



Attitudes of Psychotherapists Toward Outcome Measures and Routine Outcome Monitoring in Child and Youth Psychotherapy

Sebastian Ertl^{1,2} , Theresa Emser¹, Sarah Garsche¹, and David R. Kolar¹ 

¹ Department of Psychology, University of Regensburg, Germany

² medbo Clinic for Child and Adolescent Psychiatry, Psychosomatics, and Psychotherapy Amberg | Cham | Weiden, Weiden, Germany

Abstract: *Objective:* In this observational study, we investigated which therapeutic characteristics affect the attitudes of psychotherapists working with children and adolescents toward Outcome (OM) and Routine Outcome Monitoring (ROM), and how implementation is affected by previous experience and attitudes toward administering OM/ROM. *Methods:* We assessed the attitudes of licensed German psychotherapists and psychotherapists in training working with children and adolescents toward the OM/ROM in an online survey conducted between June 2023 and March 2024 ($N = 126$). *Results:* Compared with psychoanalytic-oriented therapists, therapists with an orientation in cognitive behavioral therapy (CBT) presented more positive attitudes, but we found no significant difference between orientations in CBT and psychodynamic psychotherapy. Therapists working in institutionalized outpatient settings reported more positive attitudes than those working in private practices. We found no effect of previous experience in administering OM/ROM for either implementation barriers or facilitators. However, more positive attitudes toward OM/ROM are associated with higher expectations regarding both support in therapeutic processes and support in clarification. *Conclusion:* OM/ROM systems should consider assessing concepts from different psychotherapeutic orientations. The implementation of OM/ROM could benefit from close monitoring.

Keywords: outcome monitoring, routine outcome monitoring, therapy feedback, attitudes toward outcome monitoring, implementation of outcome monitoring

Einstellung von Psychotherapeutinnen und Psychotherapeuten gegenüber Outcome Erfassung und Routine Outcome Erhebungen im Bereich der Kinder- und Jugendpsychotherapie

Zusammenfassung: *Fragestellung:* In dieser Beobachtungsstudie wurde der Einfluss von Therapeutencharakteristika auf die Einstellung gegenüber Outcome Erfassung (OM) und Routine Outcome Erhebungen (ROM) im Bereich der Kinder- und Jugendpsychotherapie untersucht. Zudem wurde der Einfluss bisheriger Erfahrungen mit OM/ROM und die Einstellung auf die Implementation von OM/ROM untersucht. *Methode:* In einer deutschlandweiten Onlinestudie (Juni 2023–März 2024; $N = 126$) wurden approbierte Psychotherapeut_innen sowie Psychotherapeut_innen in Ausbildung im Bereich der Kinder- und Jugendpsychotherapie zu ihrer Einstellung gegenüber OM/ROM befragt. *Ergebnisse:* Verhaltenstherapeutisch orientierte Psychotherapeut_innen (KVT) zeigten in Vergleich zu psychoanalytisch orientierten Psychotherapeuten_innen eine signifikant positivere Einstellung gegenüber OM/ROM; KVT und tiefenpsychologisch orientierte Psychotherapeut_innen unterschieden sich hingegen nicht in ihrer Einstellung gegenüber OM/ROM. Psychotherapeut_innen, die in institutionalisierten ambulanten Settings arbeiteten, zeigten eine positivere Einstellung im Vergleich zu niedergelassenen Praxen. Es zeigten sich keine Effekte der Erfahrung mit OM/ROM auf die Implementierung, jedoch waren positivere Einstellungen gegenüber OM/ROM mit höheren Erwartungen an die Unterstützung durch OM/ROM verbunden. *Schlussfolgerung:* OM/ROM sollte verfahrensübergreifende Konzepte berücksichtigen, wobei die Implementation eng begleitet werden sollte.

Schlüsselwörter: Ergebnisüberwachung, routinemäßige Ergebnisüberwachung, Therapie-Feedback, Einstellungen zur Ergebnisüberwachung, Umsetzung der Ergebnisüberwachung

Introduction

One promising approach to addressing the issue that many patients either do not respond to or even deteriorate during psychotherapeutic treatment (Barkham & Lambert, 2021) is the data-driven personalization of interventions through outcome monitoring (OM; Boswell et al., 2023; Deisenhofer et al., 2024). Because of the absence of standardized definitions, we define simple OM as pre-post or post-only assessments. In contrast, routine outcome monitoring (ROM) refers to more frequent assessments (e.g., symptom severity) conducted throughout the course of psychotherapy, typically without systematic comparisons to other patient data (Lutz et al., 2022a; McAleavey et al., 2024). Therapy feedback systems, as an advanced form of ROM, are based on session-to-session assessments and provide clinical support tools that suggest evidence-based interventions based on a patient's current state compared with expected recovery curves derived from data on similar patients, for example. However, therapy feedback systems are limited to capturing changes between sessions. To address this limitation, ROM approaches can be extended through ecological momentary assessment (EMA) – referred to here as EMA-ROM – which enables the identification of intraindividual dynamics of symptom maintenance occurring between sessions (Lutz et al., 2022a; Stangier et al., 2024).

Although OM/ROM has proven its effectiveness, particularly in treatments involving patients at risk of deterioration or dropout and is highly recommended (De Jong et al., 2024; Delgado et al., 2017), it is rarely used in routine care, neither in adult populations nor with children and adolescents (Jensen-Doss et al., 2018; Waldron et al., 2018). In addition, even when OM/ROM is administered, its effectiveness varies, indicating its reliance on moderating factors at the patient, organizational, system, and provider levels (Cuperfain et al., 2021; Deisenhofer et al., 2024). In a randomized controlled trial involving clinicians working with children and adolescents, Bickman and colleagues (2016) demonstrated a smaller effect of ROM on therapy outcomes when the level of implementation was low, further highlighting the importance of these moderating factors that may hinder implementation.

One important factor in implementing OM/ROM – and thus its effectiveness on treatment outcomes – is therapists' attitudes toward ROM, which seem to moderate the frequency of OM/ROM use, even when it is mandatory (Jensen-Doss et al., 2018; Rye et al., 2019). In addition, the use of ROM for decision-making throughout treatment as well as overall therapy outcomes are clearly affected by therapists' attitudes (Lutz et al., 2015, 2022b). Recent research has shown that therapeutic orientation (e.g., cognitive behavioral therapy [CBT], psychodynamic psycho-

therapy [PD]) can be considered a predictor of attitudes toward OM/ROM, with CBT-oriented therapists having a more positive attitude than other psychotherapeutic approaches (Jensen-Doss et al., 2018; Kaiser et al., 2018). Experience with administering OM/ROM also appears to promote positive attitudes toward both the application and its use in therapy planning (Jensen-Doss et al., 2018; Kaiser et al., 2018). There are inconsistent findings regarding professional experience, with evidence suggesting that more years of therapeutic activity predict lower use of OM/ROM (Jensen-Doss et al., 2018; Kaiser et al., 2018; Rye et al., 2019). Finally, the institutional setting seems to affect psychotherapists' attitudes toward OM/ROM, with more positive attitudes and greater adherence to its use in clinical settings than in private practices (Jensen-Doss et al., 2018).

However, Jensen-Doss et al. (2018) did not find differences in attitudes toward OM/ROM between therapists who primarily work with children and adolescents and those who work with adults. Similarly, most other research on attitudes toward OM/ROM relies on samples of therapists treating adults only. An exception is the study by Klein et al. (2022), which found that the type of measurement and professional experience influenced child and adolescent therapists' attitudes toward OM/ROM. A limitation of this study is that it included only therapists trained in a specific treatment approach, namely parent-child interaction therapy (PCIT; Eyberg & Funderburk, 2011). Edbrook-Childs et al. (2017) reported that attitudes toward OM/ROM among therapists working with children and adolescents affect the frequency of its use, and that therapeutic orientation and self-efficacy were also associated with OM/ROM usage. Nevertheless, evidence on which factors affect attitudes toward OM/ROM in child and adolescent psychotherapy remains limited.

Another challenge is the transferability of these findings to the German healthcare system. For example, therapeutic orientation reliably predicts attitudes toward OM/ROM. However, previous studies examined a broader range of therapeutic orientations (e.g., Kaiser et al., 2018) not typically found in the German healthcare system. In conclusion, implementation issues of OM/ROM, specifically in child and adolescent psychotherapy, are generally underinvestigated and remain particularly unclear in the German healthcare system.

