

A BIBLIOMETRIC ANALYSIS ON TURNOVER INTENTION

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ABSTRACT

The study aimed to examine past study publication trends for turnover intention over 39 (thirty-nine) years (1982 to 2021). Bibliometric analysis was conducted through the searching method on the Scopus database. The search string for the Scopus database was conducted systematically. A total of 2215 documents were identified and screened for the scope of this study. Data screening was performed, and no duplicates were found in the document list. Therefore, 445 documents were removed. A total of 1770 published articles were analysed using Microsoft Excel, VOSviewer, and Harzing's Publish or Perish. The analysis revealed that the study of turnover intentions displays an increasing trend annually. The majority of articles are published in English, whereas the United States of America (USA) generated the highest number of publications. Osman M. Karatepe is the author with the highest number of publications and article citations in this analysis. The Journal of Vocational Behavior has the highest citation impact. In addition, a well-known publication entitled "Job Satisfaction, Organizational Commitment, Turnover Intention, and Turnover: Path Analyses Based on Meta-Analytic Findings" authored by Tett and Meyer (1993) has the highest citation with 65.21 per year. Concepts related to turnover intention such as job satisfaction, nurses, organizational commitment, turnover and burnout were the most frequently studied. In addition, this study also contributed to historical development, scientific development and identified research gaps to be filled in the future.

Keywords: Turnover intention, bibliometric analysis, VOSviewer, Harzing's Publish or Perish, Scopus database

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1. INTRODUCTION

Employees are the essential asset in ensuring the objectives of an organisation are achieved. Organisations with talented employees must adopt continuous initiatives to ensure employees are retained in the organisation, as most organisations have trouble retaining talented employees today. Voluntary resignation will inflict significant losses on the organisation (Boroş & Curşeu, 2013) as high retrenchment rates will negatively impact business performance, employee productivity, and service levels (Rai et al., 2020). In addition, organisations could experience financial losses involving training, hiring and organisational productivity (Sagie et al., 2002; Firth et al., 2004; Rai et al., 2020; Saira et al., 2020).

Besides, existing employees will be burdened with taking on additional duties and develop the intention to turnover. The additional costs covering work responsibility allowance should be provided to employees taking over the work left behind for motivational purposes. The allowance should be given to employees who are still working to ensure that the organisation's productivity is in control (King & Tang, 2018; Sagie et al., 2002). Besides, the work responsibility allowance will eliminate turnover intention when given to existing employees until a new employee takes over the job (King & Tang, 2018).

Organisations need to play a critical role in resolving and reducing the increase in turnover intentions among employees. Approaches such as organisational justice systems, including employees in decision making, involving employees in social events, organising productivity competitions, team building, balancing quality of life and work, excellence awards ceremonies, flexible working hours, and emotional support can prevent employees from developing turnover intention (Batt & Colvin, 2011; Zopiatis et al., 2014; Ramdeo & Singh, 2019; Wee & Mohd Rasdi, 2019; Agus & Selvaraj, 2020).

Employees typically develop turnover intention due to work experience or disharmonious relationships between their bosses or colleagues (Reina et al., 2018; Reknes et al., 2020). Additionally, employees feel that an organisation with fair policies, procedures and decisions have a high tendency to retain its employees (Medina-Craven & Ostermeier, 2020). Thus, organisations that maintain harmonious and good relationships with their employees indirectly negatively affect turnover intentions (Zopiatis et al., 2014; Rai et al., 2020).

This study aimed to analyse the publication trends of scholarly studies on turnover intentions topics that have been published previously in the period of 39 (thirty-nine years) from 1982 to 2021. The research objective (RO) in this study includes the following aspects of document publication:

- RO1:** Identifying the types of documents and sources frequently used for the publication of articles.
- RO2:** Identifying the frequently used language for article publishing.
- RO3:** Identifying areas associated with the topic of turnover intentions.
- RO4:** Determining the increasing publication trend for the turnover intention topic each year.

- RO5:** Identifying countries with the highest article publications.
- RO6:** Identifying institutions that have the most influential publications.
- RO7:** Identifying the most productive authors.
- RO8:** Identifying the sources that most actively publish articles.
- RO9:** Determining the metric analysis of article citations.
- RO10:** Identifying the most popular articles with the highest citations.
- RO11:** Identifying the number of authors for each article publication.
- RO12:** Identifying popular keywords in article publishing.

Additionally, the analysis in this study used a quantitative method approach based on bibliometric analysis. The bibliometric analysis was used to explore research trends for 39 (thirty-nine years) (1982 to 2021). Bibliometric analysis is one of the analyses used to review research development through the publication of documents. In addition, bibliometric analysis is also known as an analysis that applies mathematical and statistical methods to books and other communication media publications (Pritchard, 1969).

This section has described the Ros used as a guide during the bibliometric analysis in this study. The second section describes the literature review, whereas the third section describes the research methodology. Subsequently, the fourth section presents the findings from the bibliometric analysis and describes the discussion of the results according to 12 research questions (RQs) formulated based on the study's objectives. The final section presents the conclusions, limitations of the study and recommendations for future studies.

2. LITERATURE REVIEW

The turnover intention is generally the psychological desire or thought of an employee to voluntarily leave an organisation (Watrous et al., 2006). Porter and Steers (1973) stated that turnover intention is born from logical thinking when there is dissatisfaction and is the last step before quitting work. Noticeably, such dissatisfaction will stimulate psychological thinking to quit work (Mobley, 1977). An organisation can measure the actual turnover rate among its employees by measuring the turnover intention rate in the organisation (Mobley, 1977; Arnold et al., 1982; Shore et al., 1990; Ajzen, 1991; King & Tang, 2018; Ajzen, 2020; Lim & Parker, 2020).

The turnover intention can also be explained as the tendency of employees to start thinking about turnover and as an effort to find a new job (Mobley et al., 1979; Griffeth et al., 2000; Saira et al., 2020). Turnover among employees causes concern to the organisation due to high costs (Saira et al., 2020). According to Gupta and Singh (2020), turnover intention is the attitude of employees with the intention to leave the organisation but does not show the actual act of quitting. A low turnover intention rate can maintain competitiveness and achieve organisational goals in the long run (Taheri, 2020). Therefore, turnover has constantly been a strategic issue in organisations (Taheri, 2020).

