Systematic Literature Review: Aspects of Leadership in Total Quality Management Implementation

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Abstract

In the framework of Total Quality Management, this study discusses how the concept of leadership has developed (TQM) through a systematic literature review and tries to explore areas that still have opportunities for further research. In this paper, the literature analysis carried out examines papers that are only sourced from the Scopus database, this has the impact of limitations and may not cover all papers and research related to Total Quality Leadership and Management (TQM). This systematic review of the literature was conducted using the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA). Initial search returns 1.949 documents and after applying the screening process, 28 documents successfully passed all the inclusion criteria set. The following parts will go over the study's findings in greater depth: Total Quality Management (TQM), Leadership, Performance (impact). The results of the synthesis of the merger and synthesis of 28 papers, found a research gap, namely the need to build a robust (robust) TQM model, which helps organizations achieve business excellence, improve quality, be competitive and become a force to achieve higher productivity, profitability, and sustainable business performance.

Keywords
Total Quality Management, Leadership Style, Performance, PRISMA, and Scopus database.

1. Introduction
Total quality management (TQM) is a management philosophy that stresses organizational and personal values (Krajcsák, 2019). Total quality management is a management concept that aims to boost customer happiness and productivity (V. Kumar & Sharma, 2017). TQM is widely acknowledged as a general management tool that may be used by any company (R. Kumar et al., 2011). Companies that adopt TQM result in a strong production system (Banuro et al., 2017). Building a strong TQM model will help organizations achieve business advantage, quality improvement, and competitiveness (Psomas & Antony, 2017). TQM has a major impact on all facets of long-term sustainability (Tasleem et al., 2019). TQM approaches require time to make an influence on organizational performance (Qasrawi et al., 2017).

TQM is a crucial part of leadership (Sfakianaki et al., 2018). Leaders take a fundamental role in quality improvement efforts (Rodriguez et al., 2018). A competent leader may blend and adjust his style to the group's traits, its members' maturity, the work at hand, and the environment (Sfakianaki et al., 2018). Successful leaders are those who can influence those around them to ensure that optimal performance is achieved from the resources within the organization (Alloubani et al., 2019). Leadership commitment and direction involving a quality workforce that understands and participates effectively in managing operations, quality tools, The use of data and information in conjunction with a well-thought-out strategy will yield the desired results (Alanazi, 2020).

1.1 Objectives
This study aims to explain the development and reality of the leadership aspect in implementing total quality management (TQM) through a systematic literature review of the Scopus database. On the other hand, this paper tries to see opportunities and areas that can still be explored to be used as areas for further research.

2. Literature Review

2.1 Total Quality Management (TQM)
Companies that adopt TQM result in a strong production system (Banuro et al., 2017). TQM is defined as the ability to boost productivity, profitability, and long-term business performance (V. Kumar et al., 2020). TQM highlights that these values must be considered and cultivated while establishing an organizational culture in which everyone is aware of the necessity of quality improvement (Krajcsák, 2019). The focus of TQM research is typically on continual improvement and innovation (Bouranta, 2020). TQM has an impact on both employee happiness and organizational (hotel) performance (Amin et al., 2017). TQM procedures have the potential to increase organizational performance and can be used as predictors of employee satisfaction (Amin et al., 2017). TQM approaches require time to make an influence on organizational performance (Qasrawi et al., 2017).

2.2 Leadership
Leadership has a crucial role in quality management, according to TQM gurus such as Deming, Crosby, and Juran (Bouranta, 2020). All TQM practices benefit significantly from transformational leadership (Bouranta, 2020). Failure to implement TQM is often due to the reduced or lost commitment from leadership or employees to apply the quality philosophy (Krajcsák, 2019). Leaders determine the culture, motivation, tolerance, and values in an organization (Alloubani et al., 2019). Employee performance is influenced by leadership style, performance measurement system, and organizational culture (Kustono, 2019).

2.3 Performance (impact)
Organizational performance is a macro measure that reflects the overall performance of the organization which is influenced by internal and external factors (Qasrawi et al., 2017). Appropriate quality management implementation will have an impact on quality cost control (Kharub et al., 2019). Employee happiness and organizational performance are aided by strong leadership and a customer-centric approach (Amin et al., 2017). Increased productivity, lower product prices, improved product reliability, and effective use of organizational resources are all examples of superior performance (V. Kumar & Sharma, 2017). The achievement of company goals is closely related to the level of quality of its employees (Kustono, 2019).

3. Methods
The systematic review of the literature was carried out based on an analysis of the literature sourced from the Scopus database for the terms Total Quality Management (TQM) and Leadership. Using the Preferred Reporting Items for Systematic Review (PRISMA) guidelines (Page et al., 2021), the following questions were answered:

RQ1. How is the growth of research related to TQM topics?
RQ2: What are the TQM factors that have been the subject of the research?
RQ3: What kind of leadership style is being used in the TQM implementation?
RQ4. What are the strategic implications of TQM implementation for organizations?
RQ5. Areas (opportunities) for further research gaps?

3.1 Search Strategy
In September 2021, a search strategy was developed to search for papers containing the terms “Total Quality Management – TQM” and “Leadership”. Based on the search process carried out in the Scopus database on September 30, 2021, in the area TITLE-ABS-KEY (Total AND Quality AND Management), resulted in 134,085 paper documents.

3.2 Enclosure Criteria
To carry out a systematic review, then a selection process is carried out using the PRISMA protocol (Page et al., 2021). The main objective is to analyze and select papers that focus on the topic of “Total Quality Management and

Leadership". To accomplish this, several search and selection criteria have been devised. From the previous search results where 1,949 documents were obtained, the first inclusion criteria applied was to ensure that there were no duplicate documents, this exercise was completed using Microsoft Office program (excel). From the screening process, it was found that 1 (one) duplicated document was found, so that out of 1,949 documents, 1 (one) duplicated document was issued so that there were 1,948 documents left. Figure 1 depicts the procedure in further detail.