Thus, the first objective of this observational study was to assess both the attitudes of psychotherapists in the field of child and youth psychotherapy toward OM/ROM and the factors that may affect the implementation of OM/ROM. As our primary outcome, we explored whether therapeutic orientation, clinical setting, and professional experience influence attitudes toward OM/ROM. Although EMA-ROM is much less widely implemented than OM/

ROM (but could become more widely adopted in the future), we also assessed attitudes toward EMA-ROM. Second, we examined implementation barriers, facilitators, and expectations of OM/ROM in relation to participants' prior experiences with its administration and their attitudes toward OM/ROM.

Methods

Data Collection

We collected the data via an online survey from June 2023 to March 2024 using the web-based electronic data capture tool REDCap (Research Electronic Data Capture; Harris et al., 2009, 2019). The Department of Psychology, Clinical Child and Adolescent Psychology and Psychotherapy, University of Regensburg, Germany, hosted the survey.

We included psychotherapists who were licensed as child and adolescent psychotherapists or as psychotherapists with additional qualifications in psychotherapy for children and adolescents according to the German healthcare system (Bundespsychotherapeuten Kammer, 2022; Gemeinsamer Bundesausschuss, 2024). Additionally, we included professionals with advanced training status for a license to practice psychotherapy with children and adolescents. When the survey was conducted, only three therapeutic orientations for child and adolescent psychotherapy, namely, psychodynamic therapy (PD), psychoanalysis (PA), and cognitive behavioral therapy (CBT), were legally admitted for reimbursement by public health insurance in Germany. Therefore, we included only professionals trained in these methods. We made no restrictions regarding institutional settings. We excluded physicians (e.g., child and adolescent psychiatrists) with a license to treat children and adolescents from the study, as their psychotherapy training substantially varies from that of other professions.

Recruitment occurred either directly via social media channels or via professional organizations that agreed to inform their members about the study. We processed the data pseudonymously. The participants who completed the study could participate in a raffle (25€ Amazon voucher) as compensation. The Institutional Review Board of the University of Regensburg, Germany (ref. no. 23-3333-104) approved the study, which was not preregistered.

Given the exploratory and nonrepresentative nature of the study, we determined a minimum sample size of $N=100$ a priori. Once no substantial responses were received following a reminder to participate and a sufficient sample size had been reached, we concluded the data collection.

Participants

In total, $N=241$ individuals opened the survey, and $n=59$ closed the survey prematurely or did not give their consent. A further $n=22$ of the remaining participants had to be excluded from the study because they did not meet the inclusion criteria. Analysis of missing data revealed that out of the $n=160$ participants with complete sociodemographic data and therapeutic characteristics, $n=34$ (22%) had no response or only a partial response to the Outcome Measurement Questionnaire (OMQ, the first instrument after therapeutic characteristics). Further analysis revealed no statistically significant associations between therapeutic characteristics and missing data on the OMQ, indicating that the analyses of complete cases (i.e., listwise deletion) were justified. Details can be found in the electronic supplementary material (ESM 1, Table E1). Subsequently, we finally included $n=126$ participants who completed the OMQ in the study. The sample characteristics are shown in Table 1.

Measures

Sociodemographic, Professional, and Practice Characteristics

We assessed age, gender, professional education, years of training, years since licensure, license status (e.g., children and adolescents; children, adolescents, and adults), psychotherapeutic orientation, clinical setting, and prior experience with administering OM/ROM. For details, see the Codebook (<https://osf.io/cg6nz/>).

Outcome Measurement Questionnaire (OMQ)

The OMQ (Willis et al., 2009) is a self-report questionnaire for measuring clinicians' attitudes toward routine outcome assessments. The instrument consists of 23 items, each answered on a 6-point Likert scale (1 = *disagree*, 6 = *strongly agree*). In the original version, Willis et al. (2009) suggested two scales in accordance with conceptual considerations (Monitoring Attitude, Openness to Feedback). Cronbach's α was satisfactory to good for the originally proposed scales (Monitoring Attitude: $\alpha=.87$, Openness to Feedback: $\alpha=.79$). Smits et al. (2015) suggested a global OMQ factor and a method factor for negatively worded items. For clinical purposes, they recommended the use of an OMQ sum score, which demonstrated good internal consistency ($\alpha=.88$). A German version of the OMQ, which we used in this study, was validated by Kaiser et al. (2018) in a sample of Austrian psychotherapists. Similar to Smits et al. (2015), confirmatory factor analysis (CFA) revealed a two-factor solution with one OMQ factor and a method factor (negatively worded items). However,

Table 1. Sample demographics and therapist characteristics

| | Psychotherapeutic orientation | | | |
|---|-------------------------------|------------------|----------------|---------------|
| | Sample (N = 126) | CBT (n = 103) | PD (n = 13) | PA (n = 7) |
| Gender | | | | |
| Female | 99 (79%) | 83 (81%) | 10 (77%) | 3 (43%) |
| Male | 25 (20%) | 18 (17%) | 3 (23%) | 4 (57%) |
| Diverse | 2 (2%) | 2 (2%) | – | – |
| Age | | | | |
| Mean (SD) | 39 (± 11) | 37 (± 9.3) | 46 (± 11) | 56 (± 11) |
| Discipline | | | | |
| Educational sciences | 17 (13%) | 15 (15%) | 2 (15%) | – |
| Psychology | 71 (56%) | 66 (64%) | 4 (31%) | – |
| Teacher | 5 (4%) | 4 (4%) | – | 1 (14%) |
| Social work | 30 (24%) | 17 (17%) | 7 (54%) | 6 (86%) |
| Other | 3 (2%) | 1 (1%) | – | – |
| License status | | | | |
| Child & youth | 72 (57%) | 53 (51%) | 9 (69%) | 7 (100%) |
| Child/youth & adults | 14 (11%) | 13 (13%) | 1 (8%) | – |
| Training child & youth | 1 (1%) | 1 (1%) | – | – |
| Training child/youth, no license | 1 (1%) | 1 (1%) | – | – |
| Training child/youth/adults, no license | 38 (30%) | 35 (34%) | 3 (23%) | – |
| Working field (setting) | | | | |
| Inpatient | 17 (13%) | 16 (16%) | 1 (8%) | – |
| Inpatient/outpatient institutional | 7 (6%) | 7 (7%) | – | – |
| Inpatient/private practice | 1 (1%) | 1 (1%) | – | – |
| Outpatient institutional | 41 (33%) | 38 (37%) | 3 (23%) | – |
| Outpatient private practice | 51 (40%) | 34 (33%) | 8 (62%) | 7 (100%) |
| Other | 9 (7%) | 7 (7%) | 1 (8%) | – |
| Administering OM/ROM | | | | |
| No use of OM/ROM | 18 (14%) | 11 (11%) | 3 (23%) | 4 (57%) |
| Pre-post evaluation | 72 (57%) | 63 (61%) | 6 (46%) | 1 (14%) |
| ROM | 17 (13%) | 17 (17%) | – | – |
| Therapy feedback | 9 (7%) | 5 (5%) | 2 (15%) | 2 (29%) |
| License years | | | | |
| Mean (SD) | 9.7 (± 7.4) | 8.4 (± 5.5) | 13 (± 11) | 19 (± 11) |
| Training years | | | | |
| Mean (SD) | 3.4 (± 1.7) | 3.4 (± 1.7) | 4.3 (± 1.5) | – |

Note. CBT = cognitive behavioral therapy; PD = psychodynamic psychotherapy; PA = psychoanalysis. Categories with no response across all factors and missing values were removed.

in the German version, item 21 had to be removed because of low factor loading. Cronbach's α for the German version of the OMQ total score was good ($\alpha = .94$). We were able to replicate the results of Kaiser et al. (2018) in a CFA for the German version of the OMQ on our sample before the main analysis. For the general OMQ factor, McDonald's $\omega = .86$ and Cronbach's $\alpha = .84$ were revealed (ESM 1, Tables E2 and E3).

