

Analysis of the body of literature based on a new drama therapy literature database

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This study's data and analysis are made publicly accessible via the online repository figshare (Constien, 2022a, 2022b). The first author of this article is taking part in the NADTA literature project that is referenced in this article. No further conflicts of interest are to be disclosed.

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Abstract

Recent years have seen an influx in publications in the field of drama therapy. However, this growth has so far not been comprehensively quantified. This article presents the results of a bibliometric output analysis based on a new comprehensive drama therapy literature database. The development of the new database is presented, and related initiatives are outlined. The study analyses journal articles indexed in the new database with an explicit focus on drama therapy that are published between 2000 and 2021 ($N = 345$) by several quantity indicators. The analysis finds significant growth in publications per year, as well as a significant trend towards more collaboration within the field. Articles are predominantly from the United Kingdom and the United States and published in journals specifically focused on drama therapy. Although there is a high number of authors in the field, only a few have published more than one article. Further, this analysis finds a lack of systematization within publication structures in the field leading to issues of visibility of drama therapy publications. These findings indicate the importance of a drama therapy exclusive database from which scholarly activity within the field is aggregated, shared, and developed.

Keywords: drama therapy; drama therapy; bibliometric analysis; output analysis; literature database; publication trends; quantity indicators

Since the formation of drama therapy as a distinct field of practice, there have been numerous calls for an increased focus on research and research-publication (Fernández-Aguayo & Pino-Juste, 2018; Jennings, 1994; Jones, 2007). As Jones (2015a) notes, scholarly publications are not only vital in providing practitioners and clients within the field of drama therapy with a clear understanding of drama therapy but also promote the visibility and advocacy of drama therapy outside the field. What's more, within the current climate of our health and education systems, the need to develop as well as articulate a strong evidence base has become very much apparent to the field of drama therapy (Dokter, 2011b; Jones, 2015b; Klees, 2021). Thus, Armstrong et al. (2019) are connecting research and publication efforts not only with the promotion of the field as a whole but also with the livelihoods of practitioners themselves.

Recent years have seen developments in the scholarly infrastructure of drama therapy, such as the establishment of the journal *Drama Therapy Review* (Sajnani, 2015) and academic programs in Germany and the Netherlands. Furthermore, the field found new connections in the creation of associations and scientific committees, such as the World Alliance of Drama Therapy, the scientific committee of the European Federation of Dramatherapy, the research committee of the North American Drama Therapy Association (Armstrong et al., 2019), the German Scientific Association for Arts Therapies (Koch et al., 2019) and the Dutch Research Centre for Arts Therapies (<https://kenvak.nl>). In correlation with these developments, several authors have noted an influx in publications (de Witte et al., 2021; Jones, 2015a) that has been demonstrated in recent literature reviews (Armstrong et al., 2019; Feniger-Schaal & Orkibi, 2020) and bibliometric assessments of the field (Ciempa, 2022; Fernández-Aguayo & Pino-Juste, 2018). However, these initiatives

have so far been restricted in their scope to only a small section of the existing literature and consequently fail to comprehensively capture the actual growth in the literature as well as its underlying driving forces within the field. The current article, and the drama therapy literature database it presents aim to fill this gap.

Recent initiatives and literature projects

As recently noted by Frydman et al. (2022) there have been initiatives in recent years aggregating publications within the field of drama therapy. Dokter and Winn (2009) in association with the British Association of Dramatherapists (BADth), conducted the first of these literature projects. Their work culminated in an online database (www.badth.org.uk/resources/publications), accessible exclusively to BADth members, featuring 145 references on evidence-based practice (EBP) and practice-based evidence (PBE) research in the field of drama therapy (Dokter, 2011a, 2011b). Similarly, the Dutch Association of the Creative Arts Therapies (FVB) implemented a freely available online database in 2020 (databank.vaktherapie.nl/). To date, 78 publications focusing on drama therapy in English and Dutch are indexed in their database.

Arguably, the most ambitious project within this area of research has been the NADTA's empirical reference list based on the work by Armstrong et al. (2019). Via a comprehensive database search, they identified empirical articles published in English with a focus on drama therapy and categorized them through a peer-review process into an inductively generated system of main- and subcategories. Their list, publicly accessible via the NADTA's website as a spreadsheet (www.nadta.org/research), has been further updated and to date includes 128 empirical articles.

Bibliometric assessment of the field's scholarship

In addition to the efforts by the BADth, FVB and NADTA, scholars have recently begun to bibliometrically assess the field's scholarship to map the field's publication trends and habits. The first of these assessments was conducted by Jones (2015a) and presented as a keynote speech at the NADTA's conference in 2013. In reviewing publications from the years 2009 to 2013 in three journals related to drama therapy, he focused on potential challenges for the future of drama therapy. Among others, his research highlighted the danger of closed circuits within drama therapy literature, in which authors do not connect or reference each other's work.

More systematic in their approach Fernández-Aguayo and Pino-Juste (2018) conducted a bibliometric analysis of drama therapy and theatre intervention research. They were the first to effectively quantify the increase in publications within drama therapy by showing that 63.24% of all reviewed publications ($N = 136$) were from the past ten years (2007 – 2016). They further demonstrated that most publications are written in English by American and British authors and that the most prolific journal within their analysis is the *Arts in Psychotherapy*.

Additionally, even though not specifically labelled as a bibliometric assessment per se, Feniger-Schaal and Orkibi (2020) reported an analysis of the countries of origin of the 24 included articles in their integrative systematic review of drama therapy intervention research. They show a range of eleven countries represented; however, they find that most of the studies within their review were conducted in the UK (33%), Canada (21%), Israel (8%), and the Netherlands (8%).