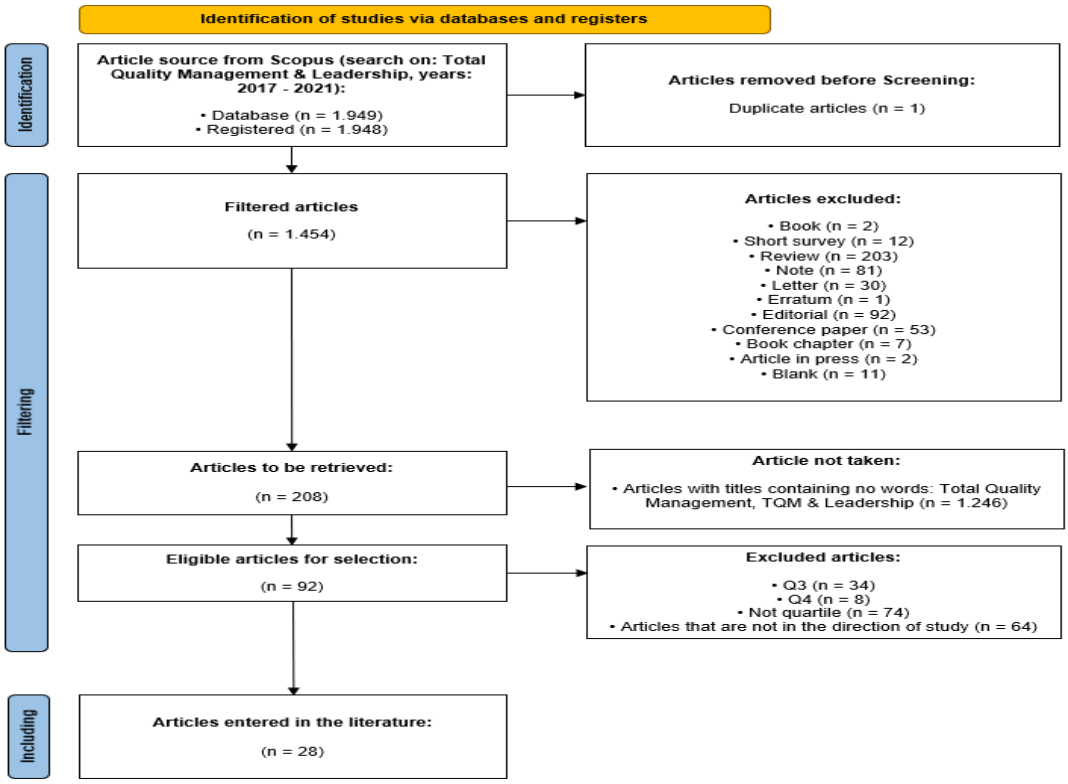

Figure 1. Flowchart for the PRISMA Systematic Review "Total Quality Management & Leadership, 2017 – 2021"

Of these 1,948 documents, only papers in the form of papers will be selected, for this the criteria have been set (excepted), including: book documents (n = 2), short surveys (n = 12), reviews (n = 203), notes (n = 81), letters (n = 30), errors (n = 1), editorials (n = 92), conference papers (n = 53), book chapters (n = 7), papers in the press (n = 2) and without document description (blank) (n = 11). With the application of the above criteria, the remaining 1.454 documents were filtered.

Process the next screening applies document selection, the document title must contain the words Total Quality Management, TQM & Leadership, from this step the remaining 208 documents that pass. The next process is to choose more deeply by selecting based on the quality of the journal that published the paper. To carry out this selection, criteria can be used based on the score issued by SJR, where journals are categorized into Quartile (4 levels), journals with the highest quality are entered into Quartile 1, and sequentially so on until Quartile 4 (Saputra, 2019).

In this paper, only journals that are included in Quartile 1 and 2 will be selected, by applying this step, papers will be issued from journals Q3 (n = 34) and Q4 (n = 8) as well as journals that are not quartile (n = 34). n = 74) so that the remaining papers are 92 documents. The final step taken to select a paper to be reviewed further is to go through the researcher selection process (reviewer), this is done by fully compiling 92 documents and selecting documents that are by the direction of the review (study). From this last step, it was found that the journals that were not by the direction of the review were 64 documents so that the result of the number of papers to be reviewed in detail was 28 documents.

4. Data Collection

In Figure 2, it can be seen the distribution of the results of each year's paper that contains Total Quality Management, it was found that the first year of the paper discussing or related to Total Quality Management was in 1947. From the picture, the trend is relatively increasing from year to year, this indicates that the topic of Total Quality Management is still an interesting topic for research.

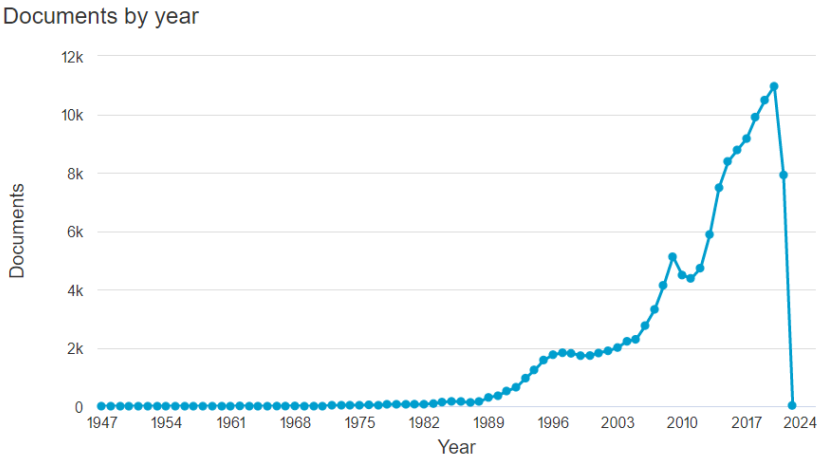

Figure 2. Document search results in Scopus with the keywords "Total AND Quality AND Management" (without special filtering)
Source: (Scopus 2021)

Discuss questions RQ1. How is the growth of research related to TQM topics? the following is a detailed description of the development of research related to the topic of TQM. In Figure 3, the United States is the country that produces the most papers related to the keyword Total Quality Management, followed by the United Kingdom, China, Canada, and others. Then in Figure 4, you can see the types of documents that discuss Total Quality Management, mostly in the form of Papers, then followed by Reviews, Conference Papers, Editorials, Notes, and so on.