Process Monitoring Questionnaire (PMQ)

Kaiser et al. (2018) developed the PMQ to evaluate attitudes toward high-intensity EMA-ROM. The instrument comprises 8 items derived from the OMQ. Like the OMQ, the Likert-scaled PMQ items range from 1 = *disagree* to 6 = *strongly agree*. The results from the investigation of the instrument revealed a one-factor structure with a Cronbach's α of .91, indicating good internal consistency. We could confirm these findings for our sample, with McDonald's $\omega = .91$ and Cronbach's $\alpha = .89$ (ESM 1, Tables E2 and E4). In this study, we calculated the mean scores for both the OMQ and the PMQ after transforming the inversely formulated items; thus, higher values indicate higher positive attitudes toward OM/ROM.

Assessment of Implementation Barriers, Facilitators, and Expectations

We addressed implementation barriers using a total of 11 items. Eight items were based on findings of implementation barriers reviewed in the literature (Batty et al., 2013; Boswell et al., 2015; Hatfield & Ogles, 2007; Kaiser et al., 2018); four items were specifically designed to assess barriers assumed to be unique to child and youth psychotherapy. We assessed facilitators for implementing OM/ROM based on conceptual considerations and the results of Boswell et al. (2015).

Finally, we assessed the expectations of child and youth psychotherapists toward OM/ROM according to the findings of Moltu et al. (2018). The mapping of items concerning implementation barriers, facilitators, and expectations related to OM/ROM, as well as their references, is documented in the Codebook annotations. To account for the previous experiences with OM/ROM, we formulated items related to implementation barriers regarding their level of experience in administering OM or ROM. If no use of OM was indicated, we assessed expected barriers (e.g., no experience with OM: "I am currently not using outcome measurements because they pose an additional burden on my patients" vs. experience with OM/ROM: "Although I use OM/ROM, I fear that they pose an additional burden on my patients."). We aligned expectations based on whether ROM had been administered. If no experiences with administering OM or using OM were reported, we determined expectations toward ROM. In the case of experi-

ences with using ROM, the current state of application was assessed. In general, only the formulation and target of the items changed; the content remained similar.

Data Analyses

Before analysis, we consolidated the data on therapeutic characteristics into meaningful categories, excluding factor levels with fewer than $n = 10$ observations (except for PA [$n = 9$]). We excluded the category "other" because of lack of interpretability. Descriptives of the OMQ and PMQ total scores for the final categories of therapeutic characteristics are shown in Table 2. Since we included both psychotherapists in training and licensed psychotherapists in this study, we consolidated professional experience by adding the average years of training reported by licensed psychotherapists to their reported professional experience.

We analyzed the data using R (v4.4.2; R Core Team, 2024). We performed ANCOVAs with the *car* package (v3.1-3; Fox & Weisberg, 2019) to investigate the effect of therapist characteristics on attitudes toward OM/ROM and the effect of experience with administering OM/ROM on perceived implementation barriers, facilitators, and expectations. We investigated statistically significant characteristics using Tukey-HSD-adjusted paired posthoc tests with the *emmeans* package (v1.10.5; Lenth, 2024). Consistent with our study aim to investigate perceived barriers, facilitators, and expectations in relation to prior experience with administering OM/ROM and attitudes toward OM/ROM, we also further examined statistically significant factors using posthoc tests. To account for the different numbers of observations in the groups of categorical predictors (therapist characteristics), we conducted weighted effect coding using the *wec* package (v0.4-1; te Grotenhuis et al., 2017) prior to analysis. Although ANCOVAs were invariant to weighted effect coding, weighted contrasts may influence the estimation of predictors in regression models. Therefore, we applied weighted effect coding to ensure consistency within the analyzed models. As visual inspection indicated a violation of homoscedasticity, we calculated HC4m robust standard errors using the *sandwich* package (v3.1-1; Cribari-Neto & Da Silva, 2011; Zeileis, 2004) and *lmtest* (v0.9-40; Zeileis & Hothorn, 2002). To reduce the number of items assessing different aspects of perceived implementation barriers, facilitators, and expectations toward OM/ROM, we conducted principal component analysis (PCA) with varimax rotation before analysis via the *psych* package (v2.4.6; Revelle, 2024). We assessed the number of components to extract using the very simple structure method (VSS; Revelle & Rocklin, 1979). For implementation, barriers require-

ments for PCA were met (Kaiser-Maier-Olkin criterion: $KMO = .84$ [.78-.94], Bartlett Test of Sphericity: $\chi^2_{(n=103)} = 429.99$, $df = 45$, $p < .001$) and via VSS a three-component solution was suggested. Sufficient internal consistency was reached for all components ($.71 \leq \alpha \leq .84$; ESM 1, Table E5). Regarding implementation facilitators and expectations, the Kaiser-Maier-Olkin criterion ($KMO_{\text{facilitators}} = .79$ [.74-.88]; $KMO_{\text{expectations}} = .91$ [.87-.95]) and the Bartlett Test of Sphericity ($\chi^2_{\text{facilitators } (n=101)} = 258.38$, $df = 15$, $p < .001$; $\chi^2_{\text{expectations } (n=101)} = 542.28$, $df = 28$, $p < .001$) indicate that the requirements were also met. VSS suggested two components for both perceived implementation facilitators and expectations toward OM/ROM. Sufficient internal consistency was reached ($.73 \leq \alpha \leq .93$), except for the component Support Clarification ($\alpha = .57$; ESM 1, Table E6 and E7).

We conducted posthoc sensitivity analyses for the main effects of the ANCOVAs using GPower (Faul et al., 2009). The interpretation of effect sizes followed Cohen's conventions (1988; small effect: $\eta^2_{\text{partial}} = .01$, medium effect: $\eta^2_{\text{partial}} = .06$, large effect: $\eta^2_{\text{partial}} = .14$).

The codebook and code are available at <https://osf.io/cg6nz/>. Owing to the possibility of deanonymization, the dataset used in this study is not publicly available. However, the data can be made available by the authors upon reasonable request.

Results

A comprehensive overview of the assessed sociodemographic, professional, and practice characteristics is presented in Table 1. Of those working in an outpatient setting, $n = 25$ participants (61%) reported employment in an outpatient university clinic. Among these, $n = 23$ (92%) had been trained in CBT and $n = 2$ (8%) in PD. All PA-licensed therapists worked exclusively in private practice and were licensed solely in child and adolescent psychotherapy.

Therapists' Attitudes Toward OM/ROM and Effects of Therapist Characteristics on Their Attitudes

In general, therapists treating children and adolescents reported somewhat positive attitudes toward OM/ROM using the OMQ ($M = 3.87$; $SD = 0.84$) and EMA-ROM (PMQ; $M = 3.43$; $SD = 0.94$).

Consistent with prior findings, therapists differed significantly in their attitudes toward both OM/ROM and EMA-

ROM depending on their therapeutic orientation, with large effect sizes (see Table 2A for attitudes toward OM/ROM and Table 2B for attitudes toward EMA-ROM). Tukey-HSD posthoc tests indicated that CBT-oriented therapists showed a significantly more positive attitude toward OM/ROM than PA-oriented therapists (OM/ROM: $t_{(101)} = 3.90$, $p = .001$, $d = 1.88$ [0.89, 2.87]; EMA-ROM: $t_{(101)} = 3.10$, $p = .007$, $d = 1.83$ [0.63, 3.03]), whereas we observed no statistically significant difference between CBT- and PD-oriented therapists (OM/ROM: $t_{(101)} = 2.14$, $p = .088$, $d = 0.88$ [0.05, 1.71]; EMA-ROM: $t_{(101)} = 1.47$, $p = .309$, $d = 0.62$ [-0.22, 1.46]; see Figure 1A). PD- and PA-oriented therapists did not differ significantly in their attitudes toward either OM/ROM or EMA-ROM.

In terms of attitudes toward OM/ROM, but not toward EMA-ROM, differences between the clinical settings emerged (Figure 1B). Tukey-HSD posthoc analyses revealed significantly more positive attitudes toward OM/ROM for therapists working in institutionalized outpatient settings than in private practice ($t_{(101)} = 2.71$, $p = .021$, $d = 0.88$ [0.22, 1.53]). We found no significant effect between inpatient and outpatient treatment settings. No other assessed therapeutic characteristics explained the differences between therapists in their attitudes toward OM/ROM or EMA-ROM (see Table 2).