Lastly, Ciempa (2022) quantified in his master thesis the number of listed publications in the NADTA's reference list per year to demonstrate the increase in

publications within the field of drama therapy. He finds that the publication of empirical drama therapy research has increased drastically since the year 2000.

The need for a more comprehensive assessment of the field

While these assessments and literature projects yielded valuable results for the field of drama therapy, they have been restricted in their scope and inclusion criteria to only certain types of evidence (e.g., empirical studies, intervention research). Consequently, none of these literature projects has captured the entirety of publications within the field of drama therapy. However, with the turn in the field of drama therapy towards a more refined focus on diversity, inclusion and social justice (Emunah et al., 2020; Sajnani et al., 2017), there is a need for a broader and comprehensive aggregation and assessment of literature that effectively captures the diversity of ideas within the field (Jones, 2015b). While the BADth, the FVB and the NADTA are currently working on expanding their respective databases, the literature project that this article presents distinguishes itself as a first of its kind in its scope to comprehensively capture the entirety of publications in the field of drama therapy.

The drama therapy literature database

The drama therapy literature database that is the subject of this article was first initialized by Gé Cimmermans at the HAN University of Applied Sciences in Nijmegen (Netherlands) in 2006. In its original form, the database was meant as an introduction to the field's literature and academic support for students of drama therapy. The format of the database was a digital folder structure embedding individual word documents, one for each subcategory, listing the applicable literature. The database was maintained by Cimmermans from 2006 to 2013 and listed 1104 individual references across 15 categories and 478 subcategories.

Based on his work, the Institute for Research and Development in the Arts Therapies at the Nürtingen-Geislingen University began in the spring of 2020 to set up a digitally accessible comprehensive drama therapy literature database. We have updated his work to include references up to 2022, cleaned its content to fit our inclusion and exclusion criteria stated below and imported it into a Citavi project. Citavi (www.citavi.com) is a reference management software that can be accessed via the web and allows for cloud projects to be shared with others via invitation links.

The database is unique, in that it comprehensively indexes all drama therapy literature regardless of its type of evidence or publication format. Its main inclusion criterion is that all indexed publications must have drama therapy, as defined by the NADTA as the intentional use of drama and/or theatre processes to achieve therapeutic goals (www.nadta.org), as its main and stated focus. Furthermore, following this criterion the following exclusion criteria were defined: Published work about the expressive or creative arts therapies in general, which does not mainly emphasize drama therapy is excluded. Additionally, published work that does not explicitly classify itself as drama therapy, even though its presented work technically would qualify as drama therapy in terms of the NADTA's definition (i.e., publications about applied theatre or arts and health) is excluded from the database. To date, the database lists 1173 references in the form of journal articles, monographs, book chapters, academic theses, and dissertations published between the years 1974 and 2022. It is maintained by the first author of this article and freely accessible to all drama therapy students at the Nürtingen-Geislingen University and others, upon request. For the past four semesters, an introduction to working with the database has been given in the form of academic tutorials and the database has been utilized as a research tool for assignments and final-year theses. This study utilizes the

database as a data source for a bibliometric output analysis of journal articles within the field of drama therapy. By showcasing the database and its application in this study, we are hoping to introduce the database to a larger audience and invite all interested parties to contact us with potential research requests.

Method

Design

A bibliometric output analysis represents a basic bibliometric method that determines the quantity, extent, and frequency of the academic output within a clearly defined field of study (Ball, 2017). It first provides a list of publications matching prior defined inclusion and exclusion criteria, which is then in a second step further defined by bibliometric indicators taken directly from the publications' metadata. While there are different types of indicators within bibliometrics, this output analysis restricts itself to quantity indicators (Durieux & Gevenois, 2010), which measure the number of publications within the field along several characteristics, i.e., year of publication, authorship, collaboration, affiliated institutions, publication outlets, origins and keywords. These indicators were chosen to assess the quantity of scholarship overall and across recent years in the field of drama therapy produced by individual authors, institutions, and countries (Ball, 2013). Moreover, they allow an assessment of the scholarship itself, in particular its connectivity (by examining co-authorship and inter-institutional collaboration) as well as its range (by examining keywords and journals' classifications)(Ball, 2017).

Inclusion and Exclusion Criteria

The introduced drama therapy literature database, first initialized by Gé Cimmermans and further developed by the Institute for Research and Development in the Arts Therapies, was used as the initial data source for this analysis. Therefore, this analysis was bound to the same inclusion criteria as the database itself, so that any reference is a priori in direct relation to the field of drama therapy. Furthermore, this analysis applied additional exclusion criteria. First, given that this analysis is meant as a statement on the field of drama therapy exclusively, all references that

did not explicitly classify themselves as drama therapy or have drama therapy, as defined by the NADTA, as its principal focus, were excluded (i.e., articles about the creative arts therapies in general or applied theatre, were excluded).

Furthermore, publications that are not peer-reviewed journal articles, were excluded from the analysis. This criterion was chosen, given the more transparent and systematic publication process of a peer-reviewed journal article. Moreover, journal articles in the form of a letter to the editor, interview, homage, obituary as well as articles not published in English were excluded from the analysis.

Additionally, articles outside of the years between 2000 and 2021 were excluded from the analysis. This time frame of consideration was chosen because many articles primarily from the British journal *Dramatherapy* published before the year 2000 couldn't be fully accessed. They therefore could not be matched to the database's inclusion criteria and have so far not been indexed. Therefore, to give a proper and fair representation of the field, only sources published between the years 2000 and 2021 were considered for this analysis.

