

PROFILES OF ENGLISH LANGUAGE MUSIC THERAPY JOURNALS

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ABSTRACT

The purpose of this study was to present a content analysis of seven music therapy journals in the English language in order to provide an objective documentation of the longitudinal growth of the field. The current study examined seven English language music therapy journals including the *Journal of Music Therapy*, *Music Therapy: Journal of the American Association for Music Therapy*, *Music Therapy Perspectives*, *The Australian Journal of Music Therapy*, *The Nordic Journal of Music Therapy*, *The British Journal of Music Therapy*, and *The New Zealand Society for Music Therapy Journal*. A total of 1,922 articles were coded according to author information (name, credentials, institution, geographic location), mode of inquiry, population studied, and subsequent article citation. Results indicated a broad range of research topics with a rapid rise in music and medicine research beginning in the 1980s. Research authors in music therapy comprise a diverse group of authors both from the United States and abroad. This study highlighted transitions in institutional productivity moving from clinical settings to academic settings. Over the course of 50 years, there have been continuous changes in various aspects of the music therapy literature that document the continuing growth of the profession.

DEDICATION

This dissertation is dedicated to my children, Jonathan, David and Erica

I love you, a bushel and a peck

...

And to Colin, for being there for them during my many journeys to Temple

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CHAPTER 1

INTRODUCTION

Overview

Academic research journals serve as forums for scholars to share research findings, communicate ideas, and maintain current knowledge of the literature. They provide a conduit for the dissemination of information that enables practitioners and researchers to keep current with developments in their field and contribute to its continued growth and development (Buboltz, Miller, & Williams, 1999). New ideas, conclusions, and theories are created on the basis of new and existing research.

A profession's journal(s) can also be viewed as a reflection of the history and progress of the profession, as articles published in it reflect the interest and thinking of scholars, as well as the focus of the discipline as a whole. Journal articles must pass a peer and editorial review process that requires them to conform to professional standards of scholarship, relevance, and ethics. Topics need to be deemed timely, relevant, and significant to the journal.

There are a number of approaches that can be used to study the nature of a scientific field. One such way is a review of its history. An historical analysis of the content of a journal can provide an in-depth look at the growth and progression of a field and provide researchers, practitioners and academicians with information on the status of research in the discipline.

Exploring the history of a field through the content of its journals can be achieved by means of a content analysis. A content analysis is defined as a scholarly methodology used primarily in the social sciences to examine outcome data in the literature (e.g., authorship, amount of data on a certain topic, themes) (Babbie, 2010). By means of a content analysis, a large body of qualitative information can be reduced to a smaller and more manageable form of representation. Content analysis is a means of changing qualitative data into quantitative data, so that they can be analyzed statistically.

Rationale for Performing a Content Analysis

A content analysis of journal articles provides an excellent means to review the topics and research questions scholars define as important by providing insight into the values that drive scholarly activities during a certain period of time and highlighting popular and neglected areas of scholarship (Nolen, 2009; Buboltz, Miller & Williams, 1999). Nolen (2009) states:

Journals provide windows into what topics and research questions scholars define as important. Thus, the number of publications about a topic, particularly in widely recognized journals, is an indication of the recognition and value of that topic. What is missing in journals can denote what counts as irrelevant and unimportant in a field. (p. 280)

Ball (1984) conducted a longitudinal content analysis of the *Journal of Educational Psychology* from 1910 through 1980. He found that in the first few decades of the journal, articles were devoted to practical educational matters: problems focusing on teachers, teaching, learning, and curriculum. Progressing through the 70 years of volumes included in his study, Ball noticed a trend in the focus of educational psychology becoming less directly related to the classroom and more interested in the academic pursuit of theory validation.

Graham and Ismail (2011) examined topic and method trends within the *Journal of Community Psychology* during a 5-year period. A content analysis was conducted on published abstracts during this period. They found that most articles were empirical studies, and most used a positivist methodology. They also found that samples mainly comprised adults and were mixed in terms of gender and ethnic/religious affiliation. The most frequent topics were mental health and mental illness, sense of community and social support, and dynamics of social exclusion. A large proportion of special issues was also noted. The results of this study illustrated contemporary trends in community psychology and suggested that critical and participatory methods, as well as socially transformative epistemologies, continue to be under-represented within the field.

Content analysis also provides a mechanism for gaining insight into the research productivity of authors actively publishing in journals. Buboltz, et al. state “authors who frequently publish in a journal not only highlight research topics the journal deems important, but also play a role in defining the discipline and may become identified with the mission of the journal” (p. 248). Content analysis not only provides information about which authors and institutions have influenced the field, but also reveals which institutions foster environments that reinforce research conducted in specific areas (Buboltz, Miller, & Williams, 1999).

A study conducted by Little, Akin-Little & Lloyd (2011) examined the content of the journal, *School Psychology International*, over a 22-year period from 1990–2011. In addition to content, categories of importance included gender and affiliation of authors as well as authors’ country of residence and the level of international content. Results

indicated that the journal is highly international with authors coming from 57 countries. With regard to gender, a trend was noticed for an increase in participation by women.

Citation Analysis

An essential part of a research paper is the list of references that point to prior publications. One method of judging the impact of the literature is through citation analysis. A citation is a reference to a published or unpublished source, embedded in the body of a work that denotes an entry in the bibliographic references section whereas a reference provides the bibliographic information that guides readers to the source. As Ziman (1968) observes, “a scientific paper does not stand alone; it is embedded in the ‘literature’ of the subject” (p.58). According to White and White (1977), “the importance of a journal is determined by the overall quality of the articles it carries, and because an article’s influence can be measured in terms of the frequency with which it is cited in subsequently published articles and books, citations per article is clearly an appropriate index of the impact of a journal” (p. 301).

In recent decades, there has been broad acceptance of the use of citations as a means of judging the relative impact of (a) an author or a particular publication on a field's subsequent literature and (b) the quality of journals per se (Garfield, 1955; 2006). Citations symbolize the association of scientific ideas. The references that research authors cite in their papers make explicit links between their current research and prior work in the scientific literature archive (Thomson Reuters, 2013a).

A traditional method of assessing research impact, citation analysis is performed by examining an individual publication and assessing how often it has been cited, if ever, in subsequent publications. Citation analysis is a useful method to examine the history of

scientific development (Garfield, 1979, 2006; Callaham, Wears, & Weber, 2002) and project future trends within a particular field or across disciplines (Moed, 2009). It is often seen as a direct measure of the recognition that work has received in its scientific field (Callaham, Wears, & Weber, 2002).

Citation analysis is considered to be less influenced by individual biases than other approaches that can be heavily influenced by subjective biases (Koulack & Keselman, 1975; Mace & Warner, 1973). For instance, Mace and Warner (1973) analyzed the responses of 48 psychology department chairpersons who were asked to rate 64 journals on a 5-point Likert-type scale from outstanding (5) to poor (1). The results of this study were subsequently criticized on a number of grounds, mainly because (a) the rating procedure was inappropriate, (b) only psychology department chairmen were used as respondents, (c) it seemed that some journals were ranked low due to the respondent's lack of familiarity with these journals, and (d) it seemed intuitively obvious that some journals should have occupied a higher rank than they were assigned (Boor, 1973; Hohn & Fine, 1973).

Investigations of professional citations have also increased a profession's understanding of important research contributors. Myers and DeLevie (1966) published a study of the most eminent authors in the area of counseling psychology during the period from 1960 to 1964. They studied four journals that they considered "most logical publication outlets and most likely organs of influence for counseling psychologists: "the *Journal of Counseling Psychology*, the *Journal of Consulting Psychology*, the *Journal of Applied Psychology*, and the *Personnel and Guidance Journal*. Cotton and Anderson (1973) ascertained which authors were cited in five particular years of the *Journal of*

Counseling Psychology. In addition, Heesacker, M., Heppner, P., & Rogers, M., (1982) provided lists of authors who have influenced counseling psychology.

Work that is viewed as particularly important or containing contributions deemed especially valuable, are likely to be widely read and referenced by others within and outside the field in related disciplines. Thus the number of citations a scientific work receives can be used as an objective gauge of its relative influence and its impact in the discipline (Garfield, 1987, 2010; Qin, 2008). This information can also help to determine which areas are of particularly high impact and what type of research is driving progress in a given field. Philanthropic, governmental and non-governmental agencies can use this information to inform the allocation of funds for future research proposals.

Moreover, the citation rate for each of an individual researcher's articles is a key component in determining that researcher's Hirsch index (h-index), which is the number of that researcher's published articles that have received at least h citations each (Hirsch, 2005). For example an h-index of 5 indicates that the researcher has five articles, each of which has accrued at least five citations. It is currently one of the most widely used measures (along with grant dollars received) for determining whether a candidate should be hired, tenured, or promoted, because it is a composite measure of both quantitative research output and the impact that those articles have had on guiding the research of others.

An analysis of the most impactful journal articles within the music therapy literature would be beneficial for a number of reasons. First, it would identify the influential works and emphasize their importance to the field. Second, it would serve to illustrate the development of the literature over time, which helps to determine the issues

that have been central to the development of music therapy, and identify those individuals who have made especially important contributions to the field. Third, it would allow for the mapping of important trends within the field and serve to identify what topics have been most impactful in the past and what topics are likely to be most impactful in the future. Finally, it would empower authors to replicate select article attributes in the hopes of producing highly cited articles.

Since 1945, the Institute for Scientific Information (ISI) has collected citation and other academic impact information in a large index named Science Citation Index Expanded™, now a subsidiary of the Thomson Reuters Corporation. The index is made available online through the Web of Knowledge™ collection of databases, which covers more than 8,200 of the world's leading scientific and technical journals published from 1899 to present. To be included in this database, Journals need to be submitted for review. The evaluation of a journal for coverage in *Web of Science* begins with the submission of current issues. The publisher must deliver three consecutive current issues, one at a time as they are published, to Thomson Reuters. Many factors are taken into account when evaluating journals for coverage in *Web of Science*, ranging from the qualitative to the quantitative. The journal's basic publishing standards, its editorial content, the international diversity of its authorship, and the citation data associated with it are all considered. This database allows users to determine which articles have been cited most frequently. However, there are only two music therapy journals represented in the Web of Science database. They are the *Journal of Music Therapy* (1975-2012) and *Nordic Journal of Music Therapy* (2007-2012).

Recently, various specialties have attempted to identify and analyze the “citation classics” in their field (Hennessey, Afshar, & Macneily, 2009; Mehlman, & Wenger, 2006; Price, Floyd, Fagan, & Smithson, 2011). To date the *Nordic Journal of Music Therapy* is the only journal, out of all the music therapy journals, with a comprehensive list available of its most frequently cited articles. Despite the existing reviews of the music therapy journal article literature, little has been done to judge the impact of this literature. The present investigation will involve a content analysis of music therapy journals in the English language to achieve an objective documentation of the longitudinal growth of the field, as well as provide a citation count analysis as a measure of journal article impact. The citation count will be limited to those journals found in specific databases that include this information; *Journal of Music Therapy*, through Web of Science (1975-2012), *Australian Journal of Music Therapy* through ProQuest (2005-2012), the *Nordic Journal of Music Therapy* through Taylor Francis (1993-2012) and *Music Therapy Perspectives* through ProQuest (1995-2012).

CHAPTER 2

RELATED LITERATURE

Content analysis of journals within the field of music therapy is not a new phenomenon, however bibliographic research completed on the music therapy literature has most often included an examination of the *Journal of Music Therapy*. Several content analysis studies have been conducted; these have involved the examination of methodology, topics, research setting, clientele, author, author affiliation and gender. To date there has not been an analysis or compilation of the most frequently cited articles in the music therapy journal literature.

