Systematicity in a Scientific Research: A Leading way to Realization of Dependable Research Findings through a Systematic Review

BY

Commy Precious GODDYMKPA, *Ph.D*
Faculty of Education
University of Uyo

AND

AKPAN, E. Ebenezer, *Ph.D, FCICN, AP, PPGDCA, PHDCDPM*
Corporate Institute of Research and Computer Science
140 Ikot Ekpene Road
Uyo, Akwa Ibom State

ABSTRACT

The study assessed systematicity in a scientific research as leading way to realization of dependable research findings through a systematic review. Descriptive survey design was adopted for the study and the study was conducted in Akwa Ibom State using the public tertiary institutions in the state (University of Uyo, Akwa Ibom State University, Akwa Ibom State Polytechnic, Akwa Ibom State College of Education Afaha Nsit, and Akwa Ibom State College of Science and Technology). The population of the study comprised post graduate students in the two universities and academic staff from the five institutions. Simple random sampling technique was used to select 80 post graduate students from University of Uyo, 40 post graduate students from Akwa Ibom State University, and 30 academic staff from each of the 5 institutions, giving a total of 270 respondents for the study. The Instrument titled "SYSTEMATICITY IN SCIENTIFIC RESEARCH AND REALISATION OF DEPENDABLE RESEARCH FINDINGS QUESTIONNAIRE (SSRRDRFQ)" was used for the study. Face validation of the instrument was carried out by research experts in business administration while Cronbach Alpha technique was used to determine the level of reliability of the instrument. The reliability coefficient obtained was 0.92 which was proved high enough to justify the use of the instrument. The researcher subjected the data generated for this study to percentage analysis used to answer the research questions and simple regression analysis for testing the hypothesis. The test for significance was done at 0.05 alpha level. The result also proved that there is significant influence of adoption of systematic review in research on the realization of dependable findings. The study concluded that the goal of systematic review is to identify the most efficient means of generating consistent and optimum results. Promotes a better quality of work results and a high level of productivity. One of the recommendations was that educational institutions should consider which aspects of the systematic review methodology might profitably be incorporated into guidelines for undergraduates or postgraduates conducting literature surveys, and under what circumstances the full approach might be adopted.

KEYWORDS: Systematicity in Research, Academic Staff, Post Graduate Students, Tertiary Institutions and Akwa Ibom State

Introduction

We all know that the level of advancement in the world today is because of various researches manifested in several disciplines. It is obvious that research has become a very important activity in our generation. A research is a scientific voyage to discover something new. It has a certain prescribed idea to perform the activities. It is the pursuit of the truth with the help of study, observation, comparison, and experiment. As stated by Akpan (2020) research gives immense contribution to the existing stock of knowledge created by the past researchers or professionals in that specific field of study. The conceptual use of research is a potentially powerful way to inform policy. According to Farrell and Coburn, (2016), when used conceptually, research serves to introduce new ideas, help people identify problems and appropriate solutions in new ways, and provide new frameworks to guide thinking and action. Every research uses a purpose for guidance.

The research purpose helps the subject assess the importance of the study relative to individual values. The research should include not only the immediate purpose of the study, but also any larger, eventual purpose. The research purpose should be stated systematic or in a way that does not reflect particular biases or values of the researcher. Research must always be of high quality in order to produce knowledge that is applicable outside of the research setting (Green, Ottoson, García, & Hiatt, 2009). Research is required not just for students and academics but for all professionals and nonprofessionals. It is also important for budding and veteran writers, both offline and online (Zarah, 2010). It is quite obvious and evident that every research conducted needs an incorporation of a systematic review to make it successful. It is quite obvious that for a research to be carried out effectively and successfully the research purpose must give a guidance for proper systematic review. A systematic review is therefore defined as "a review of the evidence on a clearly formulated question that uses systematic and explicit methods to identify, select and critically appraise relevant primary research. According to Zarah, (2010) a systematic review helps extract and analyze data from the studies that are included in the review. Researchers conducting systematic reviews use explicit methods aimed at minimizing bias, in order to produce more reliable findings that can be used to inform decision making.