Perceived Implementation Barriers and Their Associations with Previous Experience of and Attitudes Toward OM/ROM

The perceived implementation barriers were clustered into three categories: (1) Impact on the psychotherapeutic process, (2) Ethical issues, and (3) Adaptation of OM/ROM for children and youth. Table 3 presents the results of the ANCOVAs on the extracted components for perceived implementation barriers. We found no effect of previous experience with administering OM/ROM for any domain of perceived implementation barriers. Less positive attitudes toward OM as measured with the OMQ predicted perceived barriers categorized as Impact on the psychotherapeutic process ($b = -1.05$, $SE = 0.22$, $p < .001$, 95% CI [-1.48, -0.62]) and Ethical issues ($b = -0.73$, $SE = 0.30$, $p = .015$, 95% CI [-1.32, -0.14]) but not barriers regarding the Adaptation of OM/ROM for children and youth ($b = -0.31$, $SE = 0.34$, $p = .361$, 95% CI [-0.98, 0.36]). We obtained no effects on any component of perceived barriers for attitudes toward EMA-ROM as measured with the PMQ (for details, see Table 3).

Table 2. Predictors of positive attitudes toward outcome (OM/ROM) and high-frequency process monitoring (EMA-ROM)

| Factor | A: Outcome monitoring (OM)/Routine outcome monitoring (ROM) | | | | | B: Ecological momentary assessment ROM (EMA-ROM) | | | | |
|--|---|------------------------|----------|----------|----------------------|--|----------|----------|----------------------|----------------------|
| | <i>n</i> | <i>M</i> (<i>SD</i>) | <i>F</i> | <i>p</i> | η_p^2 90% CI | <i>M</i> (<i>SD</i>) | <i>F</i> | <i>p</i> | η_p^2 90% CI | η_p^2 90% CI |
| Age^a | | | 0.00 | .949 | .00 | | 0.18 | .673 | .00 | |
| Prof. experience^a | | | 0.31 | .582 | .01 | | 0.06 | .812 | .01 | [.00, .03] |
| Gender^a | | | 0.00 | .978 | .00 | | 2.30 | .132 | .02 | [.00, .09] |
| Male | 23 | 3.78 (1.02) | | | | 3.55 (1.11) | | | | |
| Female | 89 | 3.89 (0.80) | | | | 3.40 (0.90) | | | | |
| Prof. education^b | | | 0.02 | .985 | .00 | | 0.27 | .761 | .01 | [.00, .03] |
| Educational sciences | 22 | 3.81 (0.78) | | | | 3.29 (0.79) | | | | |
| Psychology | 61 | 4.10 (0.68) | | | | 3.62 (0.86) | | | | |
| Social work | 29 | 3.43 (1.03) | | | | 3.12 (1.13) | | | | |
| Psychotherapeutic Orientation^b | | | 11.02 | <.001 | .16 | | 5.55 | .005 | .14 | [.04, .23] |
| Cognitive behavioral therapy | 93 | 4.07 (0.64) | | | | 3.60 (0.82) | | | | |
| Psychoanalysis | 7 | 2.27 (0.70) | | | | 1.89 (0.76) | | | | |
| Psychodynamic | 12 | 3.26 (1.05) | | | | 2.97 (1.04) | | | | |
| Clinical setting^b | | | 4.47 | .014 | .08 | | 1.28 | .282 | .03 | [.00, .10] |
| Institutional inpatient | 25 | 4.03 (0.65) | | | | 3.76 (0.89) | | | | |
| Institutional outpatient | 41 | 4.29 (0.48) | | | | 3.75 (0.73) | | | | |
| Private practice | 46 | 3.40 (0.96) | | | | 2.96 (0.96) | | | | |
| License Status^a | | | 1.28 | .260 | .01 | | 0.75 | .388 | .01 | [.00, .06] |
| License CY | 68 | 3.78 (0.95) | | | | 3.35 (1.03) | | | | |
| No license CY | 33 | 4.06 (0.53) | | | | 3.61 (0.70) | | | | |

Note. *N* = 112. Outcome monitoring (OM)/Routine outcome monitoring (ROM) was measured with the Outcome Measurement Questionnaire (OMQ). Ecological momentary assessment ROM (EMA-ROM) was measured with the Process Monitoring Questionnaire (PMQ). For both OMQ and PMQ, higher values indicate a greater extent of positive attitudes toward OM/ROM or EMA-ROM, respectively (1 = disagree, 6 = strongly agree). η_p^2 = partial η^2 . The 90% CI comprises the lower limit and upper limit of the partial η^2 confidence interval. *F* scores are based on HC-4 m robust standard errors (Cribari-Neto & Da Silva, 2011). Factor levels with *n* ≤ 10 were omitted or merged. The subcategory "other" was excluded from the analysis. An exception to this procedure was the factor psychotherapeutic approach. To account for the linearity assumption prior to ANCOVAs for expectations toward OM/ROM, we conducted a Box-Cox transformation of the OMQ total score. For factors with η_p^2 = .07, and for factors with η_p^2 (2, 107), an effect of at least η_p^2 = .08 was detected with $1-\beta$ = .80.

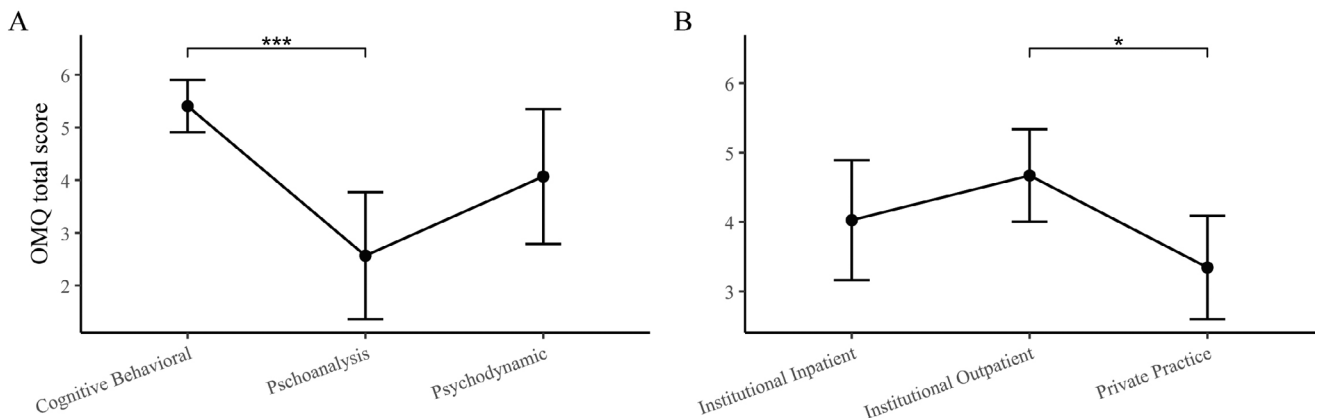


Figure 1. Posthoc analysis of significant terms in performed ANCOVAs investigating predictors of attitudes toward OM/ROM (Box-Cox transformed total score of the Outcome Measurement Questionnaire [OMQ; 1 = *strongly disagree*, 6 = *strongly agree*]) using estimated marginal means (EMMs) for the psychotherapeutic approach (A) and clinical setting (B).

Analysis of Perceived Implementation Facilitators of and Expectations in Relation to Previous Experience in Administering OM/ROM

For perceived implementation facilitators of OM/ROM, two components were revealed in a PCA, comprising aspects of (1) Organizational implementation (e.g., technical implementation) and (2) Organizational application (e.g., training for OM/ROM, use of OM/ROM under supervision). Expectations were also grouped into two components following PCA, namely, (1) Support of therapeutic process (e.g., detecting deterioration) and (2) Support of clarification (e.g., improvement of the therapeutic alliance). The ANCOVA results are shown in Table 4. For perceived facilitators, we found no significant differences between therapists with and without experience in using OM/ROM. In summary, therapists with experience in administering OM ($M=2.92$, $SD=1.11$) or ROM ($M=3.27$, $SD=0.95$) presented higher values on the Organizational application scale compared to those who reported no use of OM ($M=1.84$, $SD=1.17$), indicating that active use of OM/ROM in communication within an organization may promote acceptance of OM/ROM. We found no effect of attitudes toward OM/ROM for perceived implementation facilitators.