Several reasons motivate employees to develop turnover intention, such as personal attitudes, socioeconomics, family problems, dissatisfaction, justice and others (Porter & Steers, 1973;

Mobley, 1977; Jabeen et al., 2020; Taheri, 2020). For example, employees who feel that the organisation is unfair to them have a higher tendency to think and retain the turnover intention (Reknes et al., 2020). In addition, the turnover intention is triggered as soon as there is a shock from an event such as a family problem or sudden policy change in the organisation (Jabeen et al., 2020).

The unpleasant drastic change will slowly create an uncomfortable atmosphere leading to dissatisfaction and low-level job satisfaction among employees. Attractive alternative job opportunities or exposures, unfulfilled employee goals, and incompatibility between employees and organisations are among the internal factors identified and significantly influence employees' turnover intentions (Mobley et al., 1979; Ahmad et al., 2019). In addition, inadequate rewards, disharmonious relationships, conflicts between employees and supervisors (Reyhanoglu & Akin, 2020), uncondusive workplace conditions, lack of safety and lack of support from supervisors are also the reasons for turnover intention among employees. The impact of turnover intention can also be observed in employee behaviours such as absenteeism, complaints, lack of commitment and job dissatisfaction (King & Tang, 2018).

The negative behavioural characteristics exhibited by employees will affect organisational performance by having an adverse long-term impact. Negative implications include unsatisfactory employee performance, low productivity and low intrinsic motivation. For example, employees with turnover intention due to job dissatisfaction can be detrimental to the organisation's productivity in the long term and to the employees themselves. Therefore, organisations and supervisors need to play an important role to ensure that employees are always enthusiastic and positive during work (Firth et al., 2004; Durrah & Chaudhary, 2020). Thus, the social reaction between the organisation and employees will lead to positive or negative reciprocal norms.

According to social exchange theory, there will be a positive social response when employees feel satisfied. As a result, employees will usually benefit from the organisation and possess good mental health and ethical climate (Rai et al., 2020; Yasin et al., 2020). However, employees are forced towards negative behaviours, such as turnover intention and lack of commitment to the organisation if there is an adverse social reaction.

3. METHODS

The analysis began with searching and collecting document publication data from the Scopus database on July 5th 2022. The Scopus database was used to search for document publications related to the "turnover intention" research topic. The Scopus database was chosen as it is an indexed database, has the most extensive citation and search data, and is favoured for having good quality (Burnham, 2006).

The analysis results retrieved information including author name, year, subject field, document type, source, keywords, country, source and language. A total of 2215 documents were identified and screened for the scope of this study. The search string for the Scopus database is demonstrated

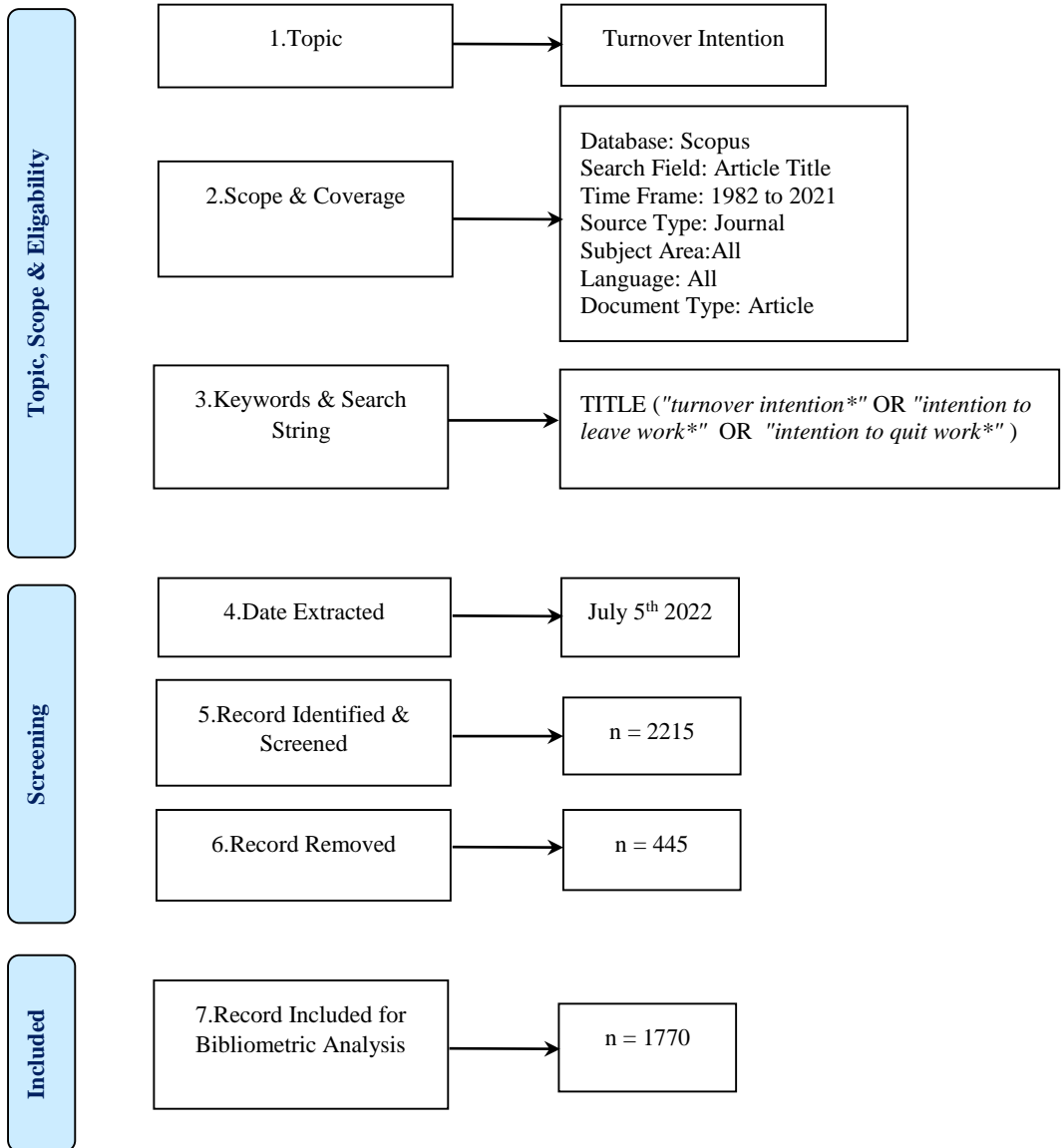
in Table 1. However, the search only focused on final publications of articles with the title and the research keyword "turnover intention" from 1982 to 2021.