Data Selection

In total, the drama therapy literature database lists 1173 references, of which 47% ($n = 556$) are journal articles. This initial list was further refined through the mentioned exclusion criteria, yielding a total of 345 publications. This final list was exported from the database in Citavi into an excel spreadsheet that listed the authors, year of publication, title, abstract, journal, keywords, and number of pages. The selection process is shown in Figure 1. The final dataset for analysis was made publicly accessible on the open-access repository figshare (Constien, 2022b).

In addition to the data taken from the drama therapy literature database, the data was supplemented by the All Science Journal Classification (ASJC) codes

taken from the Scopus Database (www.scopus.com) for all the journals included in the analysis. The ASJC is a category system of four top-level subject areas and corresponding subject area classifications. The ASJC codes are assigned by Scopus, based on the stated aims of the journal, and its published articles. As such, the ASJC can be used as a measure of a field's unity or diversity depending on the spread of its publication's categories (Wang & Waltman, 2016). It is important to note, that in a multidisciplinary classification system like Scopus' ASJC one publication might have more than one assigned subject area as well as multiple subject area classifications. The Scopus classification system as opposed to the Web of Science classification system was used because more journals identified in this analysis are indexed in Scopus ($n = 35$) than in Web of Science ($n = 31$).

Statistical Analysis

All statistical analyses were conducted using a python script within a jupyter notebook. The script was made accessible on the open-access repository figshare (Constien, 2022a). Although this analysis remains predominantly descriptive in its statistics, Spearman's rank correlation and a χ^2 -test were used to determine publication trends across years, authors' collaboration habits and the impact of institutions.

Results

The selection of articles taken from the drama therapy literature database ($N = 345$) is analysed across the bibliometric output indicators year of publication, authorship, collaboration, affiliation, origin, and keywords.

Year of publication

The numbers of publications within a year are visually displayed in Figure 2. As per inclusion criteria, the date of publication of articles included in this analysis ranges from the year 2000 to the year 2021. Within this time frame, 2018 was the most prolific year with 39 articles published. The least publications within a year ($n = 6$) are from the year 2010.

As indicated by Spearman's rank correlation coefficient, there is a significant, positive relationship between the year of publication and the number of articles published, $r(20) = .79$, 95% CI [0.56, 0.91], $p < .001$. This relationship indicates that the number of articles published within a year in the field of drama therapy is steadily increasing. 43% of all publications included in this analysis ($n = 149$) were published in the five years between 2017 and 2021.

Authors

In total, 425 individual authors were involved in the 345 publications included in this analysis. The number of publications per author ranged from 1 to 11. More than three-quarters of authors ($n = 331$, 78%) only published a single article. The remaining 22% of authors ($n = 94$) have published two or more articles. Twelve authors (3%) have published five or more articles. These most prolific authors are shown alongside their number of publications in Table 1. Aggregated, they contributed to more than a quarter of all articles ($n = 93$, 27%) included in this analysis.

Collaboration between authors

Collaboration between authors was measured using the full counting method, meaning each co-authorship is equally attributed the weight of 1. Most articles included in this analysis ($n = 224$) are single-authored. In turn, 35% of the articles ($n = 121$) are written by two or more authors.

The number of authors per article ranges from 1 to 12 ($M = 1.82$, $SD = 1.59$). As indicated by Spearman's rank correlation coefficient, there is a significant, positive relationship between the mean number of authors per article and the year of publication, $r(20) = .6$, 95% CI [.24, .82], $p = .0031$. This indicates that authors within the field are increasingly cooperating. Figure 3 presents this increase in collaboration visually by displaying the mean number of authors per publication across the years.

Affiliations

For this analysis, the affiliations named in the article's meta-data were grouped by their larger governing body. This means, that if a specific college or school associated with a larger university was given as the article's affiliated institution, only the university's name was used as affiliation in this analysis (i.e., "Department of Psychology and Applied Therapies, Lesley University, Cambridge, Massachusetts, USA" was shortened to "Lesley University"). This method of data selection was used because there was little consistency in the data on affiliated institutions, even among articles published by the same author or the same institution. Furthermore, 64 articles did not provide any data on affiliations. These articles were all published in the journal *Dramatherapy* between 2000 and 2010, indicating an omission of affiliations by the journal per se rather than the authors of these publications not having any institutional affiliations.

The number of publications published independently as well as with a single or multiple institutional affiliations are presented in Table 2. While most publications were published in affiliation with at least one institution, 37 articles were published independently by so-termed “independent scholars”. This designation was chosen for all articles published specifically under this designation or for all non-institutional affiliations (i.e., private practice).

244 articles named at least one affiliated institution. From these articles, 130 individual affiliations were named. The ten most prolific institutions with at least five publications as well as their number of publications are shown in Table 3.

Aggregated, they account for 27% ($n = 92$) of all publications within this analysis.

This analysis further distinguished publications published independently (i.e., independent scholar) or with an affiliated institution by the number of authors per publication, as shown in Figure 4. A χ^2 -test was conducted to further analyse this relationship. While both groups included more single-authored articles than collaborated articles, there was a significant association between an article having an affiliated institution and it being written in collaboration, $\chi^2(1) = 17.36$, $p < .0001$. Based on the odds ratio, the odds of an article being published in collaboration were 7.35 times higher for articles published with an affiliated institution compared to articles published independently.

