



JÖNKÖPING UNIVERSITY
School of Health and Welfare



‘Tree-Theme Method’ as an intervention for enhancing participation in meaningful daily activities for adults with depression and/or anxiety: A systematic review

Angeliki Tsakiraki¹, Timokleia Vardaki², Professor Dido Green³

¹BSc, MSc (c) in Occupational Therapy, Jönköping University, Lotos Day Center, H.C.I.P.&C. “Kostis Ballas”

²BSc, MSc (c) in Occupational Therapy, Jönköping University, Aelia “A place for specialized therapies”

³PhD, MSc, DipCOT

No financial disclosures



Background

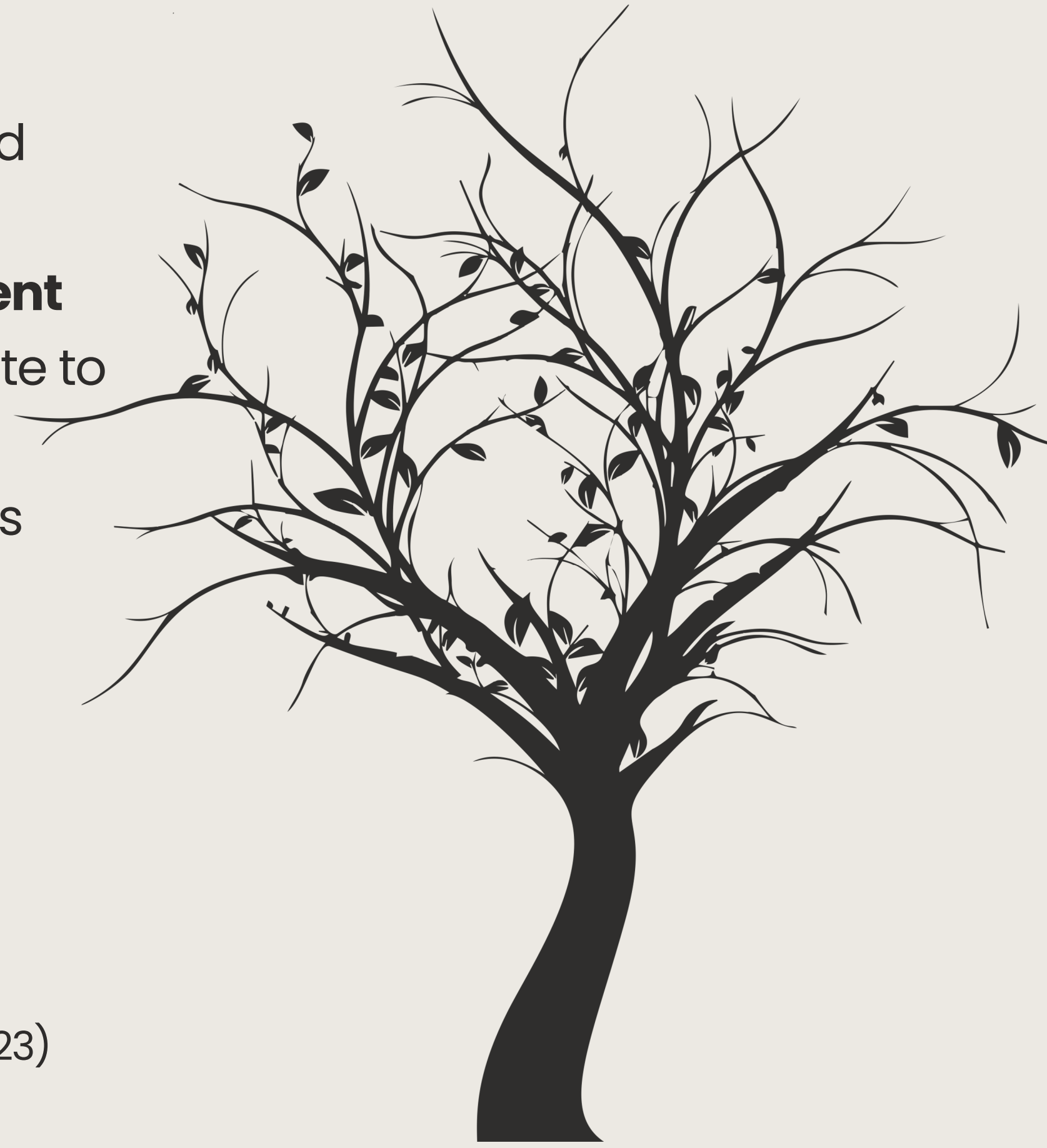
Depression and anxiety are common psychiatric conditions that significantly impair daily functioning and often co-occur (Lammers et al., 2011).