Table 1: The Search String

DATABASE	SEARCH STRING
Scopus	TITLE ("turnover intention*" OR "intention to leave work*" OR "intention to quit work*") AND (EXCLUDE (PUBYEAR, 2022)) AND (LIMIT-TO (DOCTYPE, "ar")) AND (LIMIT-TO (PUBSTAGE, "final")) AND (LIMIT-TO (SRCTYPE, "j"))

Data screening was performed, and no duplicates were found in the document list. Therefore, 445 documents were removed. Thus, a total of 1770 net documents were tracked from the Scopus database. The list of data was then exported in the form of comma-separated values (.csv) files and research information systems (.ris) files. In addition, software such as Microsoft Excel, Harzing's Publish or Perish and VOSviewer were used to analyse descriptive and visualisation data separately. The researchers analysed the data in this study using VOSviewer software for mapping analysis (Van Eck & Waltman, 2020), Microsoft Excel for descriptive analysis and Harzing's Publish or Perish for metric citation analysis. Vosviewer thesaurus file was used to clean and standardisation some plural to singular terms in the dataset (Van Eck & Waltman, 2020 ; Ahmi, 2021). The search and selection of documents were based on the study protocol guidelines described in Figure 1 below.

Figure 1: Flow diagram of the search strategy [Source: Moher et al., (2009); Ahmi, (2021); Page et al., (2021) and Zakaria et al., (2021)]



4. RESULTS AND DISCUSSION

Data exported to comma-separated values (.csv) files and research information systems (.ris) files were analysed and grouped according to document type, source type, annual trends, language, subject areas, keywords, country productivity, authors and number of citations. The findings were presented in the descriptive form, such as frequency, average and percentage accumulated until July 5th 2022. The findings and discussion based on RO will be answered through the following RQ:

RQ1. What are the types of documents and sources frequently used for the publication of articles?

The selection of article-type documents in this study explicitly focused on the keywords "turnover intention", "intention to leave work", and "intention to quit work". This topic search is only based on title searches within the Scopus database. The selection of articles and journal sources was because the study on turnover intention is frequently published in article and journal formats.

Data were collected and analysed in two separate analyses, namely document type analysis focusing on article publication and source type analysis emphasising journal publications. Refined results values exported from Scopus were downloaded and imported into Microsoft Excel software for analysis. Descriptive analysis of Microsoft Excel software found 1770 published articles comprising articles and journals related to "turnover intention" within the thirty-nine years.

RO2: What is the language frequently used for article publishing?

Table 2 shows 15 languages used in the publication of articles concerning turnover intentions studies. The majority of articles were published in English by 94.83% (1689), and no articles were published in two languages. Articles published in 14 separate languages ranged from 2.08% to 0.06%. The minority languages used are Arabic, Persian, Russian, Serbian and Ukrainian which accounted for 0.06% of each language. The second highest languages used in the publication of articles are Korean (37), Chinese (25) and Portuguese (6).

The extensive use of English is due to its status as the language of global international communication. Therefore, writing articles in English is encouraged to facilitate readers from various countries to read the publications. Simultaneously, the use of English in writing articles encourages reading, citations and increases the "h-index" and "g-index" of the article. In addition, the publication of documents in the form of articles and journals has attracted researchers to present the results of their respective studies.

Table 2: Languages

Language	TP	%
English	1689	94.83%
Korean	37	2.08%
Chinese	25	1.40%
Portuguese	6	0.34%
Italian	5	0.28%
French	3	0.17%
Japanese	3	0.17%
Spanish	3	0.17%
Turkish	3	0.17%
German	2	0.11%
Arabic	1	0.06%
Persian	1	0.06%
Russian	1	0.06%
Serbian	1	0.06%
Ukrainian	1	0.06%
Total	1781	100.00%

Notes: TP = total number of publications

RQ3: What are the areas associated with the topic of turnover intentions?

Table 3 displays the published articles based on the subject area. The majority of studies related to turnover intentions are found in the Business, Management and Accounting area, constituting 50.90 % (901) and subsequently followed by Social Sciences at 29.89 % (529), Psychology at 17.85 % (316) and Medicine at 13.79% (244). The lowest subject areas with published turnover intentions study are Chemistry, Dentistry, Neuroscience, Physics and Astronomy that accounted for 0.06 % of each field. In contrast, other subject areas accounted for between 12.54 % to 0.23 % of article publications.

Turnover intentions are often associated with the behaviour and social of employees in organisations, especially in organisations in the service sector such as medicine, business, hospitality and profit-based businesses and services. Therefore, most study publications are concentrated in Business, Management and Accounting, Social Sciences, Psychology, Medicine, Nursing, Economics, Econometrics and Finance and Arts and Humanities.

Table 3: Subject Area

Subject Area	TP	%
Business, Management and Accounting	901	50.90%
Social Sciences	529	29.89%
Psychology	316	17.85%
Medicine	244	13.79%
Nursing	222	12.54%
Economics, Econometrics and Finance	129	7.29%
Arts and Humanities	99	5.59%
Computer Science	91	5.14%
Engineering	91	5.14%
Decision Sciences	77	4.35%
Environmental Science	67	3.79%
Energy	31	1.75%
Multidisciplinary	26	1.47%
Mathematics	23	1.30%
Health Professions	22	1.24%
Biochemistry, Genetics and Molecular Biology	17	0.96%
Agricultural and Biological Sciences	16	0.90%
Pharmacology, Toxicology and Pharmaceutics	11	0.62%
Chemical Engineering	10	0.56%
Earth and Planetary Sciences	8	0.45%
Immunology and Microbiology	4	0.23%
Materials Science	4	0.23%
Chemistry	1	0.06%
Dentistry	1	0.06%
Neuroscience	1	0.06%
Physics and Astronomy	1	0.06%

Notes: TP = total number of publications

RQ4: What is the trend of publication of the topic of turnover intention each year?

Table 4 demonstrates the publication statistics on turnover intentions study for thirty-nine years from 1982 to 2021. An increasing trend of publication of articles annually on turnover intentions’ study was found in the Scopus database. The highest number of citations was in 2007 with 3689 citations, followed by 3145 citations in 2008 and 3134 citations in 2016. The year 1988 recorded the lowest citation with 31.

