University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Library Philosophy and Practice (e-journal)

Libraries at University of Nebraska-Lincoln

2020

Bibliometrics Analysis in Articles of Verbal Bullying in Schools

Nuning Kurniasih nuning.kurniasih@unpad.ac.id

Savitri Wanabuliandari

Ristiyani Ristiyani

Follow this and additional works at: https://digitalcommons.unl.edu/libphilprac



Part of the Library and Information Science Commons

Kurniasih, Nuning; Wanabuliandari, Savitri; and Ristiyani, Ristiyani, "Bibliometrics Analysis in Articles of Verbal Bullying in Schools" (2020). Library Philosophy and Practice (e-journal). 4087. https://digitalcommons.unl.edu/libphilprac/4087

Bibliometrics Analysis in Articles of Verbal Bullying in Schools

Nuning Kurniasih¹, Savitri Wanabuliandari², Ristiyani³

¹Library and Information Science Program, Faculty of Communication Sciences, Universitas Padjadjaran, Bandung, Indonesia

²Mathematics Education, Universitas Muria Kudus, Kudus, Indonesia

³Indonesian Language and Literature Education, Universitas Muria Kudus, Kudus, Indonesia

Corresponding Author: nuning.kurniasih@unpad.ac.id

Abstract

Verbal bullying in schools has become the concern of the researcher. By using the "verbal bullying" AND "school" keywords, on the Scopus Database on March 12th, 2020, 115 documents were found. These documents were produced starting from 1999. The results of the bibliometrics analysis using Biblioshiny show that the most relevant source which has the highest H-Index for this theme is the Journal of School Violence. However, after observing each document, the article written by Wang J. in 2009 in the Journal of Adolescent Health is the one that receives the most citations. Meanwhile, Chen LM is the most productive writer in this field by producing 4 documents. Furthermore, the words that are most frequently mentioned in documents regarding verbal bullying in schools are related to gender, namely male and female, as well as the age of students in schools consisting of children and adolescents. The results of the analysis of the words that are most frequently expressed also indicate that verbal bullying in schools has received certain attention and studied from various disciplines. The results of this bibliometrics analysis are expected to be able to contribute to schools and other relevant parties in dealing with verbal bullying issues and create programs to minimize verbal bullying in schools.

Keywords: verbal bullying, bullying in schools, bibliometric analysis, biblioshiny analysis

1. Introduction

Bullying can occur anywhere, including at school. Bullying in schools can be mainly happened among students or between students and teachers (Smith, 2016). According to Smith (2012), the publication about bullying has been started since the 1970s. Moreover, Olweus explained the definition of physical and verbal forms of bullying behavior carried out by individuals in 1973. Then, in 1983, a school-based anti-bullying campaign program was begun (Smith, Salmivalli, & Cowie, 2012).

In general, there are several types of bullying, including cyberbullying, social bullying, physical bullying, sexual bullying, racial bullying, and verbal bullying (HazelDen Foundation, 2007; National Centre Against Bullying, 2020; Quiroz, Arnette, & Stephens, 2006; United Nation, 2016; Wang, Iannotti, & Luk, 2012). However, verbal bullying is an issue that is mostly found in schools among others. Tapper & Boulton (2005) note that students experience verbal bullying twice as much as physical bullying. In this case, verbal bullying uses words or comments that demean or insult someone resulting in the disruption of social relations between the bully and the bullied (Berger, 2007; Isernhagen & Harris, 2018). Although the problem of bullying has received certain attention from various parties, unfortunately, they do not know what they should do when dealing with this problem (Hazler, 1996; Hosch & Bothwell, 1990; Safran & Safran, 1987).

The objective of this study is to analyze the sources of publications and the impact factors of journals, citations of documents, as well as the words that frequently mentioned in documents regarding verbal bullying in schools through Bibliometrics analysis. Then, the results of this Bibliometrics analysis are expected to provide more comprehensive information towards problems in verbal bullying, so that all elements of society can be more concerned about protecting the environment, especially in the school environment to be free from bullying actions.

2. Literature Review

2.1. Bibliometrics Analysis

The term Bibliometrics was first introduced by Pritchard in 1969. This term refers to bibliographics analysis using statistics and mathematics (Pritchard, 1969). Bibliometrics analysis is carried out to evaluate scientific publications and look at the impact factors and citations, the patterns of collaboration, the disseminate strategies for scientific publications, and the report on the productivity of scientific works (Padrós-Cuxart, Riera-Quintero, & March-Mir, 2016; Reuters, 2008). With the development of data and technology, many applications or software have been developed that can be used for bibliometrics analysis. One of them is *Bibliometrix* using R Package. Likewise, this *Bibliometrix* involves *Biblioshiny* which is an open-source application for bibliometrics analysis for non-coder (Aria & Cuccurullo, 2017; Dervis, 2018).

