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How is social work research addressing the Sustainable Development Goals? A machine learning approach to tackling the 2030 Agenda

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Abstract

Social work is increasingly engaging with the United Nations Sustainable Development Goals. The aim of this study is to analyse Sustainable Development Goals in social work research and identify their alignment with the 17 Sustainable Development Goals, using a machine learning text-classification approach on 4409 articles (2016–2024). Results show that social work research most frequently addresses reduced inequalities (Sustainable Development Goal 10), decent work and economic growth (Sustainable Development Goal 8), quality education (Sustainable Development Goal 4) and justice and strong institutions (Sustainable Development Goal 16), often in interconnected ways. In contrast, environmental goals are underrepresented. We discuss implications for broadening social work towards the full 2030 Agenda.

Keywords

social work research, Sustainable Development Goals, machine learning classification, sustainability

Introduction

The Sustainable Development Goals (SDGs) represent a global commitment by all countries to be achieved by 2030 (United Nations (UN), 2015). The social work profession has raised concerns about how recent global developments may hinder progress towards these goals (International Federation of Social Workers (IFSW), 2021, 2022), as evidence shows limited progress and even regression in achieving the Agenda's targets, jeopardizing their fulfilment (Independent Group of Scientists appointed by the Secretary-General, 2023; UN, 2024).

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Policy papers and recommendations from the IFSW (2020, 2021) highlight the active role of social workers in advancing the goals of the 2030 Agenda. Thus, understanding how social work generates and shares knowledge related to these objectives becomes essential. Promoting fairer policies to safeguard human rights requires analysing key research trends to enable more coordinated action (Banks et al., 2020). In line with IFSW's (2021) call, critical analysis is necessary to actively contribute to future agendas and policies. Research in social work serves not only to expose situations of oppression and social injustice but also to exert political pressure for more equitable societies where 'no one is left behind'.

This study aims to identify the main SDGs in social work research and how they have been linked in articles published over the last decade in journals with an impact factor. The analysis of texts using machine-learning approaches enables researchers to examine a large set of social work publications from all around the world. To support our analysis, we formulated the following research questions:

Research Question 1: Which SDGs are most frequently assigned in research with social work?

Research Question 2: How are the SDGs linked in research with social work?

Regardless of growing attention to the 2030 Agenda in social work, there is limited large-scale evidence mapping how social work research aligns with the SDGs and how these goals co-occur across the literature. This provides the opportunity to disseminate a useful tool to the scientific community for selecting studies based on the relevance of the SDGs. This study addresses this gap through machine-learning-based automated classification of a large international corpus, as we use a novel approach to identify the main SDGs related to social work research. This could help practitioners, researchers and policymakers leverage science to better understand global challenges in addressing the SDGs. Recognizing social work as a scientific discipline, the application of this artificial intelligence (AI) model also makes it possible to suggest the implementation of a system for the automatic classification of articles to identify the SDGs related to their content.

The next section contextualizes social work's role in the global commitment to the SDGs. The Method section describes the machine learning approach and study procedures. The findings focus on identifying the main SDGs in social work research, their regional distribution and their co-occurrence relationships. We discuss these findings within the broader context of the 2030 Agenda, illustrating them through relevant social work studies, followed by the study's limitations, future research directions and conclusions.

Global landscape, social work and the 2030 agenda

There needs to be awareness in the medium and long term about the effects of crises (e.g. the COVID-19 pandemic, armed conflicts in many regions, the cost of living and debt crisis and climate change) around the world, while also being prepared to deal with immediate crises (Independent Group of Scientists appointed by the Secretary-General, 2023). Recent international reports (e.g. Organisation for Economic Co-operation and Development (OECD), 2024; UN, 2024; United Nations Development Programme (UNDP), 2024; World Economic Forum (WEF), 2024) confirm this scenario, in which there is a confluence of global crises that are interlinked with the SDGs. Some risks must be highlighted, such as socio-economic inequalities, the climate crisis, geopolitical tensions and persistent poverty, which are exacerbated by inflation and food insecurity. Technological advances and changes at a time of accelerated digital revolution, as well as the

polarization phenomena that threaten social and democratic stability, present added complications as they will exacerbate inequalities and remain a constant concern (UNDP, 2024; WEF, 2024). Even though these risks are not new or unknown, their increasing severity, complexity and impact on vulnerable populations require constant attention and strategies to ensure a safer and more sustainable future for everyone.

There are some limitations in the way the SDGs are being measured, with difficulties being pointed out in the definition of indicators and the open access to data that would allow for a more accurate measurement (Bali Swain and Yang-Wallentin, 2019). According to the data shared by the UN (2024), only 17% of the SDG targets are on track, and over one-third are stalled or regressing. Therefore, actions are necessary for all stakeholders to integrate the SDGs into their main decision-making processes and prioritize them.

