PSYCHOTHERAPY SUPERVISION IN SCIENTIFIC LITERATURE: WHAT CAN A BIBLIOMETRIC LENS REVEAL?

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Abstract: Therapeutic efficacy, competency development, and professional development all depend on psychotherapy supervision in great measure. Using data from the Web of Science Core Collection, this work investigates the co-occurrence of keywords in the scientific literature on psychotherapy supervision using bibliometric analysis. Analyzed were386 papers in total, finding 937 distinct keywords of which 139 satisfied the minimal co-occurrence criterion of three. We produced network and overlay visualizations to map theme structures and changing research trends using VOSviewer. Key groupings discovered by the study included competency, therapeutic partnerships, nondisclosure, and multicultural issues in supervision underlining competence and supervision paradigms. Results show a growing emphasis on evidence-based supervision, professional development, and the part that disclosure dynamics and culture play in supervising relationships. The results offer a methodical summary of study paths and draw attention to important topics for further psychotherapy supervision investigation.

Keywords: Bibliometric analysis, psychotherapy supervision, keyword co-occurrence, professional development, supervision models, therapeutic alliance, evidence-based supervision

1. INTRODUCTION

Under a controlled, professional relationship, experienced therapists guide, mentor, and review less experienced therapists or candidates to improve their therapeutic skills, ethical decision-making, and professional identity (Watkins, 2012). It is fundamental in the

growth of psychotherapists since it guarantees that practitioners follow ethical standards, keep therapeutic effectiveness, and always improve their competence (Weerasekera, 2013). Many agree that good supervision is a tool for reducing therapist burnout, promoting professional development, and finally enhancing client outcomes (Creaner, 2014). Still, the supervisory process is complicated by different theoretical orientations, relationship dynamics, and competency-based models (Beinart, 2014).

Though important, psychotherapy supervision is still a discipline with conceptual uncertainties and training, assessment, and best practices inconsistent practices (Rojas, Arbuckle, & Cabaniss, 2010). Research shows that variables including the supervisor's training, the existence of formal agreements, and the capacity to negotiate power dynamics in the supervisory relationship can greatly affect the quality of supervision (Nelson & Friedlander, 2001; Worthington & Stern, 1985). Furthermore, conflictual supervisory interactions could impede professional growth, thereby stressing the need of better frameworks and organized approaches (Watkins Jr, Cădariu, & Vîşcu, 2024).

A bibliometric study of psychotherapy supervision offers a special chance to methodically map its intellectual terrain, expose important research trends, and pinpoint important publications influencing the discipline. Although narrative reviews and meta-analyses have added to the conversation, a bibliometric method lets one examine keyword co-occurrence, citation networks, and changing themes over time data-drivenly (Watkins, 2012.). Advancing both academic research and clinical training depends on the identification of dominating research themes, new areas of interest, and possible gaps among the growing body of literature in this field (Watkins, Vîşcu, & Cădariu, 2021).

This study aims to provide a comprehensive bibliometric analysis of the psychotherapy supervision literature, addressing the following key research questions:

- What are the dominant research themes in psychotherapy supervision?
- How have key concepts and theoretical models evolved over time?
- Which authors, journals, and publications have had the greatest influence on the field?
- What emerging topics or gaps in supervision research can be identified for future exploration?

This work aims to highlight the structure and path of psychotherapy supervision research by means of keyword co-occurrence analysis and citation mapping. This kind of strategy will not only assist to clarify already in use conceptual frameworks but also draw attention to urgent field needs (Watkins, Cădariu, Vîşcu, & Viliūnienė, 2024).

Several important contributions come from a methodical study of psychotherapy supervision using bibliometric analysis. First, it offers an empirical basis for comprehending the change in theoretical orientations, training approaches, and competency-based models (Watkins, 2012; Beinart, 2014), therefore enabling scholars and practitioners to identify changes in these areas. Second, by means of major publications, eminent researchers, and citation networks, this study helps to provide a more methodically coherent knowledge of how supervision scholarship has evolved (Hall, Macvaugh, Merideth, & Montgomery, 2007).

Moreover, considering the increasing emphasis on evidence-based treatment, it is necessary to understand the function of supervision in therapist development, ethical decision-making, and competency evaluation (Weerasekera, 2013). Previous research have

underlined ongoing difficulties including parallel processes in supervision (Watkins Jr, 2012), liability issues (Hall et al., 2007), and the incorporation of defined learning objectives (Rojas et al., 2010). Through mapping the intellectual conversation, this study offers insights on best practices, unsolved conflicts, and future options for enhancing monitoring systems.

By providing a data-driven viewpoint on the past, present, and future orientations of psychotherapy supervision research, this study eventually supports both academic literature and professional practice. A bibliometric analysis is a useful tool for guiding evidence-based, efficient, and ethically sound supervision practices as supervision changes in response to developments in clinical psychology, technology, and multicultural concerns (Watkins, 2012; Watkins et al., 2021).

2. METHODOLOGY

This work performed a thorough bibliometric analysis of psychotherapy supervision research using the Web of Science Core Collection, a generally acknowledged and authoritative database for high-impact academic articles. Selected for its extensive coverage of peer-reviewed publications, citation data inclusion, and capacity to monitor research trends over time was the Web of Science database. Web of Science is a recommended choice for bibliometric studies in psychology and allied disciplines since it guarantees excellent indexing and citation accuracy unlike other databases (Watkins, 2012).

Regarding data retrieval, the search term "psychotherapy supervision" helped to find pertinent works. To find a wide range of material on the subject, the search was run in all accessible fields - title, abstract, and keywords. After386 records were produced by this method, they were examined to find important field-based intellectual contributions, main trends, and prominent themes. Choosing a single, clearly defined search term guaranteed accuracy and reduced pointless items that would weaken the study.

After data retrieval, the bibliometric analysis's accuracy and dependability were improved by means of a systematic data cleaning process. Originally comprising 937 distinct terms, the dataset reflected a broad spectrum of study subjects on psychotherapy supervision. Not every keyword, nevertheless, was equally often occurring or significant. Using a minimum co-occurrence criteria of three, the study was refined such that only keywords showing at least three times in the dataset were kept for additional study.

Bibliometric best practices guided the selection of this criterion, so balancing analytical clarity with inclusivity. A lower criteria might have included unusual or isolated terms with little effect on the field, while a higher barrier might have excluded newly developing research trends. 139 keywords satisfied the inclusion requirements after applying the threshold, therefore enabling a more ordered and significant analysis of the terrain of supervising research.

Semantic links between often used phrases in the dataset were found by means of a keyword co-occurrence analysis. This approach looks at how frequently particular keywords coexist in books, therefore exposing underlying research themes, conceptual frameworks, and topic clusters (Watkins, 2012). Through mapping these interactions, the study offers understanding of how psychotherapy supervision has changed and which fields have drawn greatest scholarly interest.

A network visualization created with VOSviewer, a specialist bibliometric research tool, helped us investigate keyword associations even more. Based on co-occurrence frequencies, VOSviewer generates clustered maps showing the strength of links between keywords. These clusters indicate how closely various ideas in psychotherapy supervision are connected by theme groupings of study subjects. Within the larger literature, the network visualization aids in the identification of core study domains, peripheral issues, and developing subfields.

Apart from network visualization, temporal trends in psychotherapy supervision study were investigated using overlay visualization. This method lets keywords have a color gradient depending on their average year of publication, therefore enabling an easy chronological mapping of research advances. By means of this approach, more recent trends (e.g., cultural humility, telehealth monitoring) can be separated from earlier basic themes (e.g., supervision models, competency), therefore offering a dynamic viewpoint on the development of the profession.

A citation analysis was conducted to pinpoint the most referenced authors and works in psychotherapy supervision research, therefore evaluating the impact and influence of important publications. Highly cited works show fundamental research or major contributions that have shaped the field. Leading scholars, historic theoretical models, and important debates that still shape modern supervision techniques are helped to be identified by this study (Watkins et al., 2021).

This work offers a thorough, data-driven driven analysis of psychotherapy supervision research by combining these bibliometric approaches. The results emphasize theme links, support a more ordered knowledge of research trends, and provide insightful analysis for next studies on psychotherapy supervision.