Graph 1 demonstrates an increasing trend of turnover intention study publications every year. However, a slight insignificant decrease in article publishing is evident from 1982 to 2010. The highest article publication was in 2020 and 2021, whereas the lowest article publication was in 1982,1985,1988 and 1989. The awareness of turnover intentions topic and the impact on the organisation could be the reason for the constant increase in publication. Studies on turnover intentions are expected to continuously attract researchers and subsequently increase in future (Mumu et al., 2021).

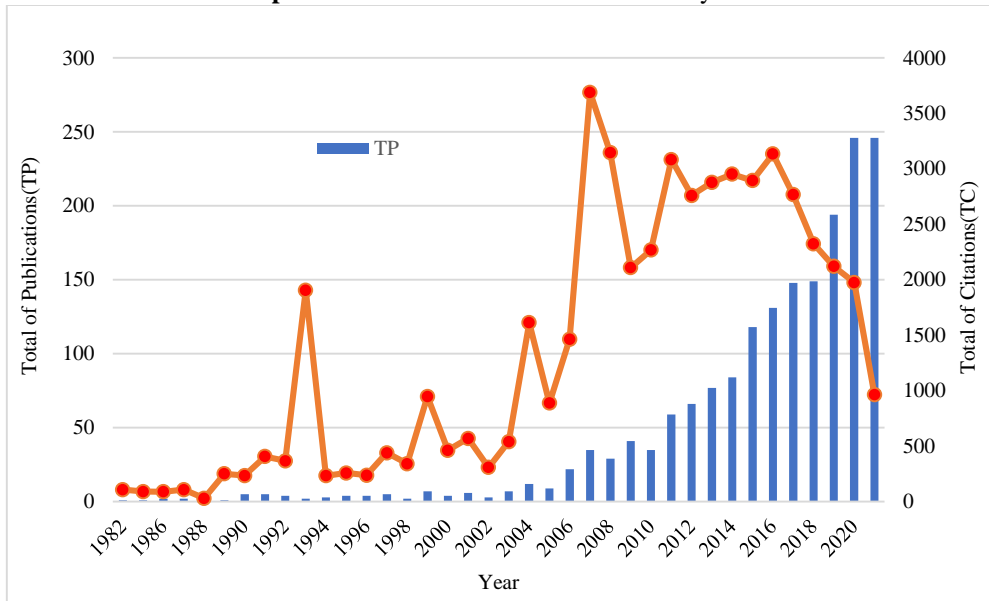
Table 4: Year of Publication

Year	TP	%	NCP	TC	C/P	C/CP	h	g
2021	246	13.90%	177	964	3.92	5.45	11	13
2020	246	13.90%	212	1975	8.03	9.32	20	28
2019	194	10.96%	157	2122	10.94	13.52	23	36
2018	149	8.42%	131	2325	15.60	17.75	28	39
2017	148	8.36%	131	2768	18.70	21.13	32	42
2016	131	7.40%	118	3134	23.92	26.56	32	50
2015	118	6.67%	107	2894	24.53	27.05	32	49
2014	84	4.75%	81	2952	35.14	36.44	31	52
2013	77	4.35%	75	2879	37.39	38.39	33	52
2012	66	3.73%	65	2761	41.83	42.48	28	52
2011	59	3.33%	56	3084	52.27	55.07	31	55
2010	35	1.98%	35	2269	64.83	64.83	23	35
2009	41	2.32%	41	2110	51.46	51.46	28	41
2008	29	1.64%	29	3145	108.45	108.45	24	29
2007	35	1.98%	35	3689	105.40	105.40	26	35
2006	22	1.24%	22	1465	66.59	66.59	16	22
2005	9	0.51%	9	889	98.78	98.78	9	9
2004	12	0.68%	12	1614	134.50	134.50	12	12
2003	7	0.40%	7	542	77.43	77.43	7	7
2002	3	0.17%	3	309	103.00	103.00	3	3
2001	6	0.34%	6	571	95.17	95.17	6	6
2000	4	0.23%	4	463	115.75	115.75	4	4
1999	7	0.40%	7	949	135.57	135.57	7	7
1998	2	0.11%	2	342	171.00	171.00	2	2
1997	5	0.28%	5	441	88.20	88.20	5	5
1996	4	0.23%	4	238	59.50	59.50	3	4
1995	4	0.23%	4	259	64.75	64.75	4	4

1994	3	0.17%	3	234	78.00	78.00	3	3
1993	2	0.11%	2	1906	953.00	953.00	2	2
1992	4	0.23%	4	368	92.00	92.00	4	4
1991	5	0.28%	5	407	81.40	81.40	5	5
1990	5	0.28%	5	235	47.00	47.00	5	5
1989	1	0.06%	1	252	252.00	252.00	1	1
1988	1	0.06%	1	31	31.00	31.00	1	1
1987	2	0.11%	2	108	54.00	54.00	2	2
1986	2	0.11%	2	90	45.00	45.00	1	2
1985	1	0.06%	1	92	92.00	92.00	1	1
1982	1	0.06%	1	109	109.00	109.00	1	1
TOTAL	1770							

Notes: TP = total number of publications; NCP = number of cited publications; TC = total citations; C/P = average citations per publication; C/CP = average citations per cited publication; h = h-index; and g = g-index.

Graph 1: Total Publications and Citations by Year



RQ 5: Which countries have the highest article publications?

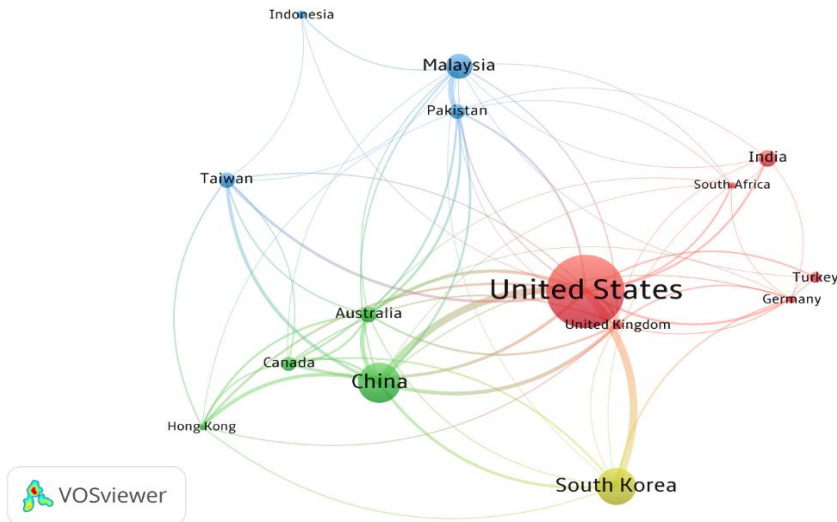
Table 5 exhibits the 15 most productive countries that contributed to publications in this field of study. The USA ranked top with 417 articles publications, followed by China (228), South Korea (210), Malaysia (140) and India (95). Other countries contributed between 39 to 92 article publications. The highest number of citations within the forty years is from the USA with 22416 citations and subsequently Canada (5404), China (4521), South Korea (3166) and the United Kingdom (3060).