Regarding the expectations towards OM/ROM, the results indicated that receiving support in clarification processes throughout the course of psychotherapy is affected by previous experience in administering OM/ROM (Table 4B). As we conducted the assessment of expectations in relation to the actual usage of OM/ROM, we performed a posthoc Bonferroni-adjusted contrast analysis, comparing no use of OM with administering pre-post measurements (OM) and usage of OM with experience in administering ROM. Our analysis revealed that therapists who use OM

have higher expectations of the support provided by ROM in clarification processes than do therapists who currently use ROM ($t_{(86)}=4.29$, $p<.001$, $d=1.07$ [0.55, 1.59]). We found no statistically significant difference between those who did not use any OM and those who reported using OM. Attitudes toward OM/ROM showed an effect on both domains of expectation (Support of therapeutic process: $b=0.94$, $SE=0.38$, $p=.016$, 95% [0.18, 1.70]; Support of clarification: $b=0.63$, $SE=0.27$, $p=.020$, 95% [0.10, 1.16]). The results suggest that more positive attitudes toward OM/ROM are associated with higher expectations of receiving support for the adaptation of the therapeutic process from these tools.

Discussion

First, this study investigated the effects of therapist characteristics on attitudes toward OM/ROM. Second, we examined perceived implementation barriers, facilitators, and expectations in relation to therapists' previous experience with administering OM/ROM.

Across all therapists, the attitudes toward OM/ROM as well as EMA-ROM were moderately positive, with slightly more positive attitudes toward OM/ROM than EMA-ROM. Of all therapist characteristics, only therapeutic orientation strongly affected attitudes toward OM/ROM. As hypothesized, CBT-oriented psychotherapists showed more positive attitudes toward OM/ROM and EMA-ROM than PA-oriented psychotherapists, but not than PD-oriented therapists. This finding is consistent with findings regarding psychotherapists primarily working with adult patients (Jensen-Doss et al., 2018; Kaiser et al., 2018). One explanation for the difference between CBT and PA-oriented therapists may be that OM/ROM is currently typi-

Table 3. Predictors of perceived implementation barriers towards outcome and routine outcome monitoring

| Factor | Impact on the psychotherapeutic process | | | Ethical issues | | | Adaptation of OM/ROM for children and youth | | | | | | |
|--|---|-------------|-------|----------------|------------|-------------|---|------|------------|-------------|------|------|------------|
| | n | M (SD) | F | p | η_p^2 | M (SD) | F | p | η_p^2 | M (SD) | F | p | η_p^2 |
| Age ^a | | | 1.62 | .206 | .02 | | 2.63 | .108 | .04 | 3.55 (1.21) | 2.25 | .137 | .03 |
| Prof. experience ^a | | | 1.24 | .269 | .02 | | 0.55 | .460 | .01 | 3.35 (1.17) | 0.32 | .573 | .01 |
| Gender ^a | | | 0.00 | .957 | .00 | | 0.00 | .953 | .00 | 3.58 (1.42) | 0.52 | .474 | .01 |
| Male | 22 | 3.24 (1.13) | | | | 2.68 (1.48) | | | | | | | |
| Female | 81 | 3.21 (1.20) | | | | 2.59 (1.32) | | | | | | | |
| Prof. education ^b | | | 0.11 | .896 | .00 | | 3.76 | .027 | .08 | 3.42 (1.15) | 0.02 | .985 | .00 |
| Educational sciences | 20 | 3.36 (1.23) | | | | 3.20 (1.51) | | | | | | | |
| Psychology | 57 | 2.95 (1.00) | | | | 2.12 (1.03) | | | | | | | |
| Social work | 26 | 3.68 (1.37) | | | | 3.23 (1.44) | | | | | | | |
| Psychotherapeutic Orientation^b | | | 1.28 | .283 | .03 | | 0.12 | .888 | .01 | 3.32 (1.10) | 1.36 | .262 | .07 |
| Cognitive behavioral therapy | 86 | 3.00 (1.08) | | | | 2.42 (1.22) | | | | | | | |
| Psychoanalysis | 7 | 4.51 (0.82) | | | | 4.29 (1.22) | | | | | | | |
| Psychodynamic | 10 | 4.18 (1.25) | | | | 3.10 (1.68) | | | | | | | |
| Clinical setting^b | | | 0.62 | .539 | .01 | | 0.02 | .984 | .00 | 4.20 (1.32) | 1.17 | .315 | .02 |
| Institutional inpatient | 23 | 2.96 (1.19) | | | | 2.39 (1.23) | | | | | | | |
| Institutional outpatient | 39 | 2.86 (0.90) | | | | 2.06 (0.83) | | | | | | | |
| Private practice | 41 | 3.70 (1.27) | | | | 3.26 (1.55) | | | | | | | |
| License Status^a | | | 0.14 | .714 | .00 | | 0.13 | .722 | .00 | 3.45 (1.32) | 0.40 | .528 | .01 |
| License CY | 70 | 3.25 (1.27) | | | | 2.75 (1.49) | | | | | | | |
| No license CY | 33 | 3.14 (0.97) | | | | 2.32 (0.93) | | | | | | | |
| Experience OM/ROM^b | | | 0.04 | .959 | .00 | | 1.67 | .193 | .06 | 3.71 (1.34) | 0.15 | .857 | .01 |
| No use of OM/ROM | 17 | 3.86 (1.59) | | | | 2.97 (1.58) | | | | | | | |
| Pre-Post evaluation | 62 | 2.99 (0.99) | | | | 2.52 (1.28) | | | | | | | |
| ROM | 24 | 3.33 (1.18) | | | | 2.60 (1.37) | | | | | | | |
| OMQ total score^a | | | 23.42 | < .001 | .22 | | 6.11 | .015 | .07 | 3.33 (1.26) | 0.84 | .361 | .01 |
| PMQ total score^a | | | 0.01 | .925 | .00 | | 0.24 | .627 | .00 | | 0.07 | .809 | .00 |

Note. N = 103. η_p^2 = partial η^2 . Higher values indicate a greater extent of perceived implementation barriers (1 = disagree, 6 = strongly agree). F scores are based on HC-4 m robust standard errors (Cribari-Neto & Da Silva, 2011). Factor levels with n ≤ 10 were omitted or merged. The subcategory "other" was excluded from the analysis. An exception to this procedure was the factor psychotherapeutic approach. For factors with η_p^2 (1, .97), an effect of at least $\eta_p^2 = .07$ was detected, and for factors with η_p^2 (2, .96), an effect of at least $\eta_p^2 = .09$ was detected, with 1 - $\beta = .80$.

Table 4. Predictors of perceived implementation facilitators of and expectations towards (routine) outcome monitoring

