





Review Article/Literature Update

Occupational therapy, schools and youth: a mapping review¹

Terapia ocupacional, escolas e juventudes: uma revisão de mapeamento

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Abstract

Introduction: Occupational therapists are dedicated to the education service sector, however, this sector has had difficulties in advancing its universal accessibility, with a growing number of young people out of school, harming their condition of inclusion and social participation. **Objective:** To map the production of scientific knowledge associated with occupational therapy, schools and youth, to answer the following questions: 1. How have occupational therapists contributed to youth in schools? 2. What proposals have these professionals disseminated in this context? **Method:** A systematic mapping review carried out on the Scopus and Web of Science databases, which retrieved 46 publications covering from 1979 until 2019. **Results:** Occupational therapists have not prioritized young population in their practices and studies. Noteworthy are the work to support young people with disabilities leaving high school, studies on mental health and an increasing number of works involving young people in situations of social vulnerability. **Conclusion:** There is a need to increase and disseminate occupational therapy actions related to young people in schools, fostering theoretical and practical subsidies that offer better contours to this professional insertion.

Keywords: Occupational Therapy, School, Youth, Adolescence, State of the Art Review.

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Resumo

Introdução: Os terapeutas ocupacionais têm se inserido profissionalmente em serviços que compõem o setor da educação, no entanto, este setor tem encontrado dificuldades em avançar em sua acessibilidade universal, com um número crescente de jovens fora da escola, prejudicando sua condição de inserção e participação social. **Objetivo:** Mapear a produção do conhecimento científico associado à terapia ocupacional, escolas e juventude, para responder às seguintes questões: Como os terapeutas ocupacionais têm contribuído para a juventude nas escolas? Quais propostas esses profissionais realizam nesse contexto? **Método:** Revisão sistemática de mapeamento realizada nas bases de dados Scopus e Web of Science, sendo recuperadas 46 publicações no período de 1979 a 2019. **Resultados:** Os terapeutas ocupacionais não têm priorizado a população jovem em suas práticas e estudos. Destacam-se o trabalho de apoio a jovens com deficiência egressos do ensino médio, estudos sobre saúde mental e um número crescente de trabalhos envolvendo jovens em situação de vulnerabilidade social. **Conclusão:** Há necessidade de aumentar e divulgar as ações de terapeutas ocupacionais dedicadas aos jovens nas escolas, fomentando subsídios teóricos e práticos que ofereçam melhores contornos a essa inserção profissional.

Palavras-chave: Terapia Ocupacional, Escola, Juventude, Adolescência, Revisão do Estado da Arte.

Introduction

Data from the United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics (UIS) show that 258.4 million children, adolescents and youth worldwide were out of school in 2018. Of these, 59 million (23%) were children of primary school age (about 6 to 11 years), 62 million (24%) were adolescents of lower secondary school age (about 12 to 14 years old), and 138 million (53%) were youth of upper secondary school age (about 15 to 17 years old). These figures show that we are still far from universal access to basic education globally (United Nations Educational, Scientific and Cultural Organization, 2018). In addition, this monitoring report shows that upper secondary school-aged youth are more than four times as likely to be out of school as children of primary school age and more than twice as likely to be out of school as adolescents of lower secondary school age (United Nations Educational, Scientific and Cultural Organization, 2018). According to Ferreira Junior & Bittar (2006), access to education or school is only part of the ideal of universal access but, unfortunately, it has been the sole focus of the work undertaken in many countries. Alongside access, permanence in school and effective learning need to be addressed to the same extent.

As for the composition of demographic structures, developed and developing countries present different configurations regarding the universal access of children and youth to school education. In less developed countries, greater participation among children is lost as they move into older age groups, which is still strongly related to the socioeconomic conditions of their families. The right to education has been violated for the young population particularly in less developed countries, although the issue is also present in more developed countries, where social inequality is also present, albeit to a lesser extent (United Nations Children's Fund, 2018). Once the right to education is

violated, young people face more obstacles to break the cycles that involve poverty and the perpetuation of their historically predetermined social place. With fewer choices, there will be fewer opportunities for social participation, thus increasing social inequalities and injustices.

Once the right to education is violated, more obstacles exist for young people to be able to break the cycles that involve poverty and redefine a historically predetermined social place. With fewer possibilities for choices, fewer opportunities for social participation and, therefore, social inequalities and injustices will increase.

This scenario, which affects young people all over the world, takes on a more serious expression in Brazil, in the face of enormous social inequality, from where researchers and also teachers in the areas of occupational therapy and education are located.

In this context, in 1998, was created the *Metuia Projetc*² from the result of an inter-institutional initiative of professors in the area of occupational therapy belonging three universities in the state of São Paulo, with the aim of developing studies, training and actions for the citizenship of populations in processes of rupture of social support networks (Barros et al., 2002). Their experiences and elaborations built the theoretical-methodological framework of social occupational therapy, articulated to research and actions in different sectors of social policies, in a 'knowledge from practice' (Barros et al., 2002; Lopes & Malfitano, 2016, 2021)

Since 2019, it has been renamed *Rede Metuia – Social Occupational Therapy*, with six active centers in different regions of Brazil, the UFSCar, in São Carlos (SP), the University of São Paulo, in São Paulo (SP), the Federal University of São Paulo, in Santos (SP), the Federal University of Espírito Santo, in Vitória (ES), the Federal University of Paraíba, in João Pessoa (PB) together with the State University of Health Sciences of Alagoas, in Maceió (AL) and, finally, University of Brasília, in Ceilândia (DF).