Table 5: Top 15 Countries That Contributed to the Publications

Country	TP	%	NCP	TC	C/P	C/CP	h	g
United States (USA)	417	23.56%	407	22416	53.76	55.08	85	133
China	228	12.88%	201	4521	19.83	22.49	36	58
South Korea	210	11.86%	166	3166	15.08	19.07	30	48
Malaysia	140	7.91%	109	1369	9.78	12.56	20	32
India	95	5.37%	73	1161	12.22	15.90	18	31
Australia	92	5.20%	89	3221	35.01	36.19	34	55
Taiwan	87	4.92%	85	2616	30.07	30.78	27	48
Pakistan	84	4.75%	74	1332	15.86	18.00	18	33
Canada	82	4.63%	76	5404	65.90	71.11	31	73
Turkey	62	3.50%	58	1717	27.69	29.60	21	40
United Kingdom	55	3.11%	55	3060	55.64	55.64	28	55
Indonesia	47	2.66%	21	126	2.68	6.00	8	10
Germany	46	2.60%	44	1720	37.39	39.09	22	41
Hong Kong	39	2.20%	37	1805	46.28	48.78	22	39
South Africa	39	2.20%	38	554	14.21	14.58	13	23

Notes: TP = total number of publications; NCP = number of cited publications; TC = total citations; C/P = average citations per publication; C/CP = average citations per cited publication; h = h-index; and g = g-index.

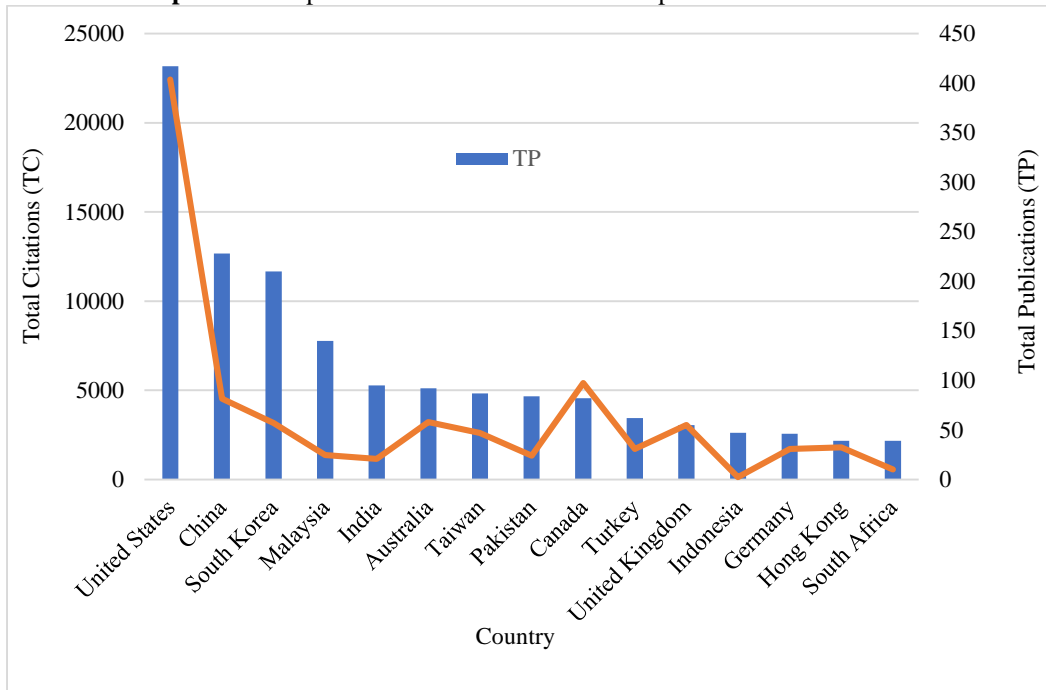
Figure 2. Network visualisation map of publication by country



The visualisation map of the publishing network by country in Figure 2 demonstrated that the USA, China, South Korea, Malaysia and India are the countries that publish the most articles.

Additionally, Graph 2 shows the number of the top 15 countries that contributed to the articles and citations from 1982 to 2022.

Graph 2: The top 15 countries contributed to the publications and citations



RQ6: Which institutions have the most influential article publications?

Table 6 displays the most influential institutions with a minimum of 12 articles published. Based on the ranking of 15 institutions, Universiti Teknologi Malaysia is top-ranked with 24 article publications, followed by Yonsei University (22), Universiti Sains Malaysia (18), Kyung Hee University (16), Renmin University of China (16) and University of Punjab (16). Other institutions published between 12 to 15 articles related to turnover intentions.

Universiti Teknologi Malaysia had the most influential and highest publication with 24 article publications but fewer citations than the Florida State University in the USA with 12 articles. Florida State University is the university with the highest citation (924 citations) with an average citation per publication of 77.00. The Eastern Mediterranean University of Cyprus has the second most cited publication with 826 citations despite having only 15 article publications and having an average citation per publication of 55.07.

An exciting finding found in this study is that Florida State University only has 12 article publications but recorded the highest citation average of 77.00 per publication. Conversely, Universiti Teknologi Malaysia recorded the third-lowest average annual citation with an average of 10.04 citations only, although the university managed to publish 24 articles and ranked first among 15 other institutions. Furthermore, Universiti Utara Malaysia has the lowest citation with 69 citations and 13 article publications. The minimum number of citations recorded in this research is 69 citations, and the maximum is 924 citations.