Modes of Inquiry

Jellison (1973) analyzed the frequency and modes of inquiry (descriptive, philosophical, experimental and historical) appearing in the *Journal of Music Therapy* and the *Music Therapy Book of Proceedings* from 1952 - 1972. Results revealed a general decrease in the total number of published articles, with an increase in the total number of articles reporting data during this time period. In terms of research classification, descriptive articles were most common, followed by philosophical, experimental, and historical research in diminishing order in the literature. This research also noted a gradual increase in the number of experimental articles, accompanied by more frequent use of behavioral and statistical research designs. At that time there were only a few examples of historical research.

Gilbert (1979) analyzed research published in the *Journal of Music Therapy* from 1973 through 1978 as an update to the Jellison study. Articles were categorized and quantified according to general emphasis, research setting, mode of inquiry, bases of

research, and clinical population. This study found that the total number of articles published per 3-year period had continued to decline as noted by the Jellison study. The percentage of empirical research papers had increased relative to the proportion of position papers and clinical positions, however a balance was noted between clinical and university settings for research. Published research during these six years, categorized according to mode of inquiry, revealed descriptive as the most frequent, followed by experimental, philosophical and historical. Examination of clinical populations sampled or discussed suggested increasing interest in mentally retarded clients, nondisabled children and university students.

Codding (1987) analyzed the content of the *Journal of Music Therapy* from 1977-1985 describing trends in article focus, research setting, and type of research. Results showed that the number of published articles had remained constant for the 3-year periods from 1977-1985, indicating a recovery from the decline reported in previous research; the percentage of research had remained high relative to the proportion of clinical articles and position papers. Also, an analysis of research by frequency of mode of inquiry indicated the following prevalence ranking (high to low): experimental, descriptive, historical, and philosophical research; there were only a few examples of historical and philosophical research. It was found that more studies had been conducted in clinical than in university settings with research in the public schools increasing. Statistical designs were more prevalent than behavioral designs in experimental research.

Aigen (2008a) completed a comprehensive analysis of qualitative research articles of doctoral degrees written in the English language. This review focused on six areas: demographic information, report attributes, topic and focus, research methods and

procedures, research findings, and evaluations of methodological information. This research indicated that the majority of studies was methodologically sound with a need for more attention to issues such as selection criteria, reflexivity and illustrating data analysis. Aigen (2008b) also completed a comprehensive analysis of qualitative music therapy research studies published in peer-reviewed music therapy and non-music therapy journals, peer-reviewed research monographs, and in edited books. Findings suggested that a clinically-relevant research base is being created. The most frequently used qualitative research methods were found to be grounded theory, naturalistic inquiry, and phenomenology.

Topics In Music Therapy

Other content analyses have been completed previously on specific topics in music therapy. Standley (1986) performed a comprehensive analysis of all the empirical studies using music in medical/dental procedures. This study revealed 30 articles that had measured the effects of music during these treatments. The music therapy journals reviewed in this research included the *Journal of Music Therapy* and *Music Therapy* from their inception through 1985. Results of this review revealed that clinical research in this medical/dental areas occurred primarily during the five years prior to the publication of the article, was fairly evenly divided between laboratory and clinical contexts, and included highly diverse diagnostic categories.

Gregory (2000) completed an analysis of test instruments used in research published in the *Journal of Music Therapy* from 1984-1997. All experimental and descriptive research articles were reviewed to determine if the methodology used included test instruments. Test instruments were then categorized as published,

unpublished, or researcher-constructed. From 1984-1997, 220 articles were published in *Journal of Music Therapy*. Gregory found that approximately 83% of the total were experimental or descriptive research studies. Of these 183 articles, 92 included a test instrument. Reviews of method sections of the 92 articles resulted in a listing of 115 different test instruments. Percentages of researcher-constructed tests, unpublished tests, and published tests were 25%, 35%, and 40% respectively.

James (1985) identified sources of scholarly activity in music therapy in the *Journal of Music Therapy* from 1964-1983. A comparison of the two 10 year periods, 1964-1973 and 1974-1983 was conducted. Data were tabulated according to year of publication, author affiliation, author gender, and author credentials. The findings indicated that most of the literature between 1974 and 1983 originated in university settings. The Florida State University, the University of Kansas, and Loyola University were found to be leaders in the profession with respect to scholarly productivity, producing 25.1% of the professional literature. General parity existed between men and women authors, with a trend for more articles to be authored by women. Information concerning author credentials was limited.

Journal Comparisons

Wheeler (1988) was the first to compare the content of different music therapy journals. An analysis of literature from *Music Therapy Perspectives*, *Music Therapy: Journal of the American Association for Music Therapy*, and *The Arts in Psychotherapy* was completed. Following the format of Decuir (1987), Wheeler analyzed topic, type of research and also identified frequent contributors to the three journals.

Brooks (2003) completed a comprehensive review of the major music therapy periodicals in the English language. Prior to this study, no study had compared the types of articles published in all major music therapy journals in the English language, nor had any study compared these journals over an extended period of time. This study examined the historical trends in the modes of inquiry (quantitative, qualitative, historical, philosophical/theoretical, clinical and professional) that have been published in major music therapy periodicals in the English language, identified historical trends for each type of article within each music therapy journal, and compared the distribution of article types across journals from 1964–2001. These journals included: *Journal of Music Therapy*, *Music Therapy: Journal of the American Association for Music Therapy*, *Music Therapy Perspectives*, *The Arts in Psychotherapy*, *Journal of the Association for Music & Imagery*, *The Australian Journal of Music Therapy*, *The Nordic Journal of Music Therapy*, *The British Journal of Music Therapy*, and *The New Zealand Society for Music Therapy Journal*. The results of this study found quantitative and clinical articles as the most common type of publications throughout the English language music therapy journals. Historical articles continued to appear only intermittently.

In her study, Brooks also suggested that bibliographic research in music therapy had taken three methodological directions: (a) articles on specific topics, (b) establishment of indices and databases on graduate research done in colleges and universities, and (c) content analysis of various music therapy journals.

The first category involved an examination of articles on specific topics. Examples in this category included studies were completed by Standley (1986) who presented a meta-analysis on music research in medical/dental treatment from 1950-1985

and by Gregory (2000), who examined the *Journal of Music Therapy* from 1984-1997 for the test instruments used in its published studies.

Examples of publications in the second category, indices and databases, include studies by Maranto and Bruscia (1988) who published the first index with abstracts of master's theses in music therapy completed in the United States from 1941 to 1986. Similarly, Weiss (1989) classified doctoral dissertations in music therapy and related areas from 1945 to 1985.

Examples of publications in the third category, content of various music therapy journals, include studies completed by Jellison (1973), who analyzed the frequency and general mode of inquiry of articles appearing in the *Journal of Music Therapy* (1964-1972) and the *Music Therapy Annual Book of Proceedings* (1952-1963), and Wheeler (1988), who was the first to compare the content of different music therapy journals.

Brooks' study included 1521 articles from all journals over a 37-year period. The historical trend in modes of inquiry indicated that quantitative research was the most frequent type of publication across all journals, followed by clinical and professional articles. Philosophical/theoretical articles were the next most common followed by qualitative research articles. Historical research represented the fewest number of articles across all journals. Further analysis indicated that, of the 1521 articles reviewed, only 55 were historical, 32 of which were published in the *Journal of Music Therapy*. Sixteen additional historical articles appeared in *Music Therapy Perspectives*. There was a steady growth in the number of quantitative articles with an increase during the mid 1970s. The publication rate of quantitative studies prior to this study remained fairly constant with 15-20 articles published each year. Clinical articles were well represented in all English

language music therapy journals beginning around 1985 and remaining fairly high until 2000. This finding was similar for the publication rate of qualitative and philosophical/theoretical articles which grew in number fairly steadily and significantly beginning about 1985. Professional articles averaged 2-4 publications per year, peaking to 14 in the mid 1980s.

The second research question explored by Brooks was concerned with the distribution of articles in each of the journals according to mode of inquiry. There were 664 articles included from the *Journal of Music Therapy*: 11-16 quantitative research articles appeared each year from 1987. Only six qualitative articles were found in this journal. Historical articles totaled 32, and there was a steady increase during the early years of the journal in philosophical/theoretical articles. However, there was a drastic decrease in the number of philosophical/theoretical articles beginning around 1968; this decrease has remained since that time. Professional articles experienced an ebb and flow through the years, remaining sporadic.

The *Nordic Journal of Music Therapy* was found to stand out in its publication of philosophical/theoretical (32 articles), clinical (31 articles), and qualitative (21) articles. Brooks study found that the *Nordic Journal of Music Therapy* is the only journal that devoted 21.9% of its content to qualitative research, and 33% of its publication to philosophical/theoretical research. No historical articles were found. *Music Therapy: Journal of the Association for Music Therapy* contained 43 clinical articles, with qualitative, philosophical/theoretical divided at 17 each. Professional articles averaged one per year. No historical articles were published in this journal. The *British Journal of*

Music Therapy contained 49 clinical, 24 professional, 18 qualitative, 16 philosophical/theoretical and 10 quantitative articles. Only three articles were historical.

There were 129 clinical articles found in *Music Therapy Perspectives*, and 65 professional articles. Brooks found clinical articles to be the most prevalent and these continued to be the most prevalent. This was also found to be true for articles related to music or music therapy in *Arts in Psychotherapy* with a marked decline in the numbers of music therapy articles beginning in 1995. Brooks suggests this decline may be partly due to the increased availability of other music therapy journals accepting publications in the English language. This journal published only two historical articles.

The *Journal of the Association for Music and Imagery* published 32 clinical articles, 4 quantitative and one historical. Eleven articles were qualitative, and 10 were philosophical/theoretical. *The New Zealand Society for Music Therapy Journal* contained primarily clinical articles (27 articles). No historical articles were found. The *Australian Journal of Music Therapy* was found to contain 29 clinical articles, whereas quantitative, qualitative and professional articles numbered 5 each. One historical and one philosophical/theoretical article appeared.

An analysis of the proportion of article types within each music therapy journal revealed that the *Journal of Music Therapy* concentrated primarily on quantitative research. *Music Therapy Perspectives*, *Music Therapy*, the *Australian Journal of Music Therapy*, the *British Journal of Music Therapy*, the *New Zealand Journal of Music Therapy* and the *Journal for the Association of Music and Imagery* contained high percentages of clinical articles. The *Nordic Journal* had the most even distribution in

types of articles. Historical research was the smallest percentage of research types in all journals.

When the journals were compared according to the percentage of the various types of articles published, Brooks (2003) found that the *Journal of Music Therapy* contributed the highest percentage of quantitative articles with 78.6%, with the next highest contributor being *Music Therapy Perspectives* with 10.7%. *The Nordic Journal of Music Therapy* contributed the highest percentage of qualitative articles. *Music Therapy Perspectives* published the highest percentage of clinical articles (25.9%) followed by the *Journal of Music Therapy* (22.4%). *The Journal of Music Therapy* published the highest percentage of historical articles (58.2%) followed by *Music Therapy Perspectives* (29.1%); these are two of the oldest journals still in existence. In the area of philosophical/theoretical, the *Nordic Journal* has published the largest percentage of articles in this category 33.3%. *Music Therapy Perspectives* has published the largest number of professional articles.

