

Bibliometric Analysis of Enforcement and Restitution for Victims of Human Trafficking

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ABSTRACT

Human trafficking is a serious global crime, including in Indonesia, where restitution, as financial compensation for victims, plays a crucial role in their recovery and reintegration. This study uses bibliometric analysis to explore research on law enforcement and restitution in human trafficking, aiming to identify trends, key themes, and gaps. Data was gathered from the Scopus database, covering publications from 2000 to 2024. The analysis revealed a rise in human trafficking-related publications, primarily scientific articles. Seven thematic clusters were identified, focusing on law enforcement, victim protection, and sexual trafficking. However, restitution remains underexplored, with only minimal coverage in one weakly connected cluster. Bibliographic coupling and co-citation analysis highlighted key studies and journals in the field. The study concludes that restitution deserves further attention, particularly in terms of policy, challenges, and its impact on victims, to enhance protection and justice efforts.

Keywords: *Bibliometrics, Human Trafficking, Enforcement, Restitution*

I. INTRODUCTION

Human trafficking is one of the most serious and widespread types of transnational crime globally. According to the United Nations Office on Drugs and Crime (UNODC), every year millions of people are victimized by this practice, with women and children making up the majority of victims (World Drug Report, 2023). In Indonesia, this issue has become increasingly urgent due to the high prevalence of human trafficking which continues to increase (Wardah, 2023).

Law enforcement against human traffickers is one of the main aspects of combating this crime. However, this alone is not enough to ensure justice for victims. Restitution, as a form of financial compensation provided to victims, plays an important role in supporting their recovery and reintegration into society. Restitution not only helps victims fulfill their basic needs, but also provides a sense of justice and recognition for the suffering they have endured.

Academic studies on law enforcement and restitution for victims of human trafficking have seen significant developments in the last two decades. However, a deeper understanding of existing research trends is needed to strengthen the theoretical and practical basis for addressing this issue. Bibliometric analysis can be an important tool to gain insights into how these two aspects, namely law enforcement and restitution, are discussed in the scientific literature. By evaluating publication trends, leading authors, and international collaboration networks on this topic, we can identify research gaps, uncover under-researched areas, and

encourage stronger synergies between law enforcement efforts and the provision of restitution to victims.

II. METHODS

This research uses bibliometric analysis. Bibliometric analysis is a meta-analytical research method that aims to summarize a collection of bibliographic papers to identify relationships between articles based on various measures. This technique involves analyzing citations and co-citations with a quantitative approach, as well as uncovering key research themes relevant to a particular topic, such as 'enforcement', 'restitution', 'victims', and 'human trafficking'.

The main objective of bibliometric analysis is to answer previously formulated research questions. The analysis also helps to map relationships between articles, by highlighting the frequency with which an article is cited as well as co-cited in other articles, as illustrated in Table 1 below.

Data Source	Search syntax
Search syntax in the Scopus database	TITLE-ABS-KEY ("enforcement" OR "restitution" AND "victims" AND "human trafficking") AND (LIMIT-TO (DOCTYPE , "ar") OR LIMIT-TO (DOCTYPE , "ch") OR LIMIT-TO (DOCTYPE , "cp") OR LIMIT-TO (DOCTYPE , "bk"))

Table 1. Search syntax in the Scopus database
Source: 2024 Scopus Indexing

This study uses a comprehensive database, which has been widely utilized by researchers in various fields to conduct bibliometric analysis. Scopus was selected as the primary source because of its broader coverage, approximately 60% greater than that of the Web of Science (WOS) database (Zhao & Strotmann, 2015). Relevant articles for this study were obtained from Scopus using the following keywords: "enforcement" OR "restitution" AND "victims" AND "human trafficking".

The research encompassed various disciplines but was restricted to specific types of publications, including journal articles, book chapters, books, and conference proceedings. The analysis focused on publications released between 2000 and 2024. A total of 250 documents were identified during the search process, forming the foundation for this review. The data in this study were examined using visual mapping techniques with the aid of VOSviewer software, which specializes in scientific analysis and visualization. A scientific network map has been created giving data and analysis using keywords co-occurrence, bibliographic coupling and co-citation methods.

