to put it together as a picture which you clarify. Or keep quiet!" (Target, 2016; p. 207).

In summary, various therapeutic interventions were beneficial to experience the self: The emphasis was on working in the "here and now" with a focus on emotions, for which for instance mirroring was used [4, 13, 16, 19]. The holding but open atmosphere provided to the patients, allowed them to express their mental states uncensored. Therefore, the patients were able to recognize their mental states as their own and reflect on them [4, 9]. The continuous neutral naming of emotions led to an implicit map of emotional states, which is necessary as the basis of mentalizing [19]. Although no significant improvement in mentalization ability could be expected in this phase, a promising foundation was already created. Especially in this

phase of experiencing self in a secure relationship, trust was built, which was necessary for the transition to the next therapy phase:

> But, over time, he [the patient] settled into a secure enough attachment to me [the therapist] that he was able to relinquish his anxious preoccupation with my mind and body, and turn at last toward the discovery of his own, which had been locked away for years. (Griffies, 2010; p. 400)

Mentalizing Self and Mentalizing Others

The case studies illustrate that exploration only took place after trust and curiosity about self-states had been established. The exploration of the mental states (feelings, thoughts, desires, beliefs) seemed to enabled the development of mentalization [1-20]. However, mentalization of the self and of others do not develop simultaneously: a basic ability to mentalize the self is developed first. In the exploration of the self, the self was discovered and experienced in order to promote a differentiated self-perception. The differentiated self-perception was fundamental for mentalizing others in the next phase, which involved exploring the mental states and underlying motivations of others. Once the self was sufficiently mentalized, it was possible to switch between mentalizing the self and mentalizing others. However, case studies that explored the self, did not necessarily reach the stage of exploring others (table 1).

Mentalizing Self. In this phase, mentalization of the self was stimulated. The aim was to understand inner mental states and resulting interaction patterns [1-20]. A consistent theme in the exploration of mental states of the self was the understanding and exploration of emotions on both a cognitive and affective level. In general, it can be considered a goal to develop a patients' narrative with the help of improved mentalization [9, 12, 16-18]. In the exploration of the self, there were three domains to promote mentalizing the self: (1) in relation to the therapist, (2) in relation to others and (3) the biography. The focus is still on the patient's self in the other and therapist domains: how do the patients see themselves in interactions with the therapist or

others and how is the patient seen by others. The domain biography is used to explore and understand the self in relation to their personal history. These three domains cannot be separated distinctively as many rather complex interventions target more than one domain. In all three domains similar interventions proved to be successful.

During the exploration of the self the therapists' continued appreciation and validation of the patients and their mental states were important [4, 10-13, 15, 17-19]. On the one hand, it was essential for the patient's acceptance of his own mental states, as one patient stated: „It's your finding them valuable that makes me value them" (Griffies, 2010, p. 395). On the other hand, it was important as a reinforcement of the progress already achieved in mentalizing [11, 17]. Furthermore, it helped to build an appreciative atmosphere and trust between therapist and patient. This trusting relationship continued to be the foundation for mentalization [17]. In addition, the trusting therapeutic alliance made it possible to repair ruptures that occurred in the therapeutic relationship [12]. Complementary to validations, selective authentic self-disclosure was used. Selective authentic self-disclosure helped deepening the patients' sense of being understood [7, 16-19] and provided a role model [4].

In contrast to the phase of experiencing self in a secure relationship, patients in the phase of mentalizing self showed positive reactions to interpretations [3, 8, 10, 11, 13]: they could let them sink in and use them as stimuli for mentalizing the self. However, it was noticeable that most of these interpretations were preceded by validations of the patients' mental states. It seemed that validating patients' mental states, allowed patients to feel fundamentally understood and valued and therefore not directly attacked by focusing on their own negative aspects [18].

To enhance mentalization of the self, interventions such as elaboration of affect, mirroring and naming patients' mental states were used [1, 2, 4, 5, 7, 9, 10, 12, 13, 16-19]. The joint development of therapist and patient was important: The therapist waited for the patient's reaction after interpreting and naming emotions in order to be able to react to their response.

Therefore, the therapists hoped that patients' responses would vary between authentic agreement [17] and further processing of the therapist's interpretation or naming [9]. This collaborative approach strengthened the mentalization of the self and consolidated the feeling of being understood: „In this session, the therapist felt that Joyce [the patient] received the therapeutic interventions in a new way. She did not just say 'yes' to please the therapist, rather her 'yes' expressed that she felt genuinely understood by the therapist" (Lunn et al., 2016, p.211). Furthermore, interventions for strengthening mentalizing included mentalizing *for* the patient [1, 3, 8, 9, 13, 19], new perspectives [5, 9, 10, 18, 19] and confrontation [4, 7, 9, 10]. Body-related interventions were particularly effective when working in the here-and-now: exploring body and somatic sensations [12] as well as connecting nonverbal cues to emotions [1, 4, 5, 7, 13, 17, 19]. In addition, verbally difficult topics were made accessible by metaphors and dreams [4, 11, 13, 14, 16, 18].

Patient-Therapist. The self and its perception were explored in relation to the therapist within the therapeutic session. In a trusting therapeutic alliance and with a certain ability to mentalize, it was possible for patients to reflect on their own experiences with the therapist [1-4, 6-9, 11, 12, 14-16, 18-20]. The therapeutic alliance was strengthened, when patients were able to openly name what was beneficial and not beneficial in the therapeutic relation [14, 15].

Mentalizing the self in relation to the therapist has the special feature that the other person is present. The therapeutic alliance as a whole could be analyzed: For example, over the course of therapy Ms. Wu [6] was able to perceive her therapist in a more nuanced, complex way and was able to talk about their relation as well as the therapist's influence on her. This in turn made it possible to recognize patterns in the relationship between her and the therapist as well as to relate them to relationships outside of therapy.

With the therapist as a direct point of reference, a straightforward connection to what was said and to the immediate reactions were established. This made it possible to discuss the

different perceptions of the people involved in a situation in the "here and now". For example, ruptures were repaired through reconciling perceptions [5, 7].

Therapist: "do you know what it is about it that makes you react to me. To me it makes really good sense"

Patient: "but that is this, because I feel a bit someone else is haha controlling me"

[…]

Therapist: "so I'm sitting here and telling you what to do and not to do. And that's, annoying."

Patient: "Yes. Because I've had a mother who did that for seven hundred and forty-five years, well not quite but (…) a-and I am still a bit in that independent process (…) So I just think that every time someone is going to control a bit in my life right now, then grr (…) because I feel such a drive that says that I should and I could and I want to do it myself."

(Høgenhaug et al., p. 60)

This example shows that an exploration of the self in relation to the therapist can also involve a reference to the domains patient-others relation (in the example above the patient's mother) and biographical relations.

Patient-Others. The perception of the patient in interaction with others from the patient's perspective was an important point of mentalizing in therapy. Furthermore, the perception of the patient from the perspective of others was also of relevance [1-18, 20]. In the exploration of the self in relation to others, the patients experienced their own perceptual distortions. In addition, the patient's own share in disputes with others became apparent [9, 12, 18].

At a family dinner after [the patient's brother's] funeral, her [the patient's] niece brought her one of her brother's shirts, which she had requested as a memento. But the young woman brought it into the restaurant right before dinner, which put Harriet [the patient]

> in the position of having to carry it around, rather than waiting until afterwards. She [the patient] found this thoughtless and was offended. She responded, however, by not saying anything, noting that she would have, in the past, complained and gotten nasty, which she said, would have just made her hate herself for the rest of the week. After a moment, her niece offered an apologetic response and took the shirt back to her car, where Harriet picked it up after diner. (Seligman, 2007, p. 339)

In a mentalizing process, the causal and maintaining factors in interactions were identified [12]. It was possible to establish that the patients' own perception schemes influence behavior towards others and their perception of the mental states of others [9, 12, 18]. By strengthening the mentalization of the self, the patients' own mental states were distinguished from the assumed mental states of others. Accordingly, projections were perceived and stopped as soon as their origin in the self was recognized [8, 12, 16, 18, 19]. For example, when the patient Barry [16] felt held and recognized by the therapist, he became aware of previously unbearable affects (deep isolation, loneliness, fear of emotional dependence, sadism) and no longer had to project these feelings onto others. Instead Barry was able to integrate and express those feelings.

Biography. Every patient brings their own personal history in the form of their biography, which needs to be acknowledged and mentalized during psychotherapy [1, 3, 5-7, 9, 12-16, 18]. Mentalizing biographical experiences had been shown to increase the patient's understanding of current mental states [9, 16]. It also made patients aware of their current processing and behavioral patterns [9, 12, 16, 18]. The inclusion of biographical experiences was helpful in understanding a current issue, as they revealed belief structures and identification schemes:

> Therapist: (…) you keep exposing yourself to what your mother has exposed you to, right? What I'm trying to say is that when you were a child, then you couldn't control how your mother treated you and your boundaries were overstepped all the time (…). But now, it's

as if that now you're your own bad mother. I mean, you go on, one way or another attacking your body and –

Joyce [the patient]: myself (…) Yeah, it's as if I love to suffer, right? It really is, Then I find a boyfriend that I know will let me down or beat me or something, right? (…)

Therapist: So when you do not have such an external bully …

Joyce: Then I do it myself.

(Lunn, 2016, p. 211)

Mentalizing Others. Exploration of others is about understanding why someone else thinks, feels and acts the way they do in order to understand them better [2, 12, 15, 16, 18]. Before one could proceed to the exploration of others, a certain degree of mentalization of the self was needed: One should be able to mentalize one's own thoughts and feelings before being able to think about and tolerate the mental states of others. Furthermore, it was essential to be able to distinguish between the self and the other. For example, the patient's awareness and insight into their own perceptual biases were important in order to be able to question the perception of mental states of others [2, 12, 15, 16, 18]. Not all patients were able to achieve sufficient self-mentalization to move on to mentalization of others. In some cases, the conditions for exploring the mental states of others were met, and curiosity about other's mental states and an interest in understanding them more fully was stirred [15, 16, 18]. However, in some cases the phase of mentalizing others could be seen on a meta-level without the patients being receptive to this therapy phase [2, 12].

Within the exploration of others two domains emerged: therapist and others.

Therapist. The patient's imagination of the therapist's mental states had the special feature that the therapist as a counterpart was present. Over time, patients were able to form a nuanced picture of the therapist, rather than idealized generic representations [2, 16, 18]. The therapist as a counterpart became a complex individual in its own right instead of a simple projection

surface. For example, during the course of therapy Barry [16] understood the therapist's offers as such rather than as judgments. Furthermore, he noticed when the therapist appeared tired or not in a good mood and was able to forgive him for mistakes such as forgetfulness. In another case, Carol's [2] enhanced mentalizing in relation to the therapist could be found in the Patient-Therapist-Adult Attachment Interviews: In contrast to the beginning of therapy, after one year of therapy Carol was able to perceive the therapist more holistically. She was able to integrate positive as well as negative aspects of the therapist. However, these findings about Carol were only described on the basis of the interviews (meta-level) and not within the therapy sessions.

Especially ruptures in the patient-therapist relationship had been occasions to see the therapist as a person who had deeper motivations than just the interaction with the patient. For example, at first Ms. J [18] felt exploited by the therapist making it impossible for her to see the therapist's perspective. But later on, she was able to mentalize that the therapist's acting was his way of handling things and had nothing to do with her as a person. She was able to reconsider her initial thought that he did not care about her. She even hypothesized that this issue was a sensitive area for the therapist himself.

A useful intervention to enhance mentalization in relation to the therapist was for example in the case of Barry [16] the therapist's selective authentic self-disclosure. It allowed Barry to recognize what mental states he triggered in the therapist and that the therapist had needs as well.