Historical research is for the most part unexplored territory in music therapy research. Most studies examining the historical content of music therapy research are primarily focused on the *Journal of Music Therapy*, with only two studies that examined more than one music therapy journal, specifically, Brooks (2003) and Wheeler (1988). The Brooks study, although significantly more comprehensive in scope as it encompassed all the major English language journals over significantly longer time periods, focused exclusively on modes of inquiry. There is a need for a study that would complement and expand previous research in music therapy by providing an in-depth investigation of information on author demographics (institution, gender, profession position/title,

country), sample characteristics, type of research, and most frequently cited articles. To date, there has not been a comprehensive analysis of the citation impact of music therapy literature. Therefore, this study is designed to answer the following research question: What are the profiles of the eight English language music therapy journals? More specifically: (1) who or what are the most frequently contributing authors, institutions, geographic locations, and professional credentials?; (2) what populations of research participants are served?; (3) what modes of inquiry are most often used? and (4) what are the most frequently cited articles?

CHAPTER 3

RESEARCH METHOD

The present study, directly influenced by Brooks (2003) was designed to provide a comprehensive evaluation of English language music therapy journals and to examine seven areas of interest: authors, institutions, geographic location, research population, modes of inquiry, institutions, and times cited and appearing in music therapy articles published between 1964 and 2012.

Sample

Journals selected for this study were those journals that met the following criteria: (a) a minimum of 5 years in existence, (b) a minimum of one issue published per year, (c) a minimum total of 40 articles on music therapy, (d) exclusive publication of music therapy articles and (e) published in the English language. The eight journals identified were: *Journal of Music Therapy (JMT)*, *Music Therapy: Journal of the American Association for Music Therapy (MT)*, *The Australian Journal of Music Therapy (AJMT)*, *Music Therapy Perspectives (MTP)*, *Nordic Journal of Music Therapy (NJMT)*, *The British Journal of Music Therapy (BJMT)*, *New Zealand Society of the Music Therapy Journal (NZSMTJ)* and the *Canadian Journal of Music Therapy (CJMT)*.

The following is a description of those journals included in the current study, the years of publication for each journal and the information excluded from each journal. This information was adopted from Brooks (2003).

1. ***Journal of Music Therapy (JMT)*** (1964-2012). Four issues per year. Refereed by an editorial board. Excluded were book reviews, editorial reports, Code of Ethics, conference reports, financial statements, and job listings (Brooks, p. 154).

The Mission Statement of the *Journal of Music Therapy* states “to advance research, theory, and practice in music therapy through the dissemination of scholarly work. The journal strives to present a variety of research approaches and topics, to promote critical inquiry, and to serve as a resource and forum for researchers, educators, and clinicians in music therapy and related professions.” (American Music Therapy Association, 2013).

2. ***Music Therapy: Journal of the American Association for Music Therapy (MT)*** (1981-1995). One issue per year. Refereed by an editorial board. Excluded were: opening notes, letters of invitation, statements, notes, prologues, epilogues, research publication/presentation, Code of Ethics, philosophy & suggestions for format & style (Brooks, p. 154).
3. ***The Australian Journal of Music Therapy (AJMT)*** (1990 – 2012). One issue per year. Refereed by an editorial board. Excluded were editorials and policies (Brooks, p. 154). The mission of the *Australian Journal of Music Therapy* “is to support and develop the profession standing of music therapy in Australia, and to encourage the highest quality of research and training for music therapists.” (Australian Journal of Music Therapy, 2013)
4. ***Music Therapy Perspectives (MTP)*** (1982 – 2012). One issue per year until 1992, then two issues per year. Refereed by an editorial board. Excluded were: letters from the editors, “another perspective,” contemporary guitar applications, columns, and reference reviews, Music Therapy in Action, issues in clinical training, international perspectives, information sharing, and my viewpoint (Brooks, p. 154-155). The mission of *Music Therapy Perspectives* “is to promote

the development of music therapy clinical practice through the dissemination of scholarly work. With a focus on clinical benefits of music therapy, *Music Therapy Perspectives* strives to serve as a resource and forum for music therapists, music therapy students and educators, and those in related professions.” (American Music Therapy Association, 2013)

5. ***Nordic Journal of Music Therapy (NJMT)*** (1992 - 2012). Two issues per year up through 2010, three issues 2011. Refereed by an editorial board. Excluded were: articles not appearing in English, or with an English summary or abstract, introduction, editorials, “What’s Been Happening” “The Series of Classical Articles”. Nordic research network, dialogues, book reviews, announcements and advertisements (Brooks, p. 155). The mission of the *Nordic Journal of Music Therapy* “is to serve the international community of music therapy by being an avenue for publication of scholarly articles, texts on practice, theory and research, dialogues and discussions, reviews and critique.” (Nordic Journal of Music Therapy, 2013)
6. ***The British Journal of Music Therapy (BJMT)*** (1984 – 2012). Two issues per year. Reviewed by the editors. Excluded were: dialogues, forwards, subscription information, book reviews, indexes, acknowledgements and historical perspectives: interview series (Brooks, p. 155).
7. ***New Zealand Society of Music Therapy Journal (NZSMTJ)*** (1991 – 2012). One issue per year. Excluded were: editor’s notes, incorporation report, book reviews, interviews, and income and expenditure reports (Brooks, P. 155). The mission of the *New Zealand Society of Music Therapy Journal* “is to extend the knowledge

of music therapists and develop their understanding of their own profession and of the context in which they work.” (Music Therapy New Zealand, 2013)

8. *The Canadian Journal of Music Therapy (CJMT)* (2004-2012). One issue per year. Excluded were: articles not appearing in English, or with an English summary or abstract, editor’s notes, cover, and book reviews. The mission of the *Canadian Journal of Music Therapy* “is to raise international standards of music therapy knowledge”. (Canadian Association of Music Therapy, 2013)

Procedure

Each article meeting the criteria for inclusion was assigned a record number and entered into an Excel database. Each was coded, for subsequent computer analysis, according to the following scheme:

- (1) Journal name
- (2) Year of publication
- (3) Volume
- (4) Number
- (5) Title of article
- (6) Author(s)
- (7) Institution affiliation of author(s)
- (8) Geographic location
- (9) Professional (author(s) credentials)
- (10) Methodologies/mode(s) of inquiry
- (11) Clinical/non-clinical population
- (12) Citation rate
- (13) Institution

Institutions and Authors

To calculate institutional productivity, this study employed a weighted, proportional counting formula that was developed by Howard, Cole and Maxwell (1987). Institutional productivity estimates were compiled on the basis of frequency and order of

authorship. A single-authored article netted that author's institution a single unit of credit. In multi-authored articles, credit was assigned to institutions proportionately:

$$\text{Credit} = (1.5^{n-i}) / (\sum_{i=1}^n 1.5^{i-1}),$$

where n is the total number of authors and i is the particular author's ordinal position. Hence, second authorship in a co-authored article was given 0.40 credit unit; third authorship in a three-author article, 0.21, and so forth.

Author credentials were coded as follows:

- (a) Doctoral degree,
- (b) Master's degree,
- (c) Baccalaureate degree
- (d) MT
- (e) Non-MT
- (f) Other

Methodology

The literature by type of methodology was adopted from Brooks' (2005) definitions. This study included mixed-methods research as defined by Johnson, R.B., Onwuegbuzie, A. and Turner, L. (2004). The research methodologies were defined as follows:

1. Quantitative Research: Any article wherein numeric data were statistically summarized or analyzed for the purpose of making generalizations. This included experimental and descriptive research as well as studies in applied behavior analysis. Also included in this category were writings about research methods and the presentation of research protocols (Brooks, p. 155-156).

2. Qualitative Research: Any article involving systematic collection and analysis of non-numeric data for the purpose of deriving idiographic insights or meanings in relation to a phenomenon. This included research (individual case or small groups) labeled as naturalistic, action based, participatory, hermeneutic, heuristic, phenomenological, constructive, critical, or discursive. Also included in this category were writings about qualitative research methods and the presentation of research protocols (Brooks, p. 156).
3. Clinical Reports: Any article describing actual clinical work with clients where there was no intent to use clinical data for research purposes. This included clinical case studies, reports of clinical programs, and presentations of treatment protocols, methods, or techniques (Brooks, p. 156).
4. Philosophical & Theoretical Research: Any article that involved philosophical inquiry or the elaboration of theoretical constructs, but did not involve the gathering of new data. This included articles aimed at clarifying, evaluating, relating or arguing basic assumptions, beliefs, hypotheses, constructs, paradigms, principles, or discoveries guiding practice or research (Brooks, p. 156).
5. Historical Research: Any article aimed at gaining knowledge or insights about the past by systematically studying past practices, materials, institutions and people, and so forth. This included biographies, histories of music therapy, bibliographic studies, and literature reviews (Brooks, p. 156).
6. Mixed methods research: A type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g., use of qualitative and quantitative viewpoints, data collection, analysis,

inference techniques) for the broad purposes of breadth and depth of understanding and corroboration (Johnson, et.al. p. 123).

7. Professional Articles: Any article that dealt with professional aspects of music therapy. This included position papers, articles dealing with music therapists, clinical training, ethics, standards, competencies, employment, credentialing and so forth (Brooks, p. 156).

Times Cited

In a manner consistent with previous research (e.g., Aylward, Roberts, Colombo, & Steele, 2007; Wicherts, 2009), the Institute for Scientific Information Web of Science database was used to identify articles in the *Journal of Music Therapy*. This database comprises five citation databases: the Science Citation Index (covering 1965 to present), the Social Sciences Citation (covering 1965 to present), and the Arts and Humanities Citation Index (covering 1975 to present), as well as the Conference Proceedings Citation Index-Science (covering 2006 to present) and the Conference Proceedings Citation Index-Social Science & Humanities (covering 2006 to present). The number of citations each article has received (i.e., the Times Cited variable) was targeted. The number of citations for articles in *The Australian Journal of Music Therapy* was also reported for the years (2000-2012) through the ProQuest database. The *Nordic Journal of Music Therapy* citation rates for the years 1993-2012 were accessed through the Taylor Francis Online database.

CHAPTER 4

RESULTS

Overview of Journal Research Articles

There was a total of 1,952 journal articles published in eight English language music therapy journals. These journals included: *Music Therapy Perspectives* (MTP), *Journal of Music Therapy* (JMT), *Music Therapy: Journal of the American Association for Music Therapy* (MT), *British Journal of Music Therapy* (BJMT), *Australian Journal of Music Therapy* (AJMT), *Nordic Journal of Music Therapy* (NJMT), *Canadian Journal of Music Therapy* (CJMT) and *New Zealand Journal of Music Therapy* (NZJMT). A total of 1,641 different authors contributed to the literature, representing 27 different countries. A total of 289 institutions was represented across all journals.

There was a total of 820 articles published in the *Journal of Music Therapy* (JMT) from 1964-2012. *Music Therapy Perspectives* (MTP) published from 1982-2012 included 366 articles. The *British Journal of Music Therapy* (BJMT) was originally titled *The Journal of British Music Therapy* from the years 1984-1994. The name of the journal changed to the *British Journal of Music Therapy* in 1995. The total for the British journals was 169 articles. The *Nordic Journal of Music Therapy* (NJMT) included 161 articles from 1993-2013. The *Australian Journal of Music Therapy* (AJMT) included a total of 138 articles. The *New Zealand Journal of Music Therapy* (NZJMT) contained 107 articles from 1991-2012. *Music Therapy: Journal of the American Association for Music Therapy* (MT) published 99 articles from 1981-1996. The *Canadian Journal of Music Therapy* (CJMT) included 92 articles from 1973-1979 and 1993 – 2012. There were no published articles between the years 1980 and 1992.