However, crises can be transformed into opportunities to join efforts in designing and implementing integrated recovery strategies (Independent Group of Scientists appointed by the Secretary-General, 2023; UN, 2024). One of the stakeholders in this action is the IFSW, which represents social work in an international context and with international organizations, with the aim of promoting social change from the perspective of human rights and social justice (Bowles et al., 2018). Social work, as a profession and scientific discipline, must be a strong partner and recognized as an essential part of achieving the 2030 Agenda (IFSW, 2021; Mapp and Gabel, 2022; Palattiyil et al., 2024; Rice et al., 2022), such as in the call for long-term solutions for collective wellbeing.

Jones and Truell (2021) reinforce the alignment of social workers all around the world with the United Nations Agenda, which has been reinforced by the emergence of the pandemic crisis (IFSW, 2021). Despite the obstacles posed by the successive crises, several studies show that social work has been an essential profession in responding to global challenges (Banks et al., 2020, 2024; Dominelli, 2021; Kwan et al., 2021; Sen et al., 2022). To achieve these goals, the necessity to work actively with people, groups and communities is emphasized, considering that the action must be in proximity, political and involve permanent advocacy for better policies and universal rights across the globe (Bliss, 2015; IFSW, 2022; Reisch, 2016; Rocha, 2018; Teater, 2008). Promoting sustainability is an imperative for prosperous societies, to which social work has awakened in the field of the environment and green social work (Breen et al., 2023; Dominelli, 2012; Gray and Coates, 2012; Shaw, 2013), as well as developing an ecosocial approach and practice (Kwan and Walsh, 2015; Matthies et al., 2020; Närhi and Matthies, 2018; Norton, 2012; Thysell and Cuadra, 2023; Wang and Altanbulag, 2022). However, this commitment is much broader and seeks to respond to other challenges facing the planet and societies, requiring a monitoring of how social work research has addressed these challenges and how it can contribute to the continued promotion of strategies, policies and practices that respect inclusion and mutual understanding.

Method

This study aims to work with a wide range of data, and as such, AI was selected and applied as a methodological approach. Existing research highlights the relevance of AI and data science in social work, particularly in research, practice and education (e.g. Asakura et al., 2020; Cariceo et al., 2018; Yousif et al., 2025). This study contributes by empirically mapping the relationship between scientific production in social work and the SDGs, which is still little explored in international literature. It proposes an automated large-scale analysis, offering a panoramic, quantitative and comparative view.

Among the two most widely adopted global scientific databases that index peer-reviewed articles, Web of Science (WoS) and Scopus (Martín-Martín et al., 2018), Scopus encompasses a broader spectrum of publications compared to WoS (Abrizah et al., 2013). Given that Scopus has

consistently been selected for literature analysis across various domains and applications (e.g. Parlina et al., 2020), we have similarly chosen Scopus as the source for retrieving relevant articles for this analysis. The query that was used in our analysis was the following:

> TITLE ('Social Work') AND KEY ('Social Work') AND ABS (social AND work) AND PUBYEAR > 2015 AND (LIMIT-TO (DOCTYPE, 'ar')) AND (LIMIT-TO (PUBSTAGE, 'final')) AND (LIMIT-TO (SRCTYPE, 'j')) AND (LIMIT-TO (LANGUAGE, 'English'))

The final search query was conducted in Scopus in March 2025, aimed at identifying peer-reviewed journal articles published in English that referenced the term 'Social Work' from 2016 onwards. The period begins in 2016, the first full year after the SDGs' adoption in 2015. The query yielded a total of 4621 articles, from which key bibliographic and metadata elements – title, publication year, Digital Object Identifier (DOI), abstract, author-provided and Scopus-generated keywords, publisher and open-access status – were extracted for subsequent analysis. Articles lacking a DOI (to ensure unique identification of records – 156 in total), duplicate records (2) and records referring to the partial collection for 2025 (54) were removed, resulting in a final dataset comprising 4409 articles between 2016 and 2024. The initial manual screening involved interpretation and therefore the risk of bias. Accordingly, we adopted a systematic and partially automated approach to data collection and analysis, complemented by manual verification. To ensure relevance, all article titles and abstracts were independently reviewed by two social work researchers and validated as relevant to the field. Specifically, the scope encompassed publications addressing the following topics: social work practice in various fields (e.g. child protection, health and substance use); training programmes, curricula, teaching methodologies and learning strategies in social work; critical reflections, policies and ethical issues; multidisciplinary studies that include contributions from social workers or social work students; literature review (e.g. scoping review; systematic review); historical analysis or analysis of social work theories; and application of new digital technologies or research methods in social work (e.g. AI, social media and digital skills). The independent screening resulted in full agreement that all retained articles addressed at least one of these topics and were therefore considered relevant to social work.