Country of Origin

An article’s country of origin was defined as the country of residence of the first author at the time of publication or the country of their provided affiliated institution. The country of residence was determined through either the article’s meta-data taken from the drama therapy literature database or a Google search of the author’s name. For 337 articles (98%) a country of origin could be determined. In

turn, 8 articles were excluded from this part of the analysis because a country of origin could not be conclusively determined.

In total, the articles included in this analysis originated from 24 different countries. A large majority of articles are either from the UK ($n = 120$) or the USA ($n = 107$). Cumulatively, these two countries represent two-thirds of all publications included in this analysis. The eight most prolific countries along with the corresponding number of publications are visually displayed as a pie chart in Figure 5.

Journals

41 individual journals have published articles included in this analysis, out of which only 15% ($n = 6$) published three or more articles. More than three-quarters of journals included in this analysis only published a single article with a specific focus on drama therapy. Most articles were published in the journals *Dramatherapy*, *Drama Therapy Review*, and *The Arts in Psychotherapy*. Together, they account for 86% ($n = 295$) of all articles included in this analysis. The journals that have published at least two articles in the field of drama therapy and the number of their publications are presented in Table 4.

The journals identified through this analysis were further characterized by the ASJC codes taken from the Scopus database. Out of the 41 journals included in this analysis, 35 were indexed by Scopus and therefore categorized by ASJC codes. The codes, divided into subject areas and subject areas classification, and their corresponding number of journals are listed in Table 5.

Keywords

Keywords were taken directly from the article's meta-data and formatted to be in lowercase. No other modification was made to the keywords. This meant, given

the low systematisation regarding keywords relating to drama therapy, multiple keywords representing the same concept or method, were counted as different keywords due to divergent spelling (therapeutic theatre and therapeutic theater) or abbreviations (i.e., DvT and Developmental transformations). Roughly three-quarters of the articles included in this analysis ($n = 251$) have associated keywords. In turn, 27% of included articles ($n = 94$) do not have any associated keywords and therefore were excluded from this part of the analysis.

In total, 834 individual keywords were named by the articles included in this analysis. More than three-quarters of these keywords ($n = 645$, 77%), are only used for a single publication. 23% of all keywords ($n = 189$) are used in two or more publications. 5% of keywords ($n = 39$) are used in five or more publications. The fifteen most popular keywords that are used in seven or more publications are presented in Table 6.

Discussion

Based on a newly developed comprehensive database of drama therapy literature, this output analysis quantitatively assessed the published literature in the field of drama therapy. Journal articles published between 2000 and 2021 taken from the database were filtered to only include drama therapy-specific publications and analysed by several output indicators.

The main result of this analysis is that scholarly publications per year have been increasing significantly and steadily over the years. The number of publications published in the five years between 2017 and 2021 nearly matches the number of publications published in the preceding seventeen years. This result supports recent statements made on the growth of the body of literature in drama therapy in the past (de Witte et al., 2021; Feniger-Schaal & Orkibi, 2020; Jones, 2015a), yet it is the first time this growth is quantitatively and comprehensively analyzed.

This influx in publications speaks of the academization of drama therapy, which can also be found in other recent developments in the field (Armstrong et al., 2019; Frydman et al., 2022; Koch et al., 2019). Most notable among these developments is the establishment of the American journal *Drama Therapy Review* (Sajnani, 2015), which, as this analysis shows, has become one of the main publication outlets for drama therapy literature since its conception in 2015.

This development toward a scholarly community within drama therapy can also be seen in the increased collaborations of authors. As shown by this analysis, the number of authors per publication has been significantly increasing over the years, reaching its peak in the years 2020 and 2021. Furthermore, this analysis finds that institutions significantly foster collaborations among authors. This impact of a scholarly infrastructure on publications can further be seen in the countries of origin.

Countries with established academic programs and institutions in drama therapy, such as the US, the UK, Israel, and Canada, also have the highest number of publications in the field.

While these results speak for a developing scholarly infrastructure within drama therapy, some results are cause for concern. First and foremost, the high number of authors, who have only published a single article posits a challenge for the future of drama therapy. It is vital for the further development of drama therapy to keep these authors within the scholarly community and assist them in further publications. The establishment of inclusive systems supporting practitioner-based research outside the traditional scholarly realm (Barham, 2003), as highlighted by Jones (2015b) might be important to broaden the scholarly community and diversity of ideas. The newly created NADTA's or EFD's research committees might be ideally suited to meet this task.

The need to amplify a range of voices within the scholarly discourse is also apparent in the result of the analysis regarding the Scopus classification of journals publishing drama therapy literature. The diverse characterization in subject areas and subject area classification highlights the diversity within drama therapy. The journals are almost equally distributed between the subject areas of *Health* and *Social Sciences* and are further predominantly classified as *Medicine*, *Psychology*, *Social Sciences* and *Arts and Humanities*. The top two indexed journals, *Arts in Psychotherapy* and *Drama Therapy Review*, also show this diversity. *Arts in Psychotherapy* is indexed in the subject area classifications as *Medicine* and *Psychology*, whereas *Drama Therapy Review* is indexed as *Arts and Humanities*. Sajnani et al. (2017) have written about the need to embrace the range of contexts creative arts therapists inhabit and not limit oneself to the medical sphere alone. The

result of this analysis regarding the classification of drama therapy literature supports this assertion.