Table 1 presents the eight English language journals and the total number of articles contained in each journal.

| Table 1 <i>Total Number of Articles per Journal</i> | |
|--|-------|
| Journal Title | Total |
| Journal of Music Therapy | 820 |
| Music Therapy Perspectives | 366 |
| British Journal of Music Therapy | 169 |
| Australian Journal of Music Therapy | 138 |
| Nordic Journal of Music Therapy | 161 |
| New Zealand Journal of Music Therapy | 107 |
| Music Therapy: Journal of the American Association for Music Therapy | 99 |
| Canadian Journal of Music Therapy | 92 |

Journal Total by Country

Of the 1,952 journal articles, there was a total of 1,135 articles whose primary author was from the United States. These articles were also sorted by seven regions designated by the American Music Therapy Association. The region with the majority of articles was the Southeastern region with a total of 298 articles. The Southeastern region includes the states of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, and Tennessee. The Mid-Atlantic region, consisting of Delaware, District of Columbia, Maryland, New Jersey, New York, Pennsylvania, Virginia and West Virginia, contributed 239 articles. The Midwestern region, that includes the states of Colorado, Iowa, Kansas, Missouri, Montana, Nebraska, North Dakota, South Dakota and Wyoming, contributed 201 articles. The Great Lakes region of Illinois, Indiana, Michigan, Minnesota, Ohio and Wisconsin included a total of 161 articles. The Western region, Alaska, Arizona, California, Hawaii, Idaho, Nevada, Oregon, Utah and Washington had a total of 105 articles. The Southwestern region, New Mexico, Oklahoma and Texas included 70 articles, whereas the New England Region,

Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont contributed 11 articles. Table 2 presents the total number of articles published by authors from the United States by region.

Table 2
Total Number of Articles Published By US Region

| Articles by Region | Region Total |
|--------------------|--------------|
| Southeastern | 298 |
| Midwestern | 202 |
| Western | 105 |
| New England | 11 |
| Mid-Atlantic | 240 |
| Great Lakes | 161 |
| Southwestern | 70 |

There was a total of 523 articles identified that were published outside of the United States. Table 3 presents these 26 countries and the total number of articles for each country.

Table 3
Total Articles by Country

| Country | Total Articles | Country | Total Articles |
|-------------|----------------|--------------|----------------|
| Australia | 125 | South Korea | 6 |
| Canada | 104 | Sweden | 6 |
| UK | 73 | Jerusalem | 5 |
| New Zealand | 46 | South Africa | 3 |
| Norway | 35 | Spain | 3 |
| Denmark | 27 | Brazil | 2 |
| Israel | 25 | Estonia | 2 |
| Germany | 16 | Italy | 2 |
| Japan | 9 | Switzerland | 2 |
| Finland | 8 | Venezuela | 2 |
| Netherlands | 7 | Dundee | 1 |
| Ireland | 6 | New Mexico | 1 |
| Scotland | 6 | Poland | 1 |

Authors, Institutions and Credentials

The first research question was concerned with identifying the most frequently contributing authors, their institutions, their geographic location and their professional

credentials. There was a total of 1,641 authors who contributed to music therapy research across all journals. There were five authors who published 20 or more research articles as primary author or in collaboration with other authors. Clifford Madsen, PhD, published 27 articles over 40 years, from 1965 to 2009 while at Florida State University located in the United States. These articles were all published in the *Journal of Music Therapy*. Between 2001 and 2012, Felicity Baker, PhD, RMT published 25 articles from two institutions, the University of Queensland in Australia and Sogn og Fjordane University College in Norway. She has published in all the journals except for *Music Therapy*. Tony Wigram, PhD, RMT also contributed 23 articles while at Aalborg University in Denmark, from 1985-2011, publishing in the *British Journal of Music Therapy*, *Australian Journal of Music Therapy*, *Nordic Journal of Music Therapy* and *Music Therapy Perspectives*. Alice-Ann Darrow, PhD, RMT-BC published 22 articles between 1979 and 2007 primarily in the *Journal of Music Therapy*. Four of her articles are published in *Music Therapy Perspectives*. She contributed her first article in 1979 while in the Dade County Public Schools in Florida and 17 articles while at The University of Kansas. Four articles were published while at Florida State University. Michael Silverman, PhD, RMT-BC, NICU MT, published 20 articles beginning in 2003 while at Florida State University and the University of Minnesota. His latest article was written in 2012 and published in *Music Therapy Perspectives*.

Although Madsen had the highest number of articles published, it is interesting to two fewer articles in an eleven-year time frame. Table 4 contains the list of authors with 10 or more articles published in any of the eight English language music therapy journals.

Table 4

Authors With 10 or More Articles Published From 1964-2012 in any of the Eight English Language Journal

| Author Name | Total # Articles |
|------------------------|------------------|
| Madsen, Clifford K. | 27 |
| Baker, Felicity | 25 |
| Wigram, Tony | 23 |
| Darrow, Alice-Ann | 22 |
| Silverman, Michael J | 20 |
| Gfeller, Kate | 19 |
| Rickson, Daphne J | 19 |
| Krout, Robert E | 17 |
| Steele, Anita Louise | 17 |
| Cevasco, Andrea M | 14 |
| Grocke, Denise | 14 |
| O' Callaghan, Clare C. | 14 |
| Standley, Jayne M. | 14 |
| Wheeler, Barbara L. | 14 |
| Brotons, Melissa | 13 |
| Davis, William B | 13 |
| James, Mark R. | 13 |
| Aigen, Kenneth | 12 |
| Aldridge, David | 12 |
| Clair, Alicia Ann | 12 |
| Gregory, Dianne | 12 |
| Magee, Wendy L | 12 |
| Amir, Dorit | 11 |
| Decuir, Anthony A. | 11 |
| Maranto, Cheryl D | 11 |
| McFerran, Katrina | 11 |
| Wolfe, David E. | 11 |
| Bruscia, Kenneth E. | 10 |
| Daveson, Barbara A. | 10 |
| Hanser, Suzanne B. | 10 |
| Pavlicevic, Mercedes | 10 |
| Thaut, Michael H. | 10 |

Sixty-eight authors published 5 or more articles as primary author. Table 5

contains the list of the 17 authors who have contributed 10 or more articles from 1964-2012 as primary author in any of the eight English language journals.

Table 5

Primary Authors with 10 or More Articles Published from 1964-2012 in any of the Eight English Language Journals

| Author | Total # Articles |
|------------------------|------------------|
| Madsen, Clifford K. | 24 |
| Darrow, Alice-Ann | 19 |
| Silverman, Michael J | 19 |
| Baker, Felicity | 18 |
| Rickson, Daphne J | 18 |
| Gfeller, Kate | 16 |
| Steele, Anita Louise | 14 |
| Aigen, Kenneth | 12 |
| James, Mark R. | 12 |
| Krout, Robert E | 12 |
| Wheeler, Barbara L. | 12 |
| Davis, William B | 11 |
| Wigram, Tony | 11 |
| Bruscia, Kenneth E. | 10 |
| Gregory, Dianne | 10 |
| O' Callaghan, Clare C. | 10 |
| Standley, Jayne M. | 10 |

Twenty-five authors have published seven to nine articles in any of the eight English language music therapy journals as primary authors. Table 6 presents these authors who have published between 1964-2012 in any of the eight music therapy journals presented in this study.

Table 6

Primary Authors with Seven to Nine Articles Published from 1964-2012 in any of the Eight English Language Journals

| Author | Total # Articles |
|------------------------|------------------|
| Amir, Dorit | 9 |
| Braswell, Charles | 9 |
| Cevasco, Andrea M | 9 |
| Magee, Wendy L | 9 |
| Short, Alison E | 9 |
| Bonny, Helen Lindquist | 8 |
| Clair, Alicia Ann | 8 |
| Colwell, Cynthia M | 8 |
| Croxson, Morva | 8 |
| Daveson, Barbara A. | 8 |
| Grocke, Denise | 8 |
| Hanser, Suzanne B. | 8 |
| Dileo-Maranto, Cheryl | 8 |
| Pavlicevic, Mercedes | 8 |
| Robb, Sheri L. | 8 |
| Staum, Myra J. | 8 |
| Brotons, Melissa | 7 |
| Cassity, Michael David | 7 |
| Cohen, Nicki S. | 7 |
| Lim, Hayoung A | 7 |
| Shoemark, Helen | 7 |
| Smith, David S. | 7 |
| Thaut, Michael H. | 7 |
| VanWeelden, Kimberly | 7 |
| Wolfe, David E. | 7 |

Table 7 presents 32 authors who have contributed a total of five to six articles published in any of the English language journals as primary author from 1964-2012.

Table 7

Primary Authors with Five or Six Research Articles Published from 1964-2012 in any of the Eight English Language Journals

| Author | Total |
|--------------------------|-------|
| Abad, Vicky | 6 |
| Ahonen-Eerikainen, Heidi | 6 |
| Ansdell, Gary | 6 |
| Edwards, Jane | 6 |
| Gilboa, Avi | 6 |
| Groene, Robert | 6 |
| Hilliard, Russell E. | 6 |
| Jellison, Judith A. | 6 |
| Michel, Doanld E. | 6 |
| Register, Dena | 6 |
| Stige, Brynjulf | 6 |
| Walworth, Darcy D. | 6 |
| Whipple, Jennifer | 6 |
| Alley, Jayne M. | 5 |
| Bonde, Lars Ole | 5 |
| Bunt, Leslie | 5 |
| Clark, Michael E | 5 |
| Eagle, Charles T. | 5 |
| Erdonmez, Denise | 5 |
| Gardstrom, Susan C. | 5 |
| Gibbons, Alicia Clair | 5 |
| Gooding, Lori F. | 5 |
| Hooper, Jeff | 5 |
| Lathom, Wanda | 5 |
| McFerran, Katrina | 5 |
| Moreno, Joseph J | 5 |
| Noy, Pinchas | 5 |
| Oldfield, A. | 5 |
| Rider, Mark S. | 5 |
| Ruud, Evan | 5 |
| Taylor, Dale B | 5 |
| Tyson, Florence | 5 |

Author Credentials

Of the 1,641 authors who contributed to the literature, credential information was available for 1,455 authors. For those authors who held more than one academic degree, only the highest degree was included. A total of 321 authors had obtained a PhD. Authors who held master's degrees totaled 283, and those holding only bachelor's degrees totaled 60. A total of 671 authors was listed as music therapists, while 211 authors were non-music therapists. Non-music therapy credentials included authors with distinctions such as MD, RN, MSW, CCLS, and ATR. There were 117 "other" credentials involving specialized training, such as NICU-MT, NMT and NRMT. Figure 1 presents a visual representation of author credentials.