As for the thematic classification (SDGs), we applied Aurora's existing multi-label text classifier (Jaworek and Vanderfeesten, 2021) to the concatenated title, abstract and author keywords of each article. Neither article full texts nor Scopus-generated index keywords were analysed. The model assigns scores to predefined SDGs and we did not retrain it on social work publications. We ranked the returned scores and retained at most three goals per article whose scores, converted to percentages and rounded to one decimal place, were at least 10.0%. This threshold was selected heuristically following exploratory inspection of model outputs. The resulting SDG assignments indicate model-estimated thematic alignment, not verified contributions to achieving the goals. This classification was applied to all 4409 articles in the dataset. Figure 1 presents the 17 SDGs icons as defined by the United Nations Department of Global Communications Guidelines.

In addition to SDG classification, the geographical scope of each study was identified. While author affiliation data could provide an approximation, it was deemed insufficient, as research in Social Work often occurs within international contexts that may not correlate with the authors' affiliations. Instead, Python's SpaCy (all experiments were done using Python 3.9.6 and Spacy 3.7.5, with version 3.7.1 of the `en_core_web_lg` model) Named Entity Recognition (NER) library was employed to extract geographical references mentioned within each article. SpaCy, an open-source natural language processing (NLP) tool known for its high accuracy in NER tasks (Shelar et al., 2020), was utilized, with the en_core_web_lg model selected for its performance in processing English-language text. The concatenated text of the title, abstract and author-provided



Figure 1. The 17 Sustainable Development Goals.

keywords was used as input, enabling the identification of geographical entities (e.g. countries, regions or continents) in 2013 articles. Finally, identified geographical entities were mapped to one of five major regions: Asia, Africa, America, Europe, or Oceania. This mapping required comprehensive correspondence between countries and their respective regions (e.g. 'Argentina: America' and 'Austria: Europe') and the inclusion of special regional designations not tied to specific countries (e.g. 'European Union: Europe' and 'Gulf Cooperation Council: Asia'). Scopus-generated keywords were intentionally excluded from the concatenated input text due to inconsistencies identified during data validation. For example, Scopus occasionally misclassified terms, such as associating 'Roma' with Italy even when referring to the ethnic group rather than the city.

The data obtained were analysed considering the distribution of the SDGs over the period from 2016 to 2024, across different geographic regions and in relation to the most significant co-occurrences among them. Classification by SDG and regional identification made it possible to observe cross-cutting trends. The transferability of the findings should consider the model's linguistic and cultural limitations and the absence of domain-specific fine-tuning.

Main themes and trends related to the SDGs

The analysis of social work research based on articles published between 2016 and 2024 enabled the identification of the SDGs with the highest growth and their evolution over time (Figures 2 and 3).

The dataset indicates a growing academic interest in topics related to SDG 10, followed by SDGs 8, 4, 16 and 5. From 2016 to 2024, there was a general upward trend in various SDGs, notably those related to education (SDG 4), economic growth (SDG 8) and the reduction of inequalities (SDG 10). SDG 10 exhibited the highest growth, rising from 253 articles in 2016 to 415 in 2024. Similarly, SDG 8 increased from 228 articles in 2016 to 353 in 2024. SDG 4 also recorded a significant rise, from 122 articles in 2016 to 211 in 2024, highlighting a greater investment in research on these topics. In addition, there was a notable increase in SDG 16 (Peace, Justice and Strong Institutions), which grew from 77 articles in 2016 to 129 in 2024, while SDG 3 fluctuated over the period, with a particularly sharp increase from 13 articles in 2019 to 56 in 2021.

