i. EXECUTIVE SUMMARY

The study has analyzed all the peer-reviewed literature on Solid Waste Management (SWM) during the period 1960 to 2020. This report includes the process of data collection, curation, and analysis of the data. Recommendations and suggestions that emerged from the study are given at the end of the report. Simultaneously, a full-text analysis of 1000 articles was carried out with the text mining software called QDA Miner lite.

All the downloaded peer-reviewed literature indexed in Scopus, Web of Science, and PubMed were subjected to data collation and curation. The Zotero corpus was updated with all the available information and has been manually cross-checked for errors and corrected. This step is important to make sure all the information regarding each article is available and valid. Further, these articles were scrutinized for cleaning and integrating the corpus. The articles in a non-English language, with no abstract, with no author name, and duplicates were identified and removed manually to clean the data sets. The detailed method used for cleaning the data sets is explained in the methodology chapter. After completing the task of data curation, 12519 articles were retained for further data analysis.

A sample of 1000 articles was used for comparing the result of full paper analysis vs title, abstract, and keyword analysis using QDA miner lite software. Then using Convolutional Neural Networks (CNN) method with an accuracy of 84% was used for all the 12519 articles text data analysis.

Findings at a glance

Full paper analysis and comparison

➢ Full paper analysis of 1000 articles using QDA miner lite software shows that among all the dimensions outcome, type, and source of solid waste are most emphasized. Among the outcomes, the focus has been on environmental, followed by heath, and social outcomes. Among the types of solid waste, the focus has been on non-biodegradable waste, followed by biodegradable waste. Among the source of solid waste generation, the focus has been on non-residential industrial sources, non-residential municipal services, and non-residential commercial sources.

➢ Comparing the 1000 papers descriptive metadata coding done using CNN and QDA miner lite software show similar results. Among all the elements results are more emphasized on the environmental outcome, processing functional element, non-biodegradable solid waste, legislative policy instrument, and municipal/local government stakeholder. The frequency values were different for CNN and QDA miner lite software results, but the pattern of emphasis is approximately the same.

CNN analysis of the total literature

➢ There is a significant increase in the number of publications for the period of 1961-2020.

➢ The CNN analysis result shows that among all the dimensions, function, outcome, and solid waste categories are emphasized most, whereas among all the elements the environmental outcome is emphasized most.

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Study at a Glance	
Period of Study	January 2020-2022
Funding agency	NSTMIS, DST, Government of India
Data Collection	
No of Databases	3
Number of publications downloaded	19864
Scopus	14389
Web of Science	4268
PubMed	1207
Time period	1960-2020
Data Curation	
Data Management Software	Zotero
Scopus Articles retained	11102
Web of Science articles retained	1167
PubMed articles retained	250
No of articles for analysis	12519
Data Analysis and Visualization	
Software used for metadata analysis (binary coding)	CNN
Software used for full-text coding of 1000 articles	QDA lite miner
Visualization software	MS Excel and VOS Viewer