| Factor | A: Perceived implementation facilitators | | | | | | | | | | B: Expectations toward OM/ROM | | | | | | | | | |
|--|--|-------------|------|------|------------|----------------------------|------|------|------------|-------------|-------------------------------|------|------------|-------------|------|-----------------------|------------|--|--|--|
| | Organizational implementation | | | | | Organizational application | | | | | Support therapeutic process | | | | | Support clarification | | | | |
| | n | M (SD) | F | p | η_p^2 | M (SD) | F | p | η_p^2 | M (SD) | F | p | η_p^2 | M (SD) | F | p | η_p^2 | | | |
| Age ^a | | | 0.35 | .557 | .01 | 2.91 (1.52) | 0.46 | .499 | .01 | 3.70 (1.36) | 2.36 | .128 | .07 | 2.82 (1.11) | 3.19 | .078 | .05 | | | |
| Prof. experience ^a | | | 0.47 | .494 | .01 | 2.83 (1.50) | 0.84 | .363 | .02 | 4.08 (1.06) | 0.20 | .655 | .00 | 3.27 (1.08) | 2.03 | .158 | .03 | | | |
| Gender ^a | | | 0.08 | .783 | .00 | 2.85 (1.07) | 2.02 | .158 | .02 | 3.70 (1.36) | 1.27 | .263 | .02 | 2.82 (1.11) | 0.68 | .413 | .01 | | | |
| Male | 22 | 2.91 (1.52) | | | | | | | | | | | | | | | | | | |
| Female | 79 | 2.83 (1.50) | | | | 2.82 (1.19) | | | | 4.08 (1.06) | | | | 3.27 (1.08) | | | | | | |
| Prof. education ^b | | | 0.51 | .605 | .02 | 2.85 (1.07) | 0.87 | .424 | .02 | 3.70 (1.36) | 0.20 | .819 | .01 | 2.82 (1.11) | 0.65 | .522 | .02 | | | |
| Educational Sciences | 19 | 2.68 (1.44) | | | | 2.46 (1.12) | | | | 4.06 (0.98) | | | | 3.53 (1.16) | | | | | | |
| Psychology | 57 | 3.28 (1.46) | | | | 3.19 (1.11) | | | | 4.21 (0.88) | | | | 3.11 (0.90) | | | | | | |
| Social work | 25 | 1.98 (1.25) | | | | 2.27 (1.03) | | | | 3.45 (1.55) | | | | 3.04 (1.41) | | | | | | |
| Psychotherapeutic orientation ^b | | | 0.21 | .810 | .01 | 2.94 (1.15) | 0.59 | .558 | .04 | 4.24 (0.87) | 2.34 | .102 | .05 | 3.25 (0.98) | 0.21 | .812 | .01 | | | |
| Cognitive Behavioral therapy | 85 | 3.00 (1.50) | | | | 2.94 (1.15) | | | | 4.24 (0.87) | | | | 3.25 (0.98) | | | | | | |
| Psychoanalysis | 7 | 1.36 (0.75) | | | | 2.29 (1.35) | | | | 1.69 (1.01) | | | | 1.86 (0.94) | | | | | | |
| Psychodynamic | 9 | 2.56 (1.26) | | | | 2.14 (0.87) | | | | 3.50 (1.33) | | | | 3.44 (1.61) | | | | | | |
| Clinical setting ^b | | | 4.29 | .017 | .12 | 2.70 (1.09) | 6.90 | .002 | .16 | 4.24 (0.87) | 1.42 | .248 | .03 | 3.22 (0.90) | 0.93 | .400 | .02 | | | |
| Institutional Inpatient | 23 | 2.70 (1.09) | | | | 2.72 (0.91) | | | | 3.94 (0.98) | | | | 3.22 (0.90) | | | | | | |
| Institutional Outpatient | 39 | 3.85 (1.26) | | | | 3.55 (1.10) | | | | 4.38 (0.74) | | | | 3.17 (0.96) | | | | | | |
| Private practice | 39 | 1.94 (1.31) | | | | 2.17 (0.94) | | | | 3.64 (1.41) | | | | 3.15 (1.33) | | | | | | |
| License status ^a | | | 0.45 | .504 | .01 | 2.65 (1.49) | 0.96 | .330 | .02 | 3.92 (1.22) | 0.12 | .735 | .00 | 3.09 (1.19) | 0.16 | .695 | .00 | | | |
| License CY | 68 | 2.65 (1.49) | | | | 2.77 (1.14) | | | | 3.92 (1.22) | | | | 3.09 (1.19) | | | | | | |
| No license CY | 33 | 3.26 (1.45) | | | | 2.95 (1.22) | | | | 4.14 (0.92) | | | | 3.35 (0.85) | | | | | | |
| Experience OM/ROM ^b | | | 0.87 | .424 | .02 | 1.62 (0.83) | 2.21 | .116 | .06 | 3.29 (1.22) | 2.61 | .080 | .07 | 2.84 (1.04) | 9.22 | < .001 | .18 | | | |
| No use of OM/ROM | 16 | 1.62 (0.83) | | | | 1.84 (1.17) | | | | 3.29 (1.22) | | | | 2.84 (1.04) | | | | | | |
| Pre-Post evaluation | 62 | 3.07 (1.48) | | | | 2.92 (1.11) | | | | 4.33 (0.90) | | | | 3.54 (0.95) | | | | | | |
| ROM | 23 | 3.09 (1.53) | | | | 3.27 (0.95) | | | | 3.57 (1.32) | | | | 2.41 (1.07) | | | | | | |
| OMQ total score ^a | | | 2.22 | .140 | .03 | 0.02 | .876 | .00 | | 6.05 | .016 | .08 | | 5.64 | .020 | .09 | | | | |
| PMQ total score ^a | | | 1.59 | .211 | .02 | 0.22 | .642 | .00 | | 3.83 | .054 | .06 | | 0.29 | .590 | .01 | | | | |

Note. N = 101. η_p^2 = partial η^2 . Higher values indicate a greater extent of perceived implementation facilitators or expectations toward OM/ROM, respectively (1 = disagree, 6 = strongly agree). Factor levels with n ≤ 10 were omitted or merged. The subcategory "other" was excluded from the analysis. An exception to this procedure was the factor psychotherapeutic approach. To account for the linearity assumption prior to ANCOVAs for expectations toward OM/ROM, we conducted a Box-Cox transformation of the Support of Therapeutic Process scale. For factors with η_p^2 = .07, an effect of at least η_p^2 = .07, and for factors with η_p^2 (2, 96), an effect of at least η_p^2 = .09 was detected, with 1 - β = .80.

cally symptom-oriented and less focused on constructs specifically relevant to PA, such as changes in transference, conflict, or structure. Thus, the implementation of OM/ROM, especially for people with therapeutic orientations other than CBT, should include these relevant constructs. One example of such an orientation-adapted implementation approach is the adaptation of a quality assurance project in Germany for PD-oriented psychotherapy for children and youth (Benecke & Volz, 2023).

In addition to therapeutic orientation, the clinical setting influenced attitudes toward OM/ROM (but not EMA-ROM): Psychotherapists working in institutionalized outpatient settings showed more positive attitudes than those in private practices. We found no effect between psychotherapists working in inpatient settings and those working in any outpatient setting, whether institutionalized or private practice. As a result, our hypothesis of more positive attitudes toward OM/ROM in institutionalized working fields was only partially confirmed. This finding may be confounded by the type of institutionalized outpatient setting in which the therapists in this sample mainly worked, namely, university outpatient therapy centers, which are typically familiar with repeated assessments because of their participation in research studies. This might explain our findings. However, similar findings were reported by Jensen-Doss et al. (2018), suggesting that attitudes are affected by the institutional context.

Surprisingly, we did not find that previous experience in administering OM/ROM had any statistically significant effect on perceived implementation barriers for OM/ROM. As most of our sample had at least some experience with either OM or ROM, this finding might reflect that first-hand experience with OM/ROM can reduce barriers. In addition, our results showed that general attitudes toward OM most significantly affected perceived implementation barriers. Therefore, future studies should investigate how perceived barriers can be removed, for example, by gradual implementation of OM/ROM or by promoting OM/ROM use during clinical training.

We did not find statistically significant effects of experience in administering OM/ROM on perceived implementation facilitators, most likely because of low power. Nevertheless, the results suggest that actively applying OM/ROM within an organization supports its acceptance. Therapists using OM/ROM reported higher ratings of aspects related to the daily application of OM/ROM (e.g., communication between colleagues, use in supervision, and training in OM/ROM). Therefore, future studies should further examine how the acceptance and implementation of OM/ROM promotion at the organizational level can increase its acceptance and implementation into daily clinical practice. Furthermore, our results revealed a significant difference between OM and ROM users in

terms of expected support for clarification: Therapists using OM seem to expect more support in clarifying interactional aspects of psychotherapy when using ROM than these systems are actually able to provide. When implementing ROM systems, it is therefore important to generate realistic expectations and to show the possibilities and limitations of such systems. In addition, this finding is indirectly connected to aspects of organizational application, as training and supervision help ensure appropriate usage. In contrast to perceived facilitators, expectations toward OM/ROM are affected by therapists' attitudes, indicating that more positive attitudes are accompanied by more expectations in supporting the psychotherapy process and clarification.

This study was the first to investigate attitudes toward OM/ROM in the field of child and youth psychotherapy in Germany. In addition to previous studies (Jensen-Doss et al., 2018; Klein et al., 2022), we also examined perceived implementation barriers and facilitators depending on previous experience with administering OM/ROM that may inform future implementation research. Furthermore, separating OM/ROM and EMA-ROM in our analyses helped investigate whether there are specific effects for different assessment schemes. Because of a lack of standardization in assessing therapist characteristics across studies, as psychotherapy training and access to training vary between healthcare systems, our results may be limited in their comparability to other samples or studies. Furthermore, qualitative research helps in understanding *how* psychotherapeutic characteristics affect attitudes toward OM/ROM and expands on our findings. As the modality of OM/ROM assessment also appears to be crucial (e.g., self-rated vs. clinician-rated; Cuijpers et al., 2010), another limitation of our study is the lack of information on which OM/ROM modality was used by the participants. One of our main findings – that therapeutic orientation is a primary factor influencing attitudes toward OM/ROM among child and adolescent psychotherapists – aligns with previous research. Effect sizes, however, should be interpreted with caution because CBT was disproportionately represented in the analysis. To address this, we applied appropriate statistical procedures to attenuate potential biases (e.g., accounting for violations of homoscedasticity in ANCOVA or using Type II sum of squares).