Other. After strengthening self-mentalization, an increased interest in others and their mental states was observed. This interest was usually associated with an increase in the mentalization of others [12, 15, 16]. For example, at first Barry [16] recalls and reflects that he felt rejected by others and therefore accused them of being narrow-minded. In a second step, he was able to mentalize that they might not know how to behave around him, because he was far from the norm and beyond his biological age. He mentalized "that by allowing other's

reactions to him to paralyze and isolate him, he shut himself off from friends who may have needed him and wanted to be with him." (Ringel, 2011, p. 66)

Curiosity about the mental states of others and an open discussion about their motivations were used to initiate and explore others in more depth. With the help of the therapist and new perspectives, others were perceived more comprehensively:

> We analyzed the experience. Winston [the patient] became aware of his mother's need to have the emotionally/interpersonal focus be exclusively on her. She was jealous that her son was more interested in building structure than paying attention to his "loving mother". His mother's angrily possessiveness led her to destroy his building block structure, an activity that took him away from her. (Rachman, 2009, p. 269)

Therapeutic Zone of Proximal Development

An element of the phase model that was important throughout all phases and their domains was the therapeutic zone of proximal development (TZPD) [1, 3-7, 9, 11-13, 15-20]. The TZPD describes the range between the actual state of the patient's development in terms of independent progress to mentalize and the progress to mentalize possible with the support of their therapist. It also refers to interventions when therapists went beyond patients' abilities such as too early interventions focusing on other or the therapeutic relationship. The therapist support enabled the patients to master steps in developing mentalizing that they could not yet manage themselves. In addition, the therapeutic support promoted the improvement of independent development of mentalizing in the long term. The TZPD therefore moves to a higher level of mentalizing ability over time. It represents the area that can be accepted and effectively worked on by the patient with the therapist. Although the aim of all interventions was to initiate or support a positive process of patients' mentalizing, this was only possible if the interventions did not fall below or exceed the TZPD. However, underchallenges of the TZPD could not be found in the case studies so that only assumptions can be made in this regard. When the interventions were above the TZPD and therefore overwhelming for the

patient, it led to ruptures in the therapeutic relation [1] or to the development of a patient's false attitude [3, 4]. This false attitude could be a superficial joining in with the therapist [4] or hypermentalization [3].

The TZPD combines phase-specific and person-specific information: (1) depending on the therapy phase, different interventions can be helpful over the course of therapy; (2) due to different biographical experiences and presumably ability to mentalize as well as personality functioning, an individual variability in the effect of the interventions becomes apparent. With regard to the phase-specific TZPD, as previously stated, in the phase of experiencing self in a secure relationship interpretations had an overstraining effect and in the phase of mentalizing self a stimulating effect. In relation to person-specific TZPD, it was important to observe the patient's mentalizing ability and willingness (consciously and unconsciously) to explore certain topics: "Because talking about our relationship seemed overwhelming, I [the therapist] worked with Ms. Wu to explore her outside relational dynamics" (Higa & Gedo, 2012, p. 201) and to design interventions accordingly. Since, in unsuitable moments, mentalization enhancing questions (demand questions) such as "What's on your mind?" triggered unproductive remarks such as "I have no idea!" and were followed by tense silences [13]. However, it can also be argued that interventions could be post-matured in the patient [9, 13]. Overall, the patient should not have the impression that the therapist is the one who knows, but rather that the patient's curiosity should be aroused to discover their perceptions and feelings [1, 7, 11, 17, 19].

Discussion

In this metasynthesis, based on 20 case studies, we developed a phase model that describes the developmental process of mentalization during psychotherapy. The phase model is embedded in the therapeutic alliance and consists of three phases: (1) experiencing self in a secure relationship, (2) mentalizing self, and (3) mentalizing others. The effective process of mentalization occurs within the therapeutic zone of proximal development (TZPD). Overall,

there are notable parallels between the development of mentalizing in psychotherapy and the development of mentalizing in early childhood.

In the phase of experiencing self in se secure relationship, it is particularly important to build trust and security in the therapeutic alliance between patient and therapist. This is consistent with therapeutic alliance as an empirically proven common mechanism of change in psychotherapy (Norcross & Lambert, 2018). Furthermore, various models that attempt to divide the course of psychotherapy into phases from a theoretical point of view place great importance on the therapeutic alliance between patient and therapist, especially as a basis of therapy (DeRivera, 1992; Howard et al., 1993). In this initial phase, the therapist should follow the patients' perception and give them space to experience themselves. By mirroring the mental states of the patient, the therapist can build epistemic trust and thus be perceived as a reliable object that symbolizes security. In early childhood, the marked mirroring of the infant's mental states by the caregiver is essential as it provides the infant with a sense of authorship and control. In addition, it promotes the infant's ability to modulate his or her emotional states so as not to be overwhelmed by affect (Fonagy et al., 2002). It is important that the therapist responds to the patient's mental states and does not introduce his own interpretations. In early childhood, the caregiver should also not response to the infant's sensations in an unmarked way or even impose their own feelings on the infant. This could lead to the infant attributing the feelings of others to themselves and establishing an alien self (Fonagy et al., 2002).

In the phases of mentalizing self and mentalizing others, the therapy setting can be used as a safe practice space to explore oneself and others. Similar to this, in early childhood, a trusting attachment to caregivers is crucial. The trusting attachment is a precondition for the open exploration of one's own mental states and later also the mental states of caregivers and others (Fonagy et al., 2002). The distinction between self and other, and the assumption that there must be sufficient mentalization of the self in order to be able to mentalize others, is consistent with the findings of Dimaggio et al. (2008).

In the second phase mentalizing self, it is important to focus on exploring the self. Hereby, three domains can be used: patient-therapist relationship, patient-other relationship, biographical relation. It is essential to explore and understand the self with its thoughts, feelings and needs and to develop a narrative of the self. Only when a distinction can be made between self and others, it is possible to explore others as valuable persons (Blatt et al., 2008; OPD, 2023). Similar to early childhood, where marked mirroring can develop self/other distinctions and promote the ability to symbolize, a precursor to mentalization (Brockmann & Kirsch, 2010).

In the third phase mentalizing others, the exploration of others with the domains therapist and others is important. The focus is on becoming aware of the thoughts, feelings and needs of others. During the development of mentalizing in early childhood, the ability to mentalize others may not be sufficient or severely impaired: traumatic experiences with caregivers and others may result in the failure to explore mental states of the caregiver/ others in order to protect the self against their malignancy (Fonagy & Target, 2000). Due to these earlier experiences, epistemic mistrust can already develop in childhood and the exploration of the mental states of others can also be limited in the later years. This increases difficulties for patients to explore mental states of others during therapy.

The TZPD is also linked to developmental research: it originates from Vygotsky's approach to understanding children's cognitive development. (Vygotsky, 1978) assumed that the development of psychological functions initially takes place between child and adult and later within the child through an internalization of the process. Vygotsky's (1978) considerations were transferred to the therapeutic context, whereby it is also hypothesized that conjoint work between therapist and patient is necessary before the process is internalized by the patient (Stiles et al., 2016). The concept of TZPD is supported by a large number of studies (Gabalda & Stiles, 2013; Meystre et al., 2014; Stiles et al., 2016; Wang & Xiang, 2022) and is

important during a phasic development of mentalization (Diamond et al., 2003; Taubner & Sharp, 2024).

The TZPD with regard to mentalization describes a zone between the patient's actual level of mentalization in terms of an independent ability and the progress possible with the therapist's support. With consistent use of the TZPD, patients' mentalizing ability will move towards a higher level of mentalizing ability over time. This is in line with Bateman et al.'s (2023). “Mentalizing muscle” metaphor, which suggests that mentalizing, like a muscle, needs the right amount of challenge through exercise to become stronger. It should be noted that TZPD of mentalization combines phase- and person-specific information: (1) Different interventions can be helpful depending on the therapy phase. Throughout the therapy process, for each phase certain interventions to enhance mentalization proved to be beneficial. (2) Interventions have different individual effects depending on patient-characteristics. This is consistent with a study by Kasper et al. (2024), which found that the interventions to enhance mentalization differed between patients and were therefore person-specific. Biographical experiences, the ability to mentalize and the level of personality functioning can be considered to be important patient characteristics.

It should be the therapists’ agenda to work therapeutically within the TZPD so as not to under- or overburden the patient. This is in line with the hypothesis that a clear therapeutic strategy and a skillful use of the patient's comfort zone improve the therapeutic process (Folmo et al., 2019). Additionally, it is consistent with Bateman et al.'s (2023) “mentalizing muscle” metaphor, which implies that therapists should work constantly to trigger the patient’s mentalizing and then help to maintain it. Closely connected to the TZPD is the therapeutic alliance, which, among other things, makes it possible to assess the patient's TZPD. In addition, the therapeutic alliance is important in repairing ruptures in the relationship that can occur when the TZPD is under- or overestimated. This is consistent with previous research on therapeutic alliance and ruptures and repair (Swift & Greenberg, 2015). Strategies for therapists to work

within the TZPD of mentalizing, might be to aim for an appropriate level of emotional arousal and to monitor their own mentalization as well as the patients' mentalizing (de la Cerda & Dagnino, 2021; Diamond et al., 2003; Kasper et al., 2024; Kivity et al., 2021). Furthermore, it can be useful to use phase-specific interventions in order to remain in the TZPD: Within the phase of experiencing self in a secure relationship, working in the here and now with supportive interventions and the focus on emotions, such as mirroring of emotions or neutral naming of emotions, proved to be effective. On the contrary, it was found that within this first phase interventions in the form of interpretations and confrontation were not helpful and rather led to ruptures. In contrast to, in the phase of mentalizing self interpretations and confrontations proved to be useful, especially in combination with validations. Furthermore, within this second phase interventions such as empathic validations, selective authentic self-revelations, elaboration of affect, mirroring and naming of the patients' mental states as a joint development, mentalizing for the patient, perspective extension, body related interventions, metaphors and dreams were beneficial. Within the phase of mentalizing others, interventions such as perspective extension and selective authentic self-revelation were found to be helpful.

Demand questions (e.g. "How did you experience it?", "Why do you think, did she react that way?") are particularly emphasized to enhance mentalization: Some studies have shown that patients' ability to mentalize increases in response to demand questions (Kasper et al., 2024; Kivity et al., 2021; Kornhas et al., 2020; Möller et al., 2017). In terms of the phase model, it is dependent on the TZPD whether demand questions are effective. Demand questions should be used in consideration of the patient's existing mentalizing ability. Furthermore, they should first be used in relation to mentalizing the self and only later in relation to mentalizing others. This is contrary to MBT (Bateman & Fonagy, 2016), in which rigidity in the activation of self- and other-awareness is to be counteracted by the therapist moving in contrary directions: If patients have a strong self-focus, therapists should concentrate more on the mental states of others.

In line with our findings, recent theories of mentalization (Bateman et al., 2023) distinguish between the “I-mode”, the “me-mode” and the “we-mode”. The I-mode represents self-awareness and the development of self-coherence and therefore can be seen in experience self and mentalizing self. The me-mode integrates the one’s own perspective on others and the perspective of others on the self, so this can be categorized as mentalizing self and mentalizing others. Although it must be emphasized that mentalizing others describes not only the perception of others (that would be exploration of the self in relation to others), but also a deeper mentalizing understanding of others. The we-mode focuses on shared attention as well as a shared understanding of the mental states of self and other; this can be seen as part of the joint work between patient and therapist to explore the self and the other, integrating different perspectives. In terms of this metasynthesis, we were able to show empirically on the basis of real-life case studies that a change from the self via others to an integrative state (switch from exploration of the self to others and vice versa) is aimed for. Furthermore, it was noticeable in the effect of the interventions that joint collaboration between the patient and therapist (we-mode) was an important factor in the process of mentalization.

Limitations and Future Research

For the research question, we decided to carry out a meta-synthesis, a secondary analysis of previously published case studies. This raises the question of whether previously published case studies are representative of the development and enhancement of mentalization over the course of therapy. While quantitative studies usually examine a large number of subjects with different backgrounds and age groups, case studies focus on single persons and thus have a very limited generalizability (McLeod & Elliott, 2011). Case studies are able to reveal especially rich insight into the patients' processes during psychotherapy (Buchholz, 2019), whereas they capture how complex and dynamic processes unfold over time (McLeod & Elliott, 2011). By taking a theory-driven approach, metasyntheses go beyond simply aggregating results (Thorne,

2017, 2019). Using multiple single case studies in a metasynthesis increases generalizability (Finfgeld-Connett, 2010; Iwakabe & Gazzola, 2009).