3. RESULTS

The bibliometric analysis of psychotherapy supervision research revealed significant trends and thematic developments over time. A total of 386 publications were retrieved from the Web of Science Core Collection, covering a broad spectrum of topics related to psychotherapy supervision. These publications included empirical studies, theoretical discussions, and systematic reviews, reflecting the multifaceted nature of supervision in psychotherapy training and professional development.

The dataset contained 937 unique keywords, of which 139 met the minimum co-occurrence threshold (≥ 3 occurrences). The selection of a minimum threshold ensured that only frequently occurring and thematically relevant terms were included in the analysis, thereby enhancing the clarity and interpretability of the findings. The keyword co-occurrence network analysis identified four distinct thematic clusters, each representing a core research focus within psychotherapy supervision (Figure 1).
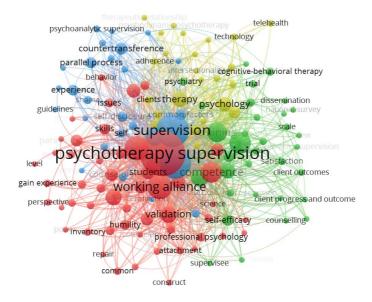
Figure 1. Network visualization

In terms of publication trends, early research (pre-2010) focused heavily on supervision models, competence frameworks, and developmental approaches to training (Anderson, Rigazio-DiGilio, & Kunkler, 1995; Auckenthaler, 1999). The period from 2010 to 2017 witnessed an expansion of research into relational dynamics, including the supervisory alliance, nondisclosure, and ethical considerations (Watkins, 2014; Ögren & Sundin, 2009). More recent studies, particularly from 2018 onward, reflect a growing interest in technology-enhanced supervision, multicultural competence, and evidence-based supervision practices (Murphy et al., 2019; Plakun, 2023), like depicted in Figure 2.
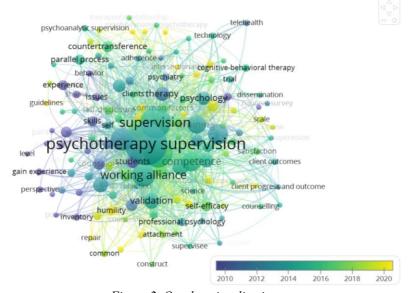

Figure 2. Overlay visualization

The bibliometric analysis identified four major thematic clusters, representing the intellectual landscape of psychotherapy supervision research. These clusters highlight key areas of scholarly inquiry and reveal the evolving nature of the field (Table 1).

Table 1. Keyword co-occurrence and citation metrics in psychotherapy supervision research

label	x	y	cluster	weight <Links>	Weight <Total link strength>	Weight <Occurrences>	score<Avg. pub. year>	score<Avg. citations>	score<Avg. norm. citations>
assessment	0.1974	-0.8547	1	19	24	3	2017.667	7	0.5663
attachment	0.0788	-0.867	1	24	39	5	2018	15.8	1.1214
behavior	-0.5645	0.5484	1	22	26	4	2007	27	1.4593
benchmarks	0.0054	-0.696	1	28	50	6	2015.833	15.8333	1.3589
common	-0.4326	-1.0363	1	14	25	5	2018.4	3.8	0.2977
competence	0.335	-0.225	1	88	266	38	2015.474	18.8421	1.0472
construct	-0.0109	-1.13	1	21	26	3	2017.333	8.6667	0.3913
counselor	-0.2505	-0.7349	1	20	25	3	2018	16	0.6252
counselor supervision	-0.9425	-0.067	1	12	13	3	2002.333	39	2.0739
counselors	-0.4812	-0.2452	1	42	76	13	2010.769	12.9231	0.5804
culture	0.4278	-0.7479	1	11	14	4	2012.75	33	1.3169
developmental model	-0.6519	-0.4986	1	25	35	5	2004.6	23.6	2.4235
disclosure	-0.4933	-0.7034	1	35	53	7	2019.143	8.7143	0.6653
education	0.3849	-0.0427	1	36	67	14	2013.286	31.8571	1.557
efficacy	-0.2078	0.4842	1	30	38	7	2012.571	21.4286	0.8354
events	-0.5669	-0.3566	1	33	52	7	2013.571	48.2857	2.0636
evidence-based supervision	0.6023	-0.7222	1	12	15	3	2013.667	24.3333	1.3678
experiences	0.0649	-0.305	1	56	119	15	2017.067	35.7333	2.5263
gain experience	-1.0046	-0.317	1	18	27	5	2002.6	59.2	2.4112
gender	-0.4004	-0.0697	1	38	63	10	2011.3	27.7	1.2959
group supervision	-0.7229	-0.3266	1	16	19	6	2013.333	12.6667	0.5839
humility	-0.3684	-0.6575	1	37	64	8	2020.875	14.25	1.2602
inventory	-0.674	-0.7156	1	24	34	5	2006.8	54.2	2.6348
issues	-0.4974	0.3397	1	20	22	7	2005.857	21.8571	1.256
level	-1.1085	-0.1581	1	11	13	3	1999.333	29.3333	1.3613
live supervision	-0.8918	0.0474	1	18	21	3	2000.667	24.6667	1.9915
model	-0.2767	-0.0286	1	84	278	51	2012.549	26.1176	1.266
national survey	-0.8093	-0.082	1	12	15	5	2007.2	30	1.5526
nondisclosure	-0.243	-0.3461	1	57	114	14	2016.929	17.1429	1.7436
nondisclosure in psychotherapy supervision	-0.8902	-0.5136	1	7	7	3	2009	10.6667	0.4604
parallel processes	-0.7652	0.0323	1	33	59	12	2008.833	35.25	1.6422
perceptions	-0.1919	-0.6096	1	48	94	13	2011.615	53	2.6202

label	x	y	cluster	weight \<Links>	Weight \<Total link strength>	Weight \<Occurrences>	score\<Avg. pub. year>	score\<Avg. citations>	score\<Avg. norm. citations>
perspective	-0.9982	-0.4733	1	16	22	4	2000.5	74.75	3.0473
power	-0.8567	-0.6965	1	12	16	3	2009.667	17	0.5942
process research	-0.7998	0.2133	1	18	21	3	2015.333	18.3333	1.0469
professional development	-0.3557	-0.523	1	20	27	6	2015.167	8.8333	0.6437
professional psychology	0.2493	-0.7578	1	29	42	7	2013.143	36.1429	1.7935
psychologists	-0.579	-0.135	1	19	22	4	2003.5	65.75	2.3548
psychotherapy supervision	-0.0652	-0.0738	1	131	832	174	2013.558	20.8391	1.217
psychotherapy training	-0.3033	0.4402	1	36	57	16	2013.688	18.5	0.9994
repair	-0.5492	-0.899	1	14	21	3	2019.667	1.6667	0.1592
science	0.3458	-0.4862	1	19	24	3	2015	7	0.5328
skills	-0.5382	0.1305	1	44	63	10	2010.5	36.2	1.7088
students	-0.1807	-0.2262	1	49	73	16	2008.5	22.4375	1.6524
supervisee nondisclosure	-0.2859	-1.0019	1	19	27	4	2019.75	9	1.0067
supervision process	-0.1078	-0.8742	1	22	31	4	2020	1.25	0.206
supervisory working alliance	0.3126	-0.5982	1	26	46	6	2019.333	12	1.8975
therapist	-0.8028	-0.4768	1	19	25	5	2012	36.8	1.9955
therapist training	0.6177	-0.6117	1	20	26	3	2018.333	54.6667	3.1015
trainees	-0.4632	-0.4309	1	61	153	23	2013.348	34.2609	1.7509
validation	-0.0167	-0.5727	1	69	179	24	2014.292	31	1.3703
working alliance	-0.0867	-0.3466	1	94	351	51	2014.451	26.1373	1.6144
care	0.655	0.3451	2	19	25	6	2007.833	16.5	0.6831
client outcomes	1.0684	-0.2283	2	15	22	4	2014	32	1.4456
client progress and outcome	1.0994	-0.4476	2	11	20	3	2012.667	38	1.7051
cognitive-behavioral therapy	0.8128	0.5978	2	26	35	6	2015.333	21.1667	0.8791
competency	0.7075	0.2225	2	19	29	4	2019.25	14.75	1.4535
counselling	0.9416	-0.6215	2	18	23	3	2016	75.6667	3.5603
depression	0.616	0.6614	2	16	19	3	2016.333	13.6667	0.7922
dissemination	0.9377	0.3595	2	18	24	3	2015	34	1.9642
feedback	0.2629	0.3179	2	27	33	4	2016	18	1.3747
framework	0.6095	0.0889	2	25	27	4	2017.25	27.25	3.0192
impact	0.2387	-0.2727	2	67	173	26	2014.808	15.3077	1.1283
models	0.7017	-0.0528	2	27	35	5	2016.2	12.4	0.9277
multicultural supervision	0.4919	-0.3958	2	27	43	5	2019.4	16.6	2.1221
national-survey	1.0026	0.285	2	9	10	3	2012.667	15.3333	0.8185
observing competence	0.6402	-0.1589	2	25	35	4	2017.75	17	1.4926
patient	0.9	-0.4357	2	24	29	3	2021.333	21	2.7774
patient outcomes	0.4763	-0.0959	2	46	83	10	2015.3	20.5	1.3564