Additionally, this analysis highlights issues surrounding the visibility of drama therapy literature. First, this analysis shows that effectively only three academic journals regularly publish articles related to drama therapy. Two of these are specific journals (*Dramatherapy* and *Drama Therapy Review*) that might be not of interest to the broader scholarly community outside the field of drama therapy. What's more, the journal *Dramatherapy*, which, as this analysis shows, is the leading journal within the field, is not indexed in the leading multidisciplinary bibliographic databases Scopus and Web of Science (WOS). Overall, 15 and 25% of all journals that have published articles on drama therapy are not indexed by Scopus or WOS respectively, resulting in 142 (Scopus) and 147 articles (WOS) on drama therapy not being findable via these databases. As noted by Dokter (2011a); Fernández-Aguayo and Pino-Juste (2018) this lack of systematization within publication structures in the field of drama therapy can lead to relevant references not being findable through databases or web searches. What's more, as shown in the introduction, databases that have been developed for drama therapy have so far neither been comprehensive nor have agreed on a common classification system. Overall, these issues of visibility, namely the small number of journals that publish publications in drama therapy, the high number of articles not indexed in major scientific databases as well as the lack of a unified specific database for drama therapy, may lead to publications not being findable, even within drama therapy specific research tools.

This lack of systematization is further supported by the keyword analysis in this study. A broad majority of keywords identified by this analysis are only used by a single publication, while only 4% out of all keywords are used five or more times.

Given the fact, that this analysis only included articles with a specific focus on drama therapy, this result is concerning regarding the scholarly exchange within the field of drama therapy. The result of this analysis on keyword allocation shows signs of closed circuits, as outlined by (Jones, 2015b) within the scholarly community. This can also be seen in the low inter-institutional collaboration reported by this analysis.

In conclusion, this analysis demonstrates a developing scholarly community within drama therapy. Independent scholars, universities, and institutions especially from the US, the United Kingdom, Israel, and Canada are contributing to a seemingly exponential growth in drama therapy publications. Authors increasingly collaborate in their publications, especially when affiliated with an institution. However, this analysis also outlines a lack of efficiency in publication habits, which speaks to the need for further academic support within the field. Additionally, this analysis shows issues of visibility of drama therapy literature within the broader scholarly realm, highlighting the need for a common drama therapy exclusive database.

Limitations

Although this analysis represents the most comprehensive, quantitative assessment of the body of drama therapy literature to date, it has various limitations. Bibliometrics are in their nature reductionist, distilling an entire field of research into small, measurable indicators. Therefore, it is important to note, that while this output analysis does convey a clear picture of publication habits, it does not represent a qualitative assessment of the literature within drama therapy. Therefore, this analysis should be seen as a statement of productivity rather than quality. On this point, it should be noted that this analysis was limited to peer-reviewed journal articles, which only represent 47% of the literature aggregated within the database. The results of this analysis therefore cannot be generalized to other forms of publication, such as

book chapters or monographs. What's more, this analysis was limited in its consideration to bibliometric-ascertainable publications. Performances, workshops, or seminars, which in the field of drama therapy represent a vital part of the transfer and presentation of knowledge (Hodermarska et al., 2015; Landy, 1987), were, therefore, a priori excluded from this analysis.

Furthermore, the current analysis has an English-language bias (Sugimoto & Larivière, 2018). Therefore, an overrepresentation of predominantly English-speaking countries, such as the UK and the USA, must be assumed. For example, Latvia has a growing drama therapy community as well as academic programs and institutions for drama therapy (Junker, 2018), however, due to language barriers, publications in Latvian couldn't be assessed within this analysis.

Additionally, this output analysis did not include citation data on the included references. Although support for the assertion of a closed circuit in the literature can be found in the keyword allocation of the studied articles as well as the lack of inter-institutional collaboration, a proper citation analysis needs to be conducted to fully assess the impact and connectivity of drama therapy publications. Further studies should include citation data in their analyses.

In sum, these findings highlight the importance of a drama therapy exclusive database, from which scholarly activity within the field can be aggregated, shared, and developed. One potential application addressing issues outlined by this analysis is the development of an index and classification system for drama therapy literature. An in-depth keyword analysis is therefore indicated as a potential area for further study. The presented database, as the most comprehensive drama therapy literature database to date, might be ideally suited for this task. Additionally, a comprehensive database, that indexes the whole of drama therapy publications, can also play a vital

role in promoting the exchange of ideas and preventing closed circuits within the scholarly community. This further implicates the need to prioritize inter-institutional collaboration via scholarly networks such as the NADTA's or EFD's research committees. Establishing an internationally shared database might be a potential objective for such a cooperation as the NADTA, BADth, FVB, as well as our institute are currently working on this already. To this end, we are currently exploring options to make our database publicly accessible, and we are highly interested in further inter-institutional collaboration to push the development of our field forward.