In the metasynthesis, we used 20 single case studies with a total of 22 illustrated courses of therapy. The included case studies showed variation in disorders and therapy schools. However, the therapy schools showed a psychodynamic dominance and, within the mental disorders, a dominance of personality disorders. The large number of psychodynamically oriented psychotherapies may be due to the fact that mentalizing was originally a psychodynamic concept (Debbané, 2019) and therefore psychodynamic case studies tend to explore the concept. The dominance of personality disorders may be due to the fact that the mentalization concept was originally focused on personality disorders (Bateman & Fonagy, 2016; Clarkin et al., 2006) and was only adapted over time in the treatment of other disorders.

The literature search was carried out with three databases. This enabled a potential representativeness of the sample across journals of different therapeutic orientations, publication cultures and a large time frame (2000-2020). Several factors should be considered to ensure the quality of metasyntheses: One factor is a diverse research group in terms of professional background and expert support (Bondas & Hall, 2007; Iwakabe & Gazzola, 2009; Lachal et al., 2017). In our knowledge of mentalization, our research group shows diversity from non-experts to experts. At conferences, we received further input from experts and also from people outside the mentalization framework, which is also a sign of quality (Creswell & Miller, 2000). However, it is noticeable that our research team is predominantly psychodynamic and MBT oriented. More knowledge from the cognitive-behavioral and psychodynamic TFP orientations would have been desirable. Another critical quality factor in ensuring the validity of results is the ongoing discussion of emerging findings among researchers during the analysis (Stiles, 1999); this was present in our metasynthesis. Another key factor is the strengthening of results through citations (Finfgeld, 2016; Krivzov, Hannon, et al., 2021), which we applied in formulating our results.

Overall, the metasynthesis method does not claim to be representative. However, it should be emphasized that elements of the phase model were found in most of the case studies. A limitation is that references to the third phase, mentalizing others, could only be found in four out of 20 case studies. It is interesting to note that in 16 case studies, the concept of mentalizing others was not mentioned in therapy or as part of therapy planning or discussion. There may be several reasons for not including the mentalization of others: the treatment focused only on the self and never intended to focus on mentalizing others; the treatment may have been too short to focus on mentalizing others as a late developmental stage; the patients had too low mentalizing level and the self was not yet sufficiently mentalized; the patients' level of personality functioning was not yet sufficient to deal with the experiences of others. In addition, it was surprising that the termination or end of treatment was not a phase of treatment. This may be due to the fact that some of the treatments were still in progress.

Future studies should address the replication of the phase model in the form of empirical studies with qualitative and quantitative evaluation. It is desirable to include a wide range of therapeutic schools and mental disorders. It is also beneficial if the research group is mixed in terms of psychotherapeutic background. In addition, future studies should include questionnaires during the course of therapy to better represent the process of mentalizing about self and others, including their domains, as well as the therapeutic alliance and TZPD. Particular attention should be paid to the third phase (mentalizing others) and the termination of the therapy. To investigate the TZPD, it would be interesting to include patient characteristics such as level of personality functioning, mentalization level as well as the therapist mentalization level, and the quality of the therapeutic alliance. The extracted interventions and their effects on the mentalizing process should be tested in the context of psychotherapy studies as well as experimental studies.

Conclusions

We have succeeded in establishing a new model for the development of mentalizing over the course of therapy. Until now, there has been no model that describes the qualitative psychotherapeutic change of mentalizing over the course of therapy and is based on real-life case studies. By describing in detail how mentalization develops in the course of therapy and which therapeutic approaches and interventions are helpful in this process, impulses for clinical practice could be generated.

A trusting therapeutic alliance enables therapeutic work in which mentalization can be enhanced and ruptures in the relationship can be observed, recognized, and repaired at any stage of therapy. To enhance mentalization, the therapist should initially withhold his or her views and give the patient space to experience himself or herself. Over time, there is a shift from self-awareness to self-exploration and exploration of others, considering the TZPD. It is only in the course of therapy that the therapist should introduce new perspectives, with empathically validating interventions and an empathic attitude being important. It is precisely these practical impulses for MBT that have been missing up to now (Sharp et al., 2020).

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Supplemental Data

Supplemental data for this article can be accessed. (insert Supplement 1, 2, 3)

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Supplement 1.

Quality check of the included case studies

Case Studies	Were the patient's demographic details stated?	Were the patient's diagnoses stated?	Were the therapeutic interventions clearly described?	Was the patient's response to the interventions clearly described?	Was the patient's clinical condition/level of mentalization clearly described			Were theoretical orientation/assumptions described?	Have patient-therapist dialogues been included?	Was the sequence made explicit (e.g. chronologically)?	What is the nature of the case study?
					at the beginning of treatment?	during treatment?	after treatment?				
Brent, 2009	5/5	5/5	5/5	5/5	5/5	2/5	5/5	5/5	4/5	5/5	Clinical case study
Diamond et al., 2008	3/5	5/5	2/5	5/5	3/5	3/5	1/5	5/5	1/5	5/5	Systematic case study
Fonagy & Target, 2000	3/5	5/5	5/5	5/5	4/5	5/5	1/5	5/5	2/5	5/5	Clinical case study
Griffies, 2010	3/5	5/5	5/5	5/5	5/5	5/5	1/5	3/5	4/5	5/5	Clinical case study
Gunderson et al., 2007	3/5	5/5	5/5	5/5	2/5	4/5	3/5	4/5	5/5	5/5	Clincial case study
Higa & Gedo, 2012	5/5	5/5	3/5	5/5	3/5	4/5	3/5	4/5	4/5	4/5	Clinical case study
Hogenhaug et al., 2021	3/5	5/5	5/5	5/5	5/5	5/5	5/5	5/5	5/5	3/5	Systematic case study
Kernberg et al. 2008	5/5	5/5	5/5	5/5	5/5	5/5	1/5	5/5	4/5	5/5	Systematic case study
Lunn et al., 2016	3/5	5/5	5/5	5/5	5/5	5/5	5/5	5/5	5/5	5/5	Systematic case study
Markowitz et al., 2020	5/5	5/5	5/5	5/5	5/5	5/5	5/5	5/5	5/5	4/5	Systematic case study
Merced, 2016	5/5	5/5	5/5	5/5	5/5	5/5	1/5	5/5	4/5	5/5	Clinical case study
Misso et al., 2019	5/5	5/5	5/5	5/5	5/5	5/5	1/5	5/5	5/5	2/5	Clinical case study
Pinter, 2016	3/5	5/5	5/5	5/5	4/5	5/5	3/5	4/5	5/5	5/5	Clinical case study
Quadrio & Haas, 2014	2/5	5/5	3/5	5/5	3/5	3/5	3/5	3/5	4/5	5/5	Clinical case study
Rachman et al., 2009	3/5	4/5	5/5	5/5	3/5	4/5	1/5	2/5	1/5	2/5	Clinical case study
Ringel, 2011	3/5	1/5	4/5	5/5	5/5	5/5	1/5	3/5	2/5	3/5	Clinical case study
Salvatore et al., 2012	3/5	5/5	5/5	5/5	3/5	5/5	5/5	5/5	5/5	5/5	Clinical case study
Seligman, 2007	3/5	3/5	5/5	5/5	5/5	5/5	1/5	5/5	2/5	4/5	Clinical case study
Target, 2016	3/5	5/5	5/5	5/5	3/5	5/5	1/5	5/5	5/5	5/5	Clinical case study
Træsdal, 2013	3/5	5/5	3/5	3/5	5/5	4/5	1/5	4/5	2/5	4/5	Clinical case study

Notes. All items except item 10 were rated on a five-point scale from 1 = does not apply at all to 5 = applies completely.

Supplement 2.

Characteristics of the case studies included in the metasynthesis

				Patient			Treatment			
	Authors	**Publication Year**	**Title**	**Age**	**Diagnosis**	**Gender**	**School**	**Duration**	**Frequency**	**Completed at time of publication**
1	Brent, B.	2009	Mentalization-Based Psychodynamic Psychotherapy for Psychosis	20s	Psychosis	male	Psychodynamic Psychotherapy (MBT)	1 year	Once a week	yes
2	Diamond, D., Yeomans, F. E., Clarkin, J. F., Levy, K. N. & Kernberg, O. F.	2008	The Reciprocal Impact of Attachment and Transference-Focused Psychotherapy with Borderline Patients	Late 20s	Boderline Personality Disorder	female	Psychdynamic Psychotherapy (TFP)	4 years	n/a	no
3	Fonagy, P. & Target, M.	2000	Playing with Reality. III: The Persistence of Dual Psychic Reality in Borderline Patients	Mid 30s	Borderline Personality Disorder	female	Psychdynamic Psychotherapy	Min. 4 years, exact duration n/a	Initially once a week, increased to four times a week within 18 months	yes
4	Griffies, W. S.	2010	Believing in the Patient's Capacity to Know His Mind: A Psychoanalytic Case Study of Fibromyalgia	33	Fibromyalgia	male	Psychdynamic Psychotherapy	6 years	Four times a week	n/a
5	Gunderson, J. G., Bateman, A. & Kernberg, O.	2007	Alternative Perspectives on Psychodynmaic Psychotherapy of Borderline Personality Disorder: The Case of “Ellen”	32	Borderline Personality Disorder, Major Depressive Disorder	female	Psychodynamic Psychotherapy	4 years	n/a	yes
6	Higa, J. K. & Gedo, P. M.	2012	Transference interpretation in the treatment of borderline personality disorder patients	34	Boderline Personality Disorder	female	Psychodynamic Psychotherapy	2 years	n/a	yes
7	Høgenhaug, S. S., Bloch, M. S., Schiepek, G., Kjølbye, M. & Steffensen, S. V.	2021	Mentalization-based therapy for patient suffering from panic disorder: a systematic single case study	Mid 30s	Personality Disorder (dependent, borderline and avoidant personality traits) Agoraphobia	female	Psychodynamic Psychotherapy (MBT)	6 months	Once a week	yes

8	Kernberg, O. F., Diamond, D., Yeomans, F. E., Clarkin, J. F. & Levy, K. N.	2008	Mentalization and attachment in borderline patients in transference focused psychotherapy.	36	Personality Disorder (Borderline, Narcisstic, Anxoius-Avoidant), Dysthymia	female	Psychdynamic Psychotherapy (TFP)	Min. 3 years, no exact information	n/a	n/a
9	Lunn, S., Daniel, S. I. F. & Poulsen, S.	2016	Psychoanalytic Psychotherapy with a Client with Bulimia Nervosa	Mid 20s	Bulimia Nervosa	female	Psychdynamic Psychotherapy	2 years	Once a week	yes
10	Markowitz, J. C., Lowell, A., Milrod, B. L., Lopez-Yianilos, A. & Neria, Y.	2020	Symptom-Specific Reflective Function as a Potential Mechanism of Interpersonal Psychotherapy Outcome: A Case Report	42	Posttraumatic Stress Disorder, Major Depressive Disorder	male	Interpersonal Psychotherapy (IPT)	14 weeks	Once a week	yes
11	Merced, M.	2016	Noticing Indicators of Emerging Change in the Psychotherapy of a Borderline Patient	24	Borderline Personality Disorder	female	Psychdynamic Psychotherapy	n/a	Twice a week	yes
12	Misso, D., Schweitzer, R. D., Dimaggio, G.	2019	Metacognition: A Potential Mechanism of Change in the Psychotherapy of Perpetrators of Domestic Violence	29	Personality Disorder (Depressive, Passiv-Aggressive, Dependent)	male	Cognitive-Behavioral Therapy (MCT-IPT)	3 years	20 sessions (partly weekly, partly long breaks)	n/a
13	Pinter, K.	2016	“I step out of my body and then out of the window…” – a case study – Maturing processes, attachment and mentalization in the psychotherapeutic treatment of adults	36	Moderate Depressive Episode with suicidal and dissociative episodes	female	Psychdynamic Psychotherapy	10 years	Once a week in the first few years, then every two to four weeks	no
14	Quadrio, C. & Haas, N.	2014	Intensive psychotherapy with bipolar disorder	n/a	Bipolar Disorder (rapid cycling)	female	Psychodynamic Psychoterhapy	4 years and 3 months	Once to four times a week	yes
15	Rachman, A. W., Yard, M. A., & Kennedy, R., E.	2009	Noninterpretative measures in the analysis of trauma	Denise: 38	Trauma	female	Psychdynamic Psychotherapy	n/a	n/a	n/a
				Patrick: 50	Trauma	Male	Psychdynamic Psychotherapy	n/a	n/a	n/a