- Symptoms are associated with **reduced engagement and satisfaction in daily occupations** and may relate to **occupational imbalance** (Eklund et al., 2017)

Key occupational areas affected in working-age adults include:

- Household management
- Social participation
- Personal care
- Workplace functioning
- Community participation

(Buist-Bouwman et al., 2007; Deady et al., 2022; Gunnarsson et al., 2023)



Background

The **Tree-Theme Method (TTM)** is a psychosocial occupational therapy intervention combining:

- **Tree painting** (symbolizing life experiences)
- **Life storytelling and story making**
- Integration of **being, doing, becoming & belonging**

TTM is described as client-centred and holistic, yet its **effectiveness remains unclear**.

There is a recognized **need for rigorous evidence** on occupational therapy interventions in mental health.

(Gunnarsson & Eklund, 2009)



Aim

To evaluate the evidence for the **Tree-Theme Method** (including painting, storytelling, and story making) as intervention for **enhancing participation in meaningful daily activities** among adults with **depression and/or anxiety**.

Methods

Research question:

What is the evidence for 'Tree-Theme Method' (**Intervention**) for enhancing participation in meaningful daily activities (**Outcomes**) for adults with depression and/or anxiety (**Population**)?
(**Comparison**): Occupational Therapy or No therapy



1

Research design

A quantitative study, employing a systematic review methodology, following the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) [15].

2

Search strategy

3 databases (PsycInfo, CINAHL, AMED) were accessed for searching relevant abstracts/titles.

1 st Block		2 nd Block		3 rd Block
Tree Theme OR TTM OR storytelling OR "story writing" OR "story making" OR LifeStor* OR paint*	AND	depression OR anxiety OR stress OR mood OR anxt* OR sad	AND	intervention OR method OR therapy OR technique