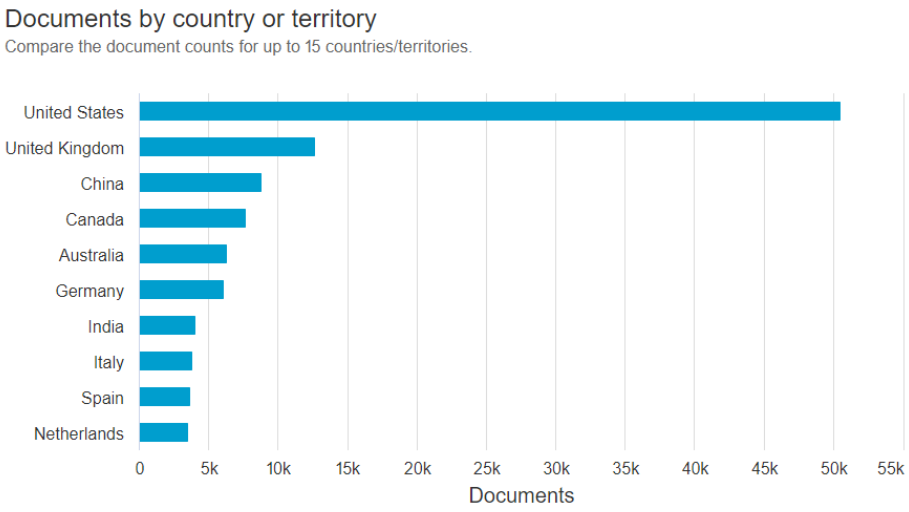

Figure 3. Countries that produce research with the keywords "Total AND Quality AND Management"
Source: (Scopus 2021)

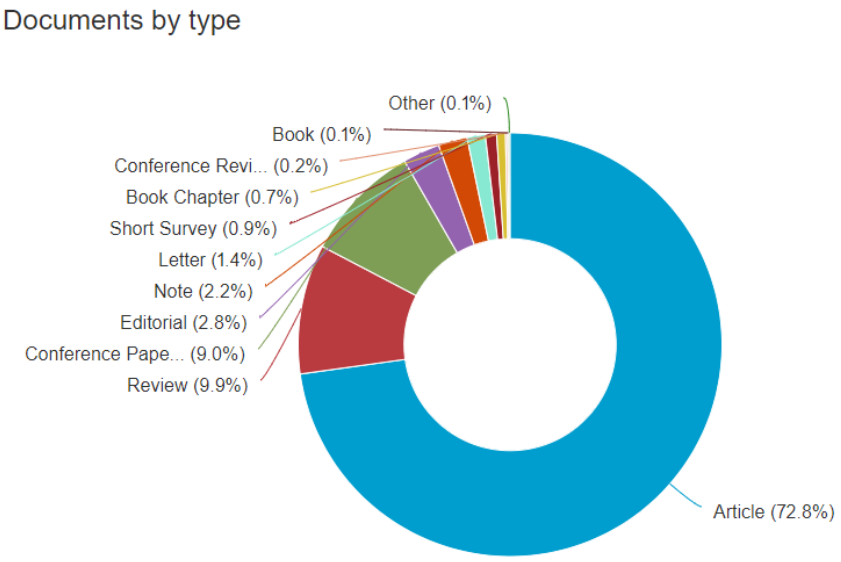

Figure 4. Keywords in various types of research documents "Total AND Quality AND Management"
Source: (Scopus 2021)

In Figure 5, it can be seen 5 (five) names of source journals from the research documents produced, this is very useful be a reference when searching for topics with the keyword Total Quality Management and can be a purpose for publishing research results related to Total Quality Management. The five journal names with the number of documents published are BMC Health Services Research, Plos One, Science of The Total Environment, Water Science and Technology, and BMJ Open.

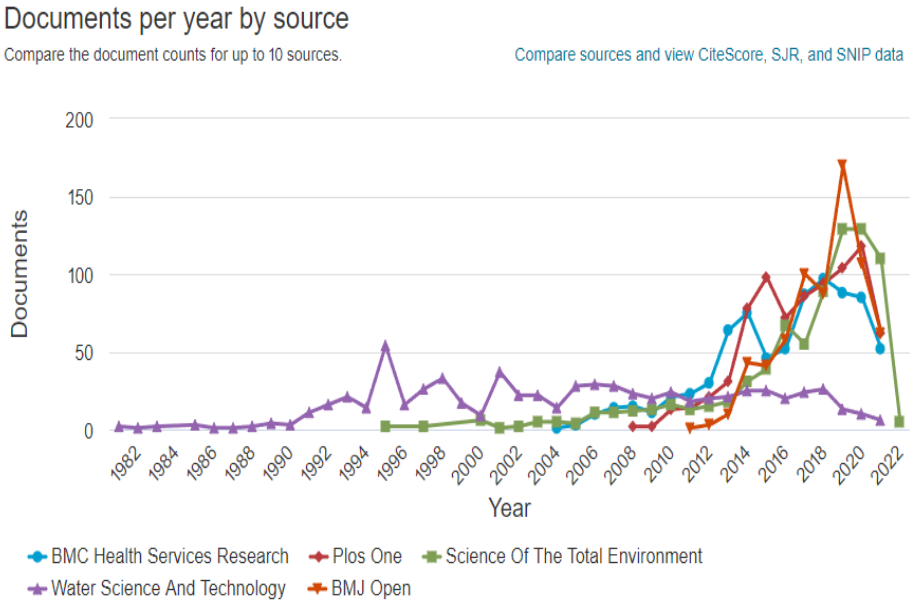

Figure 5. Keyword-searchable sources of research documents "Total AND Quality AND Management"
Source: (Scopus 2021)