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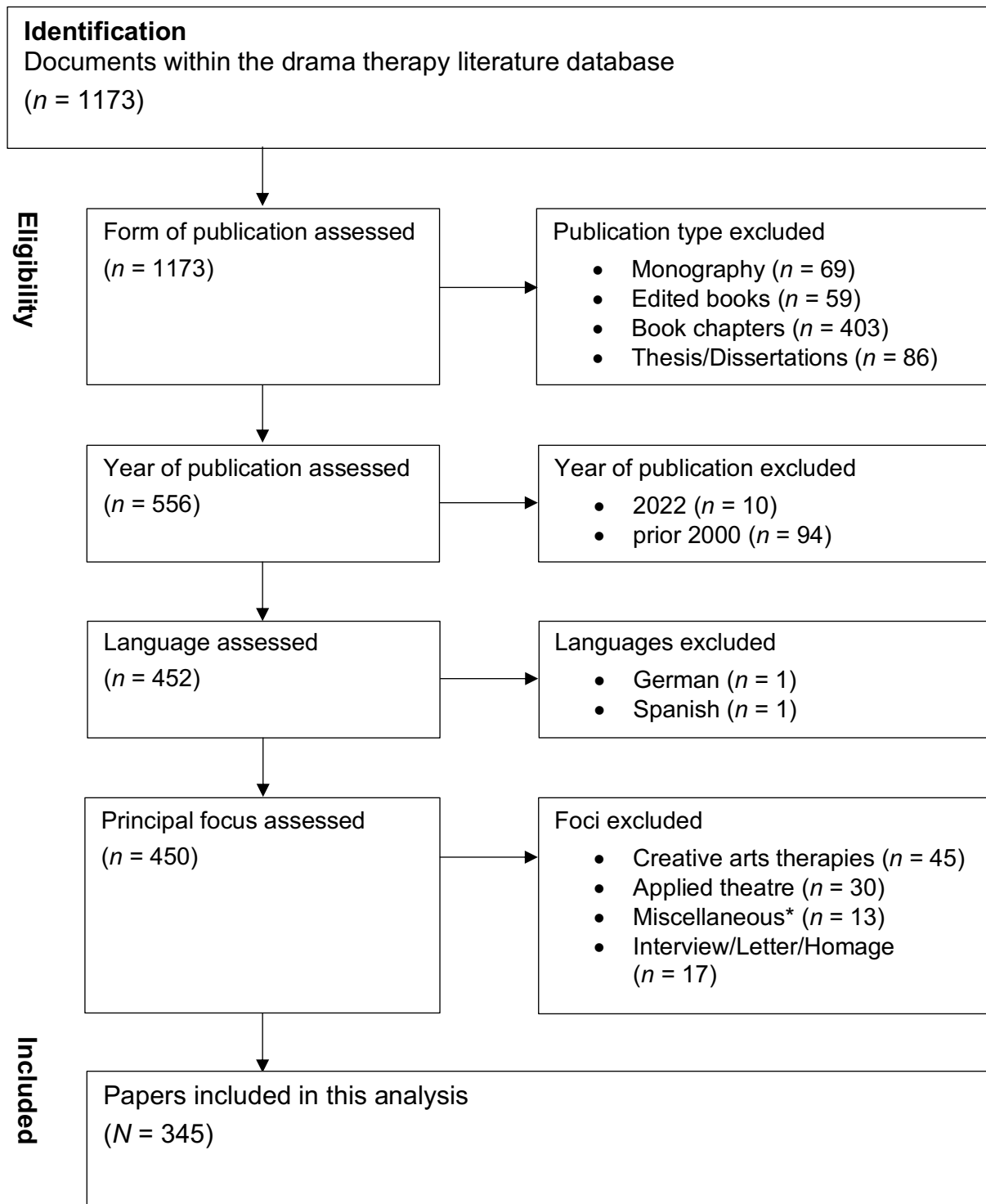
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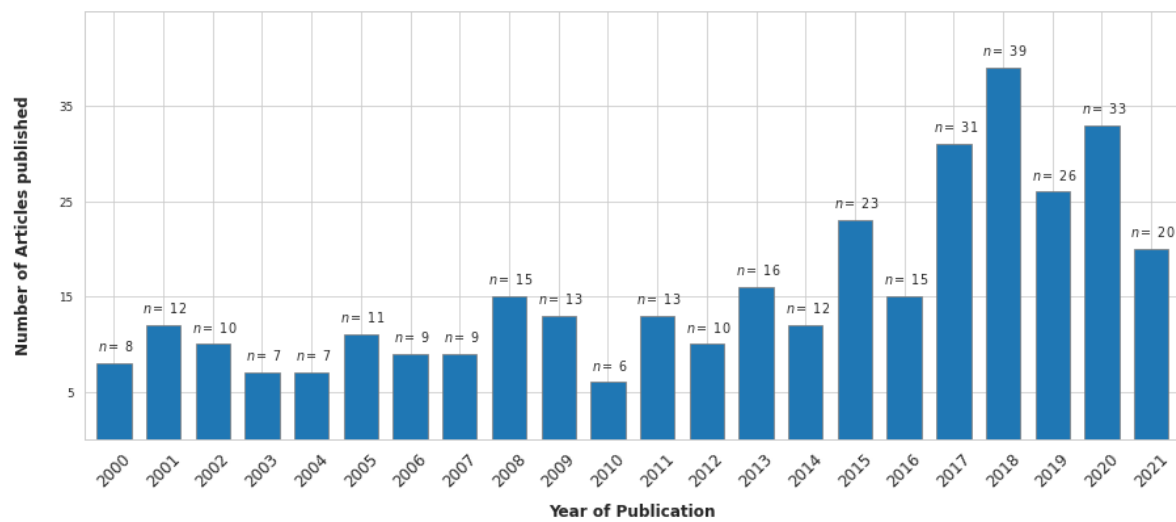
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Figure 1*Flowchart of the data selection process*

Note. Data selection was done in July 2022. *The category of miscellaneous refers to articles that were written with a focus outside of drama therapy, i.e., the arts (n = 3), supervision (n = 2), research (n = 2), social justice (n = 2), the health care system (n = 1) and other forms of therapy/self-care (cognitive analytic therapy, attachment therapy, yoga; n = 3).

Figure 2

The number of published articles per year



Note. $N = 345$.