Part of the teams from the centers of UFSCar, UNIFESP, UFPB/UNCISAL has prioritized work on interfaces with the area of education, focusing on Public Schools and Popular Youths³, outlining theoretical and practical reflections, debates and propositions that articulate social issues, school and youth (Pan & Lopes, 2020, 2022; Borba et al., 2022).

Thus, this study stems from a broader thematic research project that focuses on occupational therapy proposals and their interface with schools (Pereira, 2018; Lopes, 2019; Souza et al., 2020; Borba et al., 2020; Lopes & Borba, 2022). In short, it can be stated that there is a prevalence of propositions, both in terms of research and occupational-therapeutic practices in schools, aimed mainly at children with a focus on the problem of disability and/or global developmental disorders, and that make use of individual approaches. However, there has been fairly scant concern for preparing proposals dedicated to adolescence and youth, either with or without disabilities. In this sense, the present mapping study seeks answer two questions: 1. How have occupational therapists contributed to youth in schools? 2. What proposals have these professionals disseminated in this context?

²*Metuia*, *Metuia*, a word from the native Brazilian indigenous language, from the Bororo community, which means friend, companion.

³The use of the term youths, in the plural, shares the understanding that this category in the singular does not represent the immense diversity of the population of young people in the same country or in different countries and realities (Bourdieu, 1983; Margulis & Urresti, 1996; Pais, 2003).

The production of answers to this question that guided the production of this article can help our professional category to reflect, inspired by Nosella (2008), collectively, what have been the set of “technical solutions” created to face the problems that are presented to us or that are placed in our historic moment. For this author, technical solutions are based on the production of knowledge. Thus, we invite the reader to know the path of this production, which is also the result of the synthesis of others.

Method

A systematic mapping review (Gough, 2007) that enabled a description of the field of knowledge (Grant & Booth, 2009) sem uma definição prévia de tempo, contudo a primeira obra encontrada foi de 1979, estabelecendo um recorte de tempo das publicações entre covering the 1979-2019 period was carried out on the Scopus and Web of Science databases using the search terms ‘occupational therapy’ and ‘school’, retrieving 1,821 publications. An initial survey was conducted between December 2018 and January 2019 and was updated in January 2020.

It is important to point out that it was chosen not to include works from books due to the difficulty of accessing foreign books, since the review was intended to be carried out internationally.

A total of 1,821 texts were found in the search, and after reading the titles, abstracts, and keywords, 232 texts addressing occupational therapy and school as a focus of occupational therapists were included in the review.

The exclusion criteria filtered out publications that had no abstract; did not include or address ‘occupational therapy’ or related terms, (e.g., ‘occupational therapists’, ‘occupational-therapeutic’) in the abstract, keywords or title; did not address ‘school’ or ‘education’ in the abstract, keywords or title; used the school only as a collection site for specific research data; referred to the school only to reach the target population (e.g., school-aged children and adolescents) to participate in studies and research, but without focusing on any aspect of occupational therapy in this space; presented the school as a setting or context, or as an important place for the everyday lives of children, without placing emphasis on the school as a place of attention and practice for occupational therapists; used the term ‘school’ in reference to training programs in occupational therapy or in some other profession; or were not classified as a journal article (meaning we did not consider book chapters or editorials). Also, publications present in both databases were considered only once. Regarding the non-inclusion of books and/or book chapters, this is due to the fact that the indexed bases do not add this information easily, so it would be a capture that would depend much more on the knowledge of the authors themselves, and therefore, we could include some works and leave many others out of the review.

In this sense 232 publications addressing occupational therapy and school as the focus of attention of occupational therapists were included in the study; they were organized and categorized in a spreadsheet using Microsoft Excel®.

The data were added to the spreadsheet and sorted into the following general categories: - type of publication: 1. research article, 2. experience report, 3. theoretical essay, and 4. literature review; - article title; - author(s); - country of first author’s

affiliation institution; - year of publication; - journal name and country; - central theme; - sampled population (adolescent/youth/student).

A bibliometric analysis of these data was performed using the filter, counting and graphing tools of Microsoft Excel®, which enabled an overview of the production of knowledge on the theme under investigation. Bibliometrics is a technique used to measure the indexes of production and dissemination of scientific knowledge, and its use is recommended in association with comprehensive analysis techniques (that is, not purely quantitative methods) (Araújo, 2006).