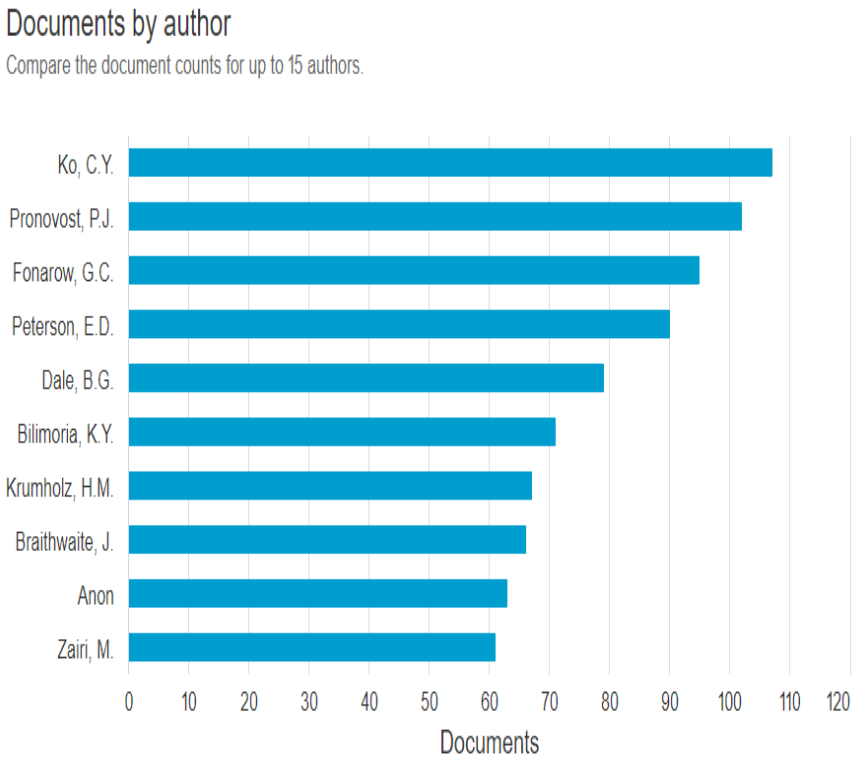

Figure 6. Researchers with the results of research documents with the keywords "Total AND Quality AND Management"
Source: (Scopus 2021)

Figure 6 shows the name of the researcher with the research results related to the keyword Total Quality Management; this is very useful as a reference when looking for researchers who can be a reference when discussing topics with the keyword Total Quality Management. Ko. C. Y is a researcher with many research results, followed by Pronovost, PJ, Fonarow, GC, Peterson, ED, and so on.

The purpose of this study is to address Leadership Aspects in Total Quality Management Implementation, so that the next search is to add search keywords in Scopus, namely: "Total AND Quality AND Management AND Leadership". With this keyword, the results generated are 5,491 documents. More specifically, the search range is limited from 2017 to 2021, this is intended so that the papers obtained are the most recent and are still relevant to the current scientific developments. With the limitation of the year, the results of the documents generated in the search were found to be 1,949 documents. These 1,949 documents are the universe of the set of documents that we will focus on in this review of this paper. A description of these 1,949 documents can be downloaded from Scopus, Table 1, shows a list of the 28 documents that were chosen.

Table 1. 28 Journals selected in the review related to Total Quality Management

No.	Author and year	Title	Method
1	(Krajcsák, 2019)	Leadership strategies for enhancing employee commitment in TQM	Qualitative
2	(Bouranta, 2020)	Does transformational Leadership influence TQM practices? A comparison analysis between manufacturing and service firms	Quantitative
3	(Sfakianaki et al., 2018)	Educational Leadership and Total Quality Management: Investigating teacher Leadership styles	Quantitative
4	(Kharub et al., 2019)	The relationship between cost Leadership competitive strategy and firm performance: A mediating role of quality management	Quantitative
5	(Alloubani et al., 2019)	Leadership styles' influence on the quality of nursing care	Quantitative
6	(Brown, 2020)	Communication and Leadership in healthcare quality governance: Findings from comparative case studies of eight public hospitals in Australia	Qualitative
7	(Chansatitporn & Pobkeeree, 2020)	Leadership and quality management measurement models: an empirical study	Quantitative
8	(Horvat & Filipovic, 2018)	Service quality and maturity of health care organizations through the lens of Complexity Leadership Theory	Quantitative
9	(Ilieş et al., 2017)	The impact of quality culture and Leadership on customer relationship in organizations from the Romanian metal construction industry	Quantitative
10	(Johannessen et al., 2021)	Exploring managers' response to a quality and safety Leadership intervention: Findings from a multiple case study in Norwegian nursing homes and homecare services	Qualitative
11	(Leggat & Balding, 2019)	The impact of Leadership churn on quality management in Australian hospitals	Mixed
12	(Toma et al., 2020)	Multi-method evaluation of a national clinical fellowship programme to build Leadership capacity for quality improvement	Mixed
13	(Amin et al., 2017)	The structural relationship between TQM, employee satisfaction and hotel performance	Quantitative
14	(Alanazi, 2020)	The mediating role of primary TQM factors and strategy in the relationship between supportive TQM factors and organisational results: An empirical assessment using the MBNQA model	Quantitative
15	(Banuro et al., 2017)	Contradictions in TQM implementation: A proposed balance from the Ghanaian perspective	Quantitative
16	(Georgiev & Ohtaki, 2020)	Critical success factors for TQM implementation among manufacturing SMEs: Evidence from Japan	Qualitative
17	(Ishijima et al., 2020)	Introducing the "1S-KAIZEN-TQM" approach into public hospitals in Egypt	Qualitative
18	(Akparobore & Omosekejimi, 2020)	Leadership qualities and style: a panacea for job productivity and effective service delivery among library staff in academic libraries in South South, Nigeria	Qualitative
19	(Busari et al., 2020)	Clinical Leadership as an agent for change: A health system improvement intervention in Curaçao	Qualitative
20	(Kumar & Sharma, 2017)	Relating management problem-solving styles of leaders to TQM focus: An empirical study	Quantitative
21	(Kumar et al., 2020)	Barriers to Total Quality Management for sustainability in Indian organizations	Mixed
22	(Kustono, 2019)	How Total Quality Management Mediates Antecedent Variables of Employee Performance?	Quantitative
23	(Kwateng & Darko, 2017)	Total Quality Management practices in aquaculture companies: A case from Ghana	Quantitative
24	(Psomas & Antony, 2017)	Total Quality Management elements and results in higher education institutions: The Greek case	Quantitative
25	(Qasrawi et al., 2017)	The impact of TQM practices and KM processes on organisational performance: An empirical investigation	Quantitative
26	(Sfakianaki, 2019)	A measurement instrument for implementing Total Quality Management in Greek primary and secondary education	Qualitative
27	(Rodriguez et al., 2018)	TQM paradigm for higher education in the Philippines	Quantitative
28	(Tasleem et al., 2019)	Impact of technology management on corporate sustainability performance: The mediating role of TQM	Quantitative