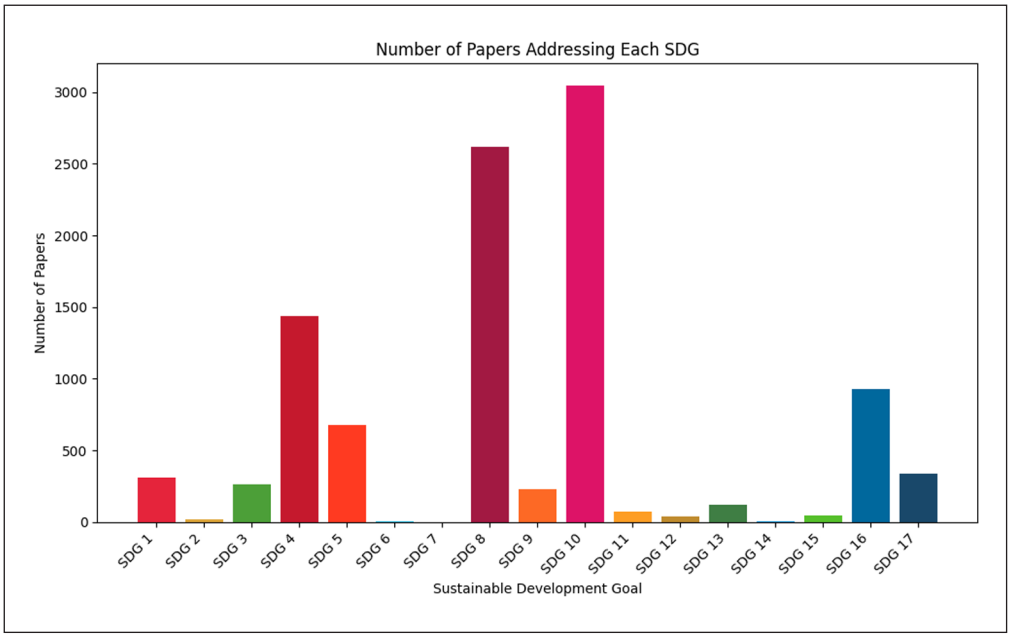

Figure 2. Number of articles retrieved from Scopus related to social work research distributed by their SDG association (2016–2024).

Overall, growth became more pronounced from 2020 onward, especially in 2021, indicating an expansion in indexed articles related to social work. SDG 10 consistently led between 2016 and 2024, showing a growth trajectory similar to SDG 8.

The analysis revealed fluctuations in certain indicators. As previously mentioned, SDG 3, after reaching a peak of 56 articles in 2021, experienced a decline in the following years. Although following a less consistent pattern, SDG 1 increased from 26 articles in 2016 to 57 in 2023 but saw a decrease to 41 in 2024. Similarly, SDG 17, despite its irregular progression, grew from 19 to 55 in 2023 before dropping to 45 in 2024. On the other hand, some SDGs have consistently had little representation. For example, SDG 7 has no recorded thematic articles over the years, while SDG 6 was virtually absent until 2023. Likewise, SDG 14 had only one study published in 2020 and another in 2024. In addition, SDGs 2, 11, 12 and 15 remained relatively underrepresented throughout the period analysed, with few publications.

SDGs trends by region of the globe

Regarding the analysis of SDGs by world region, following data processing and standardization, Figure 4 presents the results obtained for each continent. A global analysis of the SDGs, considering the regions to which the articles refer, reveals that SDG 10 is the most frequently addressed topic in academic studies worldwide (1436 articles), with prominence in Europe (554), America (333) and Asia (333). Also highly represented, SDG 8 is the second most researched topic (1284 articles), primarily in Europe (509) and Asia (327). Although less prevalent, SDG 4 and SDG 16 (645 and 490, respectively) are still significant for global analysis. In America, SDG 4 is the third most explored, making the Americas the continent with the highest number of studies on this SDG