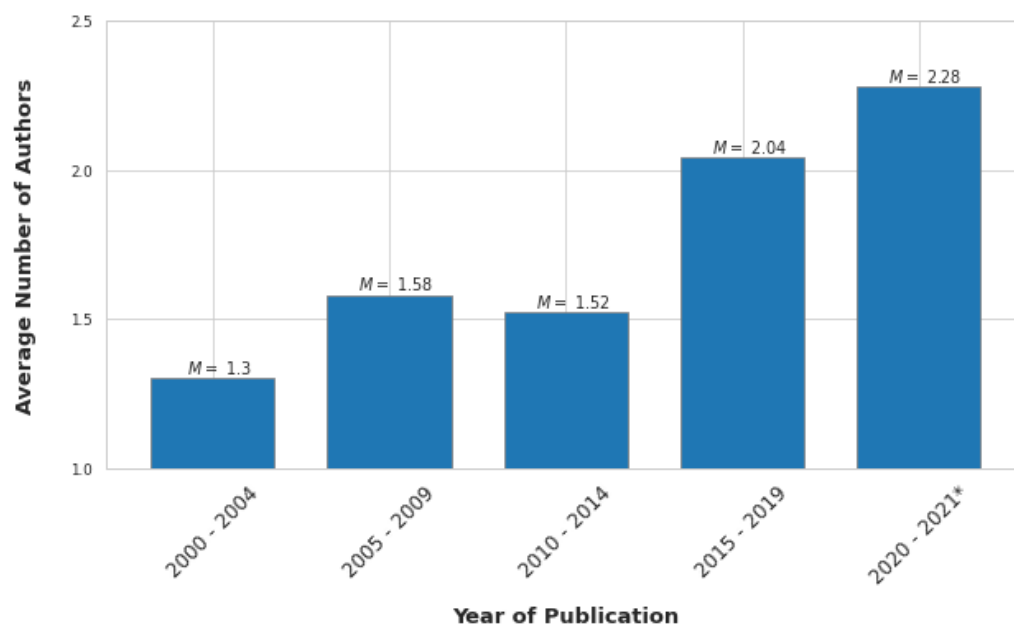
Table 1*Most prolific authors and the number of their publications*

Author	Number of publications	
	<i>n</i>	%
Susana Pendzik	11	3.18
Jason S. Frydman	10	2.89
Christine Mayor	10	2.89
Phil Jones	9	2.6
Robert J. Landy	9	2.6
Rinat Feniger-Schaal	8	2.31
Nisha Sajnani	8	2.31
Shoshi Keisari	7	2.02
Laura L. Wood	6	1.73
Jason D. Butler	5	1.45
Craig Haen	5	1.45
Salvo Pitruzzella	5	1.45
TOTAL	93	26.95

Note. *N* = 345.

Figure 3

Collaboration among authors across the years



Note. Years are grouped in intervals of five years apart from the last group (2020-2021), which represents only two years.

Table 2*Number of publications published independently or with an affiliated institution*

Stated affiliation	Number of publications	
	<i>n</i>	%
Independent Scholar	37	10.72
Single Institution	235	68.12
Multiple Institutions*	9	2.61

Note. *N* = 345. 64 (19%) articles did not provide any data on affiliations. *Range of two to four institutions per article.

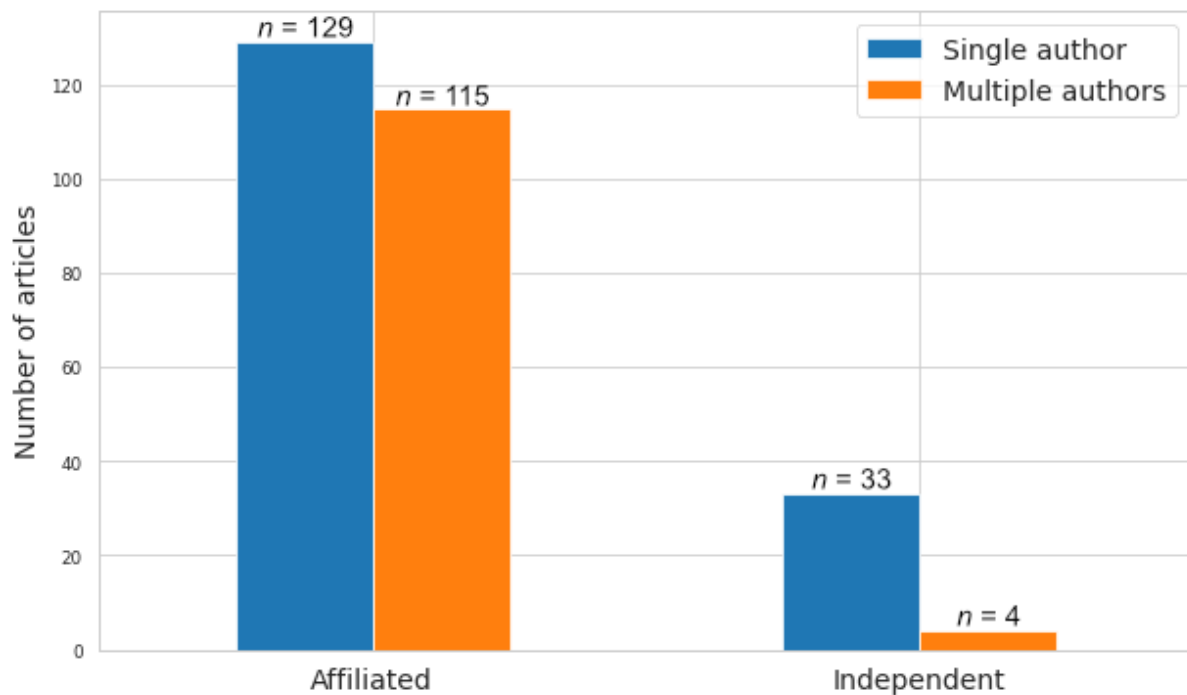
Table 3*Most prolific affiliated institutions*