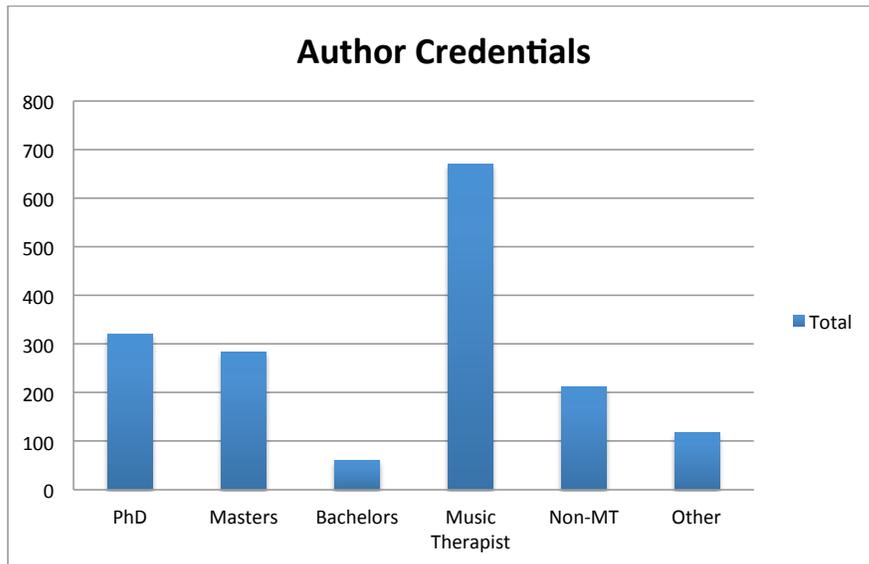


Figure 1 Total number of Author Credentials

Care must be taken in making any type of inferences from these data, as many of the articles did not include information related to author credentials.

Institutions Represented in the English-Language Journals in Music Therapy

Table 8 contains a list of institutions represented in 10 or more published articles in English language music therapy journals. Of the 1,952 total articles, 1,513 articles had listed an identifiable associated institution. Florida State University contributed a total of 116 articles publishing primarily in the *Journal of Music Therapy*. The University of Kansas contributed 71 articles, again published primarily in the *Journal of Music Therapy*. It is interesting to note the large gap in published articles between The University of Kansas and the next highest total of articles from any given institution. Temple University has 32 articles published in comparison to these other two institutions. Unlike Florida State and The University of Kansas, Temple University has published in six of the seven journals, with the majority of articles in *Journal of Music Therapy*, *Music Therapy* and *Music Therapy Perspectives*.

Table 8

Institutions with 10 or More Published Articles in English-language Music Therapy Journals

| Institution | AJMT | BJMT | CJMT | JMT | MT | MTP | NJMT | NZJMT | Total |
|---|------|------|------|-----|----|-----|------|-------|-------|
| Florida State U. | | | | 100 | | 16 | | | 116 |
| U. of Kansas | | | | 57 | | 15 | | | 72 |
| Temple University | 3 | 1 | 2 | 8 | 7 | 10 | 3 | | 34 |
| U. of Iowa | | | | 14 | 1 | 16 | | | 31 |
| U. of Minnesota | | | | 18 | | 9 | | | 27 |
| U. of Missouri-Kansas City | | | | 17 | | 9 | | | 26 |
| Colorado State U. | | 1 | 1 | 18 | | 5 | | | 25 |
| Loyola University | | | | 23 | | 2 | | | 25 |
| U. of Georgia | | | | 19 | | 5 | | | 24 |
| U. of Melbourne | 7 | 2 | 1 | 4 | | 3 | 3 | 2 | 22 |
| U. of the Pacific | | | | 18 | | 3 | | | 21 |
| The Cleveland Music School Settlement | | | | 17 | | 2 | | | 19 |
| New York University | 1 | | 1 | 1 | 11 | 2 | | | 16 |
| Private practice | 2 | 2 | 1 | 4 | 2 | | 5 | | 16 |
| Massey University | | | | | | | | 15 | 15 |
| Michigan State U. | | | 2 | 10 | | 3 | | | 15 |
| U. of Queensland | 4 | 3 | | 2 | | 1 | 4 | 1 | 15 |
| Southern Methodist U. | 1 | | | 3 | 1 | 5 | | 4 | 14 |
| U. of Texas | | | | 10 | 1 | 3 | | | 14 |
| Texas Woman's U. | | | | 6 | | 7 | | | 13 |
| U. of Miami | | | | 7 | | 6 | | | 13 |
| University of Aalborg | 4 | 5 | | | | 1 | 3 | | 13 |
| Willamette University | | | | 12 | | 1 | | | 13 |
| Bar Ilan University | 1 | | | 2 | 2 | 3 | 4 | | 12 |
| Nordoff-Robbins Center for Music Therapy, NYU | | | | 1 | 6 | 4 | 1 | | 12 |
| Sogn og Fjordane University College | | 2 | | 1 | | 2 | 7 | | 12 |
| University of Alabama | | | | 9 | | 3 | | | 12 |
| Indiana-Purdue University Fort Wayne | | | | 8 | | 3 | | | 11 |
| State University of NY at New Paltz | | | | 8 | | 3 | | | 11 |
| Aalborg University | | | | | 1 | | 9 | | 10 |
| Wilfred Laurier U. | | 2 | 2 | 2 | | | 4 | | 10 |

Table 9 presents the top ranked institutions after applying the weighted, proportional counting formula to the data. Results of this analysis revealed slight changes in the data. For instance, although Temple University ranked higher than the University of Iowa in the previous table, this ranking changed indicating that although Iowa didn't have more articles published, publishing more articles, there were more authors who published from this institution in secondary or tertiary positions.

Table 9

Weighted Rankings of Top Institutions

| Institution | Weighted Rank |
|---|---------------|
| Florida State University | 108.91 |
| The University of Kansas | 66.70 |
| The University of Iowa | 30.80 |
| Temple University | 30.42 |
| The University of Missouri-Kansas City | 25.82 |
| The University of Minnesota | 25.79 |
| Colorado State University | 24.69 |
| Loyola University | 24.00 |
| The University of Georgia | 23.20 |
| University of the Pacific | 21.11 |
| University of Melbourne | 21.06 |
| The Cleveland Music School Settlement | 19.05 |
| Private practice | 16.39 |
| University of Aalborg | 14.51 |
| The University of Texas | 14.15 |
| New York University | 13.93 |
| Michigan State University | 13.40 |
| The University of Miami | 13.40 |
| Southern Methodist University | 13.20 |
| Willamette University | 12.20 |
| Bar Ilan University | 12.08 |
| Texas Woman's University | 11.66 |
| Nordoff-Robbins Center for Music Therapy, NYU | 11.60 |
| Sogn og Fjordane University College | 11.42 |
| The University of Alabama | 10.88 |
| State University of NY at New Paltz | 10.60 |

Categories of Clinical Populations and Non-clinical Studies

The second research question examined the clinical populations of participants in articles published in English-language journals. These data were condensed into 29 different categories and are presented in Table 10.

Table 10

| <i>Categories of Clinical Populations and Non-Clinical Studies</i> | Total |
|---|-------|
| Category | |
| Medical | 179 |
| Developmentally Disabled/Learning Disabilities/Multiply Handicapped | 156 |
| MT Education and Training | 147 |
| MT assessment/treatment/intervention/methods | 131 |
| Adult psychiatric | 115 |
| MT/MT professionals/client-therapist relationship/multicultural | 107 |
| Other | 87 |
| Special Education/Preschool Ed/Gifted/ESL/Early Intervention | 82 |
| MT profession /ethics/practice/international | 79 |
| Child/Adolescent psychiatry | 77 |
| Gerontology and long term care | 73 |
| Physiological/psychological response/relaxation/anxiety | 65 |
| MT research | 60 |
| Autism | 51 |
| Neurological/TBI/Stroke | 50 |
| Hospice/Palliative/grief/bereavement | 48 |
| Visual/hearing impairment | 47 |
| Addiction/recovery/eating disorders | 42 |
| Music/psychotherapy/healing/technology/spirituality | 39 |
| Dementia/Alzheimers | 35 |
| Physical disabilities/CP/rehabilitation | 34 |
| Memory/Perception/cognition | 31 |
| Speech/language/Communication Disorders | 28 |
| Trauma/abuse/domestic violence | 24 |
| Group Therapy | 19 |
| Juvenile offenders/forensic offenders | 17 |
| Mental health | 15 |
| Psychodynamic/psychoanalytic | 14 |

| | |
|---|-----|
| Table 10, continued | |
| Parent/infant | 8 |
| Music therapy | 524 |
| Medical | 179 |
| Developmentally Disabled/Learning Disabilities/Multiply Handicapped | 156 |

There were five categories specifically related to music therapy, including: (1) music therapy education and training, 8% (n=147), (2) music therapy assessment/treatment/intervention/methods, 7% (n=131), (3) music therapy professionals/client-therapist relationship/multicultural, 6% (n=107), (4) music therapy profession/ethics/practice/international, 4% (n= 79) and (5) music therapy research, 3% (n= 60). When combined music therapy related topics accounted for 29% of the total number of articles (n=524). Figure 2 indicates five of the top populations examined, including the combined articles specific to music therapy.

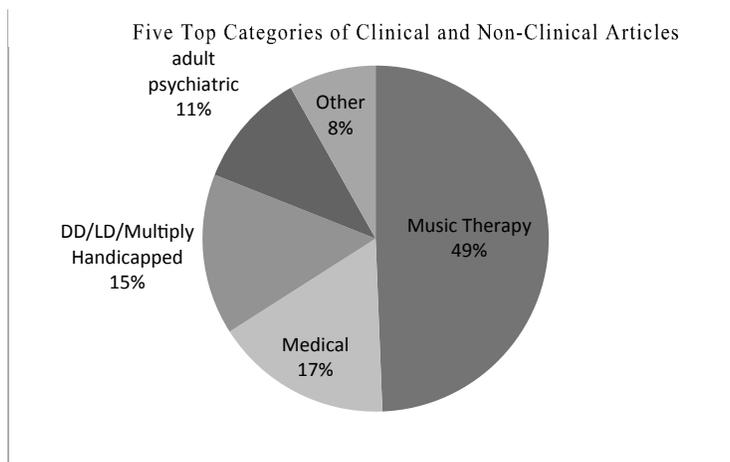


Figure 2 Top Five Categories of Clinical and Non-Clinical Articles

Authors according to specific clinical populations

Of the 19 articles published by Alice-Ann Darrow, 14 articles were dedicated to children with hearing impairments. Madsen published primarily research in music therapy education and training and music therapy research. Michael Silverman published primarily in the field of adult psychiatric. Felicity Baker's work focused primarily in the category of neurologic/TBI/stroke, whereas Kate Gfeller published eight articles related to the hearing impaired. Anita Louise Steele's research was primarily related to professional aspects of music therapy, as well as education and training; Mark James focused on addiction and recovery. Table 11 contains a list of authors with 10 or more published articles in which they were primary author and the primary population they studied.

Table 11

List of primary authors and primary population they studied

| Author | Category |
|-----------------------|---|
| Madsen, Clifford K. | Music therapy education |
| Darrow, Alice-Ann | Visual/hearing impaired |
| Silverman, Michael J. | Adult psychiatric |
| Baker, Felicity | Neurological/TBI/stroke |
| Gfeller, Kate | Visual/hearing impaired |
| Steele, Anita Louise | Music therapy profession/ethics/practice/education/ training/practice/education/training |
| James, Mark R. | Addiction/recovery |
| Aigen, Kenneth | Music therapy research/music therapy Music/psychotherapy/healing |
| Wigram, Tony | Music therapy profession/ethics/practice Music therapy assessment/treatment/intervention/methods |
| Davis, William B. | Music therapy/music therapy professionals |
| Standley, Jayne M. | Medical |
| Krout, Robert E. | Hospice/palliative/grief/bereavement |
| Gregory, Dianne | Music therapy education and training |
| Bruscia, Kenneth E. | Music therapy assessment/treatment/ Intervention/methods/education and training |

Types of Articles Published

Types of articles identified in the English-language journals included quantitative research, qualitative research, clinical reports, philosophical/theoretical, historical, professional articles and mixed methods studies. Quantitative studies appeared most frequently with a total of 785 articles. Clinical reports totaled 622, and professional articles totaled 231. Philosophical/Theoretical articles totaled 120, whereas historical articles totaled 98. Qualitative articles also totaled 98, and mixed method research had only 15 articles represented. Table 12 presents the total number of each type of article published across the journals.

| Table 12 | |
|---|-------|
| <i>Total Number of Types of Articles Published Across English Language Journals</i> | |
| Article Type | Total |
| Quantitative | 785 |
| Clinical Report | 622 |
| Professional Article | 231 |
| Philosophical/Theoretical | 120 |
| Professional Article | 231 |
| Historical Research | 98 |
| Mixed Method | 15 |

The type of article published in each English language music therapy journal was also examined. Of the 1,952 articles examined, clinical report was the most frequently published type of article in all but the *Journal of Music Therapy*, which heavily favored quantitative studies with 74% (n=822). The number of historical and philosophical/theoretical research articles published is low for all journals as well. Table 13 presents methodology by journal.