label	x	y	cluster	weight \<Links>	Weight \<Total link strength>	Weight \<Occurre nces>	score\<Avg. pub. year>	score\<Avg. citations>	score\<Avg. norm. citations>
psychiatry	0.1054	0.513	2	15	17	6	2011.667	9.5	0.9028
psychotherapy	0.5683	0.0152	2	66	175	40	2013	19.125	1.023
psychotherapy research	0.695	-0.4068	2	17	22	3	2016.333	6	0.3443
quality	0.7579	0.0273	2	25	34	5	2012.6	18.2	1.3422
residents	0.924	0.2537	2	8	9	3	2010.333	11.3333	0.986
review	1.0493	0.0766	2	22	26	3	2019.333	31	2.8308
satisfaction	0.9097	-0.138	2	24	38	5	2017	21.4	1.2955
scale	0.9521	0.1436	2	23	30	4	2019	16.5	1.395
self-efficacy	0.471	-0.6197	2	45	96	11	2017.182	28.0909	2.1865
social-work supervision	1.034	-0.0157	2	20	24	3	2015	67.3333	3.574
supervisee	0.3201	-0.97	2	20	31	3	2015.333	62.6667	2.1677
supervisors	1.1092	-0.6062	2	11	16	3	2014.667	22.6667	1.3231
systematic review	0.5816	-0.9426	2	20	26	3	2013	63.3333	2.0165
therapists	0.4712	-0.2167	2	60	140	19	2014.895	23.8947	1.3709
training	0.3822	0.0989	2	73	197	33	2013.606	23.3333	1.2601
trial	0.6713	0.497	2	31	40	5	2014.2	27.8	1.5022
alliance	-0.1313	0.0629	3	72	162	26	2017.039	14.6923	1.1058
anxiety	0.065	0.6838	3	14	15	3	2011.667	6	0.7333
attachment theory	0.0448	-0.0382	3	15	20	4	2015.75	13.75	0.8702
clinical supervision	0.0419	-0.1531	3	120	471	83	2015.868	20.253	1.2207
cognitive behavioural therapy	-0.1849	0.9156	3	22	30	3	2021	4	0.7764
common factors	0.0854	0.2429	3	32	57	10	2016.6	14.2	0.9733
conflict	-0.5383	-0.0184	3	28	40	5	2016.2	37.6	1.7277
countertransferenc e	-0.4004	0.7831	3	36	59	12	2016.25	10.1667	0.9217
experience	-0.7939	0.4473	3	23	37	10	2002.3	15.4	0.6338
exploration	0.205	-0.5619	3	33	53	6	2019	11.3333	1.3828
grounded theory	-0.6949	0.2188	3	15	15	3	2015.333	10.6667	1.2303
guidelines	-0.9411	0.2894	3	10	11	3	2021.667	3.3333	0.5175
interpersonal behavior	-0.8769	0.6282	3	9	11	3	2015	25	1.443
parallel process	-0.6474	0.6707	3	24	44	11	2014.909	10.0909	0.7198
perspectives	-0.7252	-0.2114	3	20	24	3	2016	7.6667	0.3398
pressing needs	-0.3729	0.6157	3	21	27	4	2013.5	29.75	1.1365
psychoanalytic supervision	-0.601	0.947	3	17	26	4	2015	12.75	0.9801
psychodynamic	-0.479	0.9294	3	13	17	3	2019	4	0.587
real relationship	-0.3048	0.1524	3	32	46	6	2016.167	22.3333	1.501
reflection	-0.1565	-0.446	3	13	15	3	2013.667	10.3333	0.9172

label	x	y	cluster	weight \<Links>	Weight \<Total link strength>	Weight \<Occurre nces>	score\<Avg. pub. year>	score\<Avg. citations>	score\<Avg. norm. citations>
self	-0.4037	0.0926	3	29	33	6	2013	13.8333	1.0691
self-disclosure	-0.3922	0.228	3	36	56	9	2017	12.2222	1.0775
shame	-0.6752	0.3646	3	14	19	6	2000.333	23.8333	0.8786
supervision	0.0147	0.115	3	120	505	93	2014.634	17.9785	1.0981
supervisor	-0.3876	-0.2673	3	21	33	6	2018.5	2.8333	0.65
supervisory alliance	-0.9131	0.4647	3	14	17	3	2018.333	7.6667	0.8371
time	-0.4827	0.7063	3	21	26	4	2013.5	33	1.6807
transference	-0.5533	0.83	3	26	36	4	2018.75	13.5	1.0584
adherence	-0.1299	0.6812	4	23	28	4	2013.25	22	0.92
burnout	0.2678	0.1917	4	15	16	3	2021.667	7	1.5588
client feedback	0.5104	0.4941	4	23	34	4	2017	20	1.3153
clients	-0.1769	0.3671	4	23	29	5	2016.2	15	0.7439
clinical training	0.137	-0.1557	4	11	14	3	2021.333	3.3333	0.6758
clinician	0.1988	0.7397	4	18	19	3	2015	13.3333	0.7988
competences	-0.0753	0.9172	4	23	27	3	2020.333	11.3333	1.0891
counseling psychology	0.2536	0.5307	4	15	18	3	2016.667	16	1.3854
cultural humility	-0.1172	0.1594	4	35	55	10	2021.9	11	1.3818
deliberate practice	0.1026	0.9124	4	19	24	3	2024	0.3333	0.4706
effective supervision	-0.0406	0.7453	4	24	28	3	2015.333	26	1.1876
intersectionality	0.2112	0.6048	4	7	8	3	2020	28.3333	3.8173
metaanalysis	0.3078	0.8576	4	23	27	3	2015.333	12.3333	0.6376
multicultural competence	0.2069	0.1218	4	42	66	9	2017.111	14.4444	0.7418
multicultural orientation	-0.101	0.2473	4	30	47	5	2022.4	8.4	2.4387
outcomes	0.5217	0.2646	4	60	113	13	2019.231	13.6154	1.5551
psychodynamic psychotherapy	0.0281	0.9757	4	17	21	3	2015.667	10.6667	0.5231
psychology	0.4397	0.3333	4	54	122	18	2013.5	24.1111	2.214
racial microaggressions	0.3814	0.5395	4	28	38	4	2020	11.75	0.9569
supervisory relationship	0.2218	-0.0098	4	19	27	4	2016.75	26.5	1.8319
technology	0.5204	0.8807	4	20	27	4	2014.75	30.5	1.4383
telehealth	0.8193	0.9923	4	11	17	4	2011.75	46.25	2.3343
therapeutic relationship	-0.2144	1.0399	4	20	22	3	2017	5.6667	0.9747
therapy	0.0752	0.3708	4	61	112	20	2011.7	12.85	1.0785
video	0.5002	0.6321	4	24	31	5	2020	10.6	0.9141

1. Foundations of supervision: competence, training, and development (cluster 1 – core principles of effective supervision)

This cluster represents the foundational principles of psychotherapy supervision, emphasizing competency-based models, assessment methods, and structured training approaches. The most frequently occurring keywords in this cluster include competence, developmental model, professional development, education, training, and supervision models, all of which highlight the structured, theory-driven nature of supervision.