3

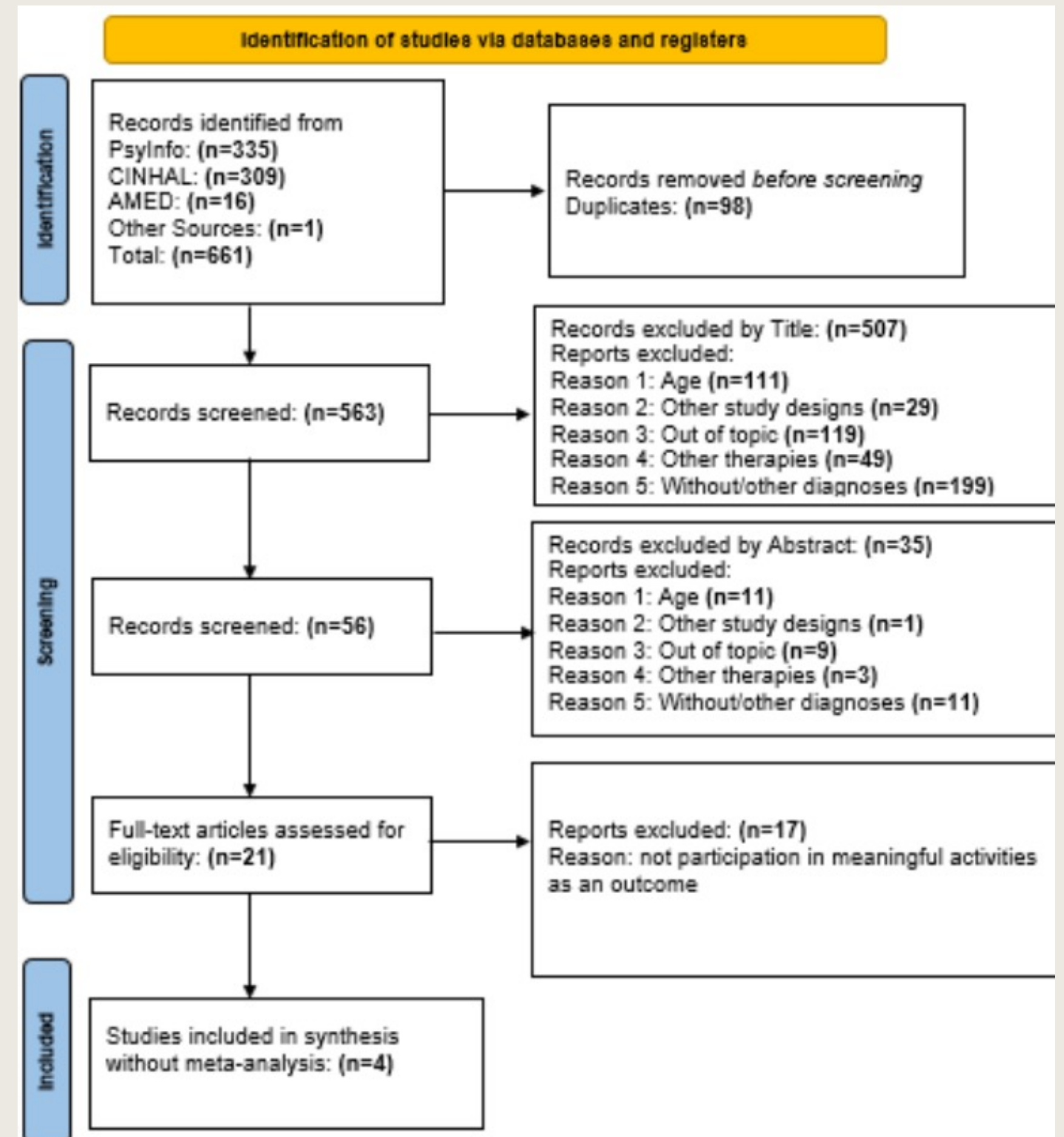
Eligibility criteria

Inclusion Criteria	Record Type	Peer-Reviewed
	Language	English
	Availability	Abstract
	Publication Date	2013 – 2023 (Before November 19, 2023)
	Primary Sources for Synthesis	Randomized and Non-Randomized Studies [21]
	Population	Adults (18-65 years old) with (primary) depression and/or anxiety
	Review Topic	TTM intervention and painting, storytelling, story making for context broadening [9,10]
Exclusion Criteria	Outcome measure	Participation in daily activities
	Population	Children/adolescents/old people/elderly people, other diagnoses (with depression and/or anxiety not being primary) or without diagnose
	Review Topic	Other techniques (music/art therapy)
	Sources for Synthesis	Other (e.g. systematic reviews, case studies etc.)
	Topic	Out of the topic of TTM and its components
Outcome measure	Other than participation in daily activities	

4

Study Identification

- References identified through database searches and imported into **EndNote**
- Duplicates removed** and final count agreed by both authors
- Independent screening** by two reviewers (titles → abstracts → full texts)
- Studies meeting **inclusion criteria** selected for critical appraisal
- Manual reference list search** conducted
- Disagreements resolved by discussion**



5

Data Extraction & Analysis

- Data independently extracted from full texts by **two reviewers** using a standardized template (Database, Title, Authors, Participants (country), Purpose, Method/ Design, Outcome measures, Results (test statistic, p-value, Effect sizes), Evidence)
- **Descriptive analysis** conducted for all included studies
- **Treatment effects** calculated for continuous outcomes (intervention vs comparison)^[26]
- **Effect sizes** computed:
- Cohen's *d* (within-group)^[27]
- Effect sizes interpreted through rules of thumbs as **small (0.2), medium (0.5), large (0.8)**^[30]

6

Quality Appraisal & Risk of Bias

- Study quality and **risk of bias (RoB)** critically appraised^[31]
- **CASP checklists** used according to study design^[32]
- Appraisal conducted **independently by two reviewers**
- **Consensus reached through discussion**, supported by supervisor
- **Level of evidence** rated using **OCEBM hierarchy** (Levels 1–5)^[33]