Table 6. Most Influential Institutions with a Minimum of 12 Publications

AFFILIATION	COUNTRY	TP	NCP	TC	C/P	C/CP	h	g
Universiti Teknologi Malaysia	Malaysia	24	21	241	10.04	11.48	7	15
Yonsei University	South Korea	22	18	406	18.45	22.56	10	20
Universiti Sains Malaysia	Malaysia	18	16	199	11.06	12.44	8	14
Kyung Hee University	South Korea	16	15	440	27.50	29.33	9	16
Renmin University of China	China	16	14	282	17.63	20.14	9	16
University of Punjab Eastern Mediterranean University	Pakistan	16	14	208	13.00	14.86	7	14
Huazhong University of Science and Technology	Cyprus	15	15	826	55.07	55.07	14	15
Universiti Utara Malaysia	China	14	12	214	15.29	17.83	7	14
University of Central Florida	Malaysia	13	9	69	5.31	7.67	6	8
Universiti Putra Malaysia	USA	13	13	201	15.46	15.46	8	13
Florida State University	Malaysia	13	11	83	6.38	7.55	5	9
Peking University	USA	12	12	924	77.00	77.00	12	12
University of South Carolina	China	12	12	704	58.67	58.67	10	12
	United States	12	12	548	45.67	45.67	8	12
Monash University	Australia	12	11	334	27.83	30.36	8	12

Notes: TP = total number of publications; NCP = number of cited publications; TC = total citations; C/P = average citations per publication; C/CP = average citations per cited publication; h = h-index; and g = g-index.

RQ7: Who are the most productive authors?

Table 7 exhibits the 15 most productive authors with a minimum of 5 articles publication and a maximum of 11 article publications. This analysis also identified Osman M. Karatepe as the most popular author with 11 articles within thirty-nine years. Additionally, Osman M. Karatepe has contributed 486 citations, 44.18 citations for each article publication, g-index = 11 and h-index = 11. Nevertheless, the authors with the lowest publications are Brough, P., Bufquin, D., Ducharme, L.J., and Galletta, M., with only five articles. Furthermore, the article authored by Saoula, O. has

the lowest citation with 33 compared to citations from other authors. On the other hand, Brough, P. from Griffith University has the highest citation average with 137.40 citations per article publication, h-index =5 and a g-index = 5 despite only authoring five articles within thirty-nine years.

Table 7. Most Productive Authors

Author's Name	Affiliation	TP	Country	NCP	TC	C/P	C/CP	h	g
Karatepe, O.M.	Eastern Mediterranean University	11	Cyprus	11	486	44.18	44.18	11	11
Labrague, L.J.	Sultan Qaboos University	10	Oman	11	442	44.20	40.18	9	10
Lin, C.P.	National Yang Ming Chiao Tung University	10	Taiwan	10	245	24.50	24.50	7	10
Battistelli, A.	Laboratoire de Psychologie	7	France	6	198	28.29	33.00	5	7
Islam, T.	University of Punjab	7	Pakistan	7	179	25.57	25.57	6	7
Memon, M.A.	NUST Business School, Islamabad	7	Pakistan	6	132	18.86	22.00	6	7
Ahmed, I.	University of Punjab	6	Pakistan	5	127	21.17	25.40	4	6
Akgunduz, Y.	Dokuz Eylül Üniversitesi	6	Turkey	6	136	22.67	22.67	5	6
Roman, P.M.	Owens Institute for Behavioral Research	6	USA	6	479	79.83	79.83	6	6
Salleh, R.	Universiti Teknologi PETRONAS	6	Malaysia	5	113	18.83	22.60	5	6
Saoula, O.	Universiti Utara Malaysia	6	Malaysia	5	33	5.50	6.60	5	5
Brough, P.	Griffith University	5	Australia	5	687	137.40	137.40	5	5
Bufquin, D.	Rosen College of Hospitality Management	5	USA	5	92	18.40	18.40	5	5
Ducharme, L.J.	National Institute on Drug Abuse (NIDA)	5	USA	5	452	90.40	90.40	5	5

Galletta, M.	Università degli Studi di Cagliari	5	Italy	5	221	44.20	44.20	5	5
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Notes: TP = total number of publications; NCP = number of cited publications; TC = total citations; C/P = average citations per publication; C/CP = average citations per cited publication; h = h-index; and g = g-index.

RQ8: Which sources are the most actively publishing articles?

The 10 most active sources published research articles related to turnover intentions are displayed in Table 8. The minimum number of published articles in a journal is 15 articles, and the maximum is 42 articles. The highest contributing journal for article publications is the International Journal of Human Resource Management, with 42 article publications and 1513 citations. The second highest contributing journal to article publication is the Journal of Nursing Management (33), with 1094 citations. The following sources comprised of International Journal of Environmental Research and Public Health (26), Frontiers in Psychology (21) and Personnel Review (21). Other journals have published between 15 and 20 articles.

The Journal of Vocational Behavior has the highest citation with 1552 citations, despite having only 20 published articles. Nevertheless, the International Journal of Human Resource Management has the highest article publication but has fewer citations than the Journal of Vocational Behavior. The lowest citation among these 10 journals is the Frontiers in Psychology, with only 155 citations. The most popular publishers are Elsevier Ltd., Taylor & Francis Online and Wiley Online Library. Elsevier Ltd has published two journals with citations between 1135 to 1552 citations. In addition, Wiley Online Library also published two journals with citations between 841 to 1094.

The findings of this study showed that studies related to the topic of turnover intention are concentrated in the field of medicine and management compared to other fields. However, the topic of turnover intention is widely studied in the field involving the nursing profession. Consistently, the nursing profession is associated with the turnover intentions topic compared to other occupations.

Table 8: Most 10 Active Source Title

Source Title	TP	TC	Publisher
International Journal of Human Resource Management	42	1513	Taylor& Francis Online
Journal of Nursing Management	33	1094	Wiley Online Library
International Journal of Environmental Research and Public Health	26	238	MDPI
Frontiers in Psychology	21	155	Organizational Psychology Emerald Group Holdings
Personnel Review	21	894	Ltd.
International Journal of Hospitality Management	20	1135	Elsevier Ltd

Journal of Vocational Behavior	20	1552	Elsevier Ltd
Social Behavior and Personality	17	368	Scientific Journal Publisher
Journal of Advanced Nursing	16	841	Wiley Online Library
Journal of Human Resources in Hospitality and Tourism	15	386	Taylor& Francis Online

Notes: TP = total number of publications; TC = total citations

RQ 9: What are the metrics citation analysis of article citations?