Supervision in psychotherapy has historically been framed around competency acquisition, ensuring that trainees develop the necessary clinical skills, ethical awareness, and professional judgment required for effective psychotherapeutic practice (Watkins, 2017; Westefeld, 2009). The shift toward competency-based supervision models reflects a broader trend in professional psychology and clinical training, emphasizing measurable skill development and evidence-based learning processes (Watkins Jr, 2012). These models are designed to provide a systematic approach to supervision, ensuring that supervisees progress through structured learning milestones that facilitate the integration of theoretical knowledge with practical application.

Competency-based supervision incorporates assessment strategies that evaluate supervisees' progress using both formative and summative assessments (Rojas, Arbuckle, & Cabaniss, 2010). Formative assessments - which occur throughout the training process - allow for continuous feedback and skill refinement, while summative assessments provide a final evaluation of the supervisee's readiness for independent clinical work (Watkins, 2012). These assessment techniques play a critical role in ensuring that supervisors can monitor and enhance supervisee development, thereby improving overall training outcomes.

The developmental model of supervision is another central theme in this cluster, emphasizing the progressive nature of skill acquisition in psychotherapy training (Ögren & Sundin, 2007). This model recognizes that supervisees undergo distinct developmental stages as they advance in their clinical expertise, with supervision needs evolving accordingly (Watkins, 2012).

- Early-stage supervisees require structured guidance, explicit instruction, and close monitoring as they build basic counseling and diagnostic skills.
- Intermediate-stage supervisees begin to integrate theoretical knowledge with practical experience, requiring more autonomy but still benefiting from active feedback and mentorship.
- Advanced-stage supervisees demonstrate increasing independence and professional identity formation, with supervision focusing on refining their therapeutic approach, ethical decision-making, and complex case conceptualization (Weerasekera, 2013).

The presence of developmental keywords such as "training," "professional development," and "competence" in this cluster suggests that the supervision process is conceptualized as an evolving trajectory, requiring tailored interventions at different career stages (Watkins Jr, 2017).

Educational institutions play a critical role in shaping effective psychotherapy supervision practices, as evidenced by the prominence of keywords related to education

and training models (Ögren & Sundin, 2007). Graduate training programs, professional accreditation bodies, and licensure requirements emphasize structured supervision as a mandatory component of psychotherapy education, ensuring that future practitioners meet high professional and ethical standards (Watkins, 2017).

A key trend identified in the literature is the increasing reliance on standardized training frameworks, particularly those that align with evidence-based supervision models (Plakun, 2023). This shift toward outcome-oriented supervision ensures that supervisees receive training that is measurable, reproducible, and accountable, aligning with broader trends in healthcare and mental health policy (Murphy et al., 2019).

Furthermore, professional development in supervision extends beyond initial training, with continuing education and supervisor training programs ensuring that experienced therapists continue to refine their supervision competencies (Watkins Jr, Cădariu, & Vîşcu, 2024). The integration of ongoing professional development initiatives ensures that supervisors remain updated on best practices, ethical considerations, and emerging research in psychotherapy supervision (Beinart, 2014).

The dominance of competence-related themes in this bibliometric analysis suggests that psychotherapy supervision remains strongly influenced by standardized training frameworks, particularly those emphasizing evidence-based practice and outcome-oriented supervision (Watkins, 2012). Research continues to support the need for structured, competency-based approaches, ensuring that supervision remains an effective, accountable, and ethically responsible process (Watkins, 2017; Westefeld, 2009).

Overall, this cluster underscores the foundational role of structured supervision models in psychotherapy training, highlighting the ongoing evolution of training methodologies, assessment strategies, and professional development standards that shape the next generation of psychotherapists and supervisors.

2. Supervisory relationship dynamics: alliance, nondisclosure, and power asymmetries (cluster 2 – interpersonal and ethical dimensions of supervision)

This cluster highlights the relational and ethical dimensions of psychotherapy supervision, focusing on key dynamics such as the supervisory working alliance, power differentials, nondisclosure, and parallel processes. The quality of the supervisory alliance has been widely recognized as a critical determinant of supervision effectiveness, drawing strong parallels with the role of the therapeutic alliance in psychotherapy (Watkins, 2014). Key concepts such as trust, perceptions of competence, humility, disclosure, and power relations emerge frequently in the bibliometric analysis, underscoring the centrality of interpersonal dynamics in shaping the supervisory experience.

The supervisory working alliance has been extensively studied as a predictor of supervision success, with research emphasizing its direct impact on supervisee development, learning outcomes, and overall satisfaction (Beinart, 2014). Much like the therapeutic alliance in psychotherapy, a strong supervisory alliance is characterized by mutual trust and respect, agreement on supervision goals and tasks (Watkins, 2012), and open communication that fosters professional growth (Watkins Jr, Vîşcu, & Cadariu, 2021). A well-established supervisory alliance promotes self-efficacy, skill development, and

emotional safety, allowing supervisees to discuss challenges without fear of judgment or punitive consequences (Nelson & Friedlander, 2001). Research suggests that when the supervisory relationship lacks trust or alignment, supervisees may engage in nondisclosure, withhold critical information, or experience heightened performance anxiety (Ladany & Walker, 2003).

One of the most frequently cited challenges in supervision is supervisee nondisclosure, which occurs when trainees withhold important information due to fear of negative evaluation, power asymmetries, or self-doubt about their competence (Ladany & Walker, 2003). Supervisees often refrain from disclosing clinical mistakes, countertransference reactions, personal insecurities, or difficulties with clients, fearing that such admissions might jeopardize their professional standing or lead to critical feedback (Watkins Jr, Cădariu, & Vîşcu, 2024). The bibliometric analysis indicates that nondisclosure remains a prevalent concern in psychotherapy supervision, with research highlighting the fear of negative evaluation as a primary driver of nondisclosure (Creaner, 2014), the impact of supervisor behavior (e.g., critical vs. supportive supervision styles) on supervisee openness (Nelson & Friedlander, 2001), and the role of trust and psychological safety in encouraging disclosure (Watkins Jr, 2017).

Studies have shown that when supervisors foster a culture of openness, collaboration, and nonjudgmental feedback, supervisees are more likely to disclose critical issues, engage in reflective practice, and develop a stronger professional identity (Rojas, Arbuckle, & Cabaniss, 2010). In contrast, authoritarian or overly evaluative supervision styles tend to suppress supervisee honesty, potentially limiting professional growth and client care quality (Watkins, 2012).

The inherent power dynamic in supervision presents another significant relational challenge. Supervisors hold evaluative authority, influencing supervisee career trajectories, performance assessments, and professional opportunities (Watkins, 2014). This imbalance of power can lead to supervisee hesitation in voicing concerns, challenging supervisor perspectives, or admitting uncertainties (Nelson & Friedlander, 2001). Power asymmetries can manifest in multiple ways, including decision-making control, where supervisors dictate case conceptualizations, interventions, and ethical decisions with little room for supervisee input (Worthington & Stern, 1985); performance evaluations, where supervisors assess clinical competence, interpersonal skills, and readiness for professional licensure, creating pressure for supervisees to conform to perceived expectations (Beinart, 2014); and ethical dilemmas, where supervisees may feel compelled to accept supervisor directives, even when these conflict with their own clinical judgment or ethical concerns (Watkins Jr, Cădariu, & Vîşcu, 2024).

Ethical supervision requires acknowledging and mitigating these power dynamics through transparent communication, collaborative goal-setting, and supervisor self-awareness (Hall, Macvaugh, Merideth, & Montgomery, 2007). Research indicates that supervisors who adopt a humility-based approach, actively solicit feedback, and recognize their positional authority can foster a more balanced and constructive supervision relationship (Watkins, 2012).