Results – Study Characteristics

- **Search results:** 661 papers → 4 included (PRISMA)
- **Study type:** 1 RCT 3 follow-up studies (3 studies share participants)
- **Location & participants:** *All in Sweden*; total non-duplicated participants = 149
- **Population:** Adults with depression and/or anxiety (18–64 yrs, mostly women, n=125)
- **Intervention:** TTM, 5 sessions over 6–9 weeks [22-25]
- **Comparison:** Regular OT of same duration and individualized structure
- **Outcomes:** Pre-post TTM [22], TTM vs OT [23], follow-up [24], correlation with occupational balance [23-24]

Results – Outcomes & Effect Sizes

Outcome Measures:

- Canadian Occupational Performance Measure (COPM) (performance₍₁₎, satisfaction₍₂₎) [22-24]
- Satisfaction with Daily Occupation (SDO) (activity level₍₁₎, satisfaction₍₂₎) [22-25]
- Occupational Balance Questionnaire (OBQ) [23-25]
- All validated with good reliability in the Swedish context

Short-Term (Immediate) Effects:

RCT [23] comparing TTM vs regular OT:

- COPM: performance (**p=.60**), satisfaction (**p=.59**) → no significant difference
- SDO: activity (**p=.65**), satisfaction (**p=.34**) → no significant difference
- Both groups showed improvement from baseline in all areas, except for satisfaction in SDO
- OBQ: no significant differences (p=1.00), improvement was evident for both interventions

Results – Outcomes & Effect Sizes

Long-Term Effects:

TTM alone (3-year follow-up) [22]:

- COPM: performance & satisfaction $p < .001$ → **significant improvement**
- SDO: stable

TTM vs regular OT (3–12 month follow-up) [24]:

- COPM & SDO: improvements **within** both groups ($p < = 0.01$)
- **Effect sizes:**
- COPM: **E.S.₍₁₎ = .88, E.S.₍₂₎ = 1.51** (within TTM), E.S.₍₁₎ = .12, E.S.₍₂₎ = .15 (between groups)
- SDO: E.S.₍₁₎ = .19, E.S.₍₂₎ = .53 (within TTM), E.S.₍₁₎ = .14, E.S.₍₂₎ = .22 (between groups)
- OBQ: significant progress within groups (**E.S._(T) = .75**), (**E.S._(C) = .99**), but **no difference between groups** ($p = .68$, E.S. = .16)

Additional findings

Certain aspects of occupational balance (3/11) were associated with occupational satisfaction **directly after the intervention** (E.S. = 0.59–0.79), and different aspects directly after the intervention **predicted satisfaction 12 months later** (E.S. = 0.60) [25]