The bibliometrics analysis can be easily done by using the software. However, the basic concepts in the bibliometric analysis such as Lotka's Law, Bradford's Law and Zipt's law, need to be comprehended. Moreover, in this case, Lotka's Law shows the distribution of authors on a subject at a certain period (Qiu, Zhao, Yang, & Dong, 2017), Bradford's Law shows the distribution of journals into three zones to see the core journals in a field (Singh & Bebi, 2014), and Zipt's Law shows the relationship between frequency and rank of words (Piantadosi, 2015).

2.2. Verbal Bullying

Verbal bullying is a kind of intimidation through words such as threatening, taunting, calling names with inappropriate calls, which are intended to humiliate or destroy the victims (Berger, 2007; Isernhagen & Harris, 2018; Wang et al., 2012). Various studies have shown that the victims of bullying especially in schools have decreased achievement, and experienced psychological and psychosocial disorders (Kibriya, Xu, & Zhang, 2015; Oliveira, de Menezes, Irffi, & Oliveira, 2018; Ponzo, 2013). Therefore, preventive programs are needed to prevent various kinds of bullying in schools (Ribakova, Valeeva, & Merker, 2016). Besides, the recommendations that can be provided to reduce bullying in schools include preparing the policies and the codes of contact, training to prevent bullying, observing, evaluating, and educating students not to carry out bullying, creating a social environment that supports a free of bullying, and monitoring and receiving feedback from all related components (University of Delaware, 2013).

3. Research Methods

This study uses bibliometrics analysis. The bibliometric analysis is a quantitative method in analyzing bibliographics data (<u>Cooper, 2015</u>; <u>Padrós-Cuxart et al., 2016</u>; <u>Reuters, 2008</u>). This analysis can include performance analysis or science mapping (<u>Moral-Muñoz, Herrera-Viedma, Santisteban-Espejo, & Cobo, 2020</u>). Furthermore, the bibliometrics analysis is carried out using the assistance of a software (<u>Bankar & Lihitkar, 2019</u>; <u>Dervis, 2018</u>).

The publication sources, the impact factors from both journals and documents, and the words that are most frequently mentioned in documents about verbal bullying in schools are analyzed in

this study. Meanwhile, the data sources were obtained through a search on the Scopus Database on March 12th, 2020. By using "verbal bullying" AND "school" keywords, 115 documents were obtained. The datasheet is downloaded from Scopus Database and imported into a format that is compatible with R Data Format. Then, *Biblioshiny* is used to analyze the data. *Biblioshiny* is a *Bibliometrix* tool from the R package (Moral-Muñoz et al., 2020). Finally, the results of software processing are analyzed and concluded.

4. Result and Discussion

4.1. Sources of Publication "Verbal Bullying in Schools"

This bibliometrics analysis uses the data sources from the Scopus Database accessed on March 12th, 2020. By using "verbal bullying" and "school" keywords, 115 documents were obtained. Then, the datasheet of the search results is processed using *Biblioshiny*. Table 1 shows the number of per year publications on "verbal bullying in schools".

Table 1. The number of publications on "Verbal bullying in Schools" in the Scopus database per year.

Year	Articles	Year	Articles
1999	1	2011	4
2002	3	2012	10
2003	3	2013	6
2004	1	2014	6
2005	2	2015	9
2006	3	2016	11
2007	4	2017	6
2008	4	2018	14
2009	7	2019	16
2010	4	2020	1

<u>Table 1</u> shows that the publication of verbal bullying in schools has been begun in 1999 with 1 document and the height number of publications was in 2019 with 16 documents.

The publications about verbal bullying at the school were spread in various sources. <u>Figure</u> 1 shows the most twenty relevant sources.

Most Relevant Sources

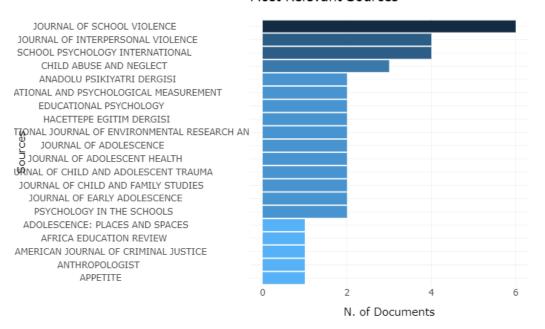


Figure 1. Distribution of documents about verbal bullying in schools in various sources

From <u>Figure 1</u>, it can be seen that the most widely published journal article about verbal bullying in schools is the Journal of School Violence, which is a total of 6 documents. By using Bradford's Law in Biblioshiny, a per-zone publication distribution is obtained as shown in <u>Figure 2</u>.