Subsequently, after reading the titles, abstracts and keywords, we eligible 47 articles, which were included because they addressed: occupational therapy, school and adolescence/youth from the general database. Of this group, only one study was excluded because it was not possible to obtain the full text in English (Kamper, 2010). Ultimately, 46 texts remained, which were read in full and reorganized in a new spreadsheet, forming a specific database. The review was conducted in English, but due to the authors' mastery of Portuguese and Spanish, we also read the full texts in these languages, when this was the case. This full process is visualized in Figure 1.

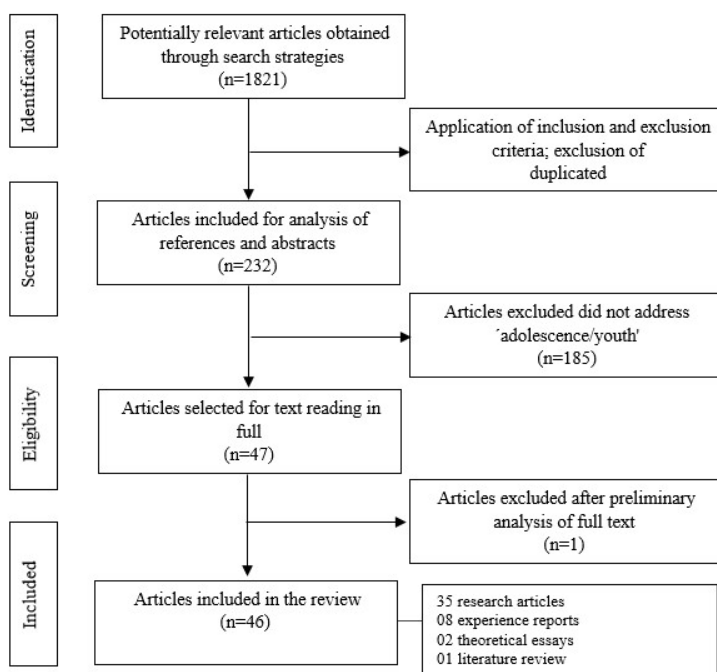


Figure 1. Flow chart of the selection process using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) model (Moher et al., 2009).

Results

The categorization of the 46 publications addressing the specific population of adolescents and youth listed in Table 1 includes 35 research articles (1), eight experience reports (2), two theoretical essays (3), and one literature review (4).

Table 1. Articles addressing Occupational Therapy, School and Youth.

	Title	Journal	Year of publication	Author(s)
1	Violence prevention in the schools: Implications for occupational therapy	Work	2001	Robbins, J. E.
2	Occupational therapy in transitioning adolescents to post-secondary activities	American Journal of Occupational Therapy	2003	Spencer, J. E., Emery, L. C., & Colleen, M. S.
3	The role of the school-based occupational therapist in secondary education transition planning: a pilot survey study	American Journal of Occupational Therapy	2005	Kardos, M. R., & White, B. P.
4	Evaluation options for secondary transition planning	American Journal of Occupational Therapy	2006	Kardos, M. R., & White, B. P.
5	Hidden in plain sight: Working with students with emotional disturbance in the schools	Occupational Therapy Practice	2007	Chandler, B. E.
6	Supported education for adults and adolescents with psychiatric disabilities: Occupational therapy's role	Occupational Therapy Practice	2007	Gutman, S. A., & Schindler, V. P.
7	Effectiveness of disc 'O' sit cushions on attention to task in second-grade students with attention difficulties	American Journal of Occupational Therapy	2008	Pfeiffer, B., Henry, A., Miller, S., & Witherell, S.
8	The role of occupational therapy in transitions throughout the lifespan	Occupational Therapy Practice	2010	Gibson, R. W., Nochajski, S. M., Scheffkind, S., Myers, C. T., & Marshal, J. S. A.
9	As students become adults: The role of occupational therapy in the transition process	Journal of Occupational Therapy, Schools, & Early Intervention	2010	Juan, H. G., & Swinth, Y. L.
10	Occupational therapists' beliefs and involvement with secondary transition planning	Physical & Occupational Therapy in Pediatrics	2011	Mankey, T. A.
11	A qualitative study of occupational therapy's role in adolescent transition in a midwestern coalition of many school districts	Journal of Occupational Therapy, Schools, & Early	2011	Gangl, C., Neufeld, P. S., & Berg, C.
12	A first-person exploration of the experience of academic reintegration after first episode psychosis	International Journal of Psychosocial Rehabilitation	2011	Zafran, H., Tallant, B., & Gelinias, I.
13	Development and evaluation of an occupational therapy program for refugee high school students	Australian Occupational Therapy Journal	2011	Copley, J., Turpin, M., Gordon, S., & McLaren, C.
14	Activity workshops with young people from public schools: Social technologies between education and occupational therapy	Interface: Comunicação, Saúde e Educação	2011	Lopes, R. E., Borba, P. L. O., Silva, C. R., Trajber, N. K., & Cuel, B. T.
15	National Behaviour Support Service and occupational therapy in school: An Irish experience	International Perspectives on Inclusive Education	2012	MacCobb, S.
16	Free expression of young people through fanzine: resource for social occupational therapy	Saúde e Sociedade	2013	Lopes, R. E., Borba, P. L. O., & Monzeli, G. A.
17	Intercultural partnering for the benefit of South Africa township high school students	Occupational Therapy International	2014	Davis, J., Dodge, E., & Welderufael, M.
18	Occupational justice, school connectedness, and high school dropout: The role of occupational therapy in meeting the needs of an underserved population	Journal of Occupational Therapy, Schools, & Early Intervention	2014	Marczuk, O., Taff, S. D., & Berg, C.