Statement of the Problem

It is quite unfortunate that many of our students, especially the undergraduate researchers are yet to appreciate this facts, as regard the usefulness of a systematic review. In our house assessment using post graduate students and lecturers have confirmed the ignorance of the undergraduate students in this direction. It is on this ground that this study is carried out in order to determine the extent of usefulness of systematicity in a Scientific Research as manifested in the realization of dependable research findings through a Systematic Review.

Purpose of the Study

1. To assess the roles of a systematic review in research.
2. To find out the extent of adoption of systematic review in research by undergraduate researchers in tertiary institutions in Akwa Ibom State.
3. To examine the extent to which adoption of systematic review in research has impacted on the realization of dependable findings.

Research Questions

1. What are the roles of systematic review in research?
2. What is the extent of adoption of systematic review in research by undergraduate researchers in tertiary institutions in Akwa Ibom State?
3. What is the influence of adoption of systematic review in research on the realization of dependable findings?

Research Hypothesis

$H0_1$: There is no significant influence of adoption of systematic review in research on the realization of dependable findings.

Conceptual Review

Concepts of Research

Research is defined as human activity based on intellectual application in the investigation of matter. It is a careful consideration of study regarding a particular concern or problem using scientific methods. According to Creswell, (2008) "research is a process of steps used to collect and analyze information to increase our understanding of a topic or issue". It consists of three steps: pose a question, collect data to answer the question, and present an answer to the question. Approaches to research depend on epistemologies, which vary considerably both within and between humanities and sciences. There are several forms of research: scientific, humanities, artistic, economic, social, business, marketing, practitioner research, life, technological, etc. The Merriam-Webster Online Dictionary (2018) defines research as "studious inquiry or examination; especially: investigation or experimentation aimed at the discovery and interpretation of facts, revision of accepted theories or laws in the light of new facts, or practical application of such new or revised theories or laws". The primary purposes of basic research (as opposed to applied research) are documentation, discovery, interpretation, and the research and development (R&D) of methods and systems for the advancement of human knowledge (Wikipedia, 2020). As stated by Slesinger & Stephenson, (2003), the primary purpose for applied research is discovering, interpreting, and the development of methods and systems for the advancement of human knowledge on a wide variety of scientific matters of our world and the universe. It is regarded as systematic efforts to gain new knowledge. Research involves inductive and deductive methods (Wimmer, & Dominick, 2011). According to Wimmer, & Dominick (2011), inductive research methods are used to analyze an observed event. Deductive methods are used to verify the observed event. Inductive approaches are associated with qualitative research and deductive methods are more commonly associated with quantitative research. Definition of Research comprises defining and redefining problems, formulating hypothesis or suggested solutions; collecting, organizing and evaluating data; making deductions and reaching conclusions and at last carefully testing the conclusions to determine whether they fit the formulating hypothesis.

Systematic Review

A systematic review is defined as "a review of the evidence on a clearly formulated question that uses systematic and explicit methods to identify, select and critically appraise relevant primary research, and to extract and analyze data from the studies that are included in the review. A systematic review attempts to collate all empirical evidence that fits a protocol designed to answer a specific research question (Armstrong, Hall, Doyle and Waters 2011). Researchers conducting systematic reviews use explicit methods aimed at minimizing bias, in order to produce more reliable findings that can be used to inform decision making. Being systematic is searching, selecting and managing the best available evidence for research, according to a defined, planned and consistent method...this should be applied to all types of reviews including data. A systematic approach is often used at projects in the workplace. The goal of this approach is to identify the most efficient means of generating consistent and optimum results. ... It also promotes a better quality of work results and a high level of productivity.