Bradford's Law

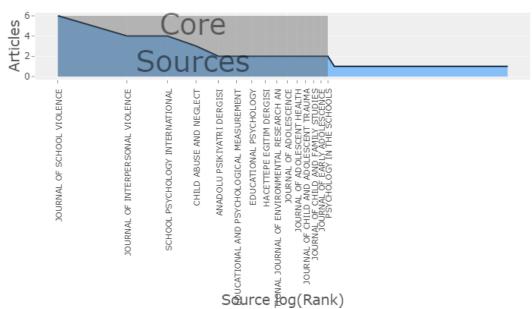


Figure 2. Clustering based on Bradford's Law

In detail, the results of clustering based on Bradford can be seen in Table 2.

Table 2. Details of clustering results based on Bradford's Law

so	Rank	Freq	cumFreq Zone	SO	Rank	Freq	cumFreq	Zone
JOURNAL OF SCHOOL VIOLENCE	1	6	6 Zone	I INTERNATIONAL GAMBLING STUDIES	47	-	1 71	Zone 2
JOURNAL OF INTERPERSONAL VIOLENCE	2	4	10 Zone	INTERNATIONAL JOURNAL OF CLINICAL	48		1 72	Zone 2
SCHOOL PSYCHOLOGY INTERNATIONAL	3	4	14 Zone	I INTERNATIONAL JOURNAL OF FORENSIC	1 49		1 73	Zone 2
CHILD ABUSE AND NEGLECT	4	3	17 Zone	I INTERNATIONAL JOURNAL OF INNOVATI	C 50		1 74	Zone 2
ANADOLU PSIKIYATRI DERGISI	5	2	19 Zone	I INTERNATIONAL JOURNAL OF INNOVATI	V 51		1 75	Zone 2
EDUCATIONAL AND PSYCHOLOGICAL MEASURE			21 Zone					Zone 2
EDUCATIONAL PSYCHOLOGY	7		23 Zone					Zone 2
HACETTEPE EGITIM DERGISI	8	2	25 Zone	I INTERNATIONAL JOURNAL OF PSYCHOLO)(54		1 78	Zone 2
INTERNATIONAL JOURNAL OF ENVIRONMENTAL			27 Zone					Zone 3
IOURNAL OF ADOLESCENCE	10		29 Zone		56		1 80	Zone 3
JOURNAL OF ADOLESCENT HEALTH	11	2	31 Zone		S' 57		1 81	Zone 3
IOURNAL OF CHILD AND ADOLESCENT TRAUMA	12	2	33 Zone				1 82	Zone 3
JOURNAL OF CHILD AND FAMILY STUDIES	13		35 Zone	·				Zone 3
IOURNAL OF EARLY ADOLESCENCE	14		37 Zone					Zone 3
PSYCHOLOGY IN THE SCHOOLS	15		39 Zone					Zone 3
ADOLESCENCE: PLACES AND SPACES	16		40 Zone		62			Zone 3
AFRICA EDUCATION REVIEW	17		41 Zone		63			Zone 3
AMERICAN JOURNAL OF CRIMINAL JUSTICE	18	1	42 Zone		64		1 88	Zone 3
ANTHROPOLOGIST	19		43 Zone		65			Zone 3
APPETITE	20		44 Zone		66			Zone 3
ASIA-PACIFIC EDUCATION RESEARCHER	21		45 Zone		H 67			Zone 3
ASSAULTS: INTERVENTIONS, PREVENTIVE STRAT	22	1	46 Zone				1 92	Zone 3
AUSTRALASIAN JOURNAL OF SPECIAL EDUCATION			47 Zone					Zone 3
AUTISM RESEARCH	24	1	48 Zone		70		1 94	Zone 3
BMC PEDIATRICS	25	1	49 Zone	2 JOURNAL OF THE AMERICAN PSYCHIATR	I(71		1 95	Zone 3
BRITISH EDUCATIONAL RESEARCH JOURNAL	26	1	50 Zone		C 72		1 96	Zone 3
BRITISH JOURNAL OF EDUCATIONAL PSYCHOLO	27	1	51 Zone		C 73		1 97	Zone 3
BRITISH JOURNAL OF SOCIOLOGY OF EDUCATION			52 Zone		74		1 98	Zone 3
CADERNOS DE SAUDE PUBLICA	29		53 Zone		75			Zone 3
CANADIAN JOURNAL OF SCHOOL PSYCHOLOGY	30	1	54 Zone		76			Zone 3
CARIES RESEARCH	31	1	55 Zone	MULTICULTURAL EDUCATION REVIEW	77		1 101	Zone 3
CENTER FOR EDUCATIONAL POLICY STUDIES JO	32	1	56 Zone	NURSE EDUCATION TODAY	78		1 102	Zone 3
CHILD AND ADOLESCENT MENTAL HEALTH	33	1	57 Zone		79			Zone 3
CHILD DEVELOPMENT	34	1	58 Zone		80		1 104	Zone 3
CHILDREN AND YOUTH SERVICES REVIEW	35	1	59 Zone		81		1 105	Zone 3
CHINESE JOURNAL OF ENDEMIOLOGY	36		60 Zone		82			Zone 3
COMPUTERS AND EDUCATION	37		61 Zone		83			Zone 3
DISABILITY AND REHABILITATION	38		62 Zone					Zone 3
EGITIM ARASTIRMALARI - EURASIAN JOURNAL (63 Zone					Zone 3
EGITIM VE BILIM	40		64 Zone		-			Zone 3
EUROPEAN JOURNAL OF PSYCHOLOGY OF EDUC			65 Zone		87			Zone 3
EUROPEAN JOURNAL OF SOCIAL SCIENCES	42		66 Zone					Zone 3
EXCEPTIONALITY EDUCATION INTERNATIONAL	43		67 Zone					Zone 3
HEALTH EDUCATION	44		68 Zone		90			Zone 3
NJURY	45		69 Zone		-			Zone 3
INJURY EPIDEMIOLOGY	46		70 Zone		J. J.			