				Winston: n/a	Posttraumatic Stress Disorder	male	Psychdynamic Psychotherapy	over 4 years, no exact information	n/a	n/a
16	Ringel, S.	2011	Developing the Capacity for Reflective Functioning Through an Intersubjective Process	40s	n/a	male	Psychdynamic Psychotherapy	5 years	n/a	n/a
17	Salvatore, G., Lysaker, P. H., Gumley, A., Popolo, R., Mari, J. & Dimaggio, G.	2012	Out of Illness Experience: Metacognition-Oriented Therapy for Promoting Self-Awareness in Individuals with Psychosis	37	Schizophrenia	female	Cognitive behavioral therapy (MCT)	6 months	Once a week	yes
18	Seligman, S.	2007	Mentalization and Metaphor, Acknowledgment and Grief: Forms of Transformation in the Reflective Space	50s	Narcissistic, Borderline and Masochistic tendencies	female	Psychdynamic Psychotherapy	n/a	Twice a week	n/a
19	Target, M.	2016	Mentalization within Intensive Analysis with a Borderline Patient	25	Personality Disorder (Borderline & Paranoid), Major Depressive Disorder	female	Psychdynamic Psychotherapy (MBT)	6 years	Four times a week	yes
20	Træsdal, T.	2013	Establishing thirdness. Overcoming an impass on the treatment of a patient with a delusional disorder.	36	Delusional disorder (mixed type: erotomanic + paranoid)	female	Psychdynamic Psychotherapy	Min. 4 years, no exact information	Started as double session every second week and developed over 4 years into 4 session a week in a reclining position	no

Notes. MBT = Mentalization-based Treatment or Mentalization Oriented Psychotherapy; TFP = Transference-Focused Psychotherapy; MCT = Metacognicitve Psychotherapy; IPT = Interpersonal Psychotherapy; n/a = not available.

Supplement 3.

Phases of the model per included case study

	Therapeutic Alliance	*Experience of the Self*	*Exploration of the Self*			*Exploration of Other*		*TZPD*
			Pat.-Th.-Relation	Pat.-Others-Relation	Biographic Relation	Therapist	Others	
Brent (2009)	x	x	x	x	x	-	-	x
Diamond et al. (2008)	x	x	x	x	-	x	-	-
Fonagy & Target (2000)	x	-	x	x	x	-	-	x
Griffies (2010)	x	x	x	x	-	-	-	x
Gunderson et al. (2007)	x	x	-	x	x	-	-	x
Higa & Gedo (2012)	x	x	x	x	x	-	-	x
Høgenhaug et al. (2021)	x	-	x	x	x	-	-	x
Kernberg et al. (2008)	x	-	x	x	-	-	-	-
Lunn et al. (2016)	x	x	x	x	x	-	-	x
Markowitz et al. (2020)	-	-	-	x	-	-	-	-
Merced (2016)	x	x	x	x	-	-	-	x
Misso et al. (2019)	x	-	x	x	x	-	x	x
Pinter (2016)	x	x	-	x	x	-	-	x
Quadrio & Haas (2014)	x	-	x	x	x	-	-	-
Rachman (2009)								
1. Denise	x	x	x	x	-	-	-	x
2. Patrick	-	-	x	x	x	-	x	x
3. Winston	x	-	-	x	x	-	-	-
Ringel (2011)	x	x	x	x	x	x	x	x
Salvatore et al. (2012)	-	x	-	x	-	-	-	x
Seligman (2007)	x	x	x	x	x	x	-	x
Target (2016)	x	x	x	-	-	-	-	x
Træsdal, T. (2013)	x	x	x	x	-	-	-	x

Notes. Pat. = Patient; Th. = Therapist; TZPD = Therapeutic Zone of Proximal Development

Appendix V: Studie 5

Kasper, L. A., Hauschild, S., Berning, A., Holl, J. & Taubner, S. (2024). Development and validation of the Mentalizing Emotions Questionnaire: A self-report measure for mentalizing emotions of the self and other. *PLoS ONE, 19(5), e0300984.* https://doi.org/10.1371/journal.pone.0300984

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RESEARCH ARTICLE

Development and validation of the Mentalizing Emotions Questionnaire: A self-report measure for mentalizing emotions of the self and other

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Abstract

Mentalizing describes the ability to imagine mental states underlying behavior. Furthermore, mentalizing allows one to identify, reflect on, and make sense of one's emotional state as well as to communicate one's emotions to oneself and others. In existing self-report measures, the process of mentalizing emotions in oneself and others was not captured. Therefore, the Mentalizing Emotions Questionnaire (MEQ; current version in German) was developed. In Study 1 ($N = 510$), we explored the factor structure of the MEQ with an Exploratory Factor Analysis. The factor analysis identified one principal ($R^2 = .65$) and three subfactors: the overall factor was *mentalizing emotions*, the three subdimensions were *self*, *communicating* and *other*. In Study 2 ($N = 509$), we tested and confirmed the factor structure of the 16-items MEQ in a Confirmatory Factor Analysis (CFI = .959, RMSEA = .078, SRMR = .04) and evaluated its psychometric properties, which showed excellent internal consistency (α = .92 - .95) and good validity. The MEQ is a valid and reliable instrument which assesses the ability to mentalize emotions provides incremental validity to related constructs such as empathy that goes beyond other mentalization questionnaires.

Introduction

Mentalizing describes the capacity to perceive and understand oneself and others in terms of mental states (emotions, beliefs, thoughts, and desires) [1]. Mentalization is closely linked to emotion regulation and its development, whereby mirroring and the resulting co-regulation of emotional states by the caregiver have a central function in the self-regulation of one's own emotions [2, 3]. Fundamental to the development of mentalizing in early childhood is building a self-representation by a caregiver's mirroring of the child's primary emotional states [1]. The mirroring gives meaning to the inner sensations of the child that are unconscious, intrapsychic embodied experiences. The child learns about their emotional states by internalizing the caregiver's feedback (visual, vocal, and body-related) as mental representations [1, 4]. This enables the child to gain knowledge of their emotions. Accordingly, mentalization of emotions can be

divided into three components (1) identifying, being aware of, as well as naming emotions, (2) processing emotions in the sense of developing an understanding and (3) communicating emotions to others. In the development of mentalizing in childhood, after having gained access to one's own emotions via bio-social-feedback (mirroring), the child learns to ascribe (identify and process) mental states to others, e.g. of the caregiver as a part of a goal-corrected partnership—which is well documented by the Theory-of-Mind body of research [5, 6].

As mentalization becomes challenging when emotions intensify, learning to better mentalize emotions is considered a key mechanism of change in psychotherapy [7]. Mentalizing one's own emotions and the emotions of others enables appropriate coping with external and internal stressors, the regulation of emotions, and the establishment of stable interpersonal relationships [1]. Especially in psychotherapy, it is important to facilitate mentalizing emotions more effectively to initiate change [8, 9].

Jurist [10, 11] proposed mentalized affectivity as the most mature form of emotion regulation: it is separated into three aspects of emotion regulation, (1) identifying emotions in the context of individual circumstances, personal memories as well as exploring the source of emotions, (2) processing in the sense of modulation and regulation of emotions (e.g. emotions can be changed in duration and intensity) and (3) expressing emotions conceptualized as communication of one's own emotions internally as well as externally to others. It is important to note that there are differences in the conceptualization of identifying, processing, and expressing/communicating in relation to emotion regulation according to Jurist [11] and mentalizing emotions operationalized in this study. According to Jurist [10, 11] identifying is seen as part of mentalizing emotions, whereas processing and expressing emotions to the self in his concept is closely linked to emotion regulation. Communicating emotions to others is an additional functional interpersonal competence as stated by Arbeitskreis OPD-3 [12]. Jurist [11] and Greenberg [13] strongly emphasized the importance of mentalization in the process of emotion regulation: prior to, during, and after the refining and modulating of the emotion. This is precisely why it is so important to take a more in-depth analysis of the individual components involved in mentalizing emotions. Overall, it should be pointed out that the theory of mentalized affectivity [11] mainly focuses on emotion regulation in the self, excluding understanding emotions of others.

Mentalizing is a complex construct and therefore difficult to measure [14, 15]. It includes both a self-reflective and an interpersonal component, whereas including mentalizing others sets it apart from self-reflection [1, 16]. The gold standard for capturing mentalizing is the Reflective-Functioning Scale (RF Scale) [16], which can be applied to interviews such as the Adult-Attachment Interview [17] or therapy transcripts [18]. Coding with the RF Scale is based on a comprehensive manual that highlights aspects of mentalizing mental states such as openness, awareness of the nature of mental states, development aspects, and reflecting on current emotions while interpreting others [1, 16]. Conducting and transcribing interviews or therapy transcripts for the use of the RF Scale is time-consuming and reliability requires extensive training.

For a more economical assessment of mentalization, a variety of different questionnaires have been developed [14]. The most often used questionnaires for the investigation of mentalization in Germany seem to be the Reflective Functioning Questionnaire (RFQ-6) [19], the Mentalization Questionnaire (MZQ) [20] and the Certainty about Mental States Questionnaire (CAMSQ) [21], although these have not yet been validated with the RF Scale.

The RFQ-6 [19] focuses on cognition and non-mentalized emotions, e.g. describing limited communication due to emotions ("When I get angry I say things without really knowing why I am saying them."). The MZQ [20] assesses maladaptive characteristics of mentalizing, in which non-mentalizing of emotions is included. Here, individual items refer to delayed

identifying of own emotions (e.g. "Sometimes I only become aware of my feelings in retrospect.") as well as failed processing (e.g. "Often I don't even know what is happening inside of me.") and failed communicating (e.g. "Talking about feelings would mean that they become more and more powerful."). Within the MZQ the emphasis on the inability to mentalize emotions is noteworthy as well as the neglect of mentalizing emotions as a comprehensive process. The CAMSQ [21] refers to the self as well as to others and thus includes an important point of mentalization theory [1]. Six of the 20 items can be associated with mentalizing emotions in a broader sense, e.g. processing emotions of the self ("I understand my feelings.") or identifying emotions of others ("I can tell when a person in a group is feeling awkward."). In addition to emotions, the CAMSQ refers to thoughts and motives; it does not explicitly refer to identifying, processing, and communicating mentalized emotions.

As in present mentalizing questionnaires no subscale is dedicated to mentalizing emotions, hence this important facet of the mentalization construct is not assessed. Furthermore, only the CAMSQ distinguished between self and others.

Phenomena such as emotional blindness [22], also known as alexithymia, psychological symptoms [23] and level of personality functioning [24] as well as intelligence [25] are related to mentalization. Therefore, when developing questionnaires to assess mentalization, these constructs and their associated questionnaires should also be taken into account, e.g. Short Alexithymia Scale (SAS-3) [26], Symptom-Checklist K9 (SCL-K-9) [27], Level of Personality Functioning Scale–Brief Form 2.0 (LPFS-BF) [28] and Berlin Test for the Assessment of Fluid and Crystallized Intelligence—Short Form Crystallized Intelligence (BEFKI GC-K) [29].

Questionnaires outside the core mentalization construct capture specific components of mentalizing emotions or concepts closely associated with it: for instance measures assessing epistemic trust (Epistemic Trust, Mistrust and credulity Questionnaire, ETMCQ) [30], attributional complexity (Attributional Complexity Scale, ACS) [31], beliefs about emotions (Emotion Belief Questionnaire, EBQ) [32], emotion knowing and understanding (GEMOK-Blends) [33], emotion regulation (Emotion Regulation Questionnaire, ERQ) [34], empathy (Empathy Quotient, EQ) [35] and mentalized affectivity (Brief Mentalized Affectivity Scale, B-MAS) [13]. With the exception of attributional complexity and empathy, these questionnaires do not consider the understanding of others and thus miss an essential aspect of mentalizing.