Systematic reviews are a type of review that uses repeatable analytical methods to collect secondary data and analyze it. Systematic reviews are a type of evidence synthesis which formulate research questions that are broad or narrow in scope, and identify and synthesize data that directly relate to the systematic review question. While some people might associate 'systematic review' with 'meta-analysis', there are multiple kinds of review which can be defined as 'systematic' which do not involve a meta-analysis. Some systematic reviews critically appraise research studies, and synthesize findings qualitatively or quantitatively (Armstrong, Hall, Doyle and Waters 2011). Systematic reviews are often designed to provide an exhaustive summary of current evidence relevant to a research question. For example, systematic reviews of randomized controlled trials are important ways of informing evidence-based medicine, (EBM 2009) and a review of existing studies is often quicker and cheaper than embarking on a new study. While systematic reviews are often applied in the biomedical or healthcare context, they can be used in other areas where an assessment of a precisely defined subject would be helpful (Ader, Mellenbergh and Hand 2008). Systematic reviews may examine clinical tests, public health interventions, environmental interventions, (Bilotta, Milner, & Boyd 2014) social interventions, adverse effects, qualitative evidence syntheses, methodological reviews, policy reviews, and economic evaluations. According to Petticrew and Roberts (2006), understanding systematic reviews and how to implement them in practice is highly recommended for professionals involved in the delivery of health care, public health and public policy.

Systematic reviews can be used to inform decision making in many different disciplines, such as evidence-based healthcare and evidence-based policy and practice. (Grant & Booth 2009) A systematic review can be designed to provide an exhaustive summary of current literature relevant to a research question. Systematic review uses a rigorous and transparent approach for research synthesis, with the aim of assessing and, where possible, minimizing bias in the findings. While many systematic reviews are based on an explicit quantitative meta-analysis of available data, there are also qualitative reviews and other types of mixed-methods reviews which adhere to standards for gathering, analyzing and reporting evidence (Bearman & Dawson, 2013). Systematic reviews of quantitative data or mixed-method reviews sometimes use statistical techniques (meta-analysis) to combine results of eligible studies. Scoring levels are sometimes used to rate the quality of the evidence depending on the methodology used, although this is discouraged by the Cochrane Library (Higgins et. al., 2019). As evidence rating can be

subjective, multiple people may be consulted to resolve any scoring differences between how evidence is rated (Siemieniuk and Guyatt 2020; Adèr 2008).

The EPPI-Centre, Cochrane and the Joanna Briggs Institute have all been influential in developing methods for combining both qualitative and quantitative research in systematic reviews. Several reporting guidelines exist to standardize reporting about how systematic reviews are conducted. Such reporting guidelines are not quality assessment or appraisal tools. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement (Booth et al. 2016) suggests a standardized way to ensure a transparent and complete reporting of systematic reviews, and is now required for this kind of research by more than 170 medical journals worldwide. Several specialized PRISMA guideline extensions have been developed to support particular types of studies or aspects of the review process, including PRISMA-P for review protocols and PRISMA-ScR for scoping reviews. A list of PRISMA guideline extensions is hosted by the EQUATOR (Enhancing the Quality and Transparency of health Research) Network. For qualitative reviews, reporting guidelines include ENTREQ (Enhancing transparency in reporting the synthesis of qualitative research) for qualitative evidence syntheses; RAMESES (Realist and Meta-Narrative Evidence Syntheses: Evolving Standards) for meta-narrative and realist reviews; and emerge (Improving reporting of Meta-Ethnography) for meta-ethnography. Developments in systematic reviews during the 21st century included realist reviews and the meta-narrative approach, both of which addressed problems of variation in methods and heterogeneity existing on some subjects (Arksey & O'Malley, 2005).

Types of Systematic Review

There are over 30 types of systematic review and the Table 1 below summarises some of these (Grant and Booth, 2009; Booth, Noyes, Flemming, Gerhardus, Wahlster, and Van Der Wilt, 2016).

Table 1: A summary of some of the types of systematic review

REVIEW TYPE	SUMMARY
Mapping review/ systematic map	A mapping review maps existing literature and categorizes data. The method characterizes quantity and quality of literature, including by study design and other features. Mapping reviews can be used to identify the need for primary or secondary research (Grant and Booth, 2009)
Meta-analysis	A meta-analysis is a statistical analysis that combines the results of multiple quantitative studies. Using statistical methods, results are combined to provide evidence from multiple studies. The two types of data generally used for meta-analysis in health research are individual participant data and aggregate data (such as odds ratios or relative risks).
Mixed studies review/ mixed methods review	Refers to any combination of methods where one significant stage is a literature review (often systematic). It can also refer to a combination of review approaches such as combining quantitative with qualitative research (Grant and Booth, 2009)