Cheryl L. Dileo 5/6/13 11:21 AM

Comment [1]: I thought you took professional articles out of this section. It really doesn't belong. Same with clinical reports. See my suggestion above. Omit the word, method

Table 13

| <i>Type of Article by Journal</i> | | | | | | | | |
|-----------------------------------|------|------|------|-----|----|-----|------|-------|
| Journal Title | AJMT | BJMT | CJMT | JMT | MT | MTP | NJMT | NZJMT |
| Clinical Report | 13% | 12% | 7% | 17% | 7% | 25% | 7% | 11% |
| Historical Research | 5% | 12% | 7% | 39% | 1% | 29% | 2% | 4% |
| Mixed Method | 0% | 13% | 7% | 47% | 0% | 0% | 20% | 13% |
| Philosophical/Theoretical | 2% | 13% | 4% | 34% | 9% | 13% | 25% | 0% |
| Professional Article | 12% | 12% | 4% | 16% | 8% | 26% | 12% | 10% |
| Qualitative | 6% | 14% | 9% | 20% | 8% | 8% | 32% | 2% |
| Quantitative | 2% | 3% | 2% | 74% | 2% | 13% | 3% | 1% |

When examining potential trends in types of articles published, it was found that the *British Journal of Music Therapy* began to publish clinical reports in the 80's, but this type of article experienced a sharp decline in 2000's. There was a rise in professional and philosophical/theoretical articles in the 90's. Quantitative studies began to appear in the 90's, with a noticeable decrease in the 2000's. Currently there is a continued increase in the number of clinical reports. Table 14 presents data of trends of article types published in the *British Journal of Music Therapy 1984-2012*.

Table 14

| <i>Historical Trends in Types of Articles Published in the British Journal of Music Therapy from 1984-2012</i> | | | | |
|--|-----|-----|-----|-----|
| BJMT | 80s | 90s | 00s | 10s |
| Clinical Report | 62% | 38% | 39% | 60% |
| Historical Research | 9% | 5% | 6% | 20% |
| Mixed Method | 0% | 0% | 0% | 20% |
| Philosophical/Theoretical | 9% | 15% | 8% | 0% |
| Professional Article | 15% | 22% | 16% | 0% |
| Qualitative | 0% | 7% | 16% | 0% |
| Quantitative | 6% | 13% | 16% | 0% |

When examining potential trends in types of articles published in the *Journal of Music Therapy*, it was found that beginning in the 60's, there was a similar distribution of clinical reports, philosophical/theoretical, and quantitative research methodology. An increase in the number of quantitative studies was found beginning in the 70's, and has continued to increase until the present, almost to the exclusion of any other type of article. Table 15 presents data regarding trends in types of articles published in the *Journal of Music Therapy*.

Table 15

Historical Trends in Types of Articles Published in the Journal of Music Therapy from 1964-2012

| JMT | 60s | 70s | 80s | 90s | 00s | 10s |
|---------------------------|-----|-----|-----|-----|-----|-----|
| Clinical Report | 43% | 27% | 6% | 1% | 2% | 0% |
| Historical Research | 2% | 2% | 5% | 5% | 8% | 4% |
| Mixed Method | 0% | 0% | 0% | 0% | 2% | 8% |
| Philosophical/Theoretical | 20% | 3% | 5% | 3% | 2% | 2% |
| Professional Article | 9% | 12% | 3% | 0% | 1% | 0% |
| Qualitative | 0% | 0% | 1% | 5% | 3% | 9% |
| Quantitative | 26% | 55% | 81% | 85% | 84% | 77% |

From its inception, *Music Therapy: Journal of the American Association for Music Therapy*, which began publishing in 1981, included a majority of clinical reports; however, there was also a fair share of quantitative and professional articles as well. Given the short life of the journal, which was published only until 1996, clinical articles remained the most common type of article published. Table 16 presents trends in types of articles published in *Music Therapy*.

Table 16

Historical trends in types of articles published in Music Therapy: Journal of the American Association for Music Therapy 1981-1995

| MT | 80s | 90s |
|---------------------------|-----|-----|
| Clinical Report | 42% | 52% |
| Historical Research | 1% | 0% |
| Mixed Method | 10% | 14% |
| Philosophical/Theoretical | 21% | 14% |
| Professional Article | 1% | 17% |
| Qualitative | 24% | 3% |
| Quantitative | 0% | 0% |

Music Therapy Perspectives began publishing in 1982. When examining potential trends in types of articles published, it is evident that clinical reports and professional articles were the primary types of articles published in this journal. There was an increase in quantitative research beginning in the 90's. Although this trend in quantitative research continues, *Music Therapy Perspectives* presently continues to include primarily clinical reports. Table 17 presents data of trends in types of articles published in *Music Therapy Perspectives*.

Table 17

Historical Trends in Types of Articles Published in Music Therapy Perspectives 1982-2012

| MTP | 80s | 90s | 00s | 10s |
|---------------------------|-----|-----|-----|-----|
| Clinical Report | 54% | 36% | 41% | 38% |
| Historical Research | 5% | 6% | 12% | 5% |
| Philosophical/Theoretical | 2% | 9% | 3% | 0% |
| Professional Article | 33% | 15% | 8% | 10% |
| Qualitative | 0% | 1% | 4% | 5% |
| Quantitative | 6% | 32% | 33% | 41% |

Table 18 presents potential trends in types of articles published in the *Nordic Journal of Music Therapy*. Beginning in 1993 and currently celebrating its twentieth

year, the *Nordic Journal of Music Therapy* published mainly clinical reports and professional articles. However a change occurred around 2005 involving a fairly even distribution of philosophical/theoretical, qualitative and quantitative articles published.

Table 18

Historical trends in types of articles published in the Nordic Journal of Music Therapy 1993-2012

| NJMT | 90s | 00s | 10s |
|---------------------------|-----|-----|-----|
| Clinical Report | 29% | 28% | 17% |
| Historical Research | 0% | 0% | 9% |
| Mixed Method | 0% | 2% | 4% |
| Philosophical/Theoretical | 24% | 18% | 22% |
| Professional Article | 41% | 12% | 4% |
| Qualitative | 6% | 23% | 22% |
| Quantitative | 0% | 18% | 22% |

When examining potential trends in types of articles published in the *New Zealand Journal of Music Therapy*, it was found to include mainly clinical reports and professional articles. Table 19 presents data of trends in article types published in the *New Zealand Journal of Music Therapy*.

Table 19

Historical trends in types of articles published in the New Zealand Journal of Music Therapy 1987-2012

| NZJMT | 80s | 90s | 00s | 10s |
|----------------------|-----|-----|-----|-----|
| Clinical Report | 56% | 72% | 65% | 20% |
| Historical Research | 0% | 2% | 5% | 0% |
| Mixed Method | 0% | 0% | 5% | 0% |
| Professional Article | 33% | 21% | 14% | 60% |
| Qualitative | 0% | 0% | 2% | 20% |
| Quantitative | 11% | 4% | 9% | 0% |

Citation Rate

This research identified citation rates for the *Journal of Music Therapy*, *Music Therapy Perspectives*, the *Nordic Journal of Music Therapy* and the *Australian Journal of Music Therapy*. *Music Therapy Perspectives* citations were available beginning 1996. Citation counts for the *Journal of Music Therapy* were available beginning in 1975. The *Nordic Journal of Music Therapy* had citations counts provided for all issues of the journal. The *Australian Journal of Music Therapy* included citation rates beginning in 2005. There was a total of 6,986 citations for 861 music therapy research articles that contained citation information.

The *Journal of Music Therapy* had a total of 603 articles cited; *Music Therapy Perspectives* had a total of 104 articles cited; the *Nordic Journal of Music Therapy* had 120 articles cited; and the *Australian Journal of Music Therapy* had 34 articles cited.

The *Nordic Journal* is one of the younger journals, but citation rates appear to be high for this journal in relation to journals that have been in existence for a longer period of time.

Author Citations

The data indicated that Clifford Madsen was the most frequently cited author with 263 citations for his publications, including articles that were co-authored. Alice-Ann Darrow, Michael Silverman, and Kate Gfeller had at least 10 citations for their articles including articles they co-authored. There were 369 authors who were cited at least one time, and 136 authors who were cited two or more times.

A closer look at author article citations can be seen in Table 20. Nine authors have 100 or more citations. The only author outside of the US with more than 100

citations is Clare O'Callaghan from Australia. Her research is primarily in palliative care/oncology.

Table 20

Authors with 50 or more citations

| Author | # of citations |
|------------------------|----------------|
| Madsen, Clifford K. | 263 |
| Standley, Jayne M. | 178 |
| Brotons, Melissa | 128 |
| O' Callaghan, Clare C. | 123 |
| Davis, William B | 122 |
| Darrow, Alice-Ann | 118 |
| Silverman, Michael J | 118 |
| Gfeller, Kate | 115 |
| Hilliard,Russell E. | 113 |
| Robb, Sheri L. | 97 |
| Clair, Alicia Ann | 92 |
| Whipple, Jennifer | 90 |
| Hanser, Suzanne B. | 88 |
| Wolfe, David E. | 75 |
| Alley, Jayne M. | 71 |
| Rickard,Nikki S. | 71 |
| Rider, Mark S. | 70 |
| Baker, Felicity | 67 |
| Cohen, Nicki S. | 66 |
| Braswell, Charles | 64 |
| LeBlanc, Albert | 64 |
| Register, Dena | 62 |
| Stratton, Valarie N. | 61 |
| Pelletier,Cori L. | 60 |
| Walworth, Darcy D. | 56 |
| Groene, Robert | 55 |
| Clark,Michael E | 52 |
| Greenfield, Dianne G. | 52 |
| Iwanaga,Makoto | 52 |
| Cevasco, Andrea M | 50 |

The most frequently cited article is by Standley (1986), “Music Research in Medical/Dental Treatment: Meta-analysis and Clinical Applications” with 87 citations. Rickard and Knight’s (2001) study, “Relaxing Music Prevents Stress-Induced Increases in Subjective Anxiety, Systolic Blood Pressure, and Heart Rate in Healthy Males and Females” had 71 citations. Davis and Thaut’s study in 1989, “The Influence of Preferred Relaxing Music on Measures of State Anxiety, Relaxation, and Physiological Responses” had 64 citations. LeBlanc’s (1982), “An Interactive Theory of Music Preference” had 63 citations. Pelletier’s (2004) article “The Effect of Music on Decreasing Arousal Due to Stress: A Meta-Analysis” had 60 citations and Hilliard’s (2003), “The Effects of Music Therapy on the Quality and Length of Life of People Diagnosed with Terminal Cancer” had a total of 59 citations.