Critical Appraisal & Level of Evidence

Tool used: quality appraisal **CASP**

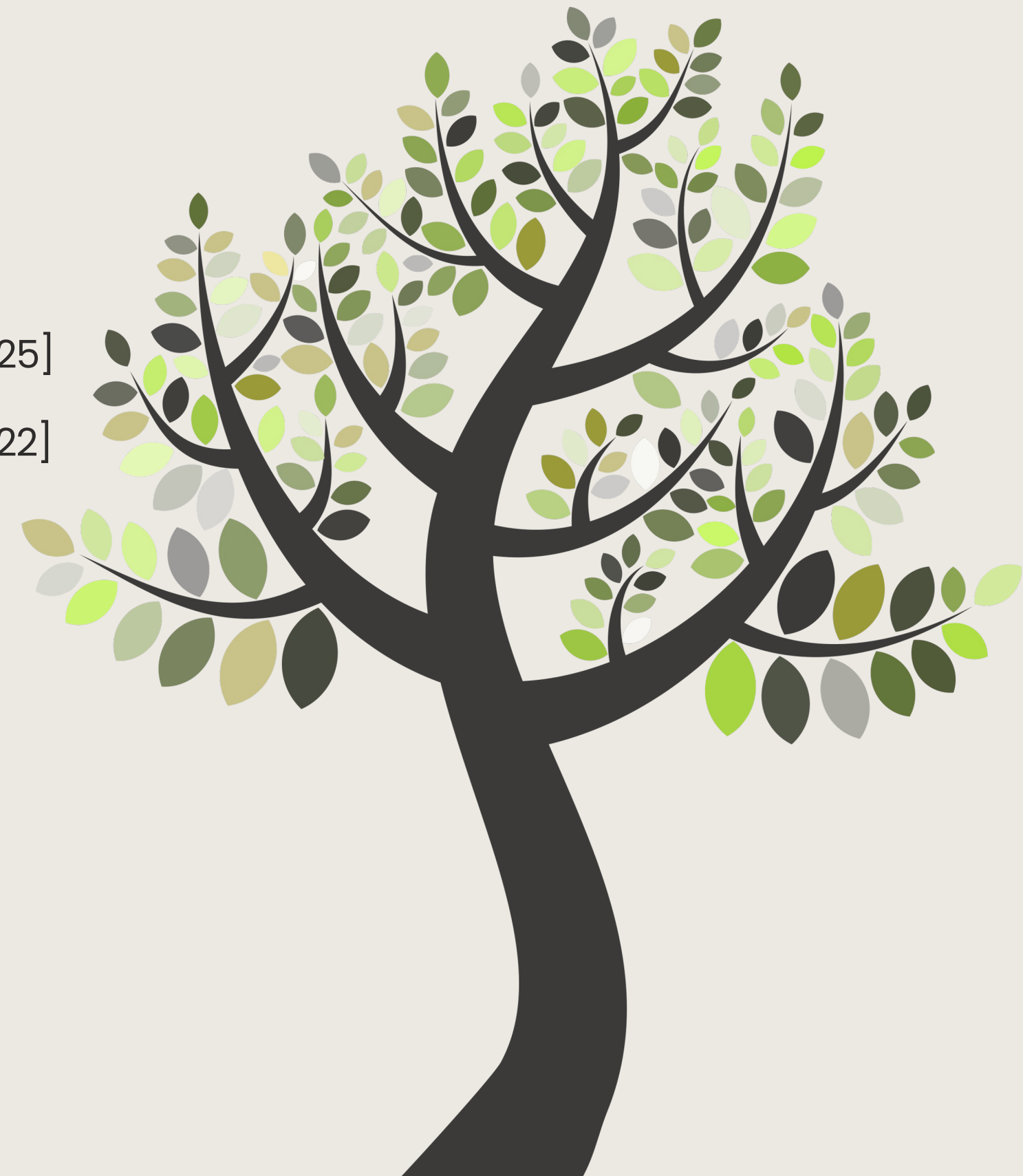
from 55% to 74%

Evidence levels:

- Level II: 1 RCT–(55% CASP)^[23]
- Level III: 2 follow-ups from RCT (65% to 74% CASP)^[24–25]
- Level IV: 1 follow-up from a cohort study (56% CASP)^[22]

Main methodological concerns:

- Same therapist delivered both interventions ^[23–24]
- Small sample sizes → low confidence intervals ^[25]
- Long-term follow-up → potential threats to internal validity (history/maturation) ^[22,24]
- Reported dropouts ^[22–25]



Discussion

Evidence is limited: Only four studies met full criteria;

- **Short-term TTM vs OT:** No significant effect on participation in meaningful daily activities.
- **Long-term TTM:** Within-group effect sizes generally large; between-group effect sizes small.
- **Data limitations:** Missing means and effect sizes reduced study quality, limiting conclusions.

Need for better evaluation of outcome measures:

- COPM is subjective and may vary across clients and therapists [42]
- Additional or more objective measures are needed.

Occupational balance:

- OBQ: **Medium-to-large effects** were observed in 3 of 11 occupational balance aspects. The rating as low-quality may indicate more robust studies are warranted.
- **Recent TTM research (2025) exploring interactions between occupational balance and satisfaction suggested that post TTM satisfaction was predicted by variety of occupations and balance in work and household/maintenance**, whereas leisure, self-care, or overall time allocation, did not emerge as significant predictors^[51]

Limitations & Future Implications

Limitations:

- Small, non-independent samples; all studies from **Swedish context**
- English-only search may have missed other studies
- Outcome measures (COPM, SDO, OBQ) have **subjectivity and context limitations**
- Short-term results inconclusive; long-term improvements promising but need caution

Future Implications:

- Need **larger RCTs** with objective outcome measures
- Include **diverse populations**, especially men
- Consider **cost-effectiveness** in future research [50]