Qualitative systematic review/qualitative evidence synthesis	This method for integrates or compares findings from qualitative studies. The method can include 'coding' the data and looking for 'themes' or 'constructs' across studies. Multiple authors may improve the 'validity' of the data by potentially reducing individual bias.
Rapid review	An assessment of what is already known about a policy or practice issue, which uses systematic review methods to search for and critically appraise existing research. Rapid reviews are still a systematic review, however parts of the process may be simplified or omitted in order to increase rapidity (Tricco, Antony, Zarin, Strifler, Ghassemi, Ivory and Straus, 2015). Rapid reviews were used during the COVID-19 pandemic.
Systematic review	A systematic search for data, using a repeatable method. It includes appraising the data (for example the quality of the data) and a synthesis of research data.
Systematic search and review	Combines methods from a 'critical review' with a comprehensive search process. This review type is usually used to address broad questions to produce the most appropriate evidence synthesis. This method may or may not include quality assessment of data sources (Grant and Booth, 2009).
Systematized review	Include elements of systematic review process, but searching is often not as comprehensive as a systematic review and may not include quality assessments of data sources.

Importance of Systematic Review

According to EPPI (2010), systematic review is very important considering the following six reasons:

Systematic reviews are transparent about how their conclusions are generated: If we are to be confident about the findings of reviews of research we need to be able to see that review authors have taken steps to reduce distortions or inaccuracies in their work. For instance, were all studies found treated as equally reliable despite differences in their quality; or could some have been missed altogether? A methodical and explicit approach to avoiding ways in which reviews can misrepresent the knowledge base is the fundamental principle of systematic research synthesis.

A 'protocol' sets out how the systematic review is to be conducted before the work starts: As is the case for any good research, the methods for a systematic review are made explicit in a 'protocol' before it starts (EPPI, 2010). This helps to reduce bias in the review process, for example by ensuring that reviewers' procedures are not overly influenced by the results of studies they find. If changes are needed to the protocol as the review progresses these needed to be noted in the review's final report and the rationale for making changes made clear.

Exhaustive searches are undertaken to find as much as possible of the relevant research: Systematic reviews include efforts to find as much as possible of the research which addresses the review's research question. This is important if the review's conclusions are not to be over-

influenced by studies which are simply the easiest to find (usually published research, showing the benefit of interventions). Another example of the methodological approach of a systematic review is the use of a set of explicit statements, called inclusion criteria, to assess each study found to see if it actually does address a review's research question. There are some systematic reviews that do not aim to be exhaustive because the nature of their review question and review methods is such that they are only attempting to identify selected examples of evidence.

The systematic review methods are made explicit: A systematic review is also explicit in reporting its methods so that these can be appraised. For example, the methods used to find studies (database searches, searches of specialist bibliographies, hand-searching of likely journals, attempts to track down unpublished research) will be reported in some detail. This allows readers to decide for themselves whether the reviewers have looked carefully enough to be able to say they have identified as many as possible of the studies that could help answer the review's research question. It is now standard practice for reports of systematic reviews to have clearly defined methods and results sections.

Potential users of the systematic review are involved: In order to meet the needs of all potential users of research, syntheses need to involve a broad range of users in the development of review questions and procedures. Advisory groups can assist with defining the broad topic area to be looked at and identifying the specific areas within that topic that would be most useful to scrutinise in-depth (EPPI, 2010).

The findings of sound research are synthesized: An important characteristic of a systematic review is that it includes a synthesis of its results, which in this case are results from previous research. As a very important part of the synthesis process, systematic reviewers assess the quality of the studies they have found (Barnett-Page and Thomas, 2009). They can then use this assessment to assign different weights to study findings. Poor quality studies are sometimes downgraded in importance or excluded from the review. The ultimate effect of this is that research can influence a review's conclusions only when that research is sound.