The ETMCQ [30] differentiates between epistemic trust, mistrust, and credulity. Epistemic trust is defined as openness to the reception of social knowledge that is regarded as personally relevant and of generalizable significance [36]. It has a close conceptual relationship to mentalization, which is also developed in early attachment experiences. However, the ETMCQ, despite the conceptual proximity, does not assess identifying, processing or communicating mentalized emotions ("Sometimes, having a conversation with people who have known me for a long time helps me develop new perspectives about myself."). The ACS [31] measures the attributional complexity describing the degree to which a more complex explanation for human behavior is chosen. The ACS focuses on the processing component in relation to the self and others („I have thought a lot about the family background and personal history of people who are close to me, in order to understand why they are the sort of people they are."). However, the focus here is on behavior, attitudes, and beliefs, leaving emotions out of the equation. The EBQ [32] differentiates between the perceived general controllability and usefulness of positive and negative emotions. This construct taps into processing of emotions ("It doesn't matter how hard people try, they cannot change their negative emotions."). What is noticeable about the EBQ is that it does not refer directly to the self or others, but instead refers to people in general. In the GEMOK-Blends emotion knowing and understand in relation to others is tested. In contrast to mentalization, where hypotheses are made about the mental states of others, the GEMOK-Blends refers to the correct or incorrect attribution of emotions

in others ("Which of the following emotions describe best what Daniel was experiencing during this episode?"). Thereby, it includes parts of the identifying and processing component. The ERQ [34] distinguishes between two common emotion regulation strategies: suppression and reappraisal. Suppression could be assigned to communicating emotions ("I keep my emotions to myself.") and reappraisal in a broader way to processing emotions ("When I want to feel more positive emotion, I change the way I'm thinking about the situation."). In the EQ [35], only a few items relate directly to mentalizing emotions. Items such as "It is hard for me to see why some things upset people so much." can be linked to problems in processing emotions of others. The B-MAS [13] measures emotion regulation on the basis of Jurist's [10, 11] theory of mentalized affectivity using three scales: identifying, processing, and expressing. Within the B-MAS, the identifying scale relates to the mentalization of emotions without further differentiation into individual components, whereas the processing and expressing scales relate to emotion regulation. Individual items of the B-MAS can be classified with identifying ("I try to put effort into identifying my emotions."), processing ("I rarely think about the reasons behind why I am feeling a certain way.") as well as communicating emotions ("If I feel something, I will convey it to others.").

The current self-report measures of mentalization lack specific components that are central to the construct such as the assessment of mentalizing emotions with the exception of the B-MAS. However, the B-MAS focuses strongly on emotion regulation and neglects the assessment and differentiation of identification, processing, and communication of mentalizing emotions. Furthermore, it does not differentiate between mentalizing oneself's and others' emotions and thus misses a core idea of mentalizing such as the interpersonal component.

The aim of this study is to develop and validate a new self-report questionnaire for the assessment of mentalizing emotions: The newly developed Mentalizing Emotions Questionnaire (MEQ) focuses on the process of mentalizing emotions in terms of identifying, processing, and communicating emotions, distinguishing between self and other. This offers the chance to assess and track changes in the mentalization ability as a process prior to, during and/or after, yet distinct from, emotion regulation.

Study 1

Methods and materials

Participants. The study was approved by the ethics committee of the Faculty of Behavioral and Cultural Studies at Heidelberg University (AZ Tau 2020 1/1). The online sample was recruited in February 2022 via the panel provider Respondi and conducted via SoSciSurvey [37]. Participants were informed about the study purpose and procedure and provided online written informed consent. After intensive data cleaning, the final *N* comprised 510 participants (50.0% female, 49.4% male, 0.6% diverse), with an age ranging from 18 to 65 years (mean age = 43.3; *SD* = 13.8). Most of the participants did not suffer from mental disorder during the last year (75.1%). Regarding the work situation 68.0% of the participants were employees, 6.9% were self-employed, 12.7% were job-seeking, 9.4% were students and 1.6% were in training. Furthermore, with reference to the highest educational attainment 4.7% had a middle school diploma, 30.8% had a high school diploma or similar, 28.8% completed apprenticeship, 34.3% had a university degree, 1.0% had a PhD and 0.4% were currently going to school.

Questionnaire development. The MEQ was developed with reference to the gold standard of mentalizing assessment, the RF Scale, with its original definition of mentalization markers in interview transcripts [16].

Mentalizing emotions was defined in the questionnaire design as follows:

1. Identifying emotions involves perceiving, recognizing, and naming emotions.
2. Processing emotions describes deeper processing and understanding including causes and mental/contextual reasons behind emotions.
3. Communicating emotions means expressing externally as sharing emotions with others.

In each of these components of mentalizing, aspects of interest/curiosity and acceptance as well as multi-perspectives and development-perspectives are of high importance as they are facets of mentalizing according to the RF Scale [1, 16]. Furthermore, the process of mentalizing emotions is operationalized as a self-reflective ability as well as an interpersonal ability (self and other component).

The Mentalizing Emotions Questionnaire (MEQ; S1 File) was developed in a multi-stage, peer reviewed consensus approach. In a first step, items were formulated for the dimension self and other considering the three components of mentalizing emotions: identifying, processing, and communicating. Regarding the dimensions of self and other for each of the three components, items were formulated, respectively for the four following aspects of mentalizing that describe typical processes of mentalizing: interest, acceptance, multi-perspective. and development-perspective [1] (S1 Table). The items include various phrases related to the mentalizing aspects, such as typical behavior, preferences, attitudes, and self-estimated abilities. Per dimension, component and aspect dual items (two items with different phrasing) were used. This step was conducted by three MBT experts (LK, SH and ST are certified MBT therapists and certified RF-raters, ST is also a certified MBT trainer and supervisor). In a second step, plausibility and phrasing of the items were examined by three clinical experts and recommended changes were included. In a further step, to test for social desirability, a group of participants ($N = 30$) rated the dual items in terms of the valence of a person's characteristic on a scale ranging from very negative (1), either / or (3) to very positive (5). It can be assumed that mentalizing emotions itself is a socially desirable skill, however in order to allow for an as unbiased as possible scoring of the items, the item phrasing regarding social desirability was investigated. Social desirability scores were compared between dual items and the one indicating greater positive or negative valence was removed. The wording of the items was adapted by simplifying and structuring them in a similar way (sentence length, auxiliary words, etc.) and one item was deleted for content reasons. Finally, a pool of 23 items was identified to be tested in the study (S2 Table). In the course of the development of the questionnaire the response format was revised, whereas a 7-point frequency scale was used ranging from never (1), almost never (2), sometimes (3), half of the time (4), often (5), and almost always (6) to always (7). For interpretation of the MEQ a sum score is formed.

Data analysis. Data analyses were performed using R Studio [38]. $N = 177$ participants did not finish the questionnaire and were consequently excluded from further analyses. To ensure data quality [39], two instructed response items were included into the dataset (e.g. "If you are attentive, please answer ´very much´."). $N = 483$ participants answered one of the instructed items incorrectly and were thereby excluded from further analyses. Exceeding data cleaning consisted of the examination of three response anomalies. First, careless responders, defined by either an excessively fast response time (measured in absolute and relative terms) or contradictory responses to the items by always selecting the same answer category were excluded from the data set ($N = 79$). Second, participants with missing data within the central measure (MEQ) were removed ($N = 1$). Lastly, a multivariate outlier analysis was performed resulting in the exclusion of $N = 28$ participants and thereby in a final dataset of $N = 510$ (S2 File). A comparison of the included and excluded participants showed no difference between the groups regarding age (t (1255) = -.30, $p = .77$). However, concerning the gender

difference between the groups, it was shown that the sample of excluded participants consisted of more men than expected (Fisher's Exact Test: $p < .001$). In addition to descriptive and preparatory analyses, an Exploratory Factor Analysis (EFA) (using the lavaan package [40]) was performed to examine the given factorial structure of the MEQ. Concerning the evaluation of difficulty (good values between 0.2 and 0.8) and discrimination (acceptable from 0.3), the cutt-offs of Bortz and Döring [41] were used. Within the EFA the decision rules were based on Osborne, Costello [42] for communalities (good values < .4) and Tabachnick and Fidell [43] regarding possible crossloadings. The resulting factor structure was also examined using a descriptive analysis.

Results

Descriptive and preparatory analyses. The descriptive values of the MEQ items are depicted in Table 1. The results of the descriptive analyses show good values for item difficulty (between 0.2 and 0.8) and discrimination (acceptable from 0.3) in almost all cases [41]. Only item 3 ("I accept my emotions as they are.") did not show satisfactory values (discrimination = .17) and was excluded from further analyses as follows. The normal distribution assumption of the MEQ items could not be confirmed, which is why a robust estimator (minimum residual solution (minres)) is used for the following factor analysis.

Exploratory factor analysis. Initially, the number of factors was examined by the empirical Kaiser Criterion, which suggested three factors, as well as a scree plot, which suggested one or

Table 1. Descriptive values of the MEQ items.

Item No.	Mean	SD	Difficulty	Discrimination	Skewness	Kurtosis
1	5.34	1.34	.62	.64	-.58	2.66
2	4.24	1.48	.46	.43	-.08	2.29
3	4.82	1.29	.55	.17	-.35	2.48
4	3.74	1.37	.39	.55	.13	2.44
5	5.24	1.46	.61	.74	-.67	2.71
6	4.96	1.49	.57	.76	-.61	2.70
7	5.25	1.47	.61	.76	-.79	3.02
8	4.50	1.34	.50	.67	-.27	2.65
9	3.57	1.75	.37	.72	.32	2.13
10	3.84	1.61	.41	.65	.07	2.21
11	4.19	1.70	.46	.72	-.08	2.08
12	3.85	1.63	.41	.72	.06	2.08
13	5.08	1.32	.58	.71	-.56	2.92
14	4.43	1.32	.49	.67	-.23	2.63
15	4.72	1.47	.53	.77	-.43	2.68
16	4.22	1.27	.46	.58	.03	2.66
17	4.75	1.36	.54	.68	-.53	2.84
18	4.48	1.49	.50	.80	-.35	2.61
19	4.57	1.34	.51	.77	-.27	2.40
20	4.37	1.55	.48	.80	-.16	2.52
21	3.56	1.52	.37	.72	-.18	2.29
22	4.21	1.63	.46	.80	.29	2.37
23	3.73	1.64	.39	.74	-.17	2.15

Mean = arithmetic mean. *SD* = standard deviation.

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Table 2. Final 16 items of the MEQ and their individual factor loadings.

		Factor		
Item No.	**Item**	**1**	**2**	**3**
		Self		
01	I am interested in my feelings.	.54		
05	I am interested in understanding my feelings.	.79		
06	I try to understand the different reasons for my feelings.	.90		
07	I think it is helpful to understand the causes of my feelings.	.93		
08	With some distance, I can understand my feelings in a new way.	.48		
			Communicating	
09	I think it is exciting to talk with others about my feelings.		.75	
10	I can explain my different feelings to others.		.79	
11	I think it is useful to talk about my feelings.		.77	
12	I can talk to others about how my feelings change.		.96	
				Other
13	I am interested in the feelings of others.			.69
14	I can perceive conflicting feelings in others.			.69
15	I think it is enriching to recognize feelings in others.			.71
17	I try to see situations through the other person's eyes.			.83
18	I find it helpful to think about the reasons for others' feelings.			.91
19	Through time, I can better understand the feelings of others.			.81
20	I think it is exciting to think about where others' feelings come from.			.71

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three factors. From a theoretical perspective, subdimensions can be considered valuable, which is why we decided to use three factors. Through the subsequent examination of a 3-factor structure with an oblimin rotation, a total of four further items had to be excluded. Items 2, 4, and 16 had to be excluded due to their insufficient communalities ($< .4$) [42] (S2 Table). Item 22 on the other hand showed too high cross loadings [43] and also had to be removed from further analyses. Thereupon, another factor analysis with oblimin rotation was performed, in which items 21 and 23 showed too high side loadings [43] and were accordingly excluded from further analyses. The final model contains 16 items and three correlating factors with an eigenvalue of > 1 (factor 1: 3.13; factor 2: 3.01; factor 3: 4.34) which explain 65% of the variance. The individual, standardized factor loadings can be obtained from Table 2. Correlations between the three factors show strong values of $.63 \leq r \leq .74$.

Skewness of the MEQ overall scale and its subscales was between -.07 and .01, the kurtosis of the MEQ overall scale and its subscales was between 2.20 and 3.04. The mean value and standard deviations were as follows: overall scale: 73.14 (SD = 17.58), factor 1: 25.29 (SD = 5.97), factor 2: 15.45 (SD = 5.92), factor 3: 32.40 (SD = 8.09). There were no indications of floor- or ceiling effects.