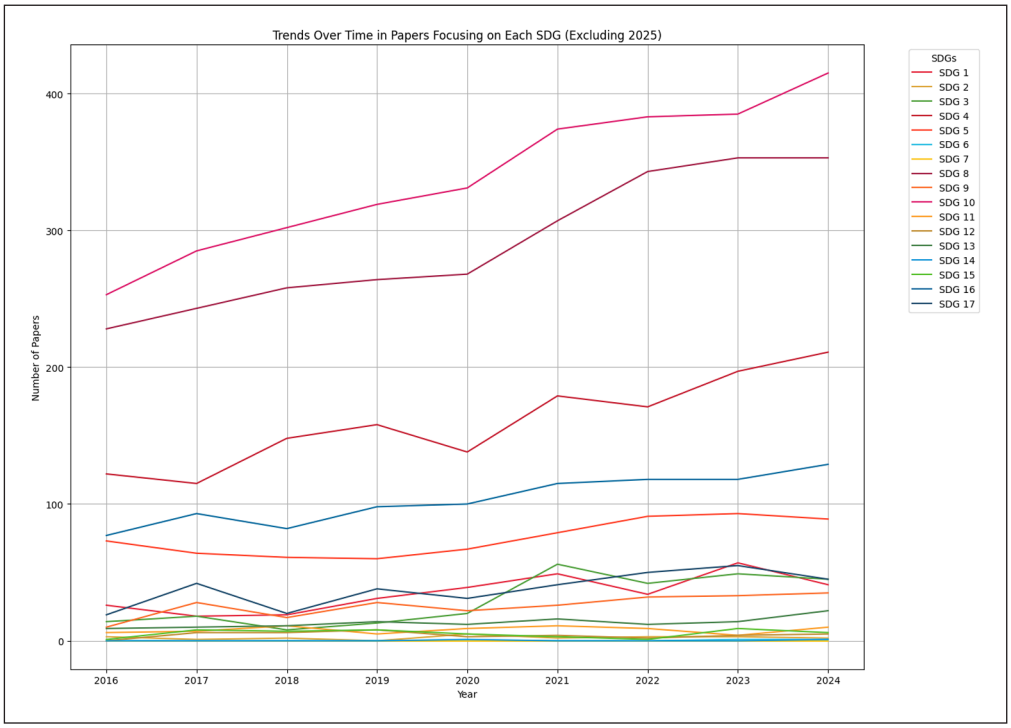

Figure 3. Trend by year of the number of articles retrieved from Scopus related to social work research distributed by their SDG association (2016–2024).

(194), followed by SDG 16 (127). This trend is similar in Europe with SDG 4 and SDG 16 (191, each). In Asia, SDG 10 (333), SDG 8 (327), SDG 4 (140) and SDG 16 (90) show an alignment with global trends.

The number of publications identified in Africa and Oceania is lower compared to the other regions, and there is a slight variation in the leading SDGs. In Oceania, the SDGs with the most studies are SDG 10 (109), SDG 8 (83) and SDG 4 (59), with SDG 16 (44) holding a relative significance. While in Africa SDG 10 (107), SDG 8 (101) and SDG 4 (61) remain the most relevant in African continent studies, SDGs 1 and 5 appear for the first time in fourth place with SDG 16 (38, each), highlighting the importance of these topics.

Conversely, the least addressed SDGs in social work publications include SDG 7, with no associated studies; SDG 6, with only one recorded study in Oceania; and SDG 14, with just three publications in total. Another underrepresented is SDG 2, with only 10 articles worldwide.

Co-occurrence relationships between SDGs

Based on the data collected, the main relationships between the SDGs can be analysed, using the Co-occurrence Matrix (Figure 5), which enabled the identification of patterns of interconnectedness between the various SDGs present in the publications.

The matrix reveals a clear strength of relationship between the most prominent SDGs in the articles, particularly SDG 10, which has the greatest prominence throughout the study. Regarding SDG 8, it was the second most prevalent in the analysed data. As such, a strong connection was

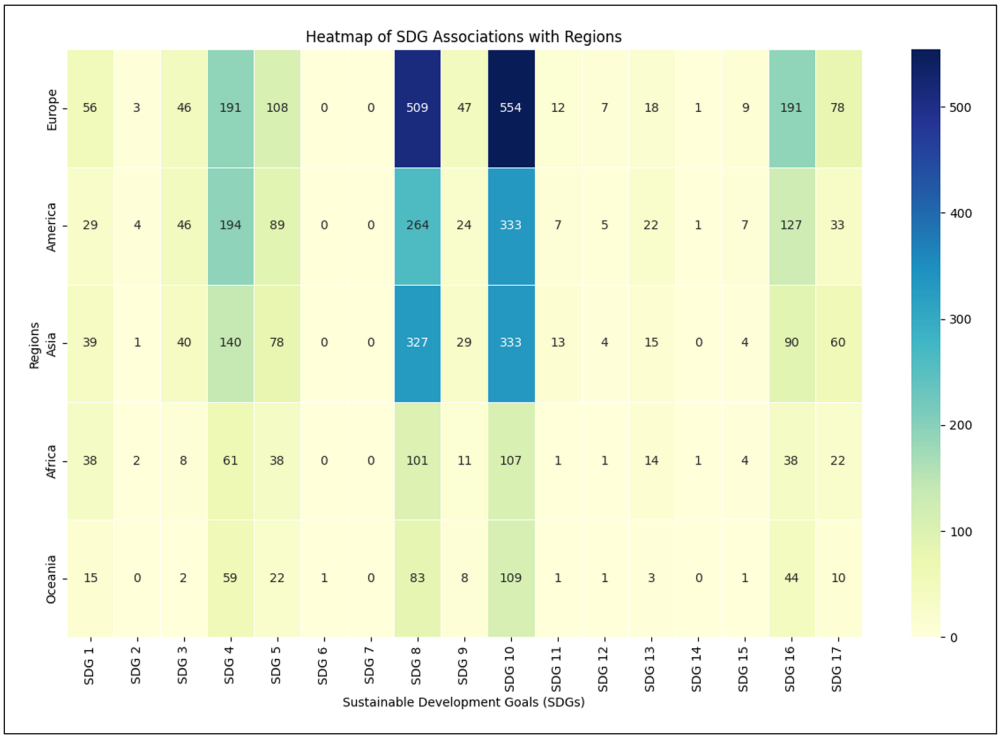

Figure 4. Heatmap of SDG associations with world regions representing the number of articles retrieved from Scopus related to social work research within that SDG/region pair (2016–2024).

identified between SDGs 10, 8 and 4, forming the most interconnected cluster in the matrix. The highest co-occurrence frequency was observed between SDGs 10 and 8 (2023 occurrences); between SDGs 10 and 4 (1106 occurrences) and between SDGs 4 and 8 (919 occurrences).