Realization of Dependability of Research Findings

Dependability refers to the consistency and reliability of the research findings and the degree to which research procedures are documented, allowing someone outside the research to follow, audit, and critique the research process (Polit et al. 2006, Streubert 2007). As a quality measure, dependability is particularly relevant to ecological and conservation science applications that are in the early stages of testing findings in multiple contexts to increase the confidence in the evidence (Adams et al. 2014). According to Korstjensa and Moser (2018), dependability involves participants' evaluation of the findings, interpretation and recommendations of the study such that all are supported by the data as received from participants of the study. Dependability is the aspect of consistency. A researcher needs to check whether the analysis process is in line with the accepted standards for a particular design. Dependability is important to trustworthiness because it establishes the research study's findings as consistent and repeatable. Researchers aim to verify that their findings are consistent with the raw data they collected. They want to make sure that if some other researchers were to look over the data, they would arrive at similar findings, interpretations, and conclusions about the data (Statistics Solutions, 2017).

Methods

Descriptive survey design was adopted for the study and the study was conducted in Akwa Ibom State using the public tertiary institutions in the state (University of Uyo, Akwa Ibom State University, Akwa Ibom State Polytechnic, Akwa Ibom State College of Education Afaha Nsit, and Akwa Ibom State College of Science and Technology). The population of the study comprised post graduate students in the two public universities and academic staff from the five tertiary institutions. Simple random sampling technique was used to select 80 post graduate students from University of Uyo, 40 post graduate students from Akwa Ibom State University, and 30 academic staff from each of the 5 institutions, giving a total of 270 respondents for the study. The Instrument titled "Systematicity in Scientific Research and Realisation of Dependable Research Findings Questionnaire (SSRRDRFQ)" was used for the study. Face validation of the instrument was carried out by research experts in business administration while Cronbach Alpha technique was used to determine the level of reliability of the instrument. The reliability coefficient obtained was 0.92 which was proved high enough to justify the use of the instrument. The researcher subjected the data generated for this study to percentage analysis used to answer the research questions and simple regression analysis for testing the hypothesis. The test for significance was done at 0.05 alpha level.

Results

Research Questions One: The research question sought to find out the roles of systematic review in research. To answer the research question, percentage analysis was performed on the data, (see table 2).

Table 2: Percentage analysis of the roles of systematic review in research

EXTENTS	FREQ.	PERCENTAGE
Systematic reviews are transparent about how their conclusions are generated	55	20.37**
A 'protocol' sets out how the systematic review is to be conducted before the work starts	52	19.26
Exhaustive searches are undertaken to find as much as possible of the relevant research	45	16.67
The systematic review methods are made explicit	39	14.44
Potential users of the systematic review are involved	36	13.33*
The findings of sound research are synthesized	43	15.93
TOTAL	**270**	**100%**

**** The highest percentage frequency**
*** The least percentage frequency**
SOURCE: Field survey

The above table 2 presents the percentage analysis of the roles of systematic review in research. From the result of the data analysis, it was observed that the tagged "systematic reviews are

transparent about how their conclusions are generated" 55(20.37%) rated the highest percentage of the roles of systematic review in research, while "potential users of the systematic review are involved" 36(13.33) rated the least percentage of the roles of systematic review in research.

Research Questions Two: The research question sought to find out the extent of adoption of systematic review in research by undergraduate researchers in tertiary institutions in Akwa Ibom State. To answer the research question, percentage analysis was performed on the data, (see table 3).

Table 3: Percentage analysis of the extent of adoption of systematic review in research by undergraduate researchers in tertiary institutions in Akwa Ibom State

EXTENTS	FREQUENCY	PERCENTAGE
VERY HIGH EXTENT	47	17.41*
HIGH EXTENT	59	21.85
LOW EXTENT	76	28.15
VERY LOW EXTENT	88	32.59**
TOTAL	**270**	**100%**

**** The highest percentage frequency**

*** The least percentage frequency**

SOURCE: Field survey

The above table 3 presents the percentage analysis of the extent of systematic review in research by undergraduate researchers in tertiary institutions in Akwa Ibom State. From the result of the data analysis, it was observed that the highest percentage 88(32.59%) of the respondents affirmed that the extent of adoption of systematic review in research by undergraduate researchers is very low, while the least percentage 47(17.41%) of the respondents stated that the extent of adoption of systematic review in research by undergraduate researchers in tertiary institutions in Akwa Ibom State is very high. The result therefore means that the extent of adoption of systematic review in research by undergraduate researchers is very low.