All papers selected for review consisted of 28 documents, as listed in Table 1. The methodologies taken in these papers can be classified into three groups, as indicated in Figure 7: qualitative, quantitative, and mixed. The parts that follow will go over the study's findings in greater depth: Total Quality Management (TQM), Leadership, Performance (impact).

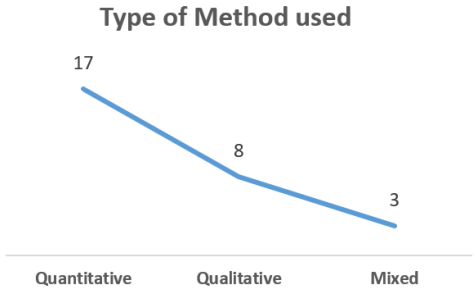

Figure 7. Research methods from selected papers in the study

5. Results and Discussion

5.1 Total Quality Management (TQM)

Building a strong TQM model will help organizations achieve business advantage, quality improvement and competitiveness (Psomas & Antony, 2017). In this review, it was found that several factors were raised in relation to TQM. This is in line and answers RQ2. What are the TQM factors that have been the subject of the research? The TQM factors are: Customer Focus/Customer Relationship (Alanazi, 2020; Amin et al., 2017; Bouranta, 2020; Georgiev & Ohtaki, 2020; Ilieş, Sălăgean, & Beleiu, 2017; Krajcsák, 2019; Kwateng & Darko, 2017; Psomas & Antony, 2017; Qasrawi et al. ., 2017; Rodriguez et al., 2018; Sfakianaki, 2019; Tasleem et al., 2019); Commitment of Leaders (Georgiev & Ohtaki, 2020; Ishijima et al., 2020; Krajcsák, 2019; V. Kumar & Sharma, 2017; Psomas & Antony, 2017; Rodriguez et al., 2018); Commitment of Employees (Georgiev & Ohtaki, 2020; Ishijima et al., 2020; Krajcsák, 2019); Continuous Process Development (Krajcsák, 2019); Employee Quality Management (Bouranta, 2020; Psomas & Antony, 2017); Process Management (Amin et al., 2017; Bouranta, 2020; Horvat & Filipovic, 2018; Kwateng & Darko, 2017; Leggat & Balding, 2019; Psomas & Antony, 2017; Qasrawi et al., 2017; Tasleem et al., 2019); Employee Education (Bouranta, 2020; Psomas & Antony, 2017); Strategic Quality Planning (Bouranta, 2020; Horvat & Filipovic, 2018); Leadership Practices (Akparobore & Omosekejimi, 2020; Alanazi, 2020; Alloubani et al.,

2019; Amin et al., 2017; Bouranta, 2020; Brown, 2020; Busari, Yaldiz, Gans, & Duits, 2020; Chansatitporn & Pobkeeree, 2020; Georgiev & Ohtaki, 2020; Horvat & Filipovic, 2018; Ilieş et al., 2017; Ishijima et al., 2020; Johannessen, Ree, Aase, Bal, & Wiig, 2021; Krajcsák, 2019; V. Kumar et al., 2020; Kustono, 2019; Kwateng & Darko, 2017; Psomas & Antony, 2017; Qasrawi et al., 2017; Rodriguez et al., 2018; Sfakianaki, 2019; Sfakianaki et al., 2018; Tasleem et al., 2019; Toma et al., 2020); Continuous Improvement (Alanazi, 2020; Amin et al., 2017; Banuro et al., 2017; Georgiev & Ohtaki, 2020; Horvat & Filipovic, 2018; V. Kumar & Sharma, 2017; Kwateng & Darko, 2017; Sfakianaki, 2019; Sfakianaki et al., 2018); Supplier (Supplier Quality) Management (Amin et al., 2017; Georgiev & Ohtaki, 2020; Kharub, Mor, & Sharma, 2019; Psomas & Antony, 2017); Continuous Management (Kharub et al., 2019); Information and analysis (Alanazi, 2020; Georgiev & Ohtaki, 2020; Horvat & Filipovic, 2018; Kharub et al., 2019; Psomas & Antony, 2017; Qasrawi et al., 2017); Design and development (Kharub et al., 2019); Quality Management Process (Alloubani et al., 2019; Chansatitporn & Pobkeeree, 2020; Georgiev & Ohtaki, 2020; Horvat & Filipovic, 2018); Resource Management (Horvat & Filipovic, 2018); Quality Culture (Alanazi, 2020; Georgiev & Ohtaki, 2020; Ilieş et al., 2017); Employee fulfillment (Amin et al., 2017); Training (Amin et al., 2017; Busari et al., 2020; Georgiev & Ohtaki, 2020; Ishijima et al., 2020; Kwateng & Darko, 2017; Sfakianaki, 2019); Knowledge Management (Alanazi, 2020; Ishijima et al., 2020; Psomas & Antony, 2017; Qasrawi et al., 2017; Tasleem et al., 2019); Standardization (Banuro et al., 2017); Empowerment (Georgiev & Ohtaki, 2020; Kwateng & Darko, 2017; Rodriguez et al., 2018); Role Quality Department (Georgiev & Ohtaki, 2020); Corporate social responsibility (Georgiev & Ohtaki, 2020); Innovation (V. Kumar & Sharma, 2017); Teamwork (Kwateng & Darko, 2017); Employee Involvement (Sfakianaki et al., 2018); Quality Data and Reporting (Kwateng & Darko, 2017); Strategic Quality Planning (Psomas & Antony, 2017; Qasrawi et al., 2017; Tasleem et al., 2019); Measurement and Evaluation (Sfakianaki, 2019); Change Management (Sfakianaki, 2019); Workforce Focus (Tasleem et al., 2019). The above findings can be seen further in Table 2. Summary of findings regarding factors in TQM.