The overall scale (mentalizing emotions) consists of 16 items within three factors (self, communicating, and other):

Factor 1 (self) consists of five items: The factor describes mentalizing emotions in the dimension self with the components identifying and processing. Identifying and processing emotions considers hereby the aspects of interest, acceptance, multi-perspective, and development-perspective.

Factor 2 (communicating) contains four items: The factor describes mentalizing emotions in the dimension self with the component communicating. Communicating emotions towards others considers hereby the aspects of interest, acceptance, multi-perspective, and development-perspective.

Factor 3 (other) consists of seven items: The factor describes mentalizing emotions in the pole others with the components identifying and processing. Identifying and processing emotions of others consider hereby the aspects of interest, acceptance, multi-perspectives, and development-perspective.

Study 2

Methods and materials

Participants. The study was approved by the ethics committee of the Faculty of Behavioral and Cultural Studies at Heidelberg University (AZ Tau 2020 1/1-A1). Analogously to the first study, the sample of the second study was recruited via the panel provider Respondi (April 2023) and conducted via SoSciSurvey [37]. Participants were informed about the study purpose and procedure and provided online written informed consent. The sample size after data cleaning was $N = 509$ (53.3% female, 46.2% male, 0.6% diverse), with age ranging from 18 to 65 years (mean age = 44.0; $SD = 13.2$). Most of the participants did not suffer from mental disorder during the last year (74.1%). 78 of the 132 participants (59.1%) with a mental disorder within the last year went into treatment, whereby 43.2% were in outpatient treatment.

69.1% of the participants were employees, 7.7% were self-employed, 12.8% were job-seeking, 8.5% were students, and 2.0% were in training. Furthermore, with reference to the highest educational attainment 16.3% had a middle school diploma, 15.0% had a high school diploma or similar, 28.7% completed apprenticeship, 38.6% had a university degree, 1.2% had a PhD, and 0.4% were currently going to school.

No significant difference was found considering age, gender, and educational status between study 1 and 2 samples using a two-sample t-test.

Measures. In Study 2, the MEQ was presented in its 16-item final form obtained from study 1. To validate the MEQ the following questionnaires were employed:

Reflecting Functioning Questionnaire (RFQ). The RFQ-8 [44] is an 8-item self-report measure of mentalizing. In order of recent recommendations [19, 45], the mean score of a psychometrically optimized six-item version of the scale (RFQ-6) [19] was used. The shortened version captures the level of uncertainty about mental states (i.e., hypomentalizing). The items are rated on a 7-point scale ranging from *strongly disagree* (1) to *strongly agree* (7). The questionnaire's Cronbach's alpha in the current study was .81.

Certainty about mental states Questionnaire (CAMSQ). The CAMSQ [21] is a 20-item self-report measure of mentalizing capturing the certainty about mental states. The questionnaire consists of two scales: Self and Other. The items are rated on a 7-point scale ranging from *never* (1) to *always* (7). The subscales' Cronbach's alpha in the current study were .92-.93.

Mentalizing questionnaire (MZQ). The MZQ [20] is a 15-item self-report measure for mentalizing. It is operationalized by four aspects associated with mentalizing: emotional awareness, regulation of affect, psychic equivalence mode, and refusing self-reflection. The items are rated on a 5-point scale ranging from *no agreement at all* (1) to *total agreement* (5), whereas high scores indicate less mentalizing. The subscales' Cronbach's alpha in the current study were .65-.76 and of the overall scale .86.

Attributional Complexity Scale (ACS). The ACS [31] is a self-report measure that assess attributional complexity. In this study a short form of the ACS [46] with seven items was chosen. The items are rated on a 7-point scale ranging from *not true at all* (1) to *accurately true* (7). The questionnaire's Cronbach's alpha in the current study was .88.

Epistemic Trust, Mistrust and Credulity Questionnaire (ETMCQ). The ETMCQ [30] is a self-report measure for three scales: Epistemic Trust, Mistrust, and Credulity. In this study the German Version of the ETMCQ [47] with 15 items was used. The items are rated on a

7-point scale ranging from *strongly disagree* (1) to *strongly agree* (7). The subscales' Cronbach's alpha in the current study were .69-.78.

Brief-Mentalized Affectivity Scale (B-MAS). The Brief-MAS [13] is a short form of the original 60-item self-report measure [48] to assess emotion regulation based on the Theory of Mentalized Affectivity [10, 11]. The three-component structure of the MAS could not be replicated [49, 50], whereas the three-component structure of the B-MAS could be replicated [50, 51]. The B-MAS consists of three subscales (identifying, processing, expressing), whereas the 12 items are rated on a 7-point scale ranging from *strong rejection* (1) to *strong agreement* (7). The subscales' Cronbach's alpha in the current study were .20-.30. These scores are unacceptably low, which is why the B-MAS was only reported with reservation in the correlation analyses.

Empathy Quotient (EQ). The EQ [35] is a 40-item self-report measure of empathy with three subscales: cognitive empathy, emotion reactivity, and social skills. Items are rated on a 4-point scale ranging from *strongly disagree* (1) to *strongly agree* (4). The subscales' Cronbach's alpha in the current study were .67-.88 and of the overall scale .87.

Emotion Regulation Questionnaire (ERQ). The ERQ [52] is a 10-item self-report measure for emotion regulation. It assesses emotion regulation with the two scales reappraisal and suppression. The items are rated on a 7-point scale ranging from *not true at all* (1) to *perfectly true* (7). In this study the German Version of the ERQ [53] was used. The subscales' Cronbach's alpha in the current study were .78-.88.

Emotion Belief Questionnaire (EBQ). The EBQ [32] is a 16-item self-report measure for beliefs about emotions consisting of three subscales: general controllability, usefulness of positive, and negative emotions. The items are rated on a 7-point scale ranging from *does not apply at all* (1) to *completely true* (7). In this study the German Version of the EBQ [54] was used. The subscales' Cronbach's alpha in the current study was .80-.88 and of the overall scale .89.

Geneva Emotion Knowledge Test–Blends Brief Form (GEMOK-Blends). The brief form of the GEMOK-Blends [33] is a 10-item task-based measure of emotion recognition. The tasks are based on text descriptions of scenarios involving two emotional experiences of a target person. Per task there are five pairs of terms as response options, whereas the best description of the targets mental states needs to be chosen. The task's Cronbach's alpha in the current study was .48. This score is unacceptably low, therefore the GEMOK-Blends was removed from the correlation analyses due to poor psychometric performance.

Level of Personality Functioning Scale–Brief Form 2.0 (LPFS-BF). The LPFS-BF [55, 56] is a 12-item self-report measure of personality functioning. Impairments in personality functioning are measured with the two scales self-functioning and interpersonal functioning. The items are rated on a 4-point scale ranging from *completely untrue* (1) to *completely true* (4), whereas high scores indicate dysfunction. The subscales' Cronbach's alpha in the current study was .77-.88 and of the overall scale .89.

Symptom-Checklist K9 (SCL-K-9). The SCL-K9 [27] is a nine-item self-report measure of symptom distress experienced in the past week. It is a short form of the SCL [57, 58]. Items are answered on a 5-point scale ranging from *not at all* (0) to *extremely* (4). The questionnaire's Cronbach's alpha in the current study was .90.

Short Alexithymia Scale (SAS-3). The SAS-3 [26] is a three-item self-report measure for alexithymia. It is a short form of the Toronto Alexithymia Scale [59]. The items are rated on a 5-point scale ranging from *not true at all* (1) to *always true* (5). The questionnaire's Cronbach's alpha in the current study was .66.

Berlin Test for the Assessment of Fluid and Crystallized Intelligence—Short Form Crystallized Intelligence (BEFKI GC-K). The BEFKI GC-K [29] is a task-based measure for assessing declarative knowledge with 12 questions and four response options per question.

The task is composed of questions from various areas as natural sciences, humanities, and social sciences. The items are in accordance with the definition of crystalline intelligence by Cattell and Carol [60]. The task's Cronbach's alpha in the current study was .60.

Data analysis. Data analyses were performed using R Studio [38]. Three instructed response items were included in the second study to ensure data quality [39] (e.g. "If you are attentive, please answer ´very much´."). $n = 216$ participants answered the instructed item incorrectly and were thereby excluded from the questionnaire survey. Moreover, a falling below a time limit (900 seconds) was already specified as an exclusion criterion in the questionnaire survey. Data cleaning of $N = 573$ participants, who have successfully completed the questionnaire survey, consisted of identifying and excluding careless responders who were characterized by an unrealistically fast response time [61]. For this purpose, the relative speed index (RSI), a variable conducted by SoSciSurvey [37], was used (excluding participants with an RSI ≥ 2) [62] ($n = 42$) as well as the total processing time (excluding participants with less than half the average processing time) ($n = 16$). Furthermore, a cut-off time for the minimum speed of the MEQ response [63] was used as an exclusion criterion (excluding participants answering the MEQ within less than 30 seconds) ($n = 6$). After data cleansing, the survey sample consisted of $N = 509$ participants (S3 File). The examination of group differences between included and excluded participants revealed no significant results with regards to age (t (911) = -1.14, p = .25) and gender (Fisher's Exact Test: $p = .26$).

Confirmatory Factor Analysis was performed by the R package lavaan [40]. To assess the model fit Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR) were used. The cut-offs for these indices were dynamically calculated [64].

To assess scale reliability, we used Cronbach's alpha: $0.6 < \alpha < 0.7$ indicates an acceptable level of reliability, an $\alpha \geq 0.8$ indicates an excellent level, whereas values higher than 0.95 indicates a possible redundancy [65].

To assess the validity and correlates, we firstly used Pearson correlation coefficient (r): according to Cohen [66] $r = .10$ is considered as small, $r = .30$ as medium and $r = .50$ as large in magnitude. Validity was assessed using the constructs of mentalization, empathy, epistemic trust, emotion regulation, emotion recognition, perceived controllability, and usefulness of emotions and mentalized affectivity, which are closely related to mentalizing emotions. Mentalization was assessed with the RFQ-6, CAMSQ, MZQ, and ACS. Epistemic trust was assessed with the ETMCQ. Focusing on emotions, mentalized affectivity was assessed with the B-MAS, empathy with the EQ, emotion regulation with the ERQ, beliefs about emotions with the EBQ, and emotion recognition with the GEMOK-Blends. As psychopathological correlates personality functioning (LPFS-BF), general psychological distress (SCL-K-9), and symptoms of alexithymia (SAS-3) were used. To test the incremental validity of the MEQ, a Structural Equation Model was performed. Thereby, CAMSQ, MZQ, RFQ-6, and MEQ were used as exogenous and ERQ and EQ as endogenous variables. To evaluate the model fit we used the following cut-offs for an acceptable fit: Comparative Fit Index (CFI) $\geq .9$; Root Mean Square Error of Approximation (RMSEA) $\leq .08$; Standardized Root Mean Square Residuals (SRMR) $\leq .08$ [67]. Furthermore, crystalline intelligence (BEFKI GC-K) was assessed. For the calculation of the correlation with the BEFKI GC-K, a subsample ($n = 420$) was formed by setting the time of completion of the BEFKI GC-K to a maximum of 5 minutes (300 seconds).

To analyze whether MEQ values differ between a healthy sample (persons with non-pre-existing mental disorders in the last year) and people with mental disorders in the last year an unpaired Welch's t-test was calculated. Furthermore, to investigate whether gender (female and male) plays a role in relation to the MEQ and whether there are gender differences in the values of the MEQ an unpaired Welch's t-test was calculated. Due to the small number of

participants with the indication diverse (n = 3), diverse could not be considered in the analysis. To test the one-sided effect of age on the MEQ a linear regression was calculated.

Results

Confirmatory Factor Analysis. The 3-factorial structure postulated by the exploratory factor analysis in study 1 was supported in the Confirmatory Factor Analysis. The model fit indices showed the following results: CFI = .959, RMSEA = .078, SRMR = .04. Calculation of the dynamic fit indices showed that the cut-offs for a good model fit were SRMR $\leq$ .04, RSMEA $\leq$.074, and CFI $\geq$ .966, and the values for an acceptable fit were SRMR $\leq$.046, RSMEA $\leq$.102, and CFI $\geq$ 944. Accordingly, the SRMR corresponds to a good model fit and the RMSEA and CFI to an acceptable model fit. Consequently, the model can be accepted. The final model of the MEQ confirmed by the CFA, including the standardized factor and item loadings, is shown in Fig 1.