Research Questions Three: The research question sought to find out the influence of adoption of systematic review in research on the realization of dependable findings. To answer the research percentage analysis was performed on the data, (see table 4).

Table 4: Descriptive statistics of the influence of adoption of systematic review in research on the realization of dependable findings

Variable	N	Arithmetic mean	Expected mean	R	Remarks
Dependable Result	270	13.72	12.5	0.65	*Moderately Strong Relationship
Systematic Review		12.37	12.5		

Source: Field Survey

The above table 4 presents the result of the descriptive analysis of the influence of adoption of systematic review in research on the realization of dependable findings. The two variables were observed to have moderately strong relationship at 0.65%. The arithmetic mean for dependable

result (13.72) was observed to be higher than the expected mean score of 12.5. In addition to that, the arithmetic mean as regards systematic review (12.37) was observed to be lower than the expected mean score of 12.5. The result therefore means that there is remarkable influence of adoption of systematic review in research on the realization of dependable findings.

Hypothesis Testing

The null hypothesis states that there is no significant influence of adoption of systematic review in research on the realization of dependable findings. In order to test the hypothesis, simple regression analysis was performed on the data (see table 4).

TABLE 5: Simple Regression Analysis of the influence of adoption of systematic review in research on the realization of dependable findings.

Model	R	R-Square	Adjusted R Square	Std. error of the Estimate	R Square Change
1	0.65a	0.43	0.43	1.68	0.43

***Significant at 0.05 level; df= 268; N= 270; critical R-value = 0.139**

The above table 5 shows that the calculated R-value (0.65) was greater than the critical R-value of 0.139 at 0.5 alpha levels with 268 degrees of freedom. The R-Square value of 0.43 predicts 43% of the influence of adoption of systematic review in research on the realization of dependable findings. This rate of percentage is moderately positive and therefore means that there is significant influence of adoption of systematic review in research on the realization of dependable findings. It was also deemed necessary to find out the influence of the variance of each class of independent variable as responded by each respondent (table 5).

TABLE 6: Analysis of variance of the influence of adoption of systematic review in research on the realization of dependable findings.

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	561.39	1	561.39	199.57	.000b
Residual	753.88	268	2.81		
Total	1315.263	269			

a. Dependent Variable: Dependable Results
b. Predictors: (Constant), Systematic Review

The calculated F-value (199.57) and the P-value as (.000b). Being that the P-value (.000b) is below the probability level of 0.05, the result therefore means that there is significant influence exerted by the independent variables i.e. systematic review on the dependent variable which is dependable results. The result therefore is in agreement with the research findings Zarah, (2010) stated that systematic review helps extract and analyze data from the studies that are included in the review. Dependability in this case is important which aims at trustworthiness because it establishes the research study's findings as consistent and repeatable (Statistics Solutions, 2017). The significance of the result caused the null hypotheses to be accepted while the alternative was rejected.

Conclusion

Based on the findings of this paper, it was concluded that systematic review attempts to collate all empirical evidence that fits a protocol designed to answer a specific research question. Being systematic is searching, selecting and managing the best available evidence for research. The goal of systematic review is to identify the most efficient means of generating consistent and optimum results. It promotes a better quality of work results and a high level of productivity. Hence, the study reveals that there is significant influence of adoption of systematic review in research on the realization of dependable findings.

Recommendations

Based on the findings of this study, the following recommendations was deemed necessary:

1. Educational institutions should consider which aspects of the systematic review methodology might profitably be incorporated into guidelines for undergraduates or postgraduates conducting literature surveys, and under what circumstances the full approach might be adopted.

2. A systematic review could be a valuable research method to be used by undergraduate as well as postgraduate students, by which evidence is combined in nontraditional ways, but advantages should be weighed against disadvantages and certain criteria to be able to conduct a systematic review should be considered.