In addition to the previously noted connection between SDGs 10, 8 and 4, there is a notable co-occurrence between SDG 10 and SDG 16 (699 occurrences), SDG 16 and 8 (369 occurrences), as well as the connection between SDG 16 and SDGs 4 and 5 (152 and 179 occurrences, respectively). Beyond the established connection, although less significant, the relationship between SDGs 5 and 10 (294 occurrences) and between SDGs 5 and 8 (281 occurrences) are worth noting.

Discussion

Prior to the adoption of the 2030 Agenda (UN, 2015), The Global Agenda for Social Work and Social Development (Truell and Jones, 2012) already highlighted social work's vital role in promoting equality of opportunity, human dignity, social justice and environmental sustainability. Since 2016, there has been notable growth in social work research related to SDG themes, with a significant increase from 2020 onward. Regional data reveal a general alignment in the most frequently studied topics across continents, with minor variations. Globally, the most prominent research themes were reducing inequalities and economic growth, followed by education and peace, justice and strong institutions. Conversely, environmental issues such as clean water,

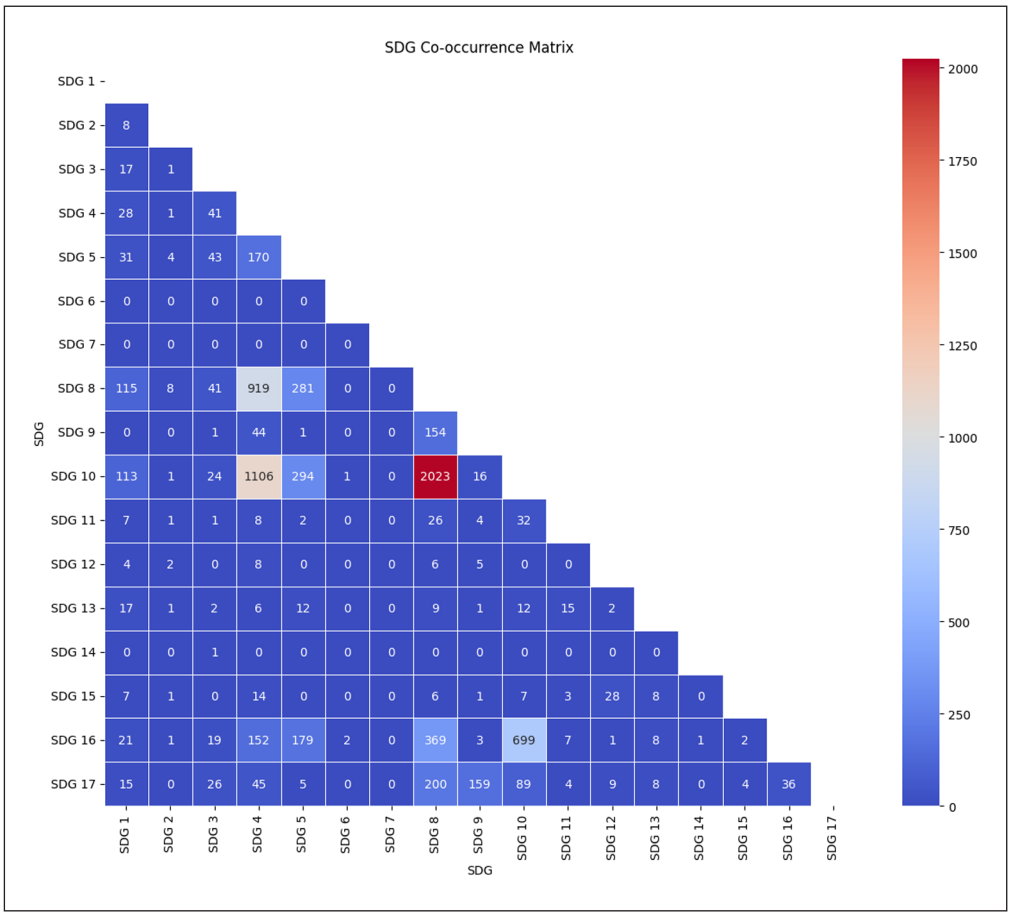

Figure 5. The SDG co-occurrence matrix that represents each pair of SDGs that are present at the same time in that number of articles retrieved from Scopus related to social work research (2016–2024).

affordable and clean energy and life below water have received limited academic attention. Health and gender equality are also represented, while topics such as water and sanitation and zero hunger remain significantly underexplored.