III. DISCUSSION

Figure 1 shows the trends in the publication and citation counts related to human trafficking research over time. The findings reveal a steady growth in studies on human trafficking over the last decade. The highest numbers of publications were recorded in 2019 and 2023, with 38 and 29 publications, respectively. Additionally, a notable increase in citations occurred in 2014 and 2015, reaching 406 and 569 citations, respectively.

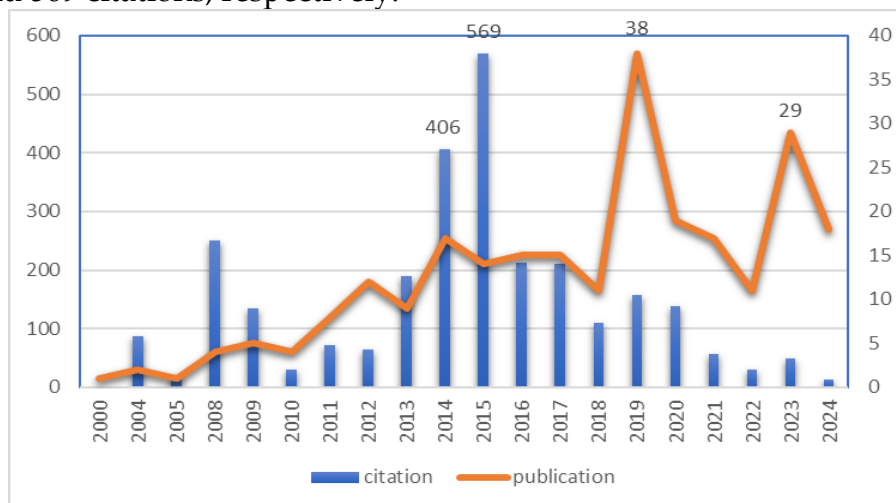


Figure 1. Number of Publications and citation per Year

Table 2 shows the distribution of publications analyzed in this study based on document type. The results show that the majority of publications are scientific articles, namely 68.4% (171 documents). Followed by book chapters at 19.2% (48 documents), conference papers at 7.2% (18 documents), and books at 5.2% (13 documents). This distribution reflects the dominance of scientific articles in the analyzed literature, while the contribution of other types of documents is more limited.

Summary of General Results	
Criteria	Quantity
Articles	171 (68.4%)
Book chapter	48(19.2%)
Conference paper	18 (7.2%)
Book	13 (5.2%)
Authors	610
Institutions	469
Countries	54
Cited references	9969

Table 2. Summary of General Results

The keyword co-occurrence analysis was conducted using a minimum threshold of 4 occurrences per keyword. Of the 1136 keywords identified, 80 met this criterion. The largest connected component consisted of 671 keywords. This analysis produced 7 clusters, comprising 1431 connections with an overall connection strength of 4174. Figure 2 illustrates the network visualization, depicting the relationships between these co-occurring keywords.

Cluster 3 (Blue) comprises 15 keywords primarily centered on reviewing literature related to sex trafficking. The keyword Human is the most prominent in this cluster, with 71 connections and a total connection strength of 527, emphasizing the human aspect within the context of human trafficking. The second most prominent keyword is article, with 68 connections and a total connection strength of 380, indicating that many studies in this cluster involve literature or article reviews. Sex trafficking ranks third, with 67 connections and an overall connection strength of 294, highlighting significant attention to this specific issue. Overall, this cluster emphasizes research efforts directed at compiling and analyzing literature that examines sex trafficking as a central topic.

Cluster 4 (Yellow) consists of 10 keywords emphasizing legal protection and rehabilitation for child victims of sexual violence and exploitation. The keyword child is the most prominent in this cluster, with 63 connections and a total connection strength of 243, underscoring the central focus on children in the context of abuse and exploitation. Child sexual abuse ranks second, with 56 connections and an overall connection strength of 177, highlighting significant attention to this issue. Adolescent follows in third place, with 50 connections and an overall connection strength of 147, reflecting a focus on adolescents as victims. Additionally, legislation and jurisprudence records 41 connections and an overall connection strength of 93, emphasizing the legal aspect in related studies. The keyword sexual abuse rounds out the cluster, with 40 connections and an overall connection strength of 88, underlining the prominence of sexual violence as a critical topic. This cluster demonstrates a research focus on legal frameworks and rehabilitation programs aimed at protecting and supporting child victims of sexual exploitation and abuse.