CHAPTER 5

DISCUSSION

The purpose of this study was to present a content analysis of eight music therapy journals in the English language in order to provide both longitudinal and current profiles of these journals. The journals investigated in this study included the *Journal of Music Therapy*, *Music Therapy: Journal of the American Association for Music Therapy*, *Music Therapy Perspectives*, the *Australian Journal of Music Therapy*, the *Nordic Journal of Music Therapy*, the *British Journal of Music Therapy*, the *Canadian Journal of Music Therapy* and the *New Zealand Society for Music Therapy Journal*. A total of 1,952 articles was coded according to author information (name, credentials, institution, geographic location), mode of inquiry, population studied, and subsequent article citation. Results indicated a broad range of article topics with a rapid rise in music and medicine research beginning in the 1980s. The research indicated that authors in music therapy comprise a diverse group from the United States and abroad. This study also highlighted transitions in institutional productivity moving from the clinical setting to the academic setting. Over the course of fifty years, there have been continuous changes in various aspects of the music therapy literature that document the continuing growth of the profession.

Most Frequently Contributing Authors and Institutions

The first objective focused on the individuals who have contributed to the journals most frequently, as well as their credentials and institutions. To date there has been little research in the music therapy literature that has identified the scholarly productivity of authors in music therapy journals. The current research revealed a significant number of

authors, publishing both independently and with other authors, who have contributed to the music therapy research literature across the eight English language music therapy journals.

In recognizing the most published authors, it is interesting to note their major contributions to the field of music therapy and the significance of their work. Clifford Madsen has received multiple awards for his publications and research, including a Presidential Award for Outstanding Contributions to the Field of Music Therapy, the Outstanding Music Therapy Pioneer Award for establishing one of five international models of music therapy, and the Lifetime Achievement Award bestowed upon him by the American Association for Music Therapy.

Another top producing author in the English language music therapy journals is Felicity Baker. Along with her substantive contributions of publications included in the music therapy journals, she is an associate professor and ARC Future Fellow at the University of Melbourne, Australia. She has received several awards acknowledging her contributions to the field, including a University of Queensland Foundation Excellence in Research Award, and a Faculty of Arts Citation Award for outstanding contributions to enhanced student learning. Along with these significant recognitions, she is the President of the Australian Music Therapy Association, former Editor of the *Australian Journal of Music Therapy* and serves on the editorial board of the *Nordic Journal of Music Therapy*.

The recognition of the top contributors does not in any way discount the efforts of other researchers and authors who have also made important contributions through their writings and research in other types of publications, non-English music therapy journals and journals outside the field of music therapy. Future research can examine authors'

productivity in music therapy by broadening publications to include books, chapters and articles. Publications by authors included in journals outside the field of music therapy should also be examined.

Among academics, the maxim “publish or perish” (i.e., publish your research or risk losing your job) is a threatening reminder of the importance of publishing. Although publication in refereed journals remains a key factor in university promotion and tenure decisions (Wilson, 2001), it has also been found that an institution’s increased emphasis on publications is associated with greater student diversity, more master’s degrees granted, more library resources, and increased money for development (Marchant & Newman, 1994). It may be interesting to study the attributes of highly productive researchers in music therapy and their processes of successful authorship. It may also be interesting to examine the factors and training that contribute to sustaining highly productive research careers in music therapy.

Many of the articles analyzed in this study involved a collaborative effort among authors as evidenced by joint publications. Some of the benefits of collaborative work include the opportunity for sharing techniques and skills, increasing knowledge capacity, addressing global problems, enhancing future funding opportunities, and enhancing cultural and personal experiences. The results of this study indicated a somewhat limited international collaboration among authors publishing in these eight journals. Several questions arise regarding this finding. Why would researchers in music therapy wish to collaborate with international colleagues? How do researchers benefit from international collaboration? How does international collaboration benefit the field of music therapy?

One simple reason for pursuing international collaboration may be a desire to work with particular people whose work is admired or who are pursuing similar lines of inquiry. International research collaboration can enable researchers to interact with colleagues whose research experiences are different from their own and who can provide valuable insights into the research. With the growing sophistication of communication technology, cross-cultural research has become more feasible.

The research also reveals that the majority of published authors hold a Ph.D. credential and are affiliated with an academic institution. This is not surprising as previously stated. Scholarly publishing in refereed journals is one of the hallmarks of academic research productivity especially for faculty who are progressing through the tenure and promotion process, as well as for graduate students who are fulfilling research requirements.

It is interesting to note that there is a wide range of credentials and professional fields for published authors outside the field of music therapy, including speech pathology, MD/medicine, audiology, occupational therapy, marriage and family therapy, special education, and RN's/nursing. These findings may provide evidence of the interdisciplinary nature of the field and the multifaceted work that music therapists do. Because of this interdisciplinary nature, it seems logical to define productivity in a way that encourages collaboration outside of the field.

The findings from the current study also point to an increased involvement by international authors, that is those residing in a country other than the one in which the journal is published. This trend may have an impact on future international collaboration that will hopefully serve to strengthen the field.

In addition, a substantial number of authors who are music therapists, also hold advanced institute training, such as NMT, NICU-MT, and NRMT. Thus, it appears that authors have sought advanced and/or specialized training in clinical areas. It is not known if there is a relationship between advanced training and motivation to publish in a music therapy journal. This is an interesting topic for future research.

Institutions

The purpose of this current research was also to document the extent to which various institutions are represented in the music therapy English language music therapy journals. A large number of institutions, including academic and non-academic, with whom authors are affiliated were identified. There is a good representation of institutions in the United States as well as outside of the United States in the journals. The Cleveland Music School Settlement is the only non-academic institution represented with 10 or more articles published. Although the Nordoff-Robbins Center for Music Therapy is also on the list of highly productive institutions, it is affiliated with New York University, an academic institution.

The current research provides a different perspective on productivity of specific institutions than that found by Coddling (1987). In her content analysis of the *Journal of Music Therapy*, she found that more studies had been conducted in clinical settings than in academic institutions. However, this may be due to the long history of this journal and a smaller number of academic institutions in existence during the earlier years of the profession.

Surprisingly, authors who are in private practice are well represented in all journals except *Music Therapy Perspectives* and the *New Zealand Journal for Music*

Therapy. Research takes time, and for those authors otherwise devoted to serving clients, the concomitant loss of income associated with research efforts may be a compelling deterrent. Although there has been limited research published by music therapists in private practice, it seems as though there is a need for more research published by clinicians in spite of the potential financial impact of these endeavors. Obviously it is important for clinicians to continue to hone their research skills even after their academic training. Professional support for research may come from the establishment of clinicians' research groups to stimulate ideas and motivation for research outside of the academic setting

Findings regarding the relationship between the most productive authors and the most productive institutions showed that only one of the most productive scholars was housed at the most productive institution. Clifford Madsen had the highest number of articles and is affiliated with Florida State University, the most productive institution. However, although Tony Wigram was found to be one of the most productive authors, his university, Aalborg University, did not rank among the top five institutions. Thus, simply having one productive faculty member does not ensure that an institution will be ranked as highly productive in such an analysis, nor does having an institution that is highly ranked for productivity imply that one of its faculty is ranked as highly productive in a similar analysis. Certainly, having several highly productive faculty members, as well as productive students, can only benefit the standings of a university.

Although Michigan State University had the first established degree program in music therapy, it was not listed among the highest rated institutions in terms of number of research articles published. Interestingly, the two most highly productive authors besides

Madsen are affiliated with foreign universities, specifically, Felicity Baker at Sogn og Fjordane University College, University of Queensland, and the University of Melbourne and Tony Wigram at Aalborg University. Several questions arise: Do institutions with high productivity rates provide funding or release time to their faculty to do their research? Do these universities place additional pressure on their faculty to publish? Do these institutions provide other types of support to faculty in their research endeavors? Future researchers are encouraged to explore relationships between faculty productivity and institutional support.

The current data may be helpful to faculty, administrators, and/or prospective students to ascertain strengths and priorities of academic programs and faculty. However, these results should not be interpreted as a ranking of music therapy academic programs: scholarly research productivity is only one aspect of the overall quality of music therapy programs. In addition, publication in English music therapy journals is only one of many places faculty may publish.

Regions

This research included an examination of research productivity of authors and institutions in the United States categorized according to seven geographic regions established by the American Music Therapy Association. The Southeastern, Mid-Atlantic and Midwestern regions account for almost half of the articles published in the United States. It would be interesting to examine this productivity as related to the number of academic institutions, the density of the music therapy population in these areas, in addition to other variables.

Clinical and Other Populations

The second research question examined the clinical or other types of populations studied in eight English language music therapy journals. Based on the results of this study, music therapy research is wide-ranging in terms of the number of clinical populations involved. From health to illness, from pre-natal care to the end of life, from local to global, and from past to present, the music therapy literature reflects an ever-expanding profession.

In her meta-analysis, Standley (1986) found that music and medicine research included highly diverse diagnostic categories. Music therapy in medicine has advanced rapidly since that time, and currently, it represents the most researched clinical population outside of the research involving the music therapy profession and education and training research.

In 1979, Gilbert suggested there would be an increase in future developmental disability research, but the current research demonstrates a decline in the amount of research with this particular clinical population. The current study also found that as research in the area of developmental disabilities has declined, research in medical areas has increased. Research in adult psychiatry has had a stable representation in the music therapy literature and has been published throughout all years of the journals. Music therapy publications in the areas of assessment/ treatment/intervention/methods has also increased through the years. Research on physiological/psychological response/relaxation/anxiety has also remained steady through the years, although it is interesting to note that a large portion of this literature was published prior to the proliferation of research in medical areas.

It is difficult to ascertain the reasons for shifts in populations receiving research attention in the literature through the years. It could be that there is more emphasis on research and funding available for professionals working in medical institutions and universities connected to medical institutions. Also the number of professionals currently working in the medical field in relation to the number of professionals working in other fields, e.g., developmental disabilities, needs to be examined. This too can account for the shift in emphasis of research.

An international survey of music therapists completed by Baker, Wigram, Stott and McFeran, (2008) revealed a disconnect between the published literature and practice. It is likely that many music therapists working with various populations have not engaged in clinical research or published their work; therefore, the literature may not be consistent with the employment rates of music therapists with these populations.

Types of Articles

The type of music therapy articles was categorized in this study. The results indicate that quantitative methods are most prevalent. Of the eight journals examined, the *Journal of Music Therapy* has been in publication for the longest period of time, publishing four issues per year with quantitative studies most highly reported. As Silverman (2006) reported in previous research, the *Journal of Music Therapy* continues to contain the fewest number of case studies compared with other journals, despite having more articles published than any other journal. The mission statement on the American Music Therapy Association (2013) website reads:

The *Journal of Music Therapy* seeks to advance research, theory, and practice in music therapy through the dissemination of scholarly work. Its mission is to promote scholarly activity in music therapy and to foster the development and understanding of music therapy and music-based

interventions. To this end, the journal publishes all types of research, including quantitative, qualitative, historical, philosophical, theoretical, and musical, and may include discipline, profession, and foundational research topics.

However in the next section that provides a description of this journal's content, it is stated that "Individual case studies or studies with very small numbers of subjects are rarely published; however, an extremely innovative case study may be accepted due to its unique contribution to knowledge". Thus, the small number of case studies included in this journal is consistent with this description.