Table 1. Continued...

	Title	Journal	Year of publication	Author(s)
19	Career counselling at school for placement in sheltered workshops?	Australian Occupational Therapy Journal	2014	Fasching, H.
20	Language, discrimination and disability in the school setting of magellan education: A human rights-based approach from occupational therapy	Magallania	2016	Yupanqui, A. C., González, B. M. A., Iancalahuen, V. M., Quilodran, O. W., & Toledo, A. C.
21	An occupational therapy and teaching partnership: Applying a scholarship practice model	Occupational Therapy in Health Care	2017	Fitzgerald, B., & MacCobb, S.
22	Occupational therapy interventions for adolescents with autism spectrum disorder	American Journal of Occupational Therapy	2017	Tomchek, S., Koenig, K. P., Arbesman, M., & Lieberman, D.
23	Enhancing classroom participation of students with intellectual and developmental disabilities	Canadian Journal of Occupational Therapy	2017	Selanikyo, E., Yalon-Chamovitz, S., & Weintraub, N.
24	Characteristics of students receiving occupational therapy services in transition and factors related to postsecondary success	American Journal of Occupational Therapy	2017	Eismann, M. M., Weisshaar, R., Capretta, C., Cleary, D. S., Kirby, A. V., & Persch, A. C.
25	What support of young presenting a first psychotic episode, when schooling is being challenged?	L'Encéphale	2017	Vacheron, M. N., Veyrat-Masson, M. N., & Wehbe, H.
26	Pilot of the BOOST-A™: An online transition planning program for adolescents with autism	Australian Occupational Therapy Journal	2017	Hatfield, M., Murray, N., Ciccarelli, M., Falkmer, T., & Falkmer, M.
27	Encounters with the difference at health education: youth, sexualities, and genders at school	Saúde e Sociedade	2018	Goncalves, C. S., & Borba, P. L. O.
28	Understanding parents' concerns about their children with autism taking public school transportation in Los Angeles County	Autism	2018	Angell, A.M., & Solomon, O.
29	The evaluation of vocational programming in secondary school settings: A suggested protocol	Journal of Occupational Therapy, Schools, & Early Intervention	2018	George, J. C., & Seruya, F. M.
30	Validity of the school setting interview for students with special educational needs in regular high school - a Rasch analysis	Health and Quality of Life Outcomes	2018	Moa, Y., Munkholm, M., Lidstrom, H., Hemmingsson, H., & Ekbladh, E.
31	A social-cognitive intervention program for adolescents with autism: A pilot study	Journal of Occupational Therapy, Schools, & Early Intervention	2018	Cheung, P. P. P., Siu, P., Brown, A. M. H., & Mong-lin, T. Y.
32	A systematic review of play-based interventions for students with ADHD: implications for school-based occupational therapists	Journal of Occupational Therapy Schools and Early Intervention	2018	Heidi, C. R., Ting, L. T., & Alvin, A. J.
33	Focus on youth center: proposal and actions	Brazilian Journal of Occupational Therapy	2019	Marinho, M. M., & Lopes, R. E.
34	Environmental factors and daily functioning levels among adolescents with executive function deficits	British Journal of Occupational Therapy	2019	Yael, F., Rosenblum, S., & Josman, N.

Table 1. Continued...