Harzing’s Publish or Perish software was used for citation metric analysis. This analysis utilises research information systems (.ris) file data exported from the Scopus database and re-imported into Harzing’s Publish or Perish software. Table 9 exhibits metric citations that were analysed from 1982 to 2022. The citations for the forty years amounted to 50985 citations for 1770 articles. The average citation in a year was 1274.63 citations indicating that the average citation for one article is 28.81 citations and the average citation for an author is 22313.95. Nevertheless, only 1562 out of 1770 articles were cited as of July 5th 2022. On the other hand, the study on turnover intentions had reached 104 h-index and 161 g-index during the data analysis.

Table 9: Citations Metrics

Metrics	Data
Publication years	39(1982-2021)
Citation years	40(1982-2022)
Papers	1770
Citations	50985
Citations/year	1274.63
Citations/paper	28.81
Citations/author	22313.95
Papers/author	738.82
Authors/paper	3.07
h-index	104
g-index	161

RQ 10: What are the most popular articles that have the highest citations?

Table 10 displays 20 articles with the highest citations in the turnover intention study. The article with the highest citation in forty years is a meta-analytical study article written by Tett dan Meyer (1993), with the highest average citation of 65.21 per year. The second popular article was written by Podsakoff et al., (2007) had an average annual citation of 68. High citation involving meta-analyses indicates that readers prefer to read meta-analysis type articles due to comprehensiveness

and conciseness to identify the latest trends and shortcomings in such studies. The lowest citation was for the article entitled “Job Satisfaction and Organizational Commitment in Relation to Work Performance and Turnover Intentions” written by Shore and Martin (1989) with only an average of 7.64 citations per year.

Table 10: Top 20 Highly Cited Articles

No.	Authors	Title	Year	Cites	CitesPerYear
1	R.P. Tett, J.P. Meyer	Job Satisfaction, Organizational Commitment, Turnover Intention, and Turnover: Path Analyses Based on Meta Analytic Findings	1993	1891	65.21
2	N.P. Podsakoff, J.A. Lepine, M.A. Lepine	Differential challenge stressor-hindrance stressor relationships with job attitudes, turnover intentions, turnover, and withdrawal behavior: A meta-analysis	2007	1020	68
3	T.M. Egan, B. Yang, K.R. Bartlett	The effects of organizational learning culture and job satisfaction on motivation to transfer learning and turnover intention	2004	442	24.56
4	M.K. Ahuja, K.M. Chudoba, C.J. Kacmar, D. Harrison McKnight, J.F. George	It road warriors: Balancing work-family conflict, job autonomy, and work overload to mitigate turnover intentions	2007	389	25.93
5	C.H. Schwepker Jr.	Ethical climate's relationship to job satisfaction, organizational commitment, and turnover intention in the salesforce	2001	368	17.52
6	H. Kim, M. Stoner	Burnout and turnover intention among social workers: Effects of role stress, job autonomy and social support	2008	366	26.14
7	R. Van Dick, O. Christ, J. Stellmacher, U. Wagner, O. Ahlswede, C. Grubba, M. Hauptmeier, C. Hahfeld, K. Moltzen, P.A. Tissington	Should I stay or should I go? Explaining turnover intentions with organizational identification and job satisfaction	2004	355	19.72
8	L. Bright	Does public service motivation really make a difference on the job satisfaction and turnover intentions of public employees?	2008	320	22.86

9	D. Abrams, K. Ando, S. Hinkle	Psychological attachment to the group: Cross-cultural differences in organizational identification and subjective norms as predictors of workers' turnover intentions	1998	318	13.25
10	G. ParÃ©, M. Tremblay	The influence of high-involvement human resources practices, procedural justice, organizational commitment, and citizenship behaviors on information technology professionals' turnover intentions	2007	315	21
11	P.E. Spector, T.D. Allen, S.A.Y. Poelmans, L.M. Lapierre, C.L. Cooper, O. Michael, J.I. Sanchez, N. Abarca, M. Alexandrova, B. Beham, P. Brough, P. Ferreiro, G. Fraile, C.-Q. Lu, L. Lu, I. Moreno-VelÃ¡zquez, M. Pagon, H. Pitariu, V. Salamatov, S. Shima, A. Suarez Simoni, O. Ling Siu, M. Widerszal-Bazyl	Cross-national differences in relationships of work demands, job satisfaction, and turnover intentions with work-family conflict	2007	307	20.47
12	H. Nadiri, C. Tanova	An investigation of the role of justice in turnover intentions, job satisfaction, and organizational citizenship behavior in hospitality industry	2010	297	24.75
13	J.M. Jensen, P.C. Patel, J.G. Messersmith	High-Performance Work Systems and Job Control: Consequences for Anxiety, Role Overload, and Turnover Intentions	2013	285	31.67
14	G. Chen, R.E. Ployhart, H.C. Thomas, N.	The power of momentum: A new model of dynamic relationships between job satisfaction change and turnover intentions	2011	271	24.64

	Anderson, P.D. Bliese				
15	M. Abbas, U. Raja, W. Darr, D. Bouckenoooghe	Combined Effects of Perceived Politics and Psychological Capital on Job Satisfaction, Turnover Intentions, and Performance	2014	266	33.25
16	E. Dane, B.J. Brummel	Examining workplace mindfulness and its relations to job performance and turnover intention	2014	260	32.5
17	S.J. Jaros	An assessment of Meyer and Allen's (1991) three-component model of organizational commitment and turnover intentions	1997	259	10.36
18	L.M. Shore, H.J. Martin	Job Satisfaction and Organizational Commitment in Relation to Work Performance and Turnover Intentions	1989	252	7.64
19	T.D. Golden, J.F. Veiga, R.N. Dino	The Impact of Professional Isolation on Teleworker Job Performance and Turnover Intentions: Does Time Spent Teleworking, Interacting Face-to-Face, or Having Access to Communication-Enhancing Technology Matter?	2008	251	17.93
20	D.P. Moynihan, S.K. Pandey	The ties that bind: Social networks, Person-organization value fit, and turnover intention	2008	249	17.79

RQ11: What is the number of authors for each article publication?

Table 11 enlists the number of authors for each article publication. A total of 10.68 % (189) articles were written by a single author, whereas more than one author published other articles. Most articles written by one author with one or two collaborating nominees are the highest article published by 28.53% (505) to 29.94% (530). Other articles were written with a co-author of other nominees who are only collaborating. However, 0.17% (3) articles were written by an unknown author.