The most common type of article in the music therapy literature involves quantitative research. This has been the case throughout the decades, but there have been shifts through the years within and across journals. For instance, in *Music Therapy Perspectives*, clinical reports and professional articles were the most frequent types of articles during the first ten years of publication, but the rate of qualitative studies in this journal increased over the next two decades. There have been no significant changes in the percentage of quantitative methods published in each journal through the years since Brooks (2003) published her study. For instance, she found that of all quantitative articles published in the English language, the *Journal of Music Therapy* contributed 78.6%. The current study found that this same journal contributed 79%.

The use of quantitative methods in a relatively new and growing field, such as music therapy, plays an important role in advancing the field. Empirical research helps to demonstrate the effectiveness of music therapy. Prickett (1995) has suggested that quantitative research in music therapy helps to make sense of and organize perceptions of music therapy practices and patient responses. She also reported that the benefits of

quantitative research may include the elimination of researchers' biases and that the results are understood in a multidisciplinary context versed in scientific methods.

The type of article published may also be influenced by the clinical population studied. For example, a critique of the autism literature by Accordino, Comer & Heller (2006) indicated that almost all of the research with this population has involved case studies. Interestingly, subsequent to the Accordino, et al. review, there has been an increase in the number of quantitative studies published.

Brooks (2003) found that there was a very low representation of historical methods published in the music therapy English language journals. She found that of all the historical articles published in the English language, the *Journal of Music Therapy* contributed 58%. The current research revealed that historical research in the *Journal of Music Therapy* has significantly declined to only 14%. Since the Brooks study, Historical reports have declined in every journal except for the *Nordic Journal of Music Therapy*.

Given the history of the profession, this seems logical. It appears that in the early years of a profession, the emerging literature would be of the type that would provide empirical research to establish the evidence in the field for those outside the profession. Historical research can only be undertaken when there is a history to be traced. It may be that a 50-year professional history would provide a milestone for examining the past, uncovering the unknown, identifying relationships the past has to the present, and recording and evaluating the accomplishments of individuals, agencies, or institutions. The process of learning and understanding the background and growth of a profession can offer insight into organizational culture, current trends, and future possibilities.

Citation Rates

Another question posed by this research involved the citation rates of articles published in the English language music therapy journals. Scientific tradition requires that researchers refer to earlier works that relate to the subject matter of their own work. These bibliographic references identify earlier researchers whose concepts, theories or methods were inspired or used by the author in the process of conducting his or her own research. Advances in technology have permitted the tracking of the number of citations of one's work by other authors. Thus, one measure of the utility and impact of a publication can be assessed by the number of authors who have cited the publication. Further, this metric is often used by academic and research institutions to measure the scholarly impact of the publications of faculty.

The current study identified citation rates for the *Journal of Music Therapy*, *Music Therapy Perspectives*, the *Nordic Journal of Music Therapy* and the *Australian Journal of Music Therapy*. The citation analysis of English language music therapy journals revealed the prominence of authors in the United States, whose influence on music therapy research is evidenced also by the number of research articles published. However, it needs to be noted that citation rates for the *Journal of Music Therapy* began in 1975, whereas the other three journals, *Music Therapy Perspectives*, the *Nordic Journal of Music Therapy* and the *Australian Journal of Music Therapy* had less than 20 years of citations represented.

The data indicated that there was a total of 369 authors who were cited at least one time, and 136 authors cited more than once. Clifford Madsen was found to be the most cited author for his publications. Madsen's career spans almost fifty years. Two of

his articles that stand out in citation count, the first “The Effect of Reinforcement on Attentiveness: A Comparison of Behaviorally Trained Music Therapist and Other Professionals for Competency-Based Academic Preparation” which is in the category of music therapy education and training, and the other article is “The Experience of Musical Tension: A Replication of Nielsen's Research Using the Continuous Response Digital Interface” categorized under physiological/psychological response/relaxation/anxiety. Given that both these topics of research are well represented in the literature, it would be understandable that these research articles would be well cited.

The most frequently cited article is by Standley (1986), “Music Research in Medical/Dental Treatment: Meta-analysis and Clinical Applications.” This is consistent with the high percentage of articles related to music therapy in medicine. Along with this, the current study demonstrated that all six of the most cited articles are in the medical category or the closely related category of physiological/psychological response/relaxation/anxiety. One author outside of the US, Clare O’Callaghan from Australia, has a high number of citations. Her research is also in the medical fields of palliative care and oncology.

With scholarship transforming into a variety of new digital networked forms, new possibilities in the evaluation of the quality of research exist. This may be of interest to research funders who assess the quality of research. It is also relevant to the individual researchers interested in assessing the impact of their publications during their career as well as for tracking the information flow of a given professional field.

Although there were limited data available for citation impact in this study across all journals and years, it is clear that much information can be gained in using this type of

bibliometric measure. For instance, a study by Gold & Rolvsjord (2010), examined the extent to which articles in the *Nordic Journal of Music Therapy* were influencing discourse both within and outside the discipline of music therapy. These authors found that articles were being more widely recognized both inside and outside the field. The current study provides only a snapshot of the type of information that can be gleaned from further bibliometric research. The *Nordic Journal of Music Therapy* is the youngest journal and the only journal that has had citation information throughout its publication history. All music therapy journals would benefit from having ongoing citation tracking of their published articles.

The results of the current study provide evidence of the diversity within the field of music therapy. The rankings spanning 50 years represent 676 different institutions and a variety of clinical populations including, for example, gerontology, disabilities, mental health, hospice, offenders, and music therapy and education. Music therapy continues to expand and grow with a continuing increase in forums for scholarly publications, thus providing room for scholarly researchers.

Limitations

For reasons already stated, it is important that the journals of a profession be accessible to those in and outside of the field. Continuing developments in technology and online access support the urgency with which music therapy journals should be made available online to professionals both within and outside of the country of publication.

There were data that was not readily available to the current researcher, such as authors' institutions and professional credentials. This information was often not included within the publication itself. Although some of these limitations are difficult to

address, one way in which music therapy journals could assist future research on scholarly productivity is to publish author information in a consistent manner across publications.

Researching citation data presented several challenges in that multiple sources were available for citation tracking, and not all databases presented the most accurate data. Thus, this study included the use of different databases, as all journals that had citation rates were not available in the same database. For instance, The *Australian Journal of Music Therapy* citations were collected from the ProQuest database; the *Nordic Journal of Music Therapy* was accessed through the Taylor Francis database; and the *Journal of Music Therapy* was available through ISI Citation Indexes. The accuracy of citation rates varied. For example, the *Journal of Music Therapy* was tracked in the Web of Science (ISI Citation Indexes) Database. However when this journal was tracked in a different database, different citation rates were found. Citation rates also varied as older papers have had more time to accumulate citations. This was not accounted for in the current study.

Citation rates for all journal years were not always available in these databases. Bibliographic indexes continue to grow in number as well as in the information they contain. It may be important for editors of journals to become familiar with these indexes, so that they can assure that all of the information that should be published in the indexes is included in individual articles. It is important that the information published in the journal is consistent with the information utilized in the index.

Although these citation tracking indexes may accurately describe a researcher's impact through his or her publications in journal articles, citation counts do not

thoroughly capture publication in books, non-English language journals and journals not covered in the specific database. Researchers who publish in these formats may be overlooked, and their impact underestimated. Publications in research journals constitute only one way to examine the impact and importance of all the work conducted within the field of music therapy. One can easily identify a significant list of accomplished and influential individuals in the field who are not represented in the current study.

Implications for Research, Practice and Training

This formal analysis of the English language music therapy journals has been helpful in charting the development of music therapy research and practice and serves as one indicator of the profession's current status while also offering insight into potential future trends. It allows researchers to build on the foundations of prior research and address issues that may be important for future researchers. The present findings serve to acknowledge the strides that have been made in the field. They also acknowledge the institutions and authors who have made important contributions to the field through their research.

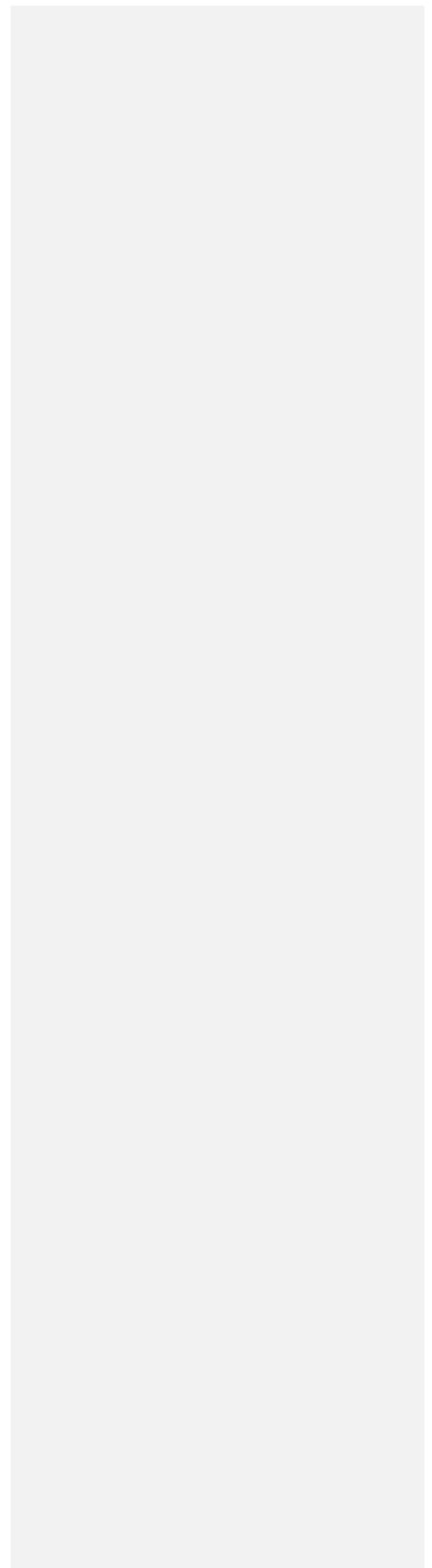
The analysis of the English language journals presented in this study has shed light on the published foci of these journals and demonstrates a critical mass of publications that have accompanied and perhaps stimulated the growth of the music therapy field over 60 years. This accumulated body of research has contributed to the establishment of evidence for music therapy practice for a broad base of clients and a variety of client concerns and may provide a springboard to move the profession of music therapy into a new era. The diversity of the research populations and the trend into

medical arenas may provide insight into matters of available funding and institutional support for researchers.

The current findings also suggest the need for a greater accessibility of music therapy journals as well as an increased inclusion in databases that allow for a bibliometric analysis of their content. Bibliometric indicators are useful tools in the assessment of research performance of music therapy professionals; this information is useful for promotion and tenure decisions. The opportunity to document the most highly cited articles within the music therapy literature allows for the identification of those articles that have had the greatest impact in the field. These results may be useful in informing journal editors about types of research that should be important to publish as well as informing authors concerning the type of research needed in the field. The current research has provided only a limited view into the rapidly growing field of bibliometrics and the plethora of information that can be gathered from it. It behooves the profession to stay abreast of the ever-changing formats that enhance the dissemination of its research to the widest possible audience.

The results of this study may be useful to music therapy professionals who may be interested in knowing which journals are most closely connected to their areas of interest and practice. Finally, potential students and other professionals may use the information presented as a means to assess the field and to isolate authors and institutions actively involved in research in their area of interest in music therapy. This research can also provide a source of clinical knowledge that can increase a music therapist's effectiveness with clients, become a basis for professional education and serve as a

unifying force for the profession that will set the agenda for the next decade of music therapy.



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