	Title	Journal	Year of publication	Author(s)
35	Autism severity, co-occurring psychopathology, and intellectual functioning predict supportive school services for youth with autism spectrum disorder	Autism	2019	Rosen, T. E., Spaulding, C. J., Gates, J. A., & Lerner, M. D.
36	A service user perspective informing the role of occupational therapy in school transition practice for high school learners with TBI: An African perspective	Occupational Therapy International	2019	Khuabi, L. J. N., Swart, E., & Shaheed, S. M.
37	Participation patterns of adolescents with autism spectrum disorder compared to their peers: Parents' perspectives	British Journal of Occupational Therapy	2019	Lamash, L., Bedell, G., & Josman, N.
38	Which students need accommodations the most, and to what extent are their needs met by regular upper secondary school? A cross-sectional study among students with special educational needs	European Journal of Special Needs Education	2019	Moa, Y., Lidstrom, H., Ekbladh, E., & Hemmingsson, H.
39	Supporting the participation of youth with physical disabilities: Parents' strategies	British Journal of Occupational Therapy	2019	Killeen, H., Saeideh, S., Bedell, G. M., & Anaby, D. R.
40	Intersectionality in the field of child and adolescent mental health: proposal of occupational therapy in the school context	Brazilian Journal of Occupational Therapy	2019	Souza, A. A. F. D., Cid, M. F. B., Speranza, M., & Copi, C. G.
41	Understanding self-determination as a crucial component in promoting the distinct value of occupational therapy in post-secondary transition planning	Journal of Occupational Therapy, Schools, & Early Intervention	2019	Amber, A. M., Carroll, T. C., Bagatell, N., Chen, C., Kramer, J. M., Schwartz, A., Tallon, M. B., & Hammel, J.
42	Transitioning racial/ethnic minorities with intellectual and developmental disabilities: Influence of socioeconomic status on related services	Career Development and Transition for Exceptional Individuals	2019	Gary, K. W., Sima, A., Wehman, P., & Johnson, K. R.
43	Occupational therapy interventions for children and youth with challenges in sensory integration and sensory processing: A school-based practice case example	American Journal of Occupational Therapy	2019	Clark, G. F., Watling, R., Parham, L. D., & SchAAF, R.
44	Occupational therapy interventions for children and youth with challenges in sensory integration and sensory processing: A clinic-based practice case example	American Journal of Occupational Therapy	2019	Parham, L. D., Clark, G. F., Watling, R., & SchAAF, R.
45	Computerised Handwriting Speed Test System (CHSTS): Validation of a handwriting assessment for Chinese secondary students	Australian Occupational Therapy Journal	2019	Li-Tsang, C. W. P., Li, T. M. H., Lau, M. S. W., Lo, A. G. W., Choco H. Y., Ho, C. H. Y., & Leung, H. W. H.
46	Loss in services precedes high school exit for teens with autism spectrum disorder: A longitudinal study	Autism Research	2019	Laxman, D. J., Taylor, J. L., DaWalt, L. S., Greenberg, J. S., & Mailick, M. R.

Note: From Scopus (2020) and Web of Science (2020) databases.

Figure 2 shows the number and temporal distribution of the studies addressing the theme of occupational therapy and its interface with school aimed at adolescents/youth published between 2001 (the year of the first publication found) and the end of 2019.

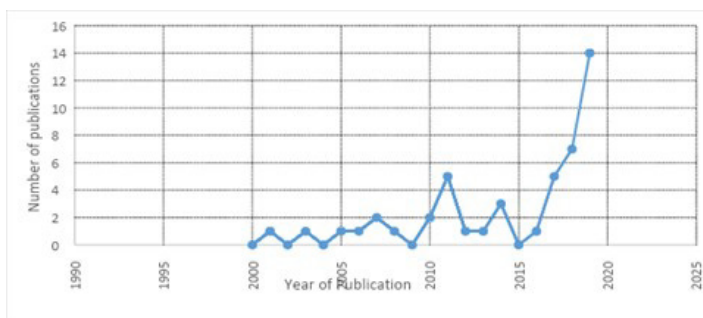


Figure 2. Number of publications on Occupational Therapy, School and Youth distributed according to year of publication. Note: From Scopus (2020) and Web of Science (2020) databases.

A late start to the scientific dissemination of the work of occupational therapists concerning adolescents/youth and school is observed, since the first texts involving occupational therapy and school date from 1979 (Pereira, 2018; Souza et al., 2020), with a subsequent rapid rise in publications starting in 2016. However, it can be observed that the number of publications aimed at youth is relatively low (46) compared with the total number of studies addressing the ‘occupational therapy/school’ interface (235), which accounts for 20% of the works produced. This indicates that research production has not shown a significant concern for the field of study and practice of occupational therapists, although it should be pointed out that this is a generalization that takes as reference only the data sources used in this mapping study, but which is significant for a particular part of the academic world.

Table 2 shows the number and distribution of selected texts by journal.

Table 2. Number of texts per journal.

Journal	N	%
American Journal of Occupational Therapy	8	17.3%
Journal of Occupational Therapy, Schools, & Early Intervention	7	15.2%
Australian Occupational Therapy Journal	4	8.7%
British Journal of Occupational Therapy	3	6.5%
Occupational Therapy Practice	3	6.5%
Saúde e Sociedade	2	4.4%
Autism	2	4.4%
Brazilian Journal of Occupational Therapy	2	4.4%
Occupational Therapy International	2	4.4%
Others	13	28.2%
Total	46	100%

Note: From Scopus (2020) and Web of Science (2020) databases.

Table 2 shows that among the 22 journals surveyed, there is concentration of publications in the American Journal of Occupational Therapy (AJOT) and the Journal

of Occupational Therapy, Schools & Early Intervention, with eight and seven published articles, respectively. The Australian Occupational Therapy Journal comes next, with four published studies, followed by two periodicals with three publications each and four journals with two published works; the category 'others' encompasses 13 journals with only one publication each.

As for authorship, 140 different authors and co-authors were identified. Of these, two authors have three published articles, 11 have two, and the vast majority (127) have only one published study. The fact that 89% of the authors have published only one work demonstrates that production in this field of knowledge is still incipient.

Figure 3 illustrates the countries of origin of the first authors of the 46 publications analyzed according to their affiliated institutions.