The concept of parallel process in supervision refers to the unconscious mirroring of therapeutic dynamics within the supervisory relationship (Watkins, 2012). This phenomenon suggests that issues emerging between therapist and client may unconsciously resurface between supervisee and supervisor, influencing both relational interactions and

case conceptualization (Watkins Jr, 2012). For example, a supervisee struggling with an overly dependent client may unconsciously adopt a dependent role in supervision, seeking excessive validation from the supervisor (Watkins Jr, 2017). A supervisor's frustration with a supervisee's perceived passivity may unknowingly reflect the supervisee's frustration with a disengaged client (Watkins, 2014). If a supervisee experiences resistance from a client, they may inadvertently demonstrate resistance toward supervisory feedback, reflecting a reciprocal process of interaction (Ögren & Sundin, 2007).

Recognizing and addressing parallel process is crucial for effective supervision, as unexamined relational dynamics can interfere with both supervisory learning and client care (Watkins Jr, 2017). Supervisors who remain attuned to relational patterns, unconscious reenactments, and transferential dynamics can help supervisees develop deeper self-awareness and clinical insight (Ladany & Walker, 2003).

Findings from this bibliometric analysis suggest a growing emphasis on ethical and relationally attuned supervision models, with increasing calls for enhanced transparency in supervisory expectations, feedback, and evaluations (Watkins Jr, Cădariu, & Vîşcu, 2024); greater sensitivity to power differentials and their impact on supervisee development (Nelson & Friedlander, 2001); stronger promotion of open dialogue, trust, and psychological safety in supervision (Beinart, 2014); and recognition of parallel processes and their influence on supervision effectiveness (Watkins, 2012).

As supervision models evolve, there is a clear shift toward fostering collaborative, ethically grounded, and emotionally supportive supervisory relationships (Watkins Jr, 2021). This movement aligns with the broader objective of enhancing the overall quality of psychotherapy training, ensuring supervisees feel empowered, competent, and ethically engaged in their professional development.

3. Cultural and theoretical perspectives in psychotherapy supervision (cluster 3 – multicultural competence and theoretical foundations)

This cluster represents the increasing emphasis on cultural responsiveness and theoretical foundations in psychotherapy supervision. As the field of psychotherapy continues to evolve, research has shifted toward a deeper understanding of how cultural, racial, and theoretical perspectives shape the supervision process. The necessity of culturally responsive supervision models has gained significant attention, particularly in training environments that prioritize diversity and inclusivity (Watkins Jr, Cădariu, & Vîşcu, 2024).

Supervision is not a culturally neutral process; it is embedded within broader societal and institutional contexts that influence both supervisors and supervisees (Creaner, 2014). Consequently, multicultural supervision has emerged as a critical area of research, highlighting the need for supervisors to develop cultural humility, address racial microaggressions, and integrate intersectional perspectives into their practice (Plakun, 2023). The presence of keywords such as multicultural supervision, cultural humility, and racial microaggressions in the bibliometric analysis indicates a growing commitment to making supervision more equitable and attuned to the diverse experiences of supervisees and clients alike.

Cultural humility, a key concept in contemporary supervision research, has been identified as an essential attitude for both supervisors and supervisees (Hook et al., 2016). Unlike cultural competence, which implies a finite level of knowledge mastery, cultural humility encourages a lifelong commitment to self-reflection, awareness of biases, and openness to learning from the cultural experiences of others (Rojas, Arbuckle, & Cabaniss, 2010). In psychotherapy supervision, cultural humility involves supervisors acknowledging their own limitations, actively seeking feedback from supervisees regarding cultural issues, and fostering a space where discussions of race, identity, and systemic oppression can occur without fear of judgment (Watkins Jr, 2012).

Intersectionality, another critical theme in this cluster, refers to the recognition that individuals hold multiple, interlocking identities (e.g., race, gender, sexual orientation, socioeconomic status) that shape their experiences in unique ways (Watkins Jr, Cădariu, & Vîşcu, 2024). Supervisors must be attuned to how these intersecting identities influence the supervision process, including power dynamics, implicit biases, and supervisee experiences of marginalization. Research has emphasized that when intersectionality is ignored, supervision risks reinforcing systemic inequities and failing to meet the needs of supervisees from underrepresented backgrounds (Murphy et al., 2019).

Beyond multicultural considerations, this cluster also reflects the enduring influence of psychodynamic and psychoanalytic traditions in supervision. The psychodynamic approach to supervision remains a dominant theoretical lens, particularly in relation to attachment processes, transference, countertransference, and unconscious dynamics between supervisors and supervisees (Auckenthaler, 1999). Studies have explored how supervisors and supervisees unconsciously recreate relational patterns from their own personal histories, which can either facilitate or hinder the learning process (Westefeld, 2009).

Attachment theory has provided a robust framework for understanding these relational patterns in supervision. Research suggests that supervisees with secure attachment styles tend to engage more openly in supervision, seek feedback constructively, and demonstrate greater clinical confidence (Watkins Jr, Vîşcu, & Cadariu, 2021). In contrast, those with insecure attachment patterns may struggle with authority figures, experience heightened anxiety in evaluative situations, or exhibit resistance to corrective feedback (Watkins, 2014). Recognizing these attachment dynamics allows supervisors to tailor their approach, offering increased support for supervisees with attachment insecurities while fostering autonomy for those with greater self-efficacy (Nelson & Friedlander, 2001).

Countertransference, a core concept in psychodynamic supervision, is also widely discussed in the literature (Auckenthaler, 1999). Supervisors, much like therapists, may experience strong emotional reactions toward their supervisees that stem from their own unresolved issues or unconscious projections (Watkins Jr, 2017). If left unexamined, these reactions can distort supervision dynamics, leading to unproductive interactions, favoritism, or unintentional reinforcement of supervisee insecurities. Effective supervision requires supervisors to engage in ongoing self-reflection, consultation, and, when necessary, their own supervision to manage countertransference reactions appropriately (Watkins Jr, Cădariu, & Vîşcu, 2024).

While psychodynamic supervision remains influential, research has also highlighted key distinctions between theoretical orientations in supervision practices.

Cognitive-behavioral supervision, for example, tends to be highly structured, focusing on goal-setting, skills acquisition, and measurable outcomes (Murphy et al., 2019). It emphasizes direct feedback, modeling, and reinforcement, making it particularly effective for trainees who benefit from clear guidance and concrete learning strategies (Watkins Jr, 2012). In contrast, integrative supervision approaches seek to combine elements from multiple theoretical orientations, recognizing that different supervisees may require different forms of support depending on their learning style, clinical cases, and professional development stage (Westefeld, 2009).

Findings from this bibliometric analysis suggest that psychotherapy supervision is becoming increasingly reflective of contemporary cultural and theoretical developments. There is a clear shift toward integrating multicultural awareness into supervision models, fostering cultural humility, and addressing issues of systemic inequity (Plakun, 2023). Simultaneously, theoretical traditions such as psychodynamic and cognitive-behavioral supervision continue to shape supervisory practices, offering complementary insights into the relational and technical dimensions of effective supervision.

As supervision research evolves, future directions may include greater exploration of intersectionality in supervision, further refinement of culturally responsive supervisory models, and expanded investigations into how theoretical orientations can be flexibly integrated to enhance both supervisee learning and client outcomes (Watkins Jr, Cădariu, & Vîșcu, 2024). This growing emphasis on cultural and theoretical sophistication in supervision underscores the field's commitment to fostering competent, ethically engaged, and socially responsive mental health professionals.

4. Innovation and contemporary trends in supervision research (cluster 4 – technological and evidence-based approaches in supervision)

This cluster reflects the rapid advancements in psychotherapy supervision driven by technology and evidence-based methodologies. The traditional face-to-face supervision model is increasingly supplemented - or, in some cases, replaced - by digital tools designed to enhance accessibility, efficiency, and effectiveness. With the rise of telehealth, online supervision platforms, and video-based supervision, the field is undergoing a significant transformation, embracing innovative strategies to meet the evolving needs of supervisees and supervisors alike (Gammon et al., 1998).

One of the most striking developments in contemporary supervision is the integration of technology as a central component of training and professional development. Keywords such as telehealth, video-based supervision, and technology underscore this shift, indicating a growing reliance on digital solutions for remote supervision, feedback delivery, and professional learning (Murphy et al., 2019). Virtual supervision platforms allow for real-time observation, immediate feedback, and recorded sessions that can be revisited for reflective learning and assessment.