<u>Table 2</u> shows that there were 15 sources included in Zone 1, 39 sources in Zone 2 and 37 sources in Zone 3. The distribution of resources into 3 zones shows the clustering of sources, where the sources in Zone 1 are the core sources in themes related to verbal bullying in schools.

4.2. Source Impact

The impact factor on the journal can be quantitatively seen from the number of citations and H-Index of the journal. Figure 3 shows the average citations per year obtained from documents on verbal bullying at school.

Average Article Citations per Year

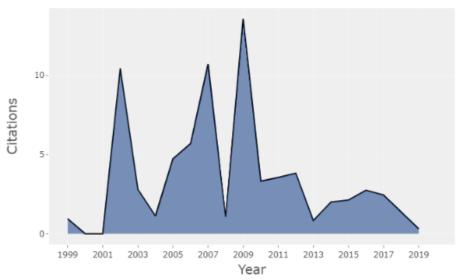


Figure 3. Average citations in articles per year.

Meanwhile, the impact factors of each source can be seen in <u>Figure 4.</u>
Source Impact

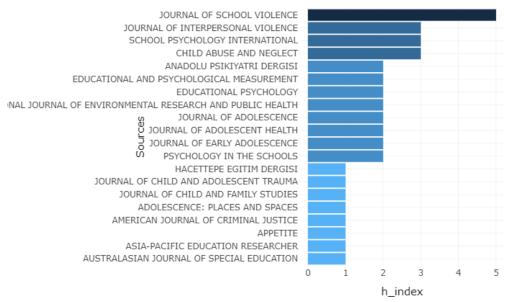


Figure 4. Source impact on 20 sources

<u>Figure 4</u> shows the impact on 20 journals, where the Journal of School Violence has the highest impact, namely the H-Index 5. However, if it is viewed from the number of citations in each document, the article written by Wang J. in 2009 in the Journal of Adolescent Health receives the most citations, with 897 citations. <u>Figure 5</u> shows the number of citations obtained per document.

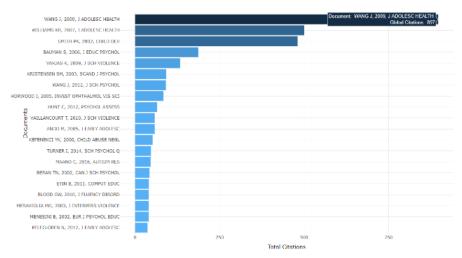


Figure 5. Top citations for Documents of Verbal Bullying at School

In terms of writer productivity, Chen LM is the most productive writer in this field by producing 4 documents. The author's productivity per document can be seen in <u>Figure 6</u>.