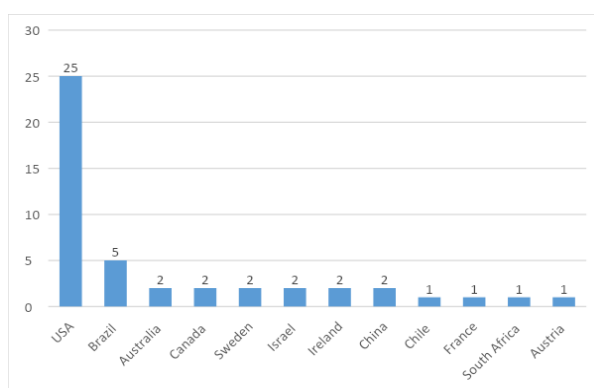


Figure 3. First authors affiliation institutions' countries. Source: Scopus (2020) and Web of Science (2020) databases.

The United States (US) stands out, being home to 54% of the affiliated institutions of the first authors, followed by Brazil with 10.9%. This echoes the results of a study conducted by Lopes (2019) on scientific productions in the 'occupational therapy/school' interface as a whole, which found that 57% of first authors (136 of 235) were affiliated with US institutions. In considering the various factors that may account for the dominance of US researchers, one key factor may be the US's regulation of occupational therapy in its education sector, which accounts for 21.6% of practicing occupational therapists (Souza et al., 2020; Clark & Chandler, 2013), has an impact on this scenario. As for authors affiliated with Brazilian institutions, they have produced more of the publications addressing 'occupational therapy' and 'school' and 'youth'.

The publications were also categorized using the terms by which the author(s) referred to the sampled population. The most commonly used term was 'students' (used in 18 publications)⁴, followed by 'adolescents' (15)⁵, 'youth' (11)⁶, 'adolescent/youth'

⁴3; 4; 5; 7; 9; 10; 13; 15; 17; 18; 19; 21; 23; 24; 30; 32; 38; 45.

⁵2; 6; 8; 11; 22; 26; 29; 31; 34; 36; 37; 40; 41; 42; 46.

⁶1; 12; 14; 20; 25; 27; 33; 35; 39; 43; 44.

(1)⁷, child (1)⁸, child at risk (1)⁹, and ‘client’ (1)¹⁰. A number of difficulties were encountered in this task, such as the fact that most authors did not adopt the terminology ‘adolescents’ and/or ‘youth’ (or related terms), but rather referred to ‘students’ without defining the age range. In these cases, the search was carried out by level and stage of education. Moreover, when considering the descriptors used, the terms ‘children’ and ‘pediatrics’ (or related) were observed. This may be a result of a unique cultural issue of the US, the country of origin of most of the articles assessed, where the word ‘kids’ is commonly used to refer to adolescents/young people. Thus, when the article referred to children, but also to adolescents, they were included in this study, however, when it related only to young children, they were excluded from the analysis.

In addition to the questions surrounding the inclusion and exclusion criteria of texts, what we would like to point out is that the chosen names for the sampled population explain, to some extent, the theoretical frameworks with which the authors are affiliated. The use of the term ‘adolescent’ is associated with studies in the field of psychology under the aegis of development, coined mainly in the works by G. Stanley Hall (US) and Maurice Debesse (France). Both of these authors focused on the intrinsic processes that are transversal to all individuals in this phase of life, understanding adolescence as a natural and homogeneous evolutionary stage for human beings, a part of the individual’s biopsychosocial maturation (Cesar, 2008). At the same time, the use of the term ‘youth’ is associated, according to Magnani (2005), with a perspective developed by the social sciences, both through sociological and anthropological studies, bringing a concern to situate this generation in a given historical, political and social context.

The reading of the 46 articles and their categorization show that the authors who use the term ‘adolescent’ are those who dialogue more closely with the health sciences and are linked to a biomedical tradition, notably the texts addressing populations with disabilities or health-disease processes. In turn, the texts that use the term ‘youth’ base their theoretical frameworks on sociological studies and are dedicated to themes such as poverty, refuge and violence, among others. However, there are a large number of texts, that use the term ‘student’, emphasizing the sampled population’s characteristic of being in school, moving away a little from the age/generation to which they belong and seeking to dialogue with the general condition of the ‘student’. Studies that are primarily concerned with the description of the resources used or the evaluation of professional practice are among those that use this term.

Regardless of the term used to describe the sample population, the comprehensive analysis performed in this study enabled observation of three major demands that occupational therapists have tried to meet based on their studies, which are themed on the following axes: (1) School, occupational therapy, and inclusion of adolescents with disabilities in school; (2) School, occupational therapy, and mental health, and (3) School, socially vulnerable adolescents and youth, and occupational therapy. These axes structure the discussion that follows.

⁷16.

⁸28.

⁹1.

¹⁰41.

School, occupational therapy, and inclusion of adolescents with disabilities in school

Of the 46 studies assessed¹¹, 22¹² focus on the discussion and problematization of the inclusion of adolescents and young people with disabilities in schools. These works present propositions, research and studies that point to occupational therapy as an important profession for addressing the issues that permeate the everyday lives of adolescents and youth with disabilities, as well as their permanence in school spaces.