Empirical distributions, reliability, and association with age, gender, and mental disorder. Skewness of the MEQ overall scale and its subscales was between -.78 and .06 and the kurtosis of the MEQ overall scale and its subscales was between 2.31 and 3.12. The mean value and standard deviations were as follows: overall scale: 74.8 (SD = 19.15), factor 1: 25.89 (SD = 6.75), factor 2: 15.98 (SD = 6.11), factor 3: 32.94 (SD = 9.04). There were no indications of floor- or ceiling effects.

Internal consistency measured with Cronbach's alpha reliability coefficient showed excellent values for factor 1 (.94), factor 2 (.92) and factor 3 (.94) as well as for the overall scale (.95).

Unpaired Welch's t-test indicated a difference between gender on the MEQ, t (468.6) = 3.75, $p < .001$. Female participants (M = 77.83, SD = 17.71) showed a significant higher mean of the MEQ total score than male participants (M = 71.44, SD = 20.26).

A simple linear regression with MEQ as the dependent variable and age as the explanatory variable was significant, β = -.40, t (504) = -6.51, p < .001, F (1, 506) = 42.43, $p < .001$. 7.74% of the variance from MEQ can be explained by the variable age. With a younger age, the MEQ total score seems to be higher.

Unpaired Welch's t-test indicated no difference on MEQ (t (242.72) = 0.97, p = .33) between participants with pre-existing mental disorder in the last year (M = 76.15, SD = 18.24)

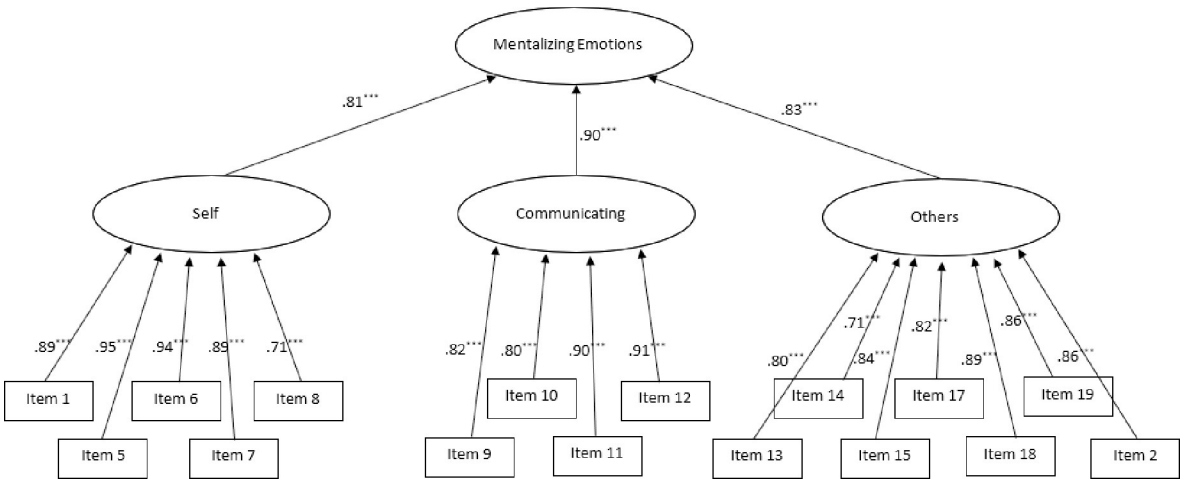

Fig 1.

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Table 3. Means, standard deviations, and correlations of the MEQ and mentalization as well as epistemic trust questionnaires.

	Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
(1)	MEQ overall scale	74.80	19.15															
(2)	MEQ self	32.94	9.04	.88**														
(3)	MEQ communicating	15.98	6.11	.85**	.60**													
(4)	MEQ other	25.89	6.75	.89**	.63**	.60**												
(5)	RFQ	21.97	7.10	-.04	-.03	-.05	-.02											
(6)	CAMSQ self	50.54	10.32	.49**	.48**	.42**	.40**	-.38**										
(7)	CAMSQ other	45.14	9.71	.59**	.45**	.45**	.61**	-.14**	.58**									
(8)	MZQ total score	40.60	9.55	-.16**	-.15*	-.21**	-.09*	.64**	-.10*	-.35**								
(9)	MZQ refusing self-reflection	10.29	3.19	-.35**	-.33**	-.38**	-.24**	.38**	-.11*	-.22**	.77**							
(10)	MZQ emotional awareness	10.35	3.20	-.19**	-.17**	-.22**	-.12**	.57**	-.15**	-.42**	.82**	.53**						
(11)	MZQ psychic equivalence	11.97	3.25	.08	.10*	.01	.10*	.52**	.01	-.21**	.79**	.40**	.51**					
(12)	MZQ regulation of affect	7.98	2.40	-.05	-.04	-.07	-.02	.59**	-.08	-.25**	.79**	.49**	.54**	.55**				
(13)	ACS	33.33	8.57	.69**	.56**	.51**	.69**	.10*	.51**	.32**	.04	-.15**	.01	.21**	.09*			
(14)	ETMCQ trust	24.56	5.14	.56**	.49**	.54**	.46**	.00	.35**	.32**	-.12**	-.28**	-.09	.08	-.10*	.44**		
(15)	ETMCQ mistrust	19.76	5.10	-.11*	-.09	-.15**	-.07	.42**	-.04	-.12**	.61**	.51**	.45**	.45**	.53**	.04	-.25**	
(16)	ETMCQ credulity	15.50	5.40	.04	.08	.05	-.02	.50**	-.07	-.12**	.51**	.33**	.43**	.43**	.42**	.12**	.10*	.48**

M and *SD* are used to represent mean and standard deviation, respectively.

* indicates $p < .05$.

** indicates $p < .01$.

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versus participants with non-pre-existing mental disorder in the last year ($M = 74.33$, $SD = 19.46$).

Validity. MEQ subscales and overall scores showed significant correlations with most of the measures used to assess construct validity (Tables 3 and 4). Most of the significant correlations between MEQ overall scale mentalizing emotions and the other constructs were positive, suggesting associations with the analyzed constructs ($.18 \leq r \leq .69$). In the following, only correlations with correlation coefficients greater than .30 or less than -.30 are specified, as these show a moderate effect and therefore are assumed to be values of consideration according to Cohen's [66] cut-offs. As expected, significant negative correlations were shown between MEQ overall scale plus its subscales and MZQ and its subscales using self-reflection and emotional awareness, ETMCQ mistrust, ERQ suppression, EBQ and its subscales ($-.37 \leq r \leq -.15$). No significant correlations were found between MEQ overall scale plus its subscales and RFQ-6, MZQ regulation of affect, and ETMCQ credulity.

In Table 3 correlations between MEQ and mentalizing constructs (RFQ-6, CAMSQ, MZQ, ACS) as well as epistemic trust (ETMCQ) are shown. MEQ overall scale and its three subscales were associated the strongest with CAMSQ self and other, ACS, and ETMCQ subscale trust ($.40 \leq r \leq .69$), whereas correlations with MZQ subscale refusing self-reflection was less distinct. Noteworthy is that MEQ subscale self correlated strongly with mentalizing the self measured by the CAMSQ self ($r = .48$), whereas MEQ subscale other correlated strongly with mentalizing other, measured by the CAMSQ other ($r = .61$).

In Table 4 correlations between MEQ and emotion constructs (EQ, ERQ, EBQ) are shown, demonstrating the expected correlation directions. MEQ overall scale showed the strongest correlates to empathy measured by EQ total score, EQ cognitive empathy, and EQ emotion reactivity ($.44 \leq r \leq .49$), whereas correlations to emotion regulation were less distinct. MEQ subscale self was the strongest associated to empathy (EQ total score, EQ cognitive empathy, EQ emotion reactivity; $.31 \leq r \leq .36$) and emotion regulation (ERQ reappraisal, $r = .31$; ERQ

Table 4. Means, standard deviations, and correlations of the MEQ and emotion related questionnaires.

	Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13
1	MEQ overall scale	74.80	19.15													
2	MEQ self	32.94	9.04	.88**												
3	MEQ communicating	15.98	6.11	.85**	.70**											
4	MEQ other	25.89	6.75	.89**	.63**	.60**										
5	EQ total score	38.33	11.12	.44**	.31**	.28**	.50**									
6	EQ cognitive empathy	9.86	4.48	.48**	.33**	.37**	.52**	.72**								
7	EQ social skills	5.65	2.62	.18**	.14**	.15**	.19**	.69**	.40**							
8	EQ emotion reactivity	11.02	4.12	.46**	.36**	.31**	.51**	.86**	.49**	.43**						
9	ERQ reappraisal	26.67	6.91	.32**	.31**	.25**	.26**	.22**	.30**	.19**	.18**					
10	ERQ suppression	15.74	4.94	-.37**	-.35**	-.46**	-.22**	-.27**	-.18**	-.29**	-.27**	.04				
11	EBQ total score	42.45	14.99	-.19**	-.15**	-.12**	-.22**	-.40**	-.15**	-.38**	-.32**	-.07	.34**			
12	EBQ controllability	22.59	9.14	-.15**	-.11**	-.10*	-.17*	-.38**	-.15**	-.38**	-.30**	-.12**	.31**	.92**		
13	EBQ negative	13.26	5.51	-.15**	-.09*	-.09*	-.18*	-.18**	-.09	-.15**	-.12**	.06	.20**	.74**	.50**	
14	EBQ positive	6.60	3.66	-.20**	-.20**	-.12**	-.20**	-.40**	-.14**	-.37**	-.35**	-.06	.34**	.68**	.54**	.28**

M and *SD* are used to represent mean and standard deviation, respectively.

* indicates $p < .05$.

** indicates $p < .01$.

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suppression, r = -.35). MEQ subscale communicating correlated the strongest with ERQ suppression (r = -.46) and correlated less pronounced with EQ subscale cognitive empathy and EQ subscale emotion reactivity. MEQ subscale other correlated the strongest with empathy (EQ total score, EQ cognitive empathy, EQ emotion reactivity;.50 $\leq r \leq$ .52). MEQ overall scale and its subscales showed a small to medium correlation to EBQ total score and its subscales.

Due to the inacceptable low internal consistency and therefore poor psychometric performance of the B-MAS, the correlations between the B-MAS and the MEQ should only be interpreted with caution. The MEQ overall score shows medium to large correlations with the B-MAS subscales identifying (r = .49), processing (r = .36), and expressing (r = .34). The MEQ subscale self correlated moderately to largely with the B-MAS subscale identifying (r = .47), processing r = .33), and expressing (r = .30). Between the MEQ subscale communicating and the B-MAS subscales the following small to medium and medium to large correlation were shown: identifying (r = .40), processing (r = .28), and expressing a (r = .25). The MEQ subscale other showed medium to large associations to the B-MAS subscales identifying (r = .41), processing (r = .31), and expressing (r = .32). When analyzing the correlation of the MEQ and the B-MAS, it is noticeable that the correlations with the B-MAS subscale identifying are consistently the strongest.

To test incremental validity, a structural equation model was created in which a regression of the previous mentalizing questionnaires (CAMSQ, MZQ, RFQ-6) and the MEQ on emotion regulation (ERQ) and empathy (EQ) was presented. This method was chosen to reduce the type 1 errors that often arise [68]. However, the structural equation model conducted in this study did not achieve an acceptable fit. This might be caused by the relatively low degrees of freedom. Nevertheless, the model was not possible to interpret. Consequently, it was decided to use multiple regression to calculate incremental validity. To limit the risk of type 1 error, it was decided to consider only one dependent variable. Thereby, empathy was included as the dependent variable. To calculate incremental validity, the multiple regression was run once

Table 5. Means, standard deviations, and correlations of the MEQ and psychopathological and intelligence correlates.

	Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9
(1)	MEQ_overall scale	74.80	19.15									
(2)	MEQ self	32.94	9.04	.88**								
(3)	MEQ communicating	15.98	6.11	.85**	.70**							
(4)	MEQ other	25.89	6.75	.89**	.63**	.60**						
(5)	LPFS-BF total score	23.22	7.30	-.10*	-.08	-.12**	-.06					
(6)	LPFS-BF self	11.85	4.50	-.05	-.06	-.09*	.01	.94**				
(7)	LPFS-BF interpersonal	11.37	3.43	-.14**	-.10*	-.13**	-.15**	.90**	.69**			
(8)	SCL-K-9	18.43	7.78	.08	.06	.01	.12**	.68**	.53**	.69**		
(9)	SAS-3	8.19	2.68	-.46**	-.38**	-.52**	-.34**	.51**	.48**	.46**	.38**	
(10)	BEFKI GC-K	8.95	2.11	-.11*	-.11*	-.11*	-.09	-.09	-.06	-.10*	-.22**	.29**

M and *SD* are used to represent mean and standard deviation, respectively.

* indicates $p < .05$.

** indicates $p < .01$.

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with and once without the predictor MEQ. The increase in the explained variance (R^2) could thus be attributed to the addition of the MEQ. The increase from the model without MEQ (R^2 = .30, $F(3, 505) = 72.99$, $p < .001$)) to the model with MEQ (R^2 = .35, $F(4, 504) = 67.88$, $p <$ .001) was R^2 = .05, which equals 5% of the total variance. As the significance of the increase in variance is not calculated automatically in our procedure, it was determined in a further regression analysis. For this purpose, the residuals of the model without the MEQ were used as the dependent variable and the MEQ score as the predictor. The result shows a significant model (R^2 = .04, $F(1, 507) = 21.46$, $p < .001$) and association ($b = .10$, $p < .001$) Thus, incremental validity of the MEQ can be assumed.

Associations to psychopathology and crystalline intelligence. As shown in Table 5, there were only isolated significant correlations between the MEQ and its subscales and psychopathology and crystalline intelligence. MEQ overall scale and its subscales correlated strongest with alexithymia (SAS-3, $-.52 \leq r \leq -.34$), but also with personality functioning (LPFS-BF total score, LPFS-BF interpersonal), symptom distress (SCL-K-9), and crystalline intelligence (BEFKI GC-K). For the correlation calculations of the BEFKI GC-K and MEQ a subsample was formed (n = 420), since the time criterion (< 300 seconds) of the BEFKI GC-K was considered.

General discussion

The aim of this research was to develop and evaluate a self-report measure to assess mentalizing of emotions with a new questionnaire: the Mentalizing Emotions Questionnaire (MEQ; S1 File). In both validation studies, the MEQ showed acceptable to good psychometric properties, with a clear and theoretically relevant factor structure, a very high internal consistency and good construct validity. Mentalizing emotions incorporates components as identifying, processing, and communicating of emotions [10, 11]. As a reflection of this, the EFA in study 1 indicated a three-factor structure consisting of 16-items with an overarching factor that was confirmed by the Confirmatory Factor Analysis in study 2. The overall scale mentalizing emotions summarizes the three factors: self, communicating, and others. Mentalizing emotions of the self and others includes perceiving, recognizing, and naming emotions (identifying) as well as a deeper process and understanding including causes and mental or contextual reasons behind emotions (processing). Communicating mentalized emotions of the self refers to

sharing and discussing own emotions with others (communicating). All three subscales include mentalization aspects such as interest, acceptance, multi-perspective-taking, and development-perspectives [16].

The MEQ was constructed similarly to the B-MAS with the components identifying, processing, and communicating [10, 11, 13, 48]. The main difference between the MEQ and the B-MAS is that the MEQ approaches the concept of emotion regulation in the sense that understanding emotions leads to emotion regulation, whereas the B-MAS views mentalizing emotions as a part of the emotion regulation process. The MEQ focuses on mentalizing emotions as an effective form of emotion regulation involving self and others, whereas the B-MAS refers to the regulation of emotions including aspects of mentalizing emotions of the self while excluding others. In this sense, the scale identifying of the B-MAS, which refers to mentalizing emotions, is represented in the components identifying and processing in the MEQ. With bearing the poor psychometric performance of the B-MAS within this study in mind, it was shown that the B-MAS subscale identifying correlates most strongly with the MEQ and its subscales in comparison to the other B-MAS subscales processing and expressing. For example, aspects such as "understanding the meaning of emotions in the context of individual circumstances and exploring the source of emotions" [13] as part of identifying in the B-MAS was defined as a component of processing in the MEQ. The theoretical construction of the MEQ was based on Fonagy's mentalization theory [1, 4] and its operationalization using the RF Scale [16]. While the B-MAS displayed excellent psychometric properties during its initial validation, the deficient psychometric values discovered in this study are noteworthy and bring into question the B-MAS's utility. Thus, an assessment of the psychometric quality of the B-MAS is necessary.

The construct Mentalizing Emotions in MEQ is newly redefined, so that the previous questionnaires do not directly measure convergent or discriminant validity, but the extent to which parts of the concept are related to other constructs. Associations between the MEQ and pre-existing mentalizing and epistemic trust as well as emotion related questionnaires provided evidence for the MEQ's validity. The MEQ shows small to large effects associated with the majority of the questionnaires tested and in the expected direction. The MEQ is seen as an important sub-construct of mentalization, whereas with the solely focus on emotions as well as self and others not too large correlations with the mentalization questionnaires were expected. Furthermore, the MEQ overlaps with constructs of emotion-related questionnaires, but again not too large correlations were expected, as MEQ captures more than just one facet. In terms of incremental validity, there was a 5% increase in the variance of empathy due to the inclusion of the MEQ. This increase in explained variance can be interpreted as an indication of incremental validity. Unfortunately, due to the unacceptable fit of the structural equation model, only incremental validity with respect to one variable (empathy) could be examined. Thus, a full statement about the incremental validity is not yet possible. This should be implemented in future research. The MEQ total scale mentalizing emotions and its subscales self, communicating and other showed medium to large associations to certainty about mental states (CAMSQ self and other), attributional complexity (ACS) and epistemic trust (ETMCQ trust) as well as to empathy (EQ total scale, EQ cognitive empathy, EQ emotion reactivity). Small to medium negative associations were found between the MEQ scales and the MZQ scale refusing self-reflection, which captures avoiding thinking about mental states [20]. Furthermore, there were small to medium associations between the MEQ scales and emotion regulation, whereas positive associations were shown towards emotion reappraisal and negative associations to emotion suppression. Likewise, a small negative association was found between the MEQ scales and beliefs about emotions (EBQ total scale, EBQ positive emotions), implicating a discrepancy between mentalizing emotions and the belief about usefulness of positive

emotions. However, it was noticeable that there was no connection between the MEQ and the RFQ-6 as well as the MZQ subscales regulation of affect and only small to medium associations between the MEQ total score and the MZQ subscale psychic equivalence mode as well as subscale emotional awareness. These results could be explained by the constructs used in the RFQ-6 and MZQ that were designed to detect hyper- or hypomentalization in contrast to the MEQ. Furthermore, the RFQ-6 focusses mainly on cognition [44], whereas the MEQ concentrates on emotions.

Focusing on the MEQ subscales: expected medium to large associations were found between mentalizing emotions of the self and certainty about mental states of the self (CAMSQ self) as well as mentalizing emotions of others and certainty about mental states of others (CASMQ other). Additionally, mentalizing emotions of others showed large associations with empathy (EQ total score, EG cognitive empathy, EQ emotion reactivity) and therefore, giving some evidence for the construct independence of the respective subscales. Furthermore, an expected medium negative association between communicating emotions of the self and emotion suppression (ERQ) was found.

There were none to small negative associations between the MEQ and its subscales with personality functioning (LPFS) and none to small positive associations with symptom severity (SCL-K-9). In addition, there were no differences in the MEQ and its subscales between participants suffering of a mental disorder in the last year and participants with no pre-existing mental disorder in the last year. Both results may be mainly influenced by the convenience sample with very low psychopathology in general. As previously deficits in mentalizing have been linked to mental disorders [69], whereas improvements in patients' mentalizing have been linked to general improvement in psychological functioning [70–73]. However, the MEQ differentiated between participants with alexithymia (SAS-3), which assesses emotional blindness. Between alexithymia and the MEQ and its subscales, particularly communicating, medium to high associations were found.

There was only a small negative correlation with crystalline intelligence, implying an independence of the two constructs. It should also be noted that only crystalline intelligence is measured, which is related to general knowledge and the corresponding level of education.

There was a gender difference in MEQ between women and men, with women appearing to have a higher subjective ability to mentalize emotions. In addition, the age of the participants had an influence on the MEQ implicating with younger age the ability to mentalize emotions to be higher.

In summary, the MEQ is a questionnaire that is closely operationalized to the mentalization concept of the RF Scale with a focus on identifying, processing and communicating emotional states differentiated into self and others. Further, the MEQ is closely related to epistemic trust and empathy as well as aspects of emotion regulation. Rather low associations were found with psychopathological characteristics. All in all, the MEQ is the first questionnaire to explicitly measure mentalizing emotions, divided into mentalizing one's own emotions, communicating about emotions of the self and mentalizing about emotions of others. In the first study, items related to talking to others about their emotions were also included, but these items were removed from the model due to insufficient loading.

Limitations and perspective

Recruiting the samples via a panel provider is economical, but bears the risk of limited generalizability to the study results. It should be considered that the factor loadings between the first and second sample differ unexpectedly in some cases (e.g. item 1: b = .54 in sample 1; b = .89 in sample 2). However, the calculations regarding sample differences did not yield any

significant results, so that a conclusion of the different factor loadings on the sample compositions is not possible. Nevertheless, the factor structure should be checked again in an external sample to make sure that the samples really do not have any effect on the factor structure. Furthermore, it can be discussed, if the internal consistency of the overall scale ($\alpha = .95$) is a reference for redundancy based on Eisinga, Grotenhuis [65] implicating scores above .95 as potential redundant. This should be verified and if necessary a brief form of the MEQ can be created. Regarding incremental validity, the results should be interpreted against the background of a possible type 1 error bias. Further, it should be considered that the structural equation model did not reach an acceptable fit. In future studies, the incremental validity should be tested again, maybe regarding other desirable measures, especially a validation with the RF Scale [16]. Moreover, the convergent validity using the RF Scale should be tested: the MEQ itself is a self-report measure and therefore captures a subjective mentalizing ability, whereas self-report of mentalizing are more consistent with measuring a specific mentalizing self-concept rather than an actual ability [21]. A limitation is that the MEQ was validated with self-reports only. Additionally, self-report methods in general are unlikely to capture actual differences in ability as shown as a lack of convergent validity between self-reports and other methods [74–78]. Therefore, we recommend that all mentalizing questionnaires showing good parametric values should be tested on the RF Scale to determine their validity. Furthermore, the retest reliability of the MEQ was not tested in this research, which should be done in future studies. So far, there is only a small association of the MEQ with psychopathology, but to confirm this, the MEQ should be tested in a patient sample. It would also be interesting to use the MEQ as an assessment tool over the course of psychotherapy to examine psychotherapy processes. A significant limitation of the use of the MEQ is that it is currently only available in German. A translation into English and other languages as well as a validation of this would be desirable and conceivable for the future.

Conclusion

The MEQ is a valid and reliable questionnaire for the assessment of mentalizing emotions, divided into self, communicating, and other. The MEQ can provide a deeper understanding of how individuals mentalize their own emotions, communicate them, and how they perceive and process the emotions of others. Especially for studies of psychotherapy processes this could provide important insights into how mentalizing emotions evolve.

Supporting information

S1 File. Mentalizing Emotions Questionnaire (MEQ)—German version.
(DOCX)

S2 File. Data set of Study 1.
(XLSX)

S3 File. Data set of Study 2.
(XLSX)

S1 Table. 16-item MEQ divided into poles, elements and aspects.
(DOCX)

S2 Table. List of the original 23 items. bold = items of the final MEQ.
(DOCX)

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Erklärung gemäß § 8Abs. (1) c) und d) der Promotionsordnung der Fakultät

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Dem Dekanat der Fakultät für Verhaltens- und Empirische Kulturwissenschaften liegt eine unterschriebene Version dieser Erklärung vom 04.06.2024 vor.