Cluster 5 (Purple) includes 8 keywords, with crime victims emerging as the strongest, having 55 connections and an overall connection strength of 208. The second most prominent keyword is United States, with 52 connections and an overall connection strength of 156, followed by health care personnel, which has 46 connections and an overall connection strength of 122. Lastly, prevention and control appears with 43 connections and an overall connection strength of 177. The analysis of commonly occurring keywords in this cluster highlights a research focus on the role of health care professionals in supporting crime victims and implementing professional standards, particularly within the context of the United States.

Cluster 6 (Light Blue): This cluster contains two keywords, with "sexual exploitation" being the dominant one, having 46 connections and an overall connection strength of 127. The second keyword, also "sexual exploitation," has 5 connections and an overall connection strength of 7. An analysis of the frequently appearing keywords in this cluster indicates that the related research primarily focuses on the experiences of sexual exploitation and its effects on the victims.

Cluster 7 (Light Orange): This cluster consists of only one keyword, "restitution," which has 3 connections and an overall connection strength of 6. This suggests that the topic of restitution is very rarely discussed or researched in the available papers.

many documents are frequently co-cited, some publications lack significant bibliographic relationships with others in this study.

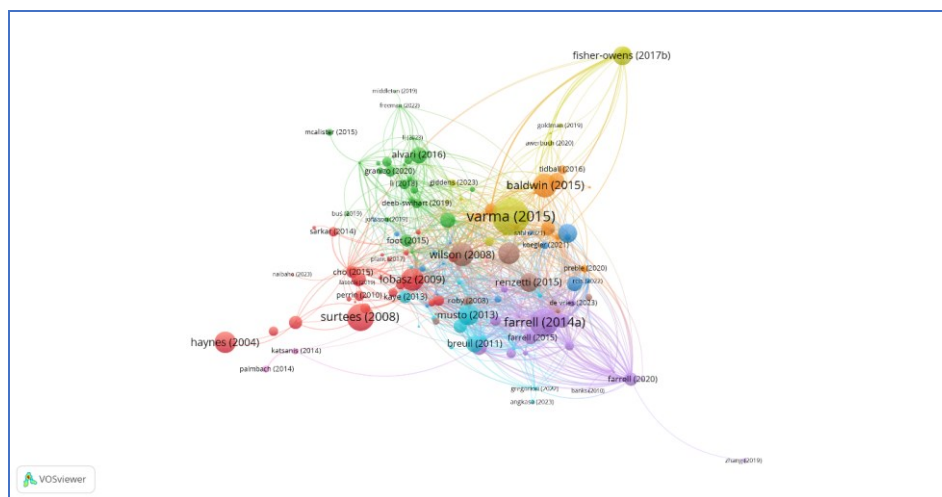


Figure 3 Network visualization of bibliographic coupling for the document.

Table 3 highlights the top 10 documents with the highest bibliographic connections in the field of Enforcement and Restitution for Victims of Human Trafficking. Farrell (2017) ranks first with an overall connection strength of 159, followed by Farrell (2020) in second place with 157, and Horning (2017) in third with an overall connection strength of 134. These findings reveal that the top three documents hold the most prominent bibliographic links, underscoring their substantial influence on the literature in this area of research.

Rank	Document	Citations	Total connections Strength
1	(Farrell & Reichert, 2017)	35	159
2	(Farrell et al., 2020)	29	157
3	(Horning & Marcus, 2017)	3	134
4	(Farrell, 2014, n.d.)	1	133
5	farrell (2015)	29	131
6	(Kiki et al., 2023)	1	130
7	(Cooper et al., 2024)	0	122
8	(Preble, 2019)	18	120
9	(Miller et al., 2016)	24	117
10	(Renzetti et al., 2015)	58	116

Table 3 Documents exhibiting the greatest cumulative connections strength in bibliographic coupling.

The analysis shows that there are 10 clusters with 914 connections and an overall connection strength of 914. Figure 5 shows the visualization of the resulting network. On the network map, adjacent documents show high bibliographic

relationships. The purple clusters, which are located in the center of the network map, consist of studies with a high number of connections and a total strength of the connections.