Top-Authors' Production over the T

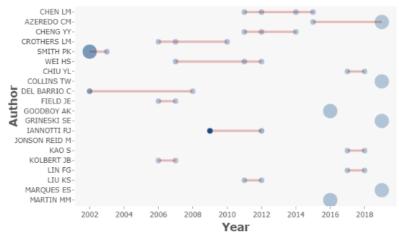


Figure 6. The most productive writer for Verbal Bullying at School

4.3. Words Most Frequently Mentioned

<u>Table 3</u> shows the most 50 common words mentioned in documents about verbal bullying at school.

Table 3. Frequency of the Most Frequently Mentioned Words

Terms	Frequency	Terms	Frequency
bullying	-	questionnaires	11
male		risk factor	11
female	78	self report	11
adolescent		united states	11
human	50	violence	10
child	44	cross sectional study	9
article	36	human relation	9
humans	36	internet	9
questionnaire	24	mental health	9
peer group	21	priority journal	9
school	21	psychological aspect	9
prevalence	20	sex factors	9
student	20	social support	9
aggression	18	statistics and numerical data	9
schools	18	cross sectional studies	8
crime victims	17	prevention and control	8
adolescent behavior	16	psychological	8
psychology	16	risk factors	8
sex difference	16	human experiment	7
students	16	age	6
victim	15	child behavior	6
major clinical study	14	health status	6
controlled study	13	social behavior	6
adult	12	social environment	6
crime victim	12		
interpersonal relations	12		

Table 3 shows that the most common words mentioned in documents about verbal bullying in school are related to gender, namely male and female, as well as the school-age consisting of children and adolescents. Table 3 also shows that verbal bullying is related to children's behavior, social status, social behavior, and social environment. Besides, verbal bullying is also seen to have been analyzed in various disciplines such as social, mental health, psychology, statistics and multidisciplinary studies (cross-sectional studies). Moreover, words that are often mentioned in a document can indicate the trending topics in this field.

5. Conclusion

The results of the bibliometric analysis of 115 documents obtained through a search with "verbal bullying" and "school" keywords in the Scopus Database show that verbal bullying in schools has become the concern of the researcher. Documents on verbal bullying are widely published in psychology, education, pediatric and other multidisciplinary journals. This is reinforced by the results of the analysis of the words that are often mentioned in the document, one of them is cross-sectional studies.

Acknowledgment

This paper is part of the research output entitled "E-Language-Based Mathematical E-module for Reducing Bullying in Slow Learner Students in Primary Schools" funded by the Ministry of Research, Technology and Higher Education (Kemenristek Dikti) 2019 budget year. Number: 3164/UN6.K/LT/2019.