Affiliated Institution	Number of publications	
	<i>n</i>	%
New York University (USA)	19	5.51
University of Haifa (Israel)	18	5.22
Lesley University (USA)	12	3.48
Concordia University (Canada)	10	2.9
University of Derby (UK)	6	1.74
Wilfried Laurier University (Canada)	6	1.74
University of London (UK)	6	1.74
California Institute of Integral Studies (USA)	5	1.45
Post-Traumatic Stress Center (USA)	5	1.45
Tel-Hai Academic College (Israel)	5	1.45
TOTAL	92	26.67

Note. *N* = 345.

Figure 4

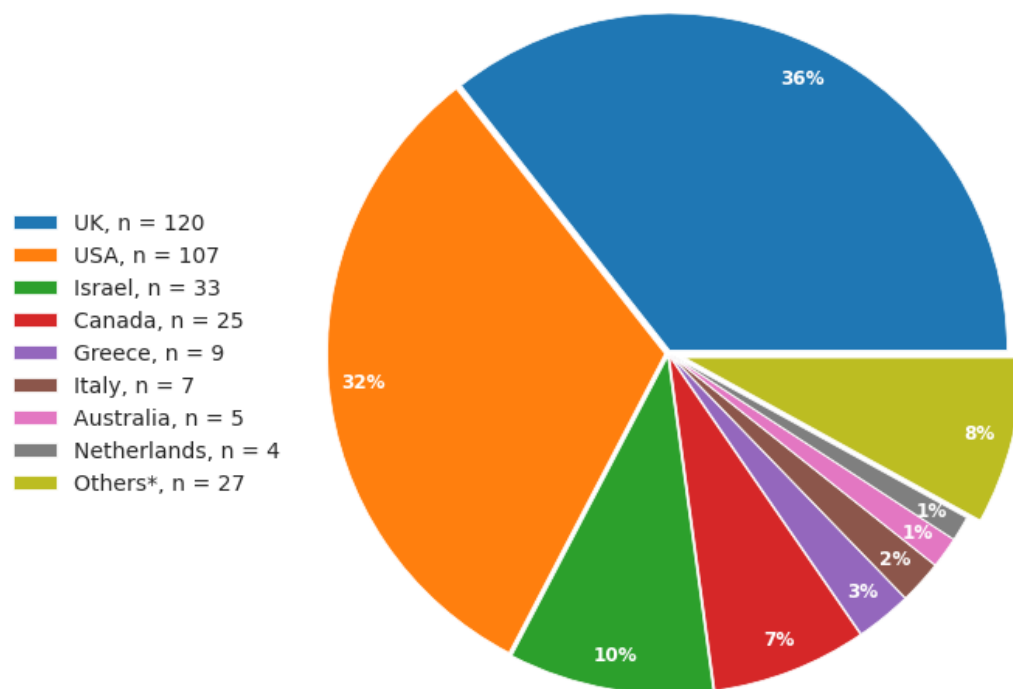
Bar chart of articles published independently or with an affiliated institution



Note. Shown are only articles published with one or more affiliated institutions (i.e., “Affiliated”) or as an independent scholar (i.e., “Independent”) ($n = 281$). Articles published without the mention of an institution, or designation of independent scholar ($n = 64$) are omitted from this part of the analysis.

Figure 5

Pie chart of the article's country of origin



Note. *The category of others includes 16 individual countries each of which produced one to three articles.

Table 4*Individual journals and their number of publications*

Journal	Number of Publications	
	<i>n</i>	%
<i>Dramatherapy</i>	136	39.42
<i>Drama Therapy Review</i>	86	24.93
<i>The Arts in Psychotherapy</i>	73	21.16
<i>Frontiers in Psychology</i>	5	1.45
<i>Clinical Child Psychology and Psychiatry</i>	3	0.87
<i>Journal of Creativity in Mental Health</i>	3	0.87
<i>Journal of Applied Arts & Health</i>	2	0.58
<i>Journal of Humanistic Psychology</i>	2	0.58
<i>Psychology of Aesthetics, Creativity, and the Arts</i>	2	0.58
<i>Violence Against Women</i>	2	0.58

Note. *N* = 345.

Table 5*Journal Classification Codes and the number of assigned journals*

Level	All Science Journal Classification Codes	<i>n</i>
Subject area	Social Science	22
	Health Science	20
	Physical Science	1
	No assigned subject area	1
Subject area classification	Medicine	17
	Psychology	15
	Social Sciences	8
	Arts and Humanities	7
	Nursing	4
	Health Professions	3
	Environmental Science	1
	General	1

Note. A journal might have more than one assigned subject area and subject area classification

Table 6*Most mentioned keywords and the number of publications*

Keyword	Number of publications	
	<i>n</i>	%
"drama therapy"	123	35.65
"dramatherapy"	60	17.39
"role theory"	18	5.22
"developmental transformations"	16	4.64
"role"	13	3.77
"dementia"	12	3.48
"play"	12	3.48
"therapeutic theatre"	10	2.9
"dramatic reality"	9	2.61
"playback theatre"	8	2.32
"mental health"	8	2.32
"embodiment"	8	2.32
"performance"	8	2.32
"psychodrama"	8	2.32
"systematic review"	7	2.02
"trauma"	7	2.02
"drama"	7	2.02

Note. N = 345