Table 11: Number of Author(s) per Document

Authors per Paper	Total Publications (TP)	Percentage (%)
0	3	0.17%
1	189	10.68%
2	530	29.94%
3	505	28.53%
4	274	15.48%
5	162	9.15%
6	53	2.99%

7	25	1.41%
8	9	0.51%
9	6	0.34%
10	6	0.34%
11	2	0.11%
12	1	0.06%
13	2	0.11%
17	1	0.06%
20	1	0.06%
23	1	0.06%
Total	1770	100%

RQ12: What are the popular keywords in article publishing?

Table 12 shows the keywords from the authors frequently used in publishing articles on the studied topic: turnover intention, job satisfaction, burnout, nurses, turnover and organizational commitment. Nevertheless, Figure 3, summarises that the theme for the red cluster is the turnover intention, and the green cluster theme represents job satisfaction. The yellow cluster theme represents organizational commitment, the purple cluster theme represents work engagement, and the blue cluster theme represents nurses. The author keyword visualisation map in Figure 3 shows five author keyword clusters represented in red, green, blue, yellow and purple. Each colour of the author keyword cluster has several items grouped under each cluster. For example, the red cluster has 6 items, the green cluster has 6 items, the blue cluster has 6 items, the yellow cluster has 1 item, and the purple cluster has 1 item.

Therefore, the largest cluster is the red cluster which includes keywords such as turnover intention, affective commitment, China, job embeddedness, perceived organizational support and transformational leadership. The second-largest cluster is the green cluster, which includes keywords such as emotional exhaustion, employee engagement, employee turnover, human resource management, job satisfaction and leadership. The blue cluster consists of keywords such as burnout, job stress, nurses, social support, turnover dan work-family conflict. Subsequently, the yellow cluster includes keywords such as organisational commitment. Finally, the purple cluster includes only one keyword which is work engagement.

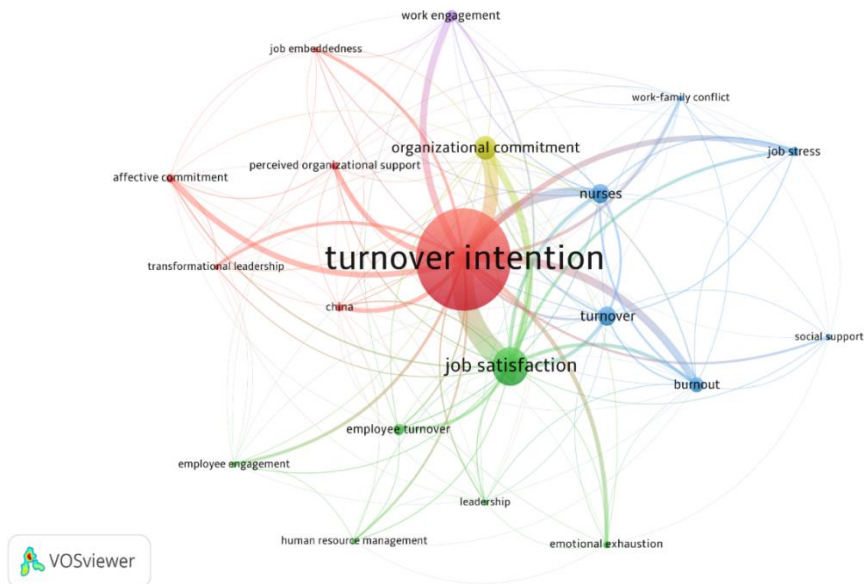
Based on all the clusters, the most significant number of keyword strengths for the topic of turnover intention were turnover intention (occurrences:1124), job satisfaction (occurrences: 333), nurses (occurrences:140), organizational commitment (occurrences:178) and work engagement (occurrences:73). Therefore, this bibliometric analysis is concluded to be a comprehensive analysis to observe the evolution and trends of publishing research articles related to turnover intentions.

Table 12: Top 20 Keywords

Keywords	Cluster	Occurrences	Total link strength
Affective Commitment	Red	51	77
China		46	70
Job Embeddedness		31	50
Perceived Organizational Support		48	72

Transformational Leadership		32	49
Turnover Intention		1124	946
Emotional Exhaustion	Green	39	52
Employee Engagement		26	40
Employee Turnover		71	62
Human Resource Management		29	36
Job Satisfaction		333	503
Leadership		22	37
Burnout	Blue	101	154
Job Stress		58	94
Nurses		140	192
Social Support		23	32
Turnover		137	119
Work-Family Conflict		30	50
Organizational Commitment	Yellow	178	278
Work Engagement	Purple	73	103

Figure 3. Network visualisation map of the author keywords



5. CONCLUSION

Conclusively, this bibliometric analysis provides crucial current information on the status of the turnover intentions study. The selected thirty-nine-year period is based on the latest trends and socioeconomic status. The trend indicates that studies involving turnover intention are widely

studied in the USA and several Asian countries. This study also provides a detailed overview of the keywords often associated with turnover intention. Therefore, the researcher can easily observe the general gaps in this study.

Additionally, the most studied profession in this field is the nursing profession, as the profession involves a high workload. Thus, the turnover rate in this profession is quite alarming, specifically during the COVID-19 pandemic (Lyu et al., 2016; Reyhanoglu & Akin, 2020; Han, 2020). The increase in turnover rate could have resulted from the sudden increase in patients with COVID-19 infections requiring treatment at hospitals and causing the workload of hospital employees to escalate.

This study has also explored a thorough overview of all article publications on turnover intentions by accessing publication information through the Scopus database. Information such as keywords, source type, document type, number of citations, the highest country to publish the document, frequently used publication language, famous author, highest published article and others. Furthermore, this study also has limitations as it is entirely based on the Scopus database retrieved specifically on July 5th 2022 and does not involve other document databases. Future studies are recommended to involve various databases to obtain additional document publication databases such as Web of Science, Google Scholar, and other databases.

In addition, the author's keyword analysis shows that the field of study on turnover intentions needs to be extended further to other variables such as organisational justice, performance appraisal and the COVID-19 pandemic impact on employee psychology against turnover intentions. Furthermore, the study of turnover intentions should be enhanced more in Asian countries as the topic is popularly studied in European countries. Last but not least, future studies may also be linked to demographic differences such as generational differences and gender in turnover intentions.

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