Nevertheless, PD-oriented and, in particular, PA-oriented therapists were underrepresented in our sample, which limits the generalizability of our findings and emphasizes the exploratory nature of the study. Regarding the observed effect of more positive attitudes toward OM/ROM among therapists working in institutionalized outpatient settings compared to private practices, the results may have been influenced by the high proportion of participants employed in an outpatient university clinic ($n=25$,

61%). We assumed that therapists in this setting are more accustomed to integrating new concepts into their clinical work and generally exhibit greater openness toward data-driven methods. Finally, we investigated only three therapeutic approaches, CBT, PD, and PA, as at the time of data collection, these were the only licensed psychotherapy approaches in Germany. Future studies might also investigate how systemic therapy-oriented therapists perceive OM/ROM and the barriers to and facilitators of its implementation.

In conclusion, our study highlights the importance of therapist attitudes toward OM/ROM for its implementation in child and adolescent psychotherapy settings. Our findings suggest a differentiated approach when implementing OM/ROM for therapeutic orientations other than CBT, adapting or supplementing a generic set of OM/ROM variables to meet individual needs based on a theoretical orientation may be important. Finally, the organizational application (e.g., training, use in supervision) should be considered when implementing OM/ROM to prevent an overestimation of its capabilities and ensure adherent administration.

Electronic Supplementary Material

The electronic supplementary material (ESM) is available with the online version of the article at <https://doi.org/10.1024/1422-4917/a001071>

ESM 1. Missing data analysis and results of (conformatory) factor analysis.

References

- Barkham, M., & Lambert, M. (2021). The efficacy and effectiveness of psychological therapies. In M. Barkham, W. Lutz, & L. Castonguay (Eds.), *Bergin and Garfield's handbook of psychotherapy and behavior change: 50th anniversary edition* (pp. 135–189). Wiley.
- Batty, M.J., Moldavsky, M., Foroushani, P.S., Pass, S., Marriott, M., Sayal, K., & Hollis, C. (2013). Implementing routine outcome measures in child and adolescent mental health services: From present to future practice. *Child and Adolescent Mental Health*, 18(2), 82–87. <https://doi.org/10.1111/j.1475-3588.2012.00658.x>
- Benecke, C., & Volz, M. (2023). Qualitätsmerkmale und Versorgungsrelevanz psychodynamischer Ausbildungsambulanzen: Das QVA-Projekt [Quality characteristics and relevance to care of psychodynamic training outpatient clinics: The QVA Project]. *Zeitschrift für Psychosomatische Medizin und Psychotherapie*, 69(4), 345–368. <https://doi.org/10.13109/zptm.2023.69.0a4>
- Bickman, L., Douglas, S.R., Andrade, A.R.V. de, Tomlinson, M., Gleacher, A., Olin, S., & Hoagwood, K. (2016). Implementing a measurement feedback system: A tale of two sites. *Administration and Policy in Mental Health and Mental Health Services Research*, 43(3), 410–425. <https://doi.org/10.1007/s10488-015-0647-8>
- Boswell, J.F., Hepner, K.A., Lysell, K., Rothrock, N.E., Bott, N., Childs, A.W., Douglas, S., Owings-Fonner, N., Wright, C.V., Stephens, K.A., Bard, D.E., Aajmain, S., & Bobbitt, B.L. (2023). The need for a measurement-based care professional practice guideline. *Psychotherapy (Chicago, IL)*, 60(1), 1–16. <https://doi.org/10.1037/pst0000439>
- Boswell, J.F., Kraus, D.R., Miller, S.D., & Lambert, M.J. (2015). Implementing routine outcome monitoring in clinical practice: Benefits, challenges, and solutions. *Psychotherapy Research*, 25(1), 6–19. <https://doi.org/10.1080/10503307.2013.817696>
- Bundespsychotherapeuten Kammer [BPTK]. (2022). *Muster-Berufsordnung der Psychotherapeut_innen: in der Fassung des Beschlusses des 24. Deutschen Psychotherapeutentages in Berlin am 17. Mai 2014* [zuletzt geändert auf dem 40. Deutschen Psychotherapeutentag in Stuttgart am 14. Mai 2022]. Retrieved from https://api.bptk.de/uploads/Muster_Berufsordnung_der_B_Pt_K_412a6bcb36.pdf
- Cohen, J. (Ed.). (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Erlbaum.
- Cribari-Neto, F., & Da Silva, W.B. (2011). A new heteroskedasticity-consistent covariance matrix estimator for the linear regression model. *ASTA: Advances in Statistical Analysis*, 95(2), 129–146. <https://doi.org/10.1007/s10182-010-0141-2>
- Cuijpers, P., Li, J., Hofmann, S.G., & Andersson, G. (2010). Self-reported versus clinician-rated symptoms of depression as outcome measures in psychotherapy research on depression: A meta-analysis. *Clinical Psychology Review*, 30(6), 768–778. <https://doi.org/10.1016/j.cpr.2010.06.001>
- Cuperfain, A.B., Hui, K., Berkhout, S.G., Foussias, G., Gratzner, D., Kidd, S.A., Kozloff, N., Kurdyak, P., Linaksita, B., Miranda, D., Soklaridis, S., Voineskos, A.N., & Zaheer, J. (2021). Patient, family and provider views of measurement-based care in an early-psychosis intervention programme. *BJPsych Open*, 7(5):e171. <https://doi.org/10.1192/bjo.2021.1005>
- De Jong, K., Douglas, S., Wolpert, M., Delgadillo, J., Aas, B., Bovendeerd, B., Carlier, I., Compare, A., Edbrooke-Childs, J., Janse, P., Lutz, W., Moltu, C., Nordberg, S., Poulsen, S., Rubel, J.A., Schiepek, G., Schilling, V.N.L.S., Van Sonsbeek, M., & Barkham, M. (2024). Using progress feedback to enhance treatment outcomes: A narrative review. *Administration and Policy in Mental Health and Mental Health Services Research*, 52(1), 210–222. <https://doi.org/10.1007/s10488-024-01381-3>
- Deisenhofer, A.-K., Barkham, M., Beierl, E.T., Schwartz, B., Aafjes-van Doorn, K., Beevers, C.G., Berwian, I.M., Blackwell, S.E., Bockting, C.L., Brakemeier, E.-L., Brown, G., Buckman, J.E.J., Castonguay, L.G., Cusack, C.E., Dalglish, T., de Jong, K., Delgadillo, J., DeRubeis, R.J., Driessen, E., ... Cohen, Z.D. (2024). Implementing precision methods in personalizing psychological therapies: Barriers and possible ways forward. *Behaviour Research and Therapy*, 172, Article 104443. <https://doi.org/10.1016/j.brat.2023.104443>
- Delgadillo, J., Overend, K., Lucock, M., Groom, M., Kirby, N., McMillan, D., Gilbody, S., Lutz, W., Rubel, J.A., & de Jong, K. (2017). Improving the efficiency of psychological treatment using outcome feedback technology. *Behaviour Research and Therapy*, 99, 89–97. <https://doi.org/10.1016/j.brat.2017.09.011>
- Edbrooke-Childs, J., Barry, D., Rodriguez, I.M., Papageorgiou, D., Wolpert, M., & Schulz, J. (2017). Patient reported outcome measures in child and adolescent mental health services: Associations between clinician demographic characteristics, attitudes and efficacy. *Child and Adolescent Mental Health*, 22(1), 36–41. <https://doi.org/10.1111/camh.12189>