Table 2. Summary of findings regarding factors in TQM

No	Reference	TQM Factors																														
		CF	CL	CE	CPD	EQM	PM	EE	SQP	LP	CI	SM	CM	IA	DD	QMP	RM	QC	EF	TN	KM	Std	Emp	RQD	CSR	IN	TQM	TW	EI	QDR	SQP	ME	CM	WF
1	(Krajcsák, 2019)	V	V	V	V					V																							
2	(Bouranta, 2020)	V				V	V	V	V	V																							
3	(Sfakianaki et al., 2018)									V	V																						
4	(Kharub et al., 2019)											V	V	V	V																		
5	(Alloubani et al., 2019)									V						V																	
6	(Brown, 2020)									V																							
7	(Chansatitporn & Pobkeeree, 2020)									V						V																	
8	(Horvat & Filipovic, 2018)						V		V	V	V			V			V																
9	(Ilieş et al., 2017)	V								V								V															
10	(Johannessen et al., 2021)									V																							
11	(Leggat & Balding, 2019)						V																										
12	(Toma et al., 2020)									V																							
13	(Amin et al., 2017)	V					V			V	V	V							V	V													
14	(Alanazi, 2020)	V								V	V			V				V			V												
15	(Banuro et al., 2017)										V											V											
16	(Georgiev & Ohtaki, 2020)	V	V	V						V	V	V		V		V		V		V			V	V	V								
17	(Ishijima et al., 2020)		V	V						V										V	V												
18	(Akparobore & Omosekejimi, 2020)									V																							
19	(Busari et al., 2020)									V										V													
20	(Kumar & Sharma, 2017)										V															V							
21	(Kumar et al., 2020)		V							V																							
22	(Kustono, 2019)									V																V							
23	(Kwateng & Darko, 2017)	V					V			V	V									V			V				V		V				
24	(Psomas & Antony, 2017)	V	V			V	V	V		V		V		V							V									V			
25	(Qasrawi et al., 2017)	V					V			V				V							V						V			V			
26	(Sfakianaki, 2019)	V								V	V									V									V			V	V	
27	(Rodriguez et al., 2018)		V							V													V										
28	(Tasleem et al., 2019)	V					V			V											V										V			V

Total Quality Management (TQM):
CF: Customer Focus/Customer Relationship; CL: Commitment of Leaders; CE: Commitment of Employees; CPD: Continuous Process Development; EQM: Employee Quality Management; PM: Process Management; EE: Employee Education; SQP: Strategic Quality Planning; LP: Leadership Practices; CI: Continuous Improvement; SM: Supplier (Supplier Quality) Management; CM: Continuous Management; IA: Information and analysis; DD: Design and development; QMP: Quality Management Process; RM: Resource Management; QC: Quality Culture; EF: Employee fulfillment; TN: Training; KM: Knowledge Management; Std: Standardization; Emp: Empowerment; RQD: Role Quality Department; CSR: Corporate social responsibility; IN: Innovation; TW: Teamwork; EI: Employee Involvement; QDR: Quality Data and Reporting; SQP: Strategic Quality Planning; ME: Measurement and Evaluation; CM: Change Management; WF: Workforce Focus;

5.2 Leadership

By looking at the important position of leadership in the implementation of TQM, the next concern is the question in RQ3. What kind of leadership style is being used in the TQM implementation? Answering the question RQ3., here are the styles / types of leadership (Leadership Style) that are used and become a concern in the application of TQM: Transformational Leadership (Akparobore & Omosekejimi, 2020; Alloubani et al., 2019; Bouranta, 2020; Krajcsák, 2019); Transactional Leadership (Akparobore & Omosekejimi, 2020; Alloubani et al., 2019); Indifferent/individualism Leadership (Banuro et al., 2017; Sfakianaki et al., 2018); Humanitarian Leadership (Sfakianaki et al., 2018); Compromise Leadership(Sfakianaki et al., 2018); Dictatorial/authoritarian Leadership (Akparobore & Omosekejimi, 2020; Ilieş et al., 2017; Sfakianaki et al., 2018); Participatory/Democratic Leadership

(Akparobore & Omosekejimi, 2020; Ilieş et al., 2017; Sfakianaki et al., 2018); Laissez-Faire Leadership/Delegating (Akparobore & Omosekejimi, 2020; Alloubani et al., 2019); Administration Leadership (Horvat & Filipovic, 2018); Adaptive Leadership (Horvat & Filipovic, 2018); Enabling Leadership (Horvat & Filipovic, 2018); Innovation Leadership (Horvat & Filipovic, 2018); Authentic Leadership (Busari et al., 2020); Compassionate Leadership (Busari et al., 2020); Situational Leadership (Kustono, 2019); Sensing-Thinking (V. Kumar & Sharma, 2017); Sensing-Feeling (V. Kumar & Sharma, 2017); Intuitive-Thinking (V. Kumar & Sharma, 2017); Intuitive-Feeling (V. Kumar & Sharma, 2017). The above findings can be seen further in Table 3. Summary of findings related to Leadership-style applied in TQM research.