Supervisors and training institutions have increasingly turned to video-based supervision as a means of enhancing the supervision process. Video recordings provide supervisees with opportunities to review their clinical sessions objectively, receive precise feedback from supervisors, and refine their skills through repeated observation and analysis. Research suggests that the use of recorded sessions leads to more accurate self-

assessments, improved case conceptualization, and enhanced communication between supervisors and supervisees (Watkins Jr, 2017).

The application of telehealth in supervision is particularly relevant in addressing geographical and logistical barriers. With the growing need for mental health services in rural and underserved communities, tele-supervision has become a viable alternative for trainees who may not have access to in-person supervision. Digital supervision platforms enable supervisees to receive high-quality mentorship from experienced supervisors regardless of location, expanding training opportunities and ensuring that supervision remains a structured, supportive process even in remote settings (Abbass et al., 2011).

The transition toward evidence-based supervision represents another defining feature of this cluster. Traditionally, supervision models were grounded in theoretical orientations without necessarily incorporating systematic evaluation of their effectiveness. However, contemporary supervision research emphasizes outcome-driven approaches that rely on data-informed decision-making, empirical assessment of supervision effectiveness, and the integration of systematic feedback mechanisms (Watkins Jr, 2017).

Feedback has become a cornerstone of evidence-based supervision, with research highlighting the importance of structured, real-time, and data-driven feedback mechanisms to enhance supervisee growth (Murphy et al., 2019). Keywords such as client feedback, clinical training, and systematic review indicate a growing emphasis on supervision models that prioritize measurable outcomes and continuous improvement.

Deliberate practice, a structured approach to skill development based on targeted repetition and performance feedback, has also gained attention in supervision research (Anderson, Rigazio-DiGilio, & Kunkler, 1995). By incorporating deliberate practice techniques into supervision, trainees engage in focused skill-building exercises that are directly tied to competency development. This evidence-based approach ensures that supervisees refine specific skills, track their progress, and receive constructive guidance tailored to their developmental needs.

Another notable trend in contemporary supervision research is the increasing reliance on systematic reviews and meta-analyses to synthesize findings and identify best practices. The presence of systematic review and meta-analysis as key terms in the bibliometric analysis suggests that supervision research is moving toward a more rigorous, research-based framework that integrates findings across multiple studies (Plakun, 2023).

Meta-analyses allow researchers to evaluate the effectiveness of different supervision models, identify common factors that contribute to positive supervision outcomes, and determine best practices for enhancing supervision efficacy. By systematically reviewing empirical studies, researchers can provide evidence-based recommendations for supervision training programs, ensuring that emerging supervisors are equipped with the most effective strategies to guide their trainees (Westefeld, 2009).

The integration of technology and data-driven methodologies in supervision is not just a passing trend but a fundamental shift in the field. As digital tools continue to evolve, future directions in supervision research may include artificial intelligence (AI)-assisted supervision, virtual reality (VR)-based training simulations, and machine learning algorithms that provide real-time performance analysis and tailored feedback (Murphy et al., 2019). These advancements have the potential to revolutionize supervision by offering personalized, adaptive training experiences that cater to the specific needs of supervisees.

Moreover, the widespread adoption of online and hybrid supervision models suggests that training institutions and mental health organizations will increasingly incorporate digital platforms into their supervision frameworks. The ongoing development of ethical guidelines and best practices for digital supervision will be critical in ensuring that technological innovations enhance, rather than diminish, the quality of supervision (Abbass et al., 2011).

The findings from this bibliometric analysis indicate that supervision research is experiencing a major paradigm shift. The increasing use of technology, systematic feedback mechanisms, and evidence-based supervision models highlights a growing commitment to improving the quality, accessibility, and effectiveness of psychotherapy supervision. As the field moves forward, continued research into the integration of digital tools, structured feedback processes, and empirical assessment methods will be essential in shaping the future of psychotherapy supervision. By embracing these innovations, the supervision process can become more adaptable, outcome-oriented, and responsive to the evolving needs of mental health professionals and the clients they serve.

3.1. Temporal trends in psychotherapy supervision research (based on overlay visualization)

The evolution of psychotherapy supervision research reflects shifts in theoretical frameworks, methodological approaches, and emerging challenges in the field. Using overlay visualization techniques, we can identify distinct periods of research focus, revealing how supervision scholarship has progressed from foundational competence-based models to contemporary, technology-enhanced, and culturally responsive practices.

Early research (pre-2010): competence-based models and developmental frameworks

In its initial stages, research on psychotherapy supervision was largely centered on competence-based training models, developmental frameworks, and standardized assessment practices (Anderson, Rigazio-DiGilio, & Kunkler, 1995; Westefeld, 2009). Supervision was primarily conceptualized as a structured, hierarchical process aimed at ensuring that trainees acquired the necessary clinical competencies, ethical awareness, and professional judgment to practice independently.

During this period, supervision research heavily emphasized developmental models, which outlined how supervisees progressed through stages of competency, from novice to expert. These models provided structured guidelines for supervisors to tailor their approaches based on the supervisee's skill level, emphasizing formative feedback, progressive skill-building, and competency assessments (Watkins, 2012).

Assessment practices were also a major focus, with studies exploring the reliability and validity of different evaluation methods in supervision. Researchers sought to establish standardized rubrics for assessing supervisee competence, performance, and readiness for independent practice (Ögren & Sundin, 2007). While these models contributed to a structured, goal-oriented supervision process, they were often criticized for being overly rigid, neglecting relational and contextual aspects of supervision (Beinart, 2014).

Mid-stage research (2010–2017): relational aspects and multicultural competence

By the 2010s, research began to shift toward exploring the interpersonal dimensions of supervision, particularly the supervisory alliance, power dynamics, and supervisee nondisclosure. Scholars recognized that effective supervision extended beyond competency assessments and technical training, requiring a strong working alliance between supervisors and supervisees (Watkins, 2014).

Studies during this period highlighted the central role of trust, openness, and mutual respect in fostering productive supervisory relationships. The supervisory alliance was increasingly viewed as analogous to the therapeutic alliance, with research emphasizing its impact on supervisee learning, professional identity development, and willingness to disclose struggles or uncertainties (Ögren & Sundin, 2009).

At the same time, multicultural competence emerged as a growing area of interest. As psychotherapy training programs became more diverse, researchers sought to examine how supervision practices could be adapted to better serve supervisees from different cultural backgrounds (Nelson & Friedlander, 2001). The concept of cultural humility, introduced in clinical supervision literature, encouraged supervisors to acknowledge their own biases, create culturally responsive supervisory environments, and integrate discussions on race, privilege, and identity into the supervision process (Hook et al., 2016).

A significant challenge identified in this era was supervisee nondisclosure, with research revealing that trainees frequently withheld critical information from their supervisors due to fear of judgment, perceived power imbalances, or concerns about their competence (Ladany & Walker, 2003). This led to calls for supervision models that emphasized psychological safety, allowing for greater openness and transparency in the supervisory relationship (Watkins, 2017).

Recent research (2018–2024): technological innovations, evidence-based supervision, and cultural responsiveness

The most recent period in supervision research has been characterized by the integration of technology, evidence-based supervision, and intersectionality into supervision practices. With advancements in digital tools and telehealth services, supervision has become more accessible and adaptable to diverse training settings. Keywords such as telehealth supervision, video-based supervision, and digital platforms reflect the increasing reliance on technology in supervision practices (Murphy et al., 2019).

Telehealth supervision has expanded opportunities for remote supervision, allowing trainees in rural or underserved areas to access high-quality mentorship without geographical constraints (Gammon et al., 1998). Studies have explored the benefits and limitations of video-based supervision, highlighting its effectiveness in enhancing clinical training while also addressing ethical concerns related to confidentiality, digital security, and rapport-building in virtual settings (Abbass et al., 2011).