- Eyberg, S., & Funderburk, B. (2011). *Parent-child interaction therapy: Treatment manual*. PCIT international.
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41(4), 1149–1160. <https://doi.org/10.3758/BRM.41.4.1149>
- Fox, J., & Weisberg, S. (2019). *An R companion to applied regression* (3rd ed.). Sage.
- Gemeinsamer Bundesausschuss [G-BA]. (2024). *Richtlinie des Gemeinsamen Bundesausschusses über die Durchführung der Psychotherapie (Psychotherapie-Richtlinie): in der Fassung vom 19. Februar 2009 [zuletzt geändert am 21. März 2024]*. Retrieved from https://www.g-ba.de/downloads/62-492-3464/PT-RL_2024-03-21_iK-2024-06-19.pdf
- Harris, P.A., Taylor, R., Minor, B.L., Elliott, V., Fernandez, M., O'Neal, L., McLeod, L., Delacqua, G., Delacqua, F., Kirby, J., & Duda, S.N. (2019). The REDCap consortium: Building an international community of software platform partners. *Journal of Biomedical Informatics*, 95, Article 103208. <https://doi.org/10.1016/j.jbi.2019.103208>
- Harris, P.A., Taylor, R., Thielke, R., Payne, J., Gonzalez, N., & Conde, J.G. (2009). Research electronic data capture (REDCap): A metadata-driven methodology and workflow process for providing translational research informatics support. *Journal of Biomedical Informatics*, 42(2), 377–381. <https://doi.org/10.1016/j.jbi.2008.08.010>
- Hatfield, D.R., & Ogles, B.M. (2007). Why some clinicians use outcome measures and others do not. *Administration and Policy in Mental Health*, 34(3), 283–291. <https://doi.org/10.1007/s10488-006-0110-y>
- Jensen-Doss, A., Haimes, E.M.B., Smith, A.M., Lyon, A.R., Lewis, C.C., Stanick, C.F., & Hawley, K.M. (2018). Monitoring treatment progress and providing feedback is viewed favorably but rarely used in practice. *Administration and Policy in Mental Health*, 45(1), 48–61. <https://doi.org/10.1007/s10488-016-0763-0>
- Kaiser, T., Schmutzhart, L., & Laireiter, A.-R. (2018). Attitudes of Austrian psychotherapists towards process and outcome monitoring. *Administration and Policy in Mental Health*, 45(5), 765–779. <https://doi.org/10.1007/s10488-018-0862-1>
- Klein, C.C., Luis Sanchez, B.E., & Barnett, M.L. (2022). Improving the quality of children's mental healthcare with progress measures: A mixed-methods study of PCIT therapist attitudes. *Administration and Policy in Mental Health and Mental Health Services Research*, 49(2), 182–196. <https://doi.org/10.1007/s10488-021-01156-0>
- Lenth, R.V. (2024). *emmeans: Estimated marginal means, aka least-squares means* (Version 1.10.5) [Computer software]. Retrieved from <https://CRAN.R-project.org/package=emmeans>
- Lutz, W., Deisenhofer, A.-K., Rubel, J., Bennemann, B., Giesemann, J., Poster, K., & Schwartz, B. (2022b). Prospective evaluation of a clinical decision support system in psychological therapy. *Journal of Consulting and Clinical Psychology*, 90(1), 90–106. <https://doi.org/10.1037/ccp0000642>
- Lutz, W., Rubel, J., Schiefele, A.-K., Zimmermann, D., Böhnke, J.R., & Wittmann, W.W. (2015). Feedback and therapist effects in the context of treatment outcome and treatment length. *Psychotherapy Research*, 25(6), 647–660. <https://doi.org/10.1080/10503307.2015.1053553>
- Lutz, W., Schwartz, B., & Delgado, J. (2022a). Measurement-based and data-informed psychological therapy. *Annual Review of Clinical Psychology*, 18, 71–98. <https://doi.org/10.1146/annurev-clinpsy-071720-014821>
- McAleavey, A.A., Jong, K. de, Nissen-Lie, H.A., Boswell, J.F., Moltu, C., & Lutz, W. (2024). Routine outcome monitoring and clinical feedback in psychotherapy: Recent advances and future directions. *Administration and Policy in Mental Health*, 51(3), 291–305. <https://doi.org/10.1007/s10488-024-01351-9>
- Moltu, C., Veseth, M., Stefansen, J., Nøtnes, J.C., Skjølberg, Å., Binder, P.-E., Castonguay, L.G., & Nordberg, S.S. (2018). This is what I need a clinical feedback system to do for me: A qualitative inquiry into therapists' and patients' perspectives. *Psychotherapy Research*, 28(2), 250–263. <https://doi.org/10.1080/10503307.2016.1189619>
- R Core Team. (2024). *R: A language and environment for statistical computing* (Version 4.4.2). R Foundation for Statistical Computing. Retrieved from <https://www.R-project.org/>
- Revelle, W. (2024). *psych: Procedures for psychological, psychometric, and personality research* (Version 2.4.6) [Computer software]. Northwestern University. Retrieved from <https://CRAN.R-project.org/package=psych>
- Revelle, W., & Rocklin, T. (1979). Very simple structure: An alternative procedure for estimating the optimal number of interpretable factors. *Multivariate Behavioral Research*, 14, 403–414.
- Rye, M., Rognmo, K., Aarons, G.A., & Skre, I. (2019). Attitudes towards the use of routine outcome monitoring of psychological therapies among mental health providers: The EBPAS-ROM. *Administration and Policy in Mental Health*, 46(6), 833–846. <https://doi.org/10.1007/s10488-019-00968-5>
- Smits, D.F., Claes, L., Stinckens, N., & Smits, D.J.M. (2015). Clinicians' attitudes towards outcome and process monitoring: A validation of the Outcome Measurement Questionnaire. *Administration and Policy in Mental Health and Mental Health Services Research*, 42(5), 634–641. <https://doi.org/10.1007/s10488-014-0597-6>
- Stangier, U., Strauß, B., Rief, W., & Hofmann, S.G. (2024). Prozessbasierter Ansatz in der Psychotherapie. *Die Psychotherapie*, 69(1), 15–23. <https://doi.org/10.1007/s00278-023-00690-6>
- te Grotenhuis, M., Pelzer, B., Eisinga, R., Nieuwenhuis, R., Schmidt-Catran, A., & König, R. (2017). When size matters: Advantages of weighted effect coding in observational studies. *International Journal of Public Health*, 62(1), 163–167. <https://doi.org/10.1007/s00038-016-0901-1>
- Waldron, S.M., Loades, M.E., & Rogers, L. (2018). Routine outcome monitoring in CAMHS: How can we enable implementation in practice? *Child and Adolescent Mental Health*, 23(4), 328–333. <https://doi.org/10.1111/camh.12260>
- Willis, A., Deane, F.P., & Coombs, T. (2009). Improving clinicians' attitudes toward providing feedback on routine outcome assessments. *International Journal of Mental Health Nursing*, 18(3), 211–215. <https://doi.org/10.1111/j.1447-0349.2009.00596.x>
- Zeileis, A. (2004). Econometric computing with HC and HAC covariance matrix estimators. *Journal of Statistical Software*, 11(10), 1–17. <https://doi.org/10.18637/jss.v011.i10>
- Zeileis, A., & Hothorn, T. (2002). Diagnostic checking in regression relationships. *R News*, 2(2), 7–10. Retrieved from <https://CRAN.R-project.org/doc/Rnews/>

History

Received August 11, 2025

Revision received June 1, 2025

Accepted February 23, 2026

Published online April 9, 2026

Acknowledgments

Preliminary results of this study were presented at the 3rd German Psychotherapy Congress 2024, Berlin, Germany. We are grateful to all professional associations for assisting in the distribution of information about participation in this study and would also like to thank all participants.

Declaration of Competing Interests

The authors have no relevant financial or nonfinancial interests to disclose. All authors declare that they do not have any conflicts of interest.

Publication Ethics

The Institutional Review Board of the University of Regensburg, Germany approved this study (ref. no. 23–3333–104). This manuscript was prepared in accordance with the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement.

Open Data

Owing to the inability to ensure complete anonymization, the dataset used in this study is not publicly available. However, the authors can make the data available upon reasonable request. Both the code used for data analysis and the codebook are openly available without restriction via the Open Science Framework (OSF) at <https://osf.io/cg6nz/>

Funding

This work was financially supported by the University Library of Regensburg.
Open access publication enabled by the Regensburg University.

ORCID

Sebastian Sebastian Ertl

 <https://orcid.org/0009-0001-0056-0361>

David R. Kolar

 <https://orcid.org/0000-0002-8649-5467>

Sebastian Ertl, Dr. sc. hum.

University of Regensburg
Department of Psychology
Universitätsstraße 31
93053 Regensburg
Germany

sebastian.ertl@ur.de