3. Educational institutions requesting undergraduate and postgraduate students to conduct a systematic review as part of their degree should include the following in their curriculum with regard to research methodology so that students could acquire the competencies needed to conduct a systematic review, an introduction to systematic reviews and meta-analyses, and short learning courses on the steps of the systematic review as well as how to conduct these.

REFERENCES

Adams, V. M., Game, E. T. and Bode, M. (2014). *Synthesis and review*: delivering on conservation promises: the challenges of managing and measuring conservation outcomes. Environmental Research Letters 9:085002.

Adèr HJ (2008). *Advising on Research Methods:* A Consultant's Companion. Johannes van Kessel Publishing.

Ader HJ, Mellenbergh GJ, Hand DJ (2008). *Methodological quality*. Advising on Research Methods: A consultant's companion. Johannes van Kessel Publishing

Arksey H, O'Malley L (2005). Scoping studies: Towards a methodological framework (PDF). *International Journal of Social Research Methodology*. 8: 19–32.

Armstrong R, Hall BJ, Doyle J, Waters E (2011). Cochrane Update. 'Scoping the scope' of a cochrane review. *Journal of Public Health*. 33 (1): 147–50.

Barnett-Page E. and Thomas J. (2009). Methods for the synthesis of qualitative research: a critical review. *BMC Medical Research Methodology* 9(1): 51-59.

Bearman M, Dawson P (2013). Qualitative synthesis and systematic review in health professions education. *Medical Education*. 47 (3): 252–60.

Bilotta GS, Milner AM, Boyd I (2014). On the use of systematic reviews to inform environmental policies. *Environmental Science & Policy*. 42: 67–77

Booth, A., Noyes, J., Flemming, K., Gerhardus, A., Wahlster, P. and Van Der Wilt, G. J. (2016). *Guidance on choosing qualitative evidence synthesis methods for use in health technology assessments of complex interventions*. p. 32.

EBM (2009). *What is EBM*?. Centre for Evidence Based Medicine. 2009-11-20.

EPPI (2010). *Why is it important to be systematic?* EPPI-Centre. Available at: https://eppi.ioe.ac.uk/cms/Default.aspx?tabid=69

Gough, D., Oliver, S. and Thomas, J. (2017). *An Introduction to Systematic Reviews*. 2nd edition. London: Sage Publications Ltd.

Grant MJ, Booth A (2009). A typology of reviews: an analysis of 14 review types and associated methodologies. *Health Information and Libraries Journal*. 26 (2): 91–108

Grant, M. J. and Booth A. (2009). A typology of reviews: an analysis of 14 review types and associated methodologies. *Health Information and Libraries Journal*, 26(2): 91–108.

Higgins JP, Thomas J, Chandler J, Cumpston M, Li T, Page MJ, Welch VA, eds. (2019). *Cochrane Handbook for Systematic Reviews of Interventions*. *training.cochrane.org*. version 6.1. pp. section 4.6.

Korstjensa, I. and Moser, A. (2018). Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. European Journal of General Practice, 24(1), 120-124

Petticrew M, Roberts H (2006). *Systematic reviews in the social sciences*

Polit, D., Beck, F. C. T. and Hungler, B. P. (2006). *Essentials of nursing research*: methods, appraisal, and utilization. Lippincott, New York, New York, USA.

Siemieniuk R, Guyatt G. (2020). *What is GRADE*?. BMJ Best Practice.

Statistics Solutions (2017). *What is dependability in qualitative research and how do we establish it*? Retrieved from: https://www.statisticssolutions.com/what-is-dependability-in-qualitative-research-and-how-do-we-establish-it/

Streubert, H. J. (2007). *Designing data generation and management strategies*. Pages 33-56 in H. J. Streubert and D. R. Carpenter, editors. Qualitative research in nursing: advancing the humanistic imperative. Third edition. Lippincott Williams & Wilkins, Philadelphia, Pennsylvania, USA.

Tricco, A. C., Antony, J., Zarin, W., Strifler, L., Ghassemi, M., Ivory, J. and Straus, S. E. (2015). A scoping review of rapid review methods. BMC Medicine, 13, 224