At the same time, evidence-based supervision models have gained prominence, emphasizing structured feedback, deliberate practice, and outcome-driven approaches (Watkins, 2017). Researchers have increasingly called for supervision practices that are systematically evaluated for effectiveness, moving beyond traditional theoretical orientations to integrate data-driven decision-making (Plakun, 2023). The use of systematic reviews and meta-analyses in supervision research has provided valuable insights into best

practices, contributing to a more empirically grounded understanding of what constitutes effective supervision (Westefeld, 2009).

Additionally, cultural humility and intersectionality have become key themes in contemporary supervision research. There is a growing recognition that supervision must account for the complexities of race, gender, sexual orientation, and other intersecting identities (Watkins Jr, Cădariu, & Vîşcu, 2024). Supervision models are increasingly incorporating discussions on systemic oppression, privilege, and microaggressions, with an emphasis on creating inclusive training environments (Plakun, 2023).

Future research is likely to further explore artificial intelligence (AI) in supervision, virtual reality (VR)-based training simulations, and machine learning for performance assessment, reflecting a continued trend toward technologically enhanced, data-driven supervision models (Murphy et al., 2019).

The temporal trends identified through overlay visualization demonstrate how psychotherapy supervision research has evolved over the past decades. The field has progressed from competency-based and developmental models in the early years to a relational and multicultural focus in the 2010s, and now toward technological innovations and evidence-based approaches in the present day. As supervision research continues to adapt to new challenges and opportunities, future studies will likely explore even greater integration of digital tools, AI-driven supervision support, and culturally responsive practices to ensure that supervision remains effective, inclusive, and grounded in empirical evidence.

3.2. Citation and impact metrics

By stressing the most important subjects, writers, and issues influencing the discipline, the study of citation and impact measures helps one to grasp the intellectual framework of psychotherapy supervision research. Psychotherapy supervision was the most often appearing keyword in the dataset, therefore confirming its central topic in this corpus of work. Other high-frequency keywords reflecting the ongoing focus on organized, competency-based supervision frameworks meant to assure the efficacy of clinical training were supervision models, competency, and training (Watkins, 2017; Westefeld, 2009).

Beyond frequency analysis, the citation impact of particular subjects offers significant new perspectives on study goals. Highly referenced subjects like nondisclosure, working alliance, multicultural supervision, and systematic reviews suggested their critical importance in modern supervisory discourse (Ladany & Walker, 2003). The predominance of nondisclosure in citation measures highlights growing worries regarding the hidden dynamics in supervision relationships, where supervisees may conceal important information due of power imbalances, fear of negative evaluations, or concerns about perceived incompetence (Nelson & Friedlander, 2001).

Another commonly mentioned area that supports the notion that the quality of the relationship between supervisor and supervisee is a major factor of supervision efficacy is the supervisory working alliance (Watkins, 2014). Research in this field often look at how openness, trust, and rapport help to create an environment in which supervisees feel encouraged, appreciated, and driven to participate in reflective learning (Beinart, 2014).

Reflecting the growing focus on cultural responsiveness and the inclusion of intersectionality into supervision models, another very mentioned theme is multicultural

supervision. Studies on how cultural humility, racial microaggressions, and institutional prejudices affect the supervising process have resulted in demands for more inclusive and equity-oriented training frameworks (Plakun, 2023; Hook et al., 2016.). The field's movement toward evidence-based monitoring is further shown by the presence of systematic reviews as a widely cited research area, so stressing the importance of empirical validation of supervising models and methods (Watkins, 2017).

Examining co-citation patterns and citation networks exposes numerous important authors who have greatly influenced the discipline of psychotherapy supervision. Among the most often referenced academics, Watkins has been quite active in investigating evidence-based procedures, working alliances, and supervising models (Watkins, 2012, 2017). Combining developmental, competency-based, and interpersonal viewpoints, his work has offered fundamental insights on how supervision serves both as an educational and relational activity.

Likewise, Ladany and Walker (2003) are regularly recognized for their work on nondisclosure in supervision, providing actual data on the degree to which supervisees conceal knowledge and the elements influencing these dynamics. Their studies have greatly helped to shape modern debates on ethical duty, trust, and authority in supervising relationships.

Especially in their work on group supervision and its function in promoting collaborative learning, peer support, and various points of view in clinical training, Ögren and Sundin's (2009, 2007) influence is also noteworthy. The more often their work is cited, the more likely group supervision models - as a substitute or complement - are becoming popular.

Emphasizing the part of digital tools, feedback systems, and AI-driven support in modernizing supervision procedures, Murphy et al. (2019) and Plakun (2023) have also greatly added to the debate on technological advancements and evidence-based monitoring. Research on telehealth monitoring, video-based training, and technology-enhanced feedback systems is being cited more and more as supervision in response to digital revolution in mental health education changes.

Trends in citation over several eras show how the emphasis of supervision research has changed. Competency-based models and developmental frameworks predominated early research (pre-2010), with high citation counts for studies establishing organized training approaches (Westefeld, 2009). From 2010 to 2017, relational elements of supervision - including the working alliance, nondisclosure, and power dynamics - gained traction with rising citations for researchers researching these interpersonal features (Watkins, 2014; Nelson & Friedlander, 2001).

More lately, between 2018 and 2024, technological developments, evidence-based monitoring, and cultural humility have climbed in citation impact, signifying an increasing interest in including technology and cultural responsiveness into supervising procedures (Plakun, 2023; Murphy et al., 2019). In line with more general trends in psychological and educational sciences, the growing citation of systematic reviews and meta-analyses points even more toward a change toward data-driven decision-making in supervision research.

This bibliometric analysis offers important new perspectives on previous trends, present topics, and future directions in the discipline by mapping the intellectual structure of psychotherapy supervision research. From conventional competency-based models to

more sophisticated, relational, and evidence-based methods, the citation and effect analysis highlight a distinct progression.

Integrated, culturally sensitive, technologically advanced supervision models are becoming more and more important as research develops to satisfy the needs of contemporary clinical training. Future research should look at how newly developed technologies - such as virtual reality training simulations, artificial intelligence-assisted monitoring, and machine learning for performance evaluation - may improve the efficacy of monitoring still more. Research should also keep looking at how intersectionality, power, and institutionalized obstacles affect the supervising process so that training settings are fair, inclusive, and mirror of many points of view.

The results of this citation and impact study ultimately act as a road map for developing psychotherapy supervision research, so ensuring that supervising practices remain scientifically informed, ethically grounded, and flexible enough to meet evolving needs of clinical trainees and mental health professionals.

4. DISCUSSION

Four main theme clusters found by bibliometric analysis of psychotherapy supervision research reflect important trends and field advances. Emphasizing the relevance of competency-based supervision models, organized training, and professional development, the first cluster, foundations of supervision: competency, training, and development, stresses This result fits long-standing studies supporting evidence-based, outcome-driven monitoring strategies that give skill learning and assessment top priority (Watkins, 2017; Westefeld, 2009). The ongoing focus on competency models shows the dedication of the profession to guarantee that supervisees have excellent training compliant with ethical and clinical criteria (Weerasekera, 2013).

Reflecting growing awareness of the relational and ethical aspects of supervision, the second cluster, supervisory relationship dynamics: alliance, nondisclosure, and power asymmetries, the major themes of nondisclosure, supervisory alliance, and power differentials point to the fact that the quality of human relationships shapes the efficiency of supervision in addition to organized models (Watkins, 2014; Nelson & Friedlander, 2001). This is congruent with more general psychotherapy studies, which have repeatedly found that client results are much influenced by the therapeutic connection. Likewise, the function of nondisclosure in supervision has been well recorded; studies show that supervisees often hide information because of fear of bad evaluations or questions about their competency (Ladany & Walker, 2003). This result emphasizes the requirement of managers to foster trust, transparency, and a favorable supervising environment in order to enable good learning (Watkins & Riggs, 2012).

The third cluster, cultural and theoretical approaches in psychotherapy supervision, points toward more cultural responsiveness in supervision. The reoccurring themes of multicultural supervision, cultural humility, and intersectionality point to researchers and practitioners realizing more and more how institutional and cultural influences affect the supervising process (Plakun, 2023; Murphy et al., 2019). Attachment theory, psychodynamic frameworks, and theoretical diversity taken together show how urgently supervisors need customize their methods to meet various supervisee demands (Watkins Jr, Cădariu, & Vîşcu, 2024). This fits more general debates in the literature stressing the need

of cultural competency in clinical training and the need of supervision models addressing racial and identity-based dynamics in therapeutic practice (Johnson, 2019).