Decent work has been one of the primary concerns of the International Labour Organization (ILO, 2017, 2020), which highlights the need for labour policies that promote stable jobs and fair wages, particularly in developing economies. The ILO highlights the link between low education levels and unequal access to the labour market, recommending investment in workforce development. In this context, articles focusing on reducing inequalities and promoting decent work and economic growth reflect a strong research interest. Notably, some of the articles that have attracted most attention address social work practice with vulnerable populations (e.g. Ferguson, 2018; Kaushik and Walsh, 2019; Levenson, 2017; Wilkins et al., 2017). Social work is seen as crucial in fighting social exclusion and promoting active citizenship. Given the global challenges of inequality and labour market access (ILO, 2022), future research should increasingly engage with perspectives beyond the profession, proposing collective strategies to expand economic opportunities and foster fairer institutional environments.

The analysis highlights the significance of SDGs 4, 8, 10 and 16, which are central to global public policies. Education is crucial for social mobility, and addressing structural inequalities requires equitable access to both education and decent work (UNDP, 2022; UNESCO, 2021). The interconnection between education, economic growth and institutional justice underscores the importance of empowering marginalized populations through professional training and labour inclusion. Notably, the connection between SDG 4 and SDG 10 is essential, as access to quality education contributes to reducing social inequalities. According to UNDP (2022), education and health are fundamental factors to development, aligning with social workers' advocacy for combating structural inequalities that impact vulnerable populations. These co-occurrence patterns are based on raw frequencies and should be interpreted cautiously, as more prevalent SDGs have a greater probability of co-occurring with other goals. Thus, high co-occurrence does not necessarily indicate a stronger substantive relationship between specific SDGs.

Studies focusing on the development of competencies for ethical social work, such as cultural competence in education and practice, stand out (e.g. Arat and Kerelian, 2019; Azzopardi and McNeill, 2016; Bennett et al., 2018; Jani et al., 2016; Nadan, 2017). Also, some of the most cited articles that intersect these SDGs are scoping and systematic review studies on simulation, including computer simulation in social work education (e.g. Huttar and BrintzenhofeSzoc, 2019; Kourgiantakis et al., 2020). Others identified regarding ICT and technology-enhanced practices, contributing to the identification of innovative educational practices in social work (Chan and Holosko, 2016; Reamer, 2019; Washburn et al., 2016).

The interconnection between decent work and quality education holds particular relevance in social work. The most frequently cited studies in this area focus on fieldwork within social work education and training, particularly regarding social work students. Several studies (e.g. Jones and Phillips, 2016; Morley and Clarke, 2020; Tanner et al., 2017) emphasize the empowerment and integration of social workers into the labour market, highlighting the importance of preparing them for contemporary challenges. Research linked to SDG 4 predominantly addresses social work education, with limited attention to broader global education issues. Therefore, although the relationships between SDGs are valid, it would be relevant to conduct more social work studies focused on education for children and youth, as well as lifelong learning, contributing more actively to the goals of SDG 4.

Another noteworthy relationship is given the number of articles linking the reduction of inequalities to the development of strong and transparent institutions. Articles addressing this connection often focus on issues related to human rights, critical social work and the interactions between groups and institutions (e.g. Cox and Pardasani, 2017; Houston, 2016; McKendrick and Finch, 2017; Mapp et al., 2019; Nelson et al., 2017). The relationship between the role of education in building fairer and more resilient societies through stable and effective institutions emphasizes the importance of equipping social workers with critical skills to promote transparent and efficient governance systems (e.g. Grodofsky and Gutman, 2016; Mapp and Gabel, 2022; Reamer and Nimmagadda, 2017). Similarly, the connection between SDG 8 and SDG 16 suggests that sustainable economic growth relies on transparent and stable institutions (e.g. Matthies et al., 2020). This underscores some of social work global commitments in promoting policies that integrate environmental and social sustainability through an ecosocial approach (IFSW, 2022; Norton, 2012). In addition, this SDG relationship includes studies focused on social work with children and families (e.g. Charles et al., 2021; Gillingham, 2019; Simpson, 2016; Zhao et al., 2017).

Studies addressing gender equality in social work stress the profession's commitment to reducing inequalities and promoting social justice. These studies explore themes related to gender in connection with issues such as violence and the oppression or discrimination of marginalized

groups (e.g. Austin et al., 2016; Bromfield, 2016; Okech et al., 2017; Simon et al., 2021). The 2023/2024 Human Development Report (UNDP, 2024) highlights the need to rethink global cooperation amid growing polarization, noting concerns over the lack of progress on the SDGs and setbacks in human development. Similarly, the Global Risks Report 2024 (WEF, 2024) warns that insufficient progress on the SDGs threatens to deepen social inequalities and erode trust in institutions. While there has been some positive development, SDG 17, focused on global partnerships, requires greater emphasis, as it is essential for achieving all other SDGs.