It is worth highlighting the significant presence of 11 texts¹³ included in this axis that provide research and experiences related to the work of occupational therapists use the term 'transition'. This is a relevant professional field in which a significant number of occupational therapists are working. Therefore, it presents important production that informs, in the case of adolescents and young people with disabilities, how practices are developed (11), which of them have proved to be successful resources for occupational-therapeutic interventions, how collaborative work with families occurs (9), or, in the case of a study conducted in Chile (20), which is the only one in this category with a focus on 'context', on the use of discriminatory language in school to refer to children and youth with disabilities. These authors take as a reference studies that point out how communicative interaction through language can create realities, form identities and foster inequalities, opening space for discriminatory actions and segregation processes that can be reproduced in school spaces. Guided by the occupational science framework, they consider that occupational therapy has the responsibility to eliminate situations of 'occupational apartheid', promoting 'occupational justice' in places where discrimination occurs by modifying social barriers in order to construct a more inclusive society.

School, occupational therapy, and mental health

Although the sub-area of mental health is established worldwide in occupational therapy, it appears more rarely in association with school, including in the youth population. 14 such articles¹⁴ were found in this review, most of them describing individual follow-ups performed by occupational therapists within the experience report/case study modality.

Of these 14 studies, six¹⁵ address issues involving young people with Autism Spectrum Disorder (ASD), following a worldwide demand for increased diagnosis of this condition (Sholtis, 2015; Center for Disease Control and Prevention, 2020). There is emphasis on experience reports/case studies dedicated to understanding which services have been offered to this population, describing scientific evidence-based approaches/techniques and evaluating a socio-cognitive program, and there are two research articles that address the participation of young people with ASD in school, domestic and leisure activities and in the use of public transport from the perspective of parents.

¹¹In this section, we have chosen to indicate the referenced texts with numbers in parentheses. These numbers appear with their respective articles in Table 1.

¹²2; 3; 4; 8; 9; 10; 11; 19; 20; 23; 24; 29; 30; 34;36 ;38; 39; 41; 42; 43; 44; 45.

¹³2; 3; 4; 8; 9; 10; 11; 24; 29; 41; 42.

¹⁴5; 6; 7; 12;22; 25; 26; 28; 31; 32; 35; 37; 40;46.

¹⁵22; 26; 28; 31; 37; 46.

There are also three other texts¹⁶ that are aimed at young people with psychiatric problems and dedicated to reporting the return-to-school process after first-episode psychosis, questioning to what extent schools are unprepared to support this return, as well as pointing out obstacles in this process, such as medication side effects, cognitive and self-esteem difficulties, and fear of failure.

Another well-known issue in the education sector, Attention Deficit Hyperactivity Disorder (ADHD), is the theme of only two articles: a systematic review of play-based interventions for children with this diagnosis at school (32) and an investigation into the effectiveness of using a type of dynamic seating system, the Disc 'O' Sit Cushion, to improve attention to task execution among primary school students with attention difficulties (7).

School, socially vulnerable adolescents and youth, and occupational therapy

10¹⁷ of the 46 studies address socially vulnerable adolescents and youth. The oldest article in the set of texts analyzed in this mapping review is a reflective essay by Robbins (1) that addresses violence prevention in schools and its possible implications for occupational therapy, in which methods to raise awareness and foster prevention are discussed. Another theoretical essay by American authors (18) discusses high school dropouts and the role of occupational therapy in meeting the needs of these young people through school connectedness for their return. They also suggest the creation of programs that can engage, be meaningful, and present challenging activities to enable and encourage permanence in the school space.

In the four Brazilian articles included in this mapping study (14; 16; 27; 33), it can be observed that, in general, the productions join efforts both to deepen and apprehend the needs and demands of young people from the lower classes and to create and evaluate interventions by occupational therapists, highlighting the use of resources and technologies, especially those referred to as 'Workshops on Activities, Dynamics and Projects' (14; 16; 33) and/or 'Difference Workshops' (27), which are based mainly on Paulo Freire's *Pedagogy of the Oppressed* (Freire, 2005).

On the other hand, the Irish works (15; 21) describe a support service that seeks to respond to the needs of students with social, emotional and behavioral difficulties¹⁸ through three levels of action: one involving the entire school community, one with groups of students, and another focusing on the individual and their family.

Finally, there are two more specific research articles. One study (13) carried out in Australia describes and discusses an occupational therapy program for refugee high school students with the intention of facilitating their participation in the school space. The article considers schools located in poor neighborhoods and discusses the perspective of offering more individualized tasks in classrooms for more group actions. The other work (17) results from a cooperation between American and South African universities dedicated to apprehending the professional career perspectives of young students, identifying their barriers and the implications of what they call 'occupational deprivation', and emphasizing that differences between genders limit the possibilities for girls.

¹⁶5; 12; 25.

¹⁷1; 13; 14; 15; 16; 17; 18; 21; 27; 33.

¹⁸'Social, Emotional and Behavioural Difficulties' (SEBD).