The fourth grouping, innovation and modern trends in supervision research, emphasizes the increasing importance of technology and evidence-based supervising techniques. Emerging telehealth supervision, video-based training, client feedback systems, and systematic reviews points to a digital revolution in the field adjusting to new technological developments improving accessibility and efficacy (Gammon et al., 1998; Murphy et al., 2019). This approach fits growing demands for data-driven, outcome-oriented supervision using technology to offer real-time feedback and competency tracking (Minieri, Reese, Miserocchi, & Pascale-Hague, 2015). Future studies should investigate the ethical and practical ramifications of artificial intelligence-assisted monitoring, virtual supervision models, and machine-learning-driven evaluation approaches as digital monitoring tools get more complex (Passmore, Turner, & Prescott, 2019).

The results of this bibliometric research show generally that psychotherapy supervision is moving from conventional competency-based models toward relationally attuned, culturally sensitive, and technologically advanced methods. To satisfy the changing needs of clinical practice, these changes underline the growing requirement of integrative supervision models combining structured training, interpersonal sensitivity, cultural responsiveness, and technological innovation (Watkins Jr, Vîşcu, & Cadariu, 2021).

Although this bibliometric study offers insightful analysis, certain constraints have to be admitted. First, the extent of the research may have been shaped by database restrictions. The study made only use of the Web of Science Core Collection, a respectable and extensively used academic database that might not fully reflect the scope of psychotherapy supervision research. Other databases as PsycINFO, Scopus, or Google Scholar might have extra pertinent research not included in this study (Westefeld, 2009). Future research could enlarge the dataset by adding a more extensive spectrum of databases so guaranteeing a more whole picture of the area.

Second, decisions on co-occurrence threshold and keyword restrictions might have affected the clustering outcomes. Although a minimum co-occurrence threshold of three was employed to guarantee significant patterns, certain critical but less often used keywords could have been left out of the study. Emerging yet understudied subjects that have yet to be well-known could thus be omitted (Watkins Jr., Vîşcu, & Cadariu, 2021). Furthermore, depending too much on keyword-based co-occurrence analysis could not adequately reflect the conceptual subtleties of supervision research since some transdisciplinary or qualitative studies might employ terminologies not known from the network analysis (Weerasekera, 2013).

Finally, the analysis ignores institutional and geographical variances in monitoring methods. Countries and organizations greatly affect the supervision methods, training systems, and cultural factors (Johnson, 2019). Although the found clusters mostly represent global trends, regional viewpoints and context-specific monitoring strategies should call for research (Rodanhauser, 1996). Cross-cultural bibliometric analyses could be used in future studies to evaluate how various cultural, educational, and healthcare institutions handle supervising policies.

Many newly developing fields call for more psychotherapy supervision study. The way artificial intelligence and virtual monitoring models are included into training courses

is one important area. Although telehealth and video-based monitoring are already becoming popular, underexplored are AI-assisted supervising systems that offer real-time feedback, automated session analysis, and tailored learning recommendations (Passmore et al., 2019). Future studies should look at how artificial intelligence may be morally and practically included into monitoring to handle issues such data privacy, algorithmic bias, and human-AI collaboration in clinical training.

The junction of mental health equity and supervision piques still another topic of inquiry. Although intersectionality and cultural humility have attracted attention, little empirical study has been done on how supervising models could actively remove systematic obstacles in mental health training (Plakun, 2023.). Future research should look at how training and clinical practice's racial, gender, and socioeconomic inequalities could be addressed via supervision (Johnson, 2019).

Furthermore, deserving of additional investigation are high-impact but understudied subjects such trauma-informed supervision, supervisor burnout, and the long-term career impact of supervising experiences. Although working alliances and nondisclosure are much researched, less is known about how supervision affects long-term professional development, ethical decision-making, or resilience among doctors (Minieri et al., 2015). Studies should also look at how managers themselves negotiate difficulties including the emotional weight of supervision, secondary trauma, and professional development needs (Watkins Jr & Riggs, 2012). At last, future studies should concentrate on creating uniform criteria to assess the success of supervision. Though evidence-based monitoring is becoming more and more important, there is still a dearth of generally agreed upon systems for evaluating supervising results (Watkins Jr, Vîşcu, & Cadariu, 2021). Research should aim to develop validated monitoring instruments measuring not only the development of competency but also the social, cultural, and ethical aspects of supervision (Westefeld, 2009).

This bibliometric study provides insightful analysis of the changing scene of psychotherapy supervision research. The found clusters emphasize theoretical, relational, cultural, technological, and theoretical aspects influencing modern monitoring methods. Limitations in database limits, keyword choice, and regional variances, however, imply that more study is required to fully depict the complexity of supervising models globally.

Future research should keep investigating new technologies, equity-based monitoring systems, and long-term career effects to guarantee that supervision is scientifically based, morally acceptable, and flexible enough to meet the demands of mental health practitioners. Psychotherapy supervision can keep developing as a dynamic, evidence-informed discipline improving the quality of clinical training and therapeutic treatment by integrating theory, practice, and invention.

5. CONCLUSION

Emphasizing important theme clusters, trends, and new approaches in the discipline, this bibliometric study has given a thorough examination of the changing scene of psychotherapy supervision research. Four main research domains have been found by mapping the intellectual structure of the literature: competency-based supervision and training models, relational dynamics in supervision, multicultural competency and theoretical frameworks, and technological innovations in supervising practices. These

groups represent both long-standing customs in supervision research and more recent innovations altering the field in response to modern problems and advances.

Emphasizing training, assessment, and professional growth as basic foundations of successful supervision, this study reveals a noteworthy finding: competency-based monitoring models remain constantly dominant. The significance of the supervisory partnership, nondisclosure, and power imbalances highlights even more the crucial part relational and ethical issues play in supervision. Simultaneously, increasing awareness of intersectionality, cultural humility, and intercultural competency points to a need change toward inclusive and socially conscious supervising models. At last, the growing emphasis on technology advancements, telehealth monitoring, and evidence-based feedback systems points to a data-driven, technologically integrated supervision that presents fresh chances to improve training accessibility and efficacy.

This study adds an empirical, data-driven viewpoint on the intellectual development of the field, therefore augmenting the scholarly debate on psychotherapy supervision. Unlike conventional narrative reviews, bibliometric analysis reveals tendencies in research that might not be immediately clear in qualitative syntheses by use of an objective and methodical mapping of data. This study clarifies our knowledge of how psychotherapy supervision has evolved over time and where it may be heading in the future by pointing out the most often occurring themes, eminent writers, and temporal changes in research focus.

Moreover, the results have pragmatic consequences for policy, training, and supervising practice. The focus on relational dynamics, cultural concerns, and evidence-based monitoring emphasizes the necessity of supervisors to transcend technical knowledge toward a more complete, introspective, and contextually aware approach. The growing integration of technology into monitoring systems offers both possibilities and difficulties that need more research into ethical rules, best practices, and the long-term viability of digital monitoring technologies.

In psychotherapy supervision research, bibliometric analysis provides insightful information about field organization, development, and trajectory. This work has shown the value of bibliometric approaches to expose latent linkages between research subjects, track knowledge distribution, and highlight areas for future investigation by using co-occurrence network analysis, citation mapping, and temporal visualization tools.

Bibliometric techniques will remain crucial for tracking trends, assessing research effect, and forming evidence-based training programs as psychotherapy supervision develops in response to clinical, technological, and social events. Future study should build on this methodological basis by extending the dataset, including further bibliometric approaches, and combining qualitative findings to produce a more complex and contextually rich knowledge of supervision research.

In psychotherapy, professional development is ultimately driven by supervision, which shapes the competency, ethical consciousness, and clinical efficacy of upcoming practitioners. The field can guarantee that supervision stays scientifically grounded, ethically responsible, and flexible enough to meet the evolving needs of mental health professionals worldwide by means of ongoing exploration of its theoretical roots, relational dynamics, cultural influences, and technological innovations.

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