References

- Aria, M., & Cuccurullo, C. (2017). Bibliometrix: An R-tool for comprehensive science mapping analysis. *Journal of Informetrics*, 11(4), 959–975. https://doi.org/10.1177/1757913911425736
- Bankar, R. S., & Lihitkar, S. R. (2019). Science Mapping and Visualization Tools Used for Bibliometric and Scientometric Studies: A Comparative Study Science Mapping and Visualization Tools Used for Bibliometric and Scientometric Studies View project. *Journal of Advancements in Library Sciences*, 6(1), 382s-394s. Retrieved from https://www.researchgate.net/publication/331533266
- Berger, K. (2007). Update on bullying at school: Science forgotten? *Developmental Review*, Vol. 27, pp. 90–126. https://doi.org/10.1016/j.dr.2006.08.002
- Cooper, D. (2015). Bibliometrics basics. *Journal of the Medical Library Association*, 103(4), 217–218. https://doi.org/10.3163/1536-5050.103.4.013
- Derviş, H. (2018). Bibliometric Analysis using Bibliometrix an R Package. *Journal of Scientometric Research*, 8(3), 156–160. https://doi.org/10.5530/jscires.8.3.32
- HazelDen Foundation. (2007). *Recognizing the many faces of bullying*. Retrieved from https://www.binghamton.edu/gse/dasa/recognize-many-faces-bullying-2014.pdf
- Hazler, R. J. (1996). Breaking the cycle of violence: interventions for bullying and victimization. *Published in 1996 in Washington (D.C.) by Accelerated Development*, p. 222. Retrieved from https://lib.ugent.be/en/catalog/rug01:000393251
- Hosch, H. M., & Bothwell, R. K. (1990). Arousal, description and identification accuracy of victims and bystanders. *Journal of Social Behavior and Personality*, Vol. 5, pp. 481–488.
- Isernhagen, J., & Harris, S. (2018). A Comparison of Bullying in Four Rural Middle and High Schools. *The Rural Educator*, 25(3), 5–13. https://doi.org/10.35608/ruraled.v25i3.523
- Kibriya, S., Xu, Z. P., & Zhang, Y. (2015). The impact of bullying on educational performance in Ghana: A Bias-reducing Matching Approach Authors: *Agricultural & Applied Economics Association and Western Agricultural Economics Association Annual Meeting*, 1–30. San Francisco.
- Moral-Muñoz, J. A., Herrera-Viedma, E., Santisteban-Espejo, A., & Cobo, M. J. (2020). Software tools for conducting bibliometric analysis in science: An up-to-date review. *El Profesional de La Información*, 29(1), 1–20. https://doi.org/10.3145/epi.2020.ene.03
- National Centre Against Bullying. (2020). Types Of Bullying. Retrieved from https://www.ncab.org.au/bullying-advice/bullying-for-parents/types-of-bullying/
- Oliveira, F. R., de Menezes, T. A., Irffi, G., & Oliveira, G. R. (2018). Bullying effect on student's performance. *EconomiA*, 19(1), 57–73. https://doi.org/10.1016/j.econ.2017.10.001
- Padrós-Cuxart, R., Riera-Quintero, C., & March-Mir, F. (2016). Bibliometrics: A publication analysis tool. *CEUR Workshop Proceedings*, *1567*, 44–53.
- Piantadosi, S. T. (2015). Zipf's word frequency law in natural language: A critical review and future directions Steven. In *Studies in Computational Intelligence* (Vol. 587).

- https://doi.org/10.1007/978-3-662-46024-5 8
- Ponzo, M. (2013). Does bullying reduce educational achievement? An evaluation using matching estimators. *Journal of Policy Modeling*, Vol. 35, pp. 1057–1078. https://doi.org/10.1016/j.jpolmod.2013.06.002
- Qiu, J., Zhao, R., Yang, S., & Dong, K. (2017). Author Distribution of Literature Information: Lotka's Law. In *Informetrics: Theory, Methods and Applications* (pp. 1–438). https://doi.org/10.1007/978-981-10-4032-0
- Quiroz, H. C., Arnette, J. L., & Stephens, R. D. (2006). *Bullying In Schools; Fighting the Bully Battle*. Retrieved from www.schoolsafety.us
- Reuters, T. (2008). Whitepaper Using Bibliometrics: In *Thomson Reuters*. https://doi.org/10.1097/NCN.0b013e31819ec9ac
- Ribakova, L. A., Valeeva, R. A., & Merker, N. (2016). Bullying in school: Case study of prevention and psycho-pedagogical correction. *International Journal of Environmental and Science Education*, 11(7), 1603–1617. https://doi.org/10.12973/ijese.2016.366a
- Safran, J. S., & Safran, S. P. (1987). Teachers' Judgments of Problem Behaviors. *Exceptional Children*, Vol. 54, pp. 240–244. https://doi.org/10.1177/001440298705400306
- Singh, K. P., & Bebi. (2014). Application of Bradford's Law on journal citations: A study of Ph.D. theses in social sciences of University of Delhi. *Annals of Library and Information Studies*, 61(2), 112–120.
- Smith, P. K. (2016). Bullying: Definition, Types, Causes, Consequences and Intervention. *Social and Personality Psychology Compass*, 10(9), 519–532. https://doi.org/10.1111/spc3.12266
- Smith, P. K., Salmivalli, C., & Cowie, H. (2012). Effectiveness of school-based programs to reduce bullying: A commentary. *Journal of Experimental Criminology*, Vol. 8, pp. 433–441. https://doi.org/10.1007/s11292-012-9142-3
- United Nation. (2016). *Tackling Violence in Schools: a global perspective*. Retrieved from www.violenceagainstchildren.un.org
- University of Delaware. (2013). *Bullying At School: Recommendations for*. Retrieved from https://www.education.udel.edu/wp-content/uploads/2013/01/Bullying.pdf
- Wang, J., Iannotti, R. J., & Luk, J. W. (2012). Patterns of adolescent bullying behaviors: Physical, verbal, exclusion, rumor, and cyber. *Journal of School Psychology*, Vol. 50, pp. 521–534. https://doi.org/10.1016/j.jsp.2012.03.004