Table 3. Summary of findings related to Leadership-style applied in TQM research

No	Reference	Leadership Style																	
							Leadership style by Marquis and Huston 2008								Management Problem-Solving Styles of Leaders				
		TFL	TAL	IL	HL	CL	DL	PL	LFL	AdmL	AL	EL	INL	ATL	CML	ST	SF	NT	NF	SL
1	(Krajcsák, 2019)	V																	
2	(Bouranta, 2020)	V																	
3	(Sfakianaki et al., 2018)			V	V	V	V	V											
4	(Kharub et al., 2019)																		
5	(Alloubani et al., 2019)	V	V						V										
6	(Brown, 2020)																		
7	(Chansatitporn & Pobkeeree, 2020)																		
8	(Horvat & Filipovic, 2018)									V	V	V							
9	(Ilieş et al., 2017)						V	V											
10	(Johannessen et al., 2021)																		
11	(Leggat & Balding, 2019)																		
12	(Toma et al., 2020)																		
13	(Amin et al., 2017)																		
14	(Alanazi, 2020)																		
15	(Banuro et al., 2017)			V									V						
16	(Georgiev & Ohtaki, 2020)																		
17	(Ishijima et al., 2020)																		
18	(Akparobore & Omosekejimi, 2020)	V	V				V	V	V										
19	(Busari et al., 2020)													V	V				
20	(Kumar & Sharma, 2017)															V	V	V	V
21	(Kumar et al., 2020)																		
22	(Kustono, 2019)																		V
23	(Kwateng & Darko, 2017)																		
24	(Psomas & Antony, 2017)																		
25	(Qasrawi et al., 2017)																		
26	(Sfakianaki, 2019)																		
27	(Rodriguez et al., 2018)																		
28	(Tasleem et al., 2019)																		

Leadership Style:
TFL: Transformational Leadership; TAL: Transactional Leadership; IL: Indifferent/individualism Leadership; HL: Humanitarian Leadership; CL: Compromise Leadership; DL: Dictatorial/authoritarian Leadership; PL: Participatory/Democratic Leadership; LFL: Laissez-Faire Leadership / Delegating; AdmL: Administration Leadership; AL: Adaptive Leadership; EL: Enabling Leadership; INL: innovation Leadership; ATL: Authentic Leadership; CML: Compassionate Leadership; ST: Sensing-Thinking; SF: Sensing-Feeling; NT: Intuitive-Thinking; NF: Intuitive-Feeling; SL: Situational Leadership;

5.3 Performance (impact)

TQM has a measurable impact on organizational performance; hence the question is answered RQ4. Performance and The impact of implementing TQM from the reviews carried out are as follows: Product Quality Improvement (Busari et al., 2020; Johannessen et al., 2021; Kharub et al., 2019; Psomas & Antony, 2017; Rodriguez et al., 2018; Toma et al., 2020); Process improvement (Busari et al., 2020; Ishijima et al., 2020; Kharub et al., 2019; Leggat & Balding, 2019; Sfakianaki, 2019); Leader Effectiveness (Alloubani et al., 2019; Busari et al., 2020); Registered Nurses' (Employee) Enthusiasm (Extra Effort) (Alloubani et al., 2019); Perceived Healthcare Quality Performance(Brown, 2020); Quality Management Performance (Chansatitporn & Pobkeeree, 2020; Leggat & Balding, 2019); Service Quality (Akparobore & Omosekejimi, 2020; Horvat & Filipovic, 2018; Leggat & Balding, 2019); Quality of Outcomes (Alanazi, 2020; Horvat & Filipovic, 2018; Leggat & Balding, 2019); Safety Improvement (Johannessen et al., 2021; Toma et al., 2020); Organizational Performance (Alanazi, 2020; Amin et al., 2017; Kwateng & Darko, 2017; Psomas & Antony, 2017); Employee (Job) Satisfaction (Alanazi, 2020; Alloubani et al., 2019; Amin et al., 2017; Psomas & Antony, 2017; Rodriguez et al., 2018); Customer Satisfaction (Alanazi, 2020; Psomas & Antony, 2017; Rodriguez et al., 2018; Sfakianaki et al., 2018); Customer Loyalty (Alanazi, 2020); Customer-Perceived Value(Alanazi, 2020); Job Productivity (Akparobore & Omosekejimi, 2020; V. Kumar et al., 2020); Economic Performance (V. Kumar et al., 2020; Psomas & Antony, 2017; Qasrawi et al., 2017; Tasleem et al., 2019); Environment Performance (V. Kumar et al., 2020; Tasleem et al., 2019); Social Performance (V. Kumar et al., 2020; Psomas & Antony, 2017; Tasleem et al., 2019); Employee Performance (Kustono, 2019); Operational Performance (Psomas & Antony, 2017; Qasrawi et al.,

2017). The above findings can be seen further in Table 4. Summary of findings related to performance from the results of implementing TQM.

Table 4. Summary of findings related to performance from the results of implementing TQM

No	Reference	Performance (Impact)																		
		PQI	PI	LE	OPP	RNE	PHQP	QMPc	SQ	QO	SI	OP	ES	CS	CL	CPV	JP	EP	Sustainable		
																			ECP	ENP	SOP
1	(Krajcsák, 2019)																				
2	(Bouranta, 2020)																				
3	(Sfakianaki et al., 2018)													V							
4	(Kharub et al., 2019)	V	V																		
5	(Alloubani et al., 2019)			V		V							V								
6	(Brown, 2020)						V														
7	(Chansatitporn & Pobkeeree, 2020)							V													
8	(Horvat & Filipovic, 2018)								V	V											
9	(Ilieş et al., 2017)																				
10	(Johannessen et al., 2021)	V									V										
11	(Leggat & Balding, 2019)		V					V	V	V											
12	(Toma et al., 2020)	V									V										
13	(Amin et al., 2017)											V	V								
14	(Alanazi, 2020)									V		V	V	V	V	V					
15	(Banuro et al., 2017)																				
16	(Georgiev & Ohtaki, 2020)																				
17	(Ishijima et al., 2020)		V																		
18	(Akparobore & Omosekejimi, 2020)								V								V				
19	(Busari et al., 2020)	V	V	V																	
20	(Kumar & Sharma, 2017)																				
21	(Kumar et al., 2020)																V		V	V	V
22	(Kustono, 2019)																	V			
23	(Kwateng & Darko, 2017)											V									
24	(Psomas & Antony, 2017)	V			V							V	V	V					V		V
25	(Qasrawi et al., 2017)				V														V		
26	(Sfakianaki, 2019)		V																		
27	(Rodriguez et al., 2018)	V											V	V							
28	(Tasleem et al., 2019)																		V	V	V