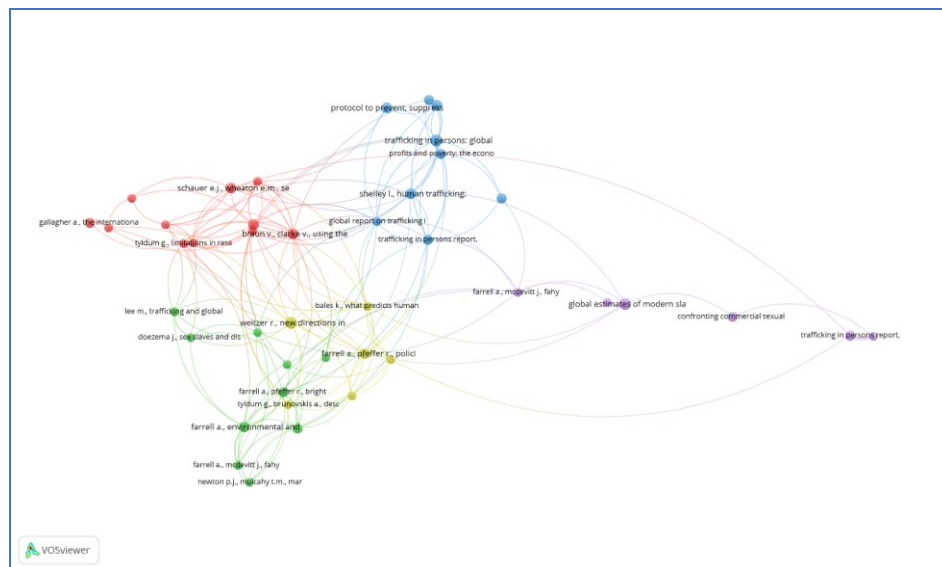


Figure 4 Network visualization of co-citation analysis of referenced citations.

In the analysis of the co citation, the cited references were used as the unit of analysis with the minimum citation threshold set forth in 5. Out of 9,969 cited references, only 43 references met this threshold. However, the largest interconnected reference network included only 42 items, as one reference had no relationships with other references in the network.

Co-citation analysis examines pairs of papers that are frequently cited together in source articles. When a pair of papers consistently appears in the reference lists of various authors, it suggests a thematic connection between them, forming a research group. This approach helps identify thematic similarities between papers. Two papers are considered co-cited when they are cited together in the reference list of another work, highlighting a conceptual or thematic link between the two.

The network analysis reveals five clusters with a total of 163 connections and a combined connection strength of 209. Figure 5 presents the network visualization of the co-citation analysis of cited references, which are organized into five distinct clusters. The red cluster, being the largest, includes 11 items with a notably high total connection strength. Among these, the Global Report on Trafficking in Persons (2014) stands out as a reference with the highest connection strength in this cluster. Additionally, the article with the highest overall connection strength across the network is Using Thematic Analysis in Psychology by Braun V. and Clarke V., published in Qualitative Research in Psychology. 3(2), 77-101 (2006). This cluster indicates a strong thematic concentration in related research.

The green cluster is the second largest cluster in the network analysis, consisting of 10 items. The study with the highest connections strength in this cluster

is Farrell A, at all., Police Perceptions of Human Trafficking, published in Journal of Crime and Justice. This cluster shows the research focus on issues related to police perceptions of human trafficking, which is a central theme in this cluster.

IV. CONCLUSION

Based on the bibliometric analysis of the documents, the least discussed theme or topic that has a great opportunity for further research is restitution for victims of human trafficking. This can be seen from the minimal focus on restitution. The cluster "restitution" (Cluster 7, Light Orange) has only one keyword with 3 connections and an overall connection strength of 6. This shows that the topic of restitution is still rarely discussed in the existing literature.

The topic of restitution is also not strongly connected to other themes such as law enforcement, victims of human trafficking, or human rights protection. This indicates the potential to explore the relationship between restitution and other aspects of addressing human trafficking.

Restitution plays an important role as financial compensation that assists victims in recovery and social reintegration. However, the lack of research suggests a lack of academic attention to how restitution can be effectively implemented in the context of policy, legal mechanisms or international support. Conducting further research on the theme of restitution will not only expand the academic literature but also contribute directly to policies and practices that support victims of human trafficking more holistically.

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