As the data demonstrate, SDG 11 (Sustainable Cities) shows some presence but is far less represented compared to other areas, while SDGs 12 and 14 are almost non-existent. Topics associated with SDG 13 and climate change have a moderate impact, being somewhat more relevant in articles related to America and Africa (e.g. Maglajlic, 2019; Nyahunda et al., 2021; Pyles, 2017). These findings suggest a need for greater emphasis on environmental and sustainability issues in social work research, aligning with international recommendations. Given the critical importance of environmental factors for sustainable human development (Dominelli, 2012) and the growing threats to planetary ecosystems (UN, 2024), SDGs related to the environmental dimension remain less explored. Furthermore, sustainable energy (SDG 7) has a pointed gap in academic studies, representing a critical issue within the sustainability domain. Likewise, Innovation and industrial development (SDG 9) are less prioritized in social work research, presenting a challenge for new investigations on these topics.

The greater representation of SDGs 4, 8, 10 and 16 may reflect their alignment with established areas of social work research and practice. The limited representation of environmental SDGs does not imply less relevance to social work, given the established green and ecosocial literature (Dominelli, 2012; Gray and Coates, 2012; Närhi and Matthies, 2018). These issues may be addressed through broader ecosocial concepts not explicitly captured by specific SDGs, particularly when relying on titles, abstracts and keywords rather than full texts.

Despite data verification by the research team, some limitations of the study must be acknowledged. The use of models and the quality of data may have introduced certain constraints. Although the automated methodology was effective for processing large datasets, it is prone to issues such as misclassification stemming from language nuances and contextual ambiguity. The exclusive focus on English-language articles may limit the generalizability of the findings to global social work research. The geographical analysis should be interpreted with caution. Conclusions cannot be fully generalized, as geographic entities were identified in only 45% of the articles, and their automatic detection through NER may introduce bias. The reliance on titles, abstracts and keywords rather than full texts may also have overlooked less explicitly signalled SDG-related content. In addition, only a limited number of examples could be presented due to the large sample size. We recognize that cultural and social variables were not addressed in this quantitative analysis, and future studies are encouraged to examine these aspects using qualitative or categorical methods.

Conclusions

This study demonstrates that social work research from 2016 to 2024 has increasingly focused on key dimensions of the United Nations Sustainable Development Goals, particularly SDG 10 (Reduced Inequalities), SDG 8 (Decent Work and Economic Growth), SDG 4 (Quality Education) and SDG 16 (Peace, Justice and Strong Institutions). By applying a machine learning framework to over 4400 articles, the analysis not only confirmed the prominence of these interconnected themes but revealed regional variations and notable research gaps, especially in environmental goals (e.g. SDG 6, 7 and 14) and partnerships (SDG 17).

The methodology, leveraging an automated SDG classifier and geographical entity recognition, proved effective for large-scale bibliometric mapping. Given the growing importance of sustainability policies, environmental topics are identified as key areas for further research in the field of social work. The relevance of SDG-related publications is affirmed within the broader global context of recent years.

Future research should explore qualitative perspectives and multilingual data to enrich understanding and foster a more holistic approach to advancing the 2030 Agenda. Overall, this study introduces an innovative analytical tool for mapping research alignment with the SDGs and advocates for broader interdisciplinary and multilingual efforts to enhance social work's contribution in driving sustainable global development.

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Ethical considerations

This research does not involve human participants. Ethical approval and informed consent statements were not required for this study.

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Declaration of conflicting interests

The authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

Data availability statement

The collected data and the resulting processed dataset that was used for the analysis reported in the paper is publicly available at Zenodo: Casquilho-Martins I and Lopes A (2025) Social Work research from 2016 to 2024 and its relationship with the SDGs and world regions [Data set]. *Zenodo*. https://doi.org/10.5281/zenodo.15387422

Statement on AI

This study employed AI during the research process. AI tools were used for automated data analysis, specifically the Aurora-SDG Classifier model which was applied to estimate the thematic alignment of articles with the 17 Sustainable Development Goals (SDGs) and the SpaCy library for named entity recognition to extract geographical references from textual data. No part of the manuscript was fully generated by AI. All AI-assisted content was reviewed, edited and approved by the authors, who take full responsibility for the final text. The authors declare that all AI-generated or AI-assisted material was thoroughly validated, in line with the journal's transparency and integrity standards.

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