Performance (Impact):
PQI: Product Quality Improvement; PI: Process improvement; LE: Leader Effectiveness; RNE: registered nurses' enthusiasm (Extra Effort); PHQP: Perceived Healthcare Quality Performance; QMPc: Quality Management Performance; SQ: Service Quality; QO: Quality of Outcomes; SI: Safety Improvement; OP: Organizational Performance; ES: Employee (Job) Satisfaction; CS: Customer Satisfaction; CL: Customer Loyalty; CPV: Customer-Perceived Value; JP: Job Productivity; ECP: Economic Performance; ENP: Environment Performance; SOP: Social Performance; EP: Employee Performance; OPP: Operational Performance;

5.4 Discussion

TQM's core values include customer attention, commitment from leaders and employees, and continuous process improvement (Krajcsák, 2019). TQM is an important aspect of management (Sfakianaki et al., 2018). Leadership, workforce, and customer factors play a central role in the Quality Management System and organizational results (Alanazi, 2020). Different leadership styles affect different forms of employee commitment in different ways (Jackson, Meyer, & Wang, 2013). To achieve high commitment, leaders must be able to excite their people (Krajcsák, 2019). Employee commitment is not just one of the most important variables in TQM's performance, but it is also one of the most important factors (Krajcsák, 2019). Organizational culture has a direct impact on TQM implementation (Kustono, 2019).

Different leadership styles affect different forms of employee commitment in different ways (Jackson et al., 2013). Varied sectors and nations have different approaches to TQM (Amin et al., 2017). A leadership style with a TQM focus is essential for today's rapidly changing market (Vimal Kumar & Sharma, 2018). quality/leadership style has a major influence on work productivity and member effectiveness (Akparobore & Omosekejimi, 2020). Leadership styles change and shape organizational strategy, including its effectiveness and implementation (Alloubani et al., 2019). In the context of TQM, a leader must pay attention to employee empowerment, recognition, and the development of their career path (Bouranta, 2020).

Various organizational outcomes that include leader effectiveness, job satisfaction, employee performance, and service quality are influenced by the applied leadership style (Alloubani et al., 2019). TQM deployment has the potential to improve employee performance (Kustono, 2019). Integrating controlled leadership functions with activities that promote innovation, learning, improvement, and adaptation can contribute to organizational success (Horvat & Filipovic, 2018). Leadership style is correlated with the leader's characteristics (Sfakianaki et al., 2018). Bouranta (2020) found that transformational leadership (TFL) may considerably improve TQM practices in the manufacturing business, according to his research. The democratic type of leadership will result in maximum

productivity and work effectiveness (Akparobore & Omosekejimi, 2020). Situational leadership has an impact on the success of TQM implementation (Kustono, 2019). Leaders with the sensing-thinking (ST) and sensing-feeling (SF) personality types are comfortable with continual improvement, but leaders with Organizational innovation is more important to the intuitive-thinking (NT) and intuitive-feeling (NF) personality types (V. Kumar & Sharma, 2017).

Barriers, problems, and risks encountered in the review in this paper are around the absence of top management and ineffective leadership are the main obstacles in implementing TQM (V. Kumar et al., 2020). It is interesting to note together, according to Kustono (2019) situational leadership has no effect on employee performance levels and according to Kwateng & Darko (2017) management competence and understanding related to quality management are the main problems in implementing TQM.

6. Conclusion

Total quality management (TQM) is a management philosophy that places a strong emphasis on both organizational and individual values (Krajcsák, 2019). Varied sectors and nations have different approaches to TQM (Amin et al., 2017). Teachers of TQM such as Deming, Crosby, and Juran agree that leadership is critical in quality management (Bouranta, 2020). Leaders take a fundamental role in quality improvement efforts (Rodriguez et al., 2018). The most crucial factor in achieving TQM is leadership (Vimal Kumar & Sharma, 2018). TQM is an important aspect of management (Sfakianaki et al., 2018). Successful TQM must be initiated and maintained by top management (Rodriguez et al., 2018).

One thing that is the main highlight in this paper is as stated in RQ5. Research gap areas (opportunities)? Ilieş et al., (2017), state that another research direction in the future is to continue to analyze the components of the TQM system, to approach the integration of the TQM system with other systems, such as environmental management. Building a strong TQM model will help organizations achieve business advantage, quality improvement, and competitiveness (Psomas & Antony, 2017). TQM is part of standard quality management; however, the definition varies from one researcher to the next (Amin et al., 2017). TQM has a significant impact on all facets of long-term sustainability (Tasleem et al., 2019). TQM refers to a company's ability to boost productivity, profitability, and long-term performance (V. Kumar et al., 2020). As a result of combining and synthesizing 28 selected papers for review, it was found that the research gap in this review is to build robust (robust) TQM models.

In this paper, the source of the search for papers reviewed only comes from Scopus, of course, this has a limited impact and may not comprehensively cover all papers and research related to Total Quality Management (TQM). For further research, it is highly recommended to involve data and other sources in compiling related papers, so that the review will be more solid.

In conclusion, despite some of the noteworthy limitations of this paper, this paper can be a source of reference for the discussion of Total Quality Management (TQM). And this paper as a whole has discussed and answered all of the research questions of this paper, starting from an overview of the development of research related to TQM to discussing opportunities that are areas of research gaps. It is hoped that this paper can be useful for various groups to be able to develop better TQM topics in the future.

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