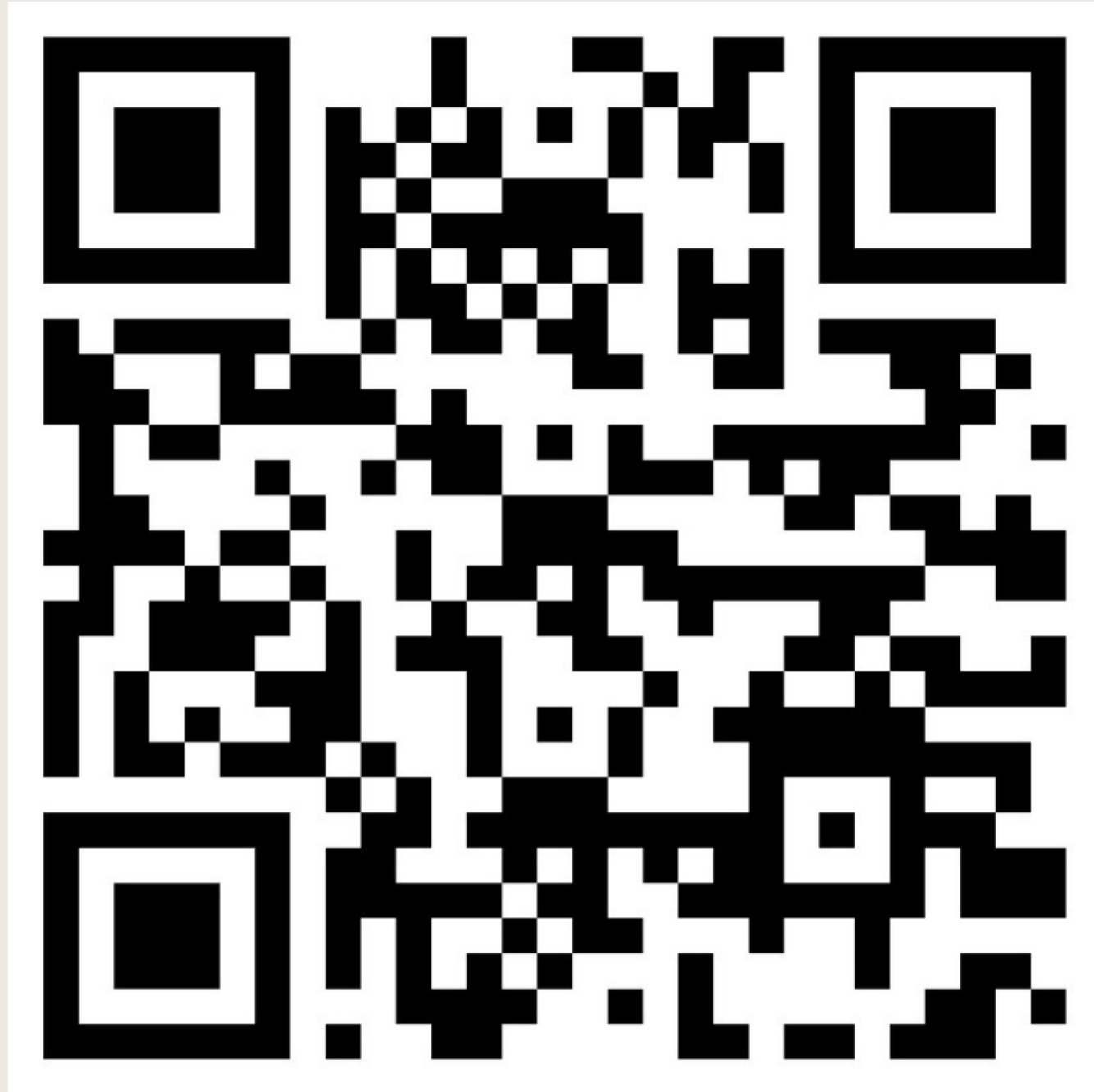


Conclusions

- TTM shows **potential as a client-centred OT intervention** for enhancing participation
- Evidence is limited and **moderate**, not high → **further research needed** to confirm clinical significance
- Improvements observed with TTM, but **insufficient evidence to conclude superiority over other OT interventions**
- Future research needed to clarify **effectiveness and long-term impact**, including more reliable outcome measures



References



THANK YOU!