Discussion

As for what concerns young people directly, it is clear how this population, despite being an important age group in terms of numbers, and one with issues to which occupational therapists can contribute, has not achieved a place of recognition in the work developed in schools. In the aforementioned broader thematic research (Lopes, 2019), works addressing young people correspond to 19% of the total collected in the 'occupational therapy/school' interface and, with regard to children or childhood, this percentage reaches 81%. In other words, this has been the target population of occupational therapists even when the focus of discussion shifts to professional training more specifically, in this case reaching a total of 10 studies.

It can also be affirmed that the production of occupational therapists is more dedicated to communicating the experiences and results of studies that focus on resources/approaches for coping with the permanence of young people in the school system, and few of them address the issue of effective learning, indicating that it is widely held among occupational therapists that access to and permanence in school would resolve the dilemmas related to adolescents and youth with regard to schooling. They consider inclusive schooling as both a means and end of education.

However, regardless of the focus on prioritizing the universalization of education or on truly inclusive education, it seems necessary to show the relative invisibility of this population in the scope of occupational therapy. What would be the reason for that? If education is a fundamental right worldwide, children, adolescents and young people who do not have access to school, do not remain in school, and/or do not learn effectively need technical support, and occupational therapists, as presented here, can contribute to this.

The literature recognizes the great burden of stigmatization linked to this phase of life (Berni & Roso, 2014). However, in addition to the stigmatization that would make actions for this population unfeasible, another question is posed: since literature or knowledge in the school field, when related to occupational therapy, is significantly focused on issues involving disability, could it be that young people with disabilities are failing to advance in their schooling trajectory, or could it even be suggested that the fundamental right of access to education is being violated for this population? Would there be a means of inclusion for them at all?

When it comes to the USA, the country responsible for 54% of the publications included in this mapping study and the place where all of the work involving youth school dropouts originates, it cannot be denied how much legal progress has been made so that the population with disabilities can be in school and benefit from the processes of schooling. However, despite constituting the majority of the specific production on the youth population, these works are still a minority in the set of research involving 'occupational therapy and school'. Added to this is the fact that the reality that is experienced in the USA is seldom shared by other young people with disabilities in the world, given the inequalities in the guarantees of various public policies aimed at school inclusion (Ainscow et al., 2006).

In another direction, but also dealing with confrontations of situations of inequality, it is important to highlight the Brazilian and Irish texts aimed at socially vulnerable young people. In both groups, approaches that move from more collective/group actions

to individual actions stand out, as well as actions in different instances of the education sector linked to the school community. The Brazilian group, to which we belong, has focused on popular urban youth and public school as central elements of practical and theoretical production (Pan & Lopes, 2020). This choice was made on purpose, since school is understood as a strategic means of promoting and expanding projects and life possibilities for poor youth (Lopes & Silva, 2007). However, the professional insertion of occupational therapists in the education sector in Brazil is still very incipient. As for the experience of our Irish colleagues, the pilot project that started in 2005, developed in partnership with the National Department of Education, enabled the hiring of occupational therapists for the education sector (Fitzgerald & MacCobb, 2017).

On this issue of the institutional place of occupational therapists in the education sector, unfortunately, this information is subsumed even with the full reading of the articles that comprised this review. It can be suggested that, once again, the USA is the country where the most progress has been made in terms of this insertion through different institutional channels (municipal and state bodies in the education sector, rehabilitation clinics that offer support to specific schools) and through services hired by the schools themselves, especially in the private education sector, or directly by the child/youth's parents.

The smaller the possibilities of professional insertion, the smaller the experiences and, therefore, what they could represent in terms of knowledge production and dissemination, including through publications. To break this cycle, it is necessary to act on two fronts: political organization with social bodies in order to defend the importance of professional contributions and encourage their insertion; and the increase and dissemination of a set of experiences among young people in schools so that theoretical and practical subsidies that offer better contours for this professional insertion can be aggregated.

Conclusion

It was possible to verify that the systematization of the articles, through a literature survey, enabled a certain range of information on occupational therapy productions and the visualization of the discussions and reflections traced in their interfaces with school and adolescents/youth.

There are clear limitations to this study, as it provides reflections on articles retrieved from only two databases that, although relevant to the academic environment, are restricted with respect to professional interests.

There is a need for new research informing practices that broaden the target audience of attention, especially young people with or without disabilities, as well as interventional approaches, so that occupational therapy's contributions to the education sector services can be better configured in order to advance towards a school guided by radical inclusion, in the sense that everyone can enjoy it and be agents that can create culture and experience and promote social justice.

Other questions were present in the process of reading and including/excluding the articles, however, could not be worked on in this review, but can inspire future productions, such as: What theoretical-methodological assumptions have supported the development of their practices? What institutional place and/or sector of social policy

do occupational therapists start their actions and what impacts result from this insertion? How have occupational therapy inside their training courses (not) approached the youth dimension?

Despite our efforts for research and even our search for answers to the demands of contemporary youth in the face of the alarming data on ‘out of school’ young people, in much of the world, as explained in our introduction, still remains the impact of the small amount of scientific literature available on this theme from an occupational therapy perspective.

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