The Process, Structure and Contribution of Work-Based Learning (WBL) to Nursing or Health

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Abstract

Background: Nurses and midwives' contribution to the health workforce is commended globally. Continuous professional guidelines for nurses and midwives are in place to enhance life-long learning. However, literature on Work-Based Learning in healthcare settings is limited. It is important to document evidence on how nurses learn at their places of work to strengthen life-long learning.

Aim: To identify existing evidence on the process, structure and contribution of WBL to nursing or health care outcomes.

Design: we used scoping review approach.

Data sources: EBSCOhost, Wiley Online University, and Science Direct. Google was used as a general search engine.

Review Methods: Screening was by reading abstracts and full texts. Contextualization and thematic analysis were employed. The John Hopkins Nursing Evidence-Based Practice appraisal tools were used to determine the level and quality of evidence.

Results: A total of 14 articles were reviewed. Identifying the problem, assessing the environment, having a learning action plan and documentation are key steps for WBL. A positive workplace culture, collaboration between the learner, organization, regulation and education institutions in addition to learning resources make a strong structure for WBL. Individual and institutional growth and visibility that contribute to improved quality of care are outcomes of WBL.

Conclusion: The literature reviewed suggests that nurses ought to engage in a step wise process for effective WBL. Efficient collaboration between the learner, workplace, education and regulatory institutions are needed to support WBL. WBL plays an important role in improving nursing and health care outcomes.

Keywords: Work-Based Learning, Nurses, Midwives, scoping review.

Introduction

Work-Based Learning (WBL) calls for the individual's ability to identify own gaps in knowledge and skills of a work-related task and look for ways of acquiring it. Work-Based-Learning can be defined as the acquisition of knowledge, skills and attitudes that takes place in the real work place environment when an employee or learner demonstrates the ability to identify own learning needs and devise strategies of meeting them (Mari-Hall (Nevara), Ulicna, & Duchemin, 2013). According to Alam (2015), the teaching and learning that occurs in Work-Based-Learning is appropriate to the needs of the learner, patient, and mentor or supervisor.

Existing literature on the benefits of Work-Based-Learning categorizes them under employee, employer and society (Mari-Hall (Nevara), Ulicna, & Duchemin, 2013).

The employee gains such benefits as development of hard skills, technical expertise and implicit knowledge. Employer benefits from WBL stretch from financial (increased productivity) to increased staff morale, which goes hand in hand with reduced turnover (Mari-Hall (Nevara), Ulicna, & Duchemin, 2013). Employees who engage in WBL require minimal training, reducing on the expenditure of the organization. The social benefits of WBL include increased employability skills (Mari-Hall (Nevala), A; Ulicna, 2013). According to

Lowden, Hall, Elliot, & Lewin (2011) report on young people, employability and the induction process, employability skills employers are looking for can only be learned in 'real life' situations.

Nurses and midwives are seen as the pillars for promoting Universal Health Care (UHC) by virtue of their professional preparedness to handle emergency and non-emergency situations within and outside the hospital, and their ability to provide client-centered care. All nurses are expected to engage in Continuous professional Development (CPD) to promote provision of quality health care services to the public through the acquisition of up-to-date knowledge and skills. Work place related tasks are great exposures to learning. Since nurses engage in several activities at their places of work, it is important to document the evidence as to how they learn.

Existing literature reviews on WBL focused to identifying evidence for its benefits, essential elements, and exploring implications of the results to inform the development of its programs. This review focused on identifying the process through which nurses and midwives learn at their places of work, the structure that support WBL and the contribution of WBL to nursing or health care outcomes.

Methods

The aim of the scoping review was to identify existing evidence on the process, structure and contribution of WBL to nursing or health care outcomes.

Design

We conducted this review as a scoping review, following the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) guidelines (Appendix 1) (Tricco, Lillie, Zari, et al, 2018). The findings would inform a planned study on WBL for nurses and midwives. Scoping review was needed to identify the nature and extent of research evidence that exist in relation to WBL among nurses and in health care.

Data Search

The literature search used databases and other internet searches. The databases used were: EBSCOhost, Wiley Online University, and Google search (emerald and Science Direct). Details of the search strategies are reflected in table 1.

Table 1. Data Bases, Search Strategy and Results

Data base/Search Engine	Search strategy	Results
EBSCOhost	"Work-based Learning"	2419 Journal articles and book chapters
	"Work-based Learning" AND Nurs*	49 articles
	"Work-based Learning" AND (Nursing OR Healthcare Outcomes)	34 Journal articles
	"Work-based learning" and Benefits	273 Journal articles
Wiley Online Library (Journal of Nurse Education in Practice; Jan 2010-August, 2020)	"Work-based Learning" AND Nurs* OR Midwi*	956 Journal articles
Wiley Online Library (Journal of Contemporary Nurse; Jan 2010-August 2020)	Work-based Learning" AND Nurs* OR Midwi	487 Journal articles and book chapters
Google Search (emerald)	"Work-based Learning" AND (Nurs* OR Healthcare outcomes)	362 articles

Inclusion and exclusion criteria. Inclusion focused on the full text articles that tended to address the aim of the review by identifying the key words: Work-based learning or work-place learning, nurses, midwives, health care, and benefits of work-based learning. Further screening was done by eliminating records basing

on their titles, non-English language, and time frame (not within 2009-2019).

Results

The scoping review sought to answer the questions: "How do Nurses and Midwives in Africa identify and meet their learning needs at their places of work?' and "How does WBL contribute to nursing/ healthcare outcomes?". Literature in Africa being limited, the review was opened up worldwide. The articles reviewed were from Australia (Faithfull-byrne et al., 2017; Mcdonald, Jackson, Wilkes, & Vickers, 2013a; Nacioglu, 2016), United Kingdom (Burholt, Buckingham, Roche, Nixon, & Simmons, 2016; Cameron, Rutherford, & Mountain, 2012; Mari-Hall, Ulicna, & Duchemin, 2013; Marshall, 2017; Williams, 2010a; Wright et al., 2010), Asia (Chakkaravarthy et al., 2018; Shirazi, Sharif, Molazem, & Alborzi, 2017), Nigeria (Okereke et al., 2015) and Uganda (Matovu, Wanyenze, Mawemuko, Okui, Bazeyo, 2013).

Search Outcomes

A total of 3365 records were obtained from the data bases used. Google search in emerald and Science Direct yielded a total of three hundred sixty-two (362) records. Records from the data bases and Google search were checked and a total of five hundred and eighty-four (584) duplicates were eliminated.

A total of 2781 full text articles were assessed for eligibility. The inclusion criteria were full text articles on Work-Based Learning from 2009 to 2019. Of these, only those that had information on how people engage in WBL, benefits or contribution of WBL to nursing or health care outcomes were included. The final total number of articles that met the inclusion criteria was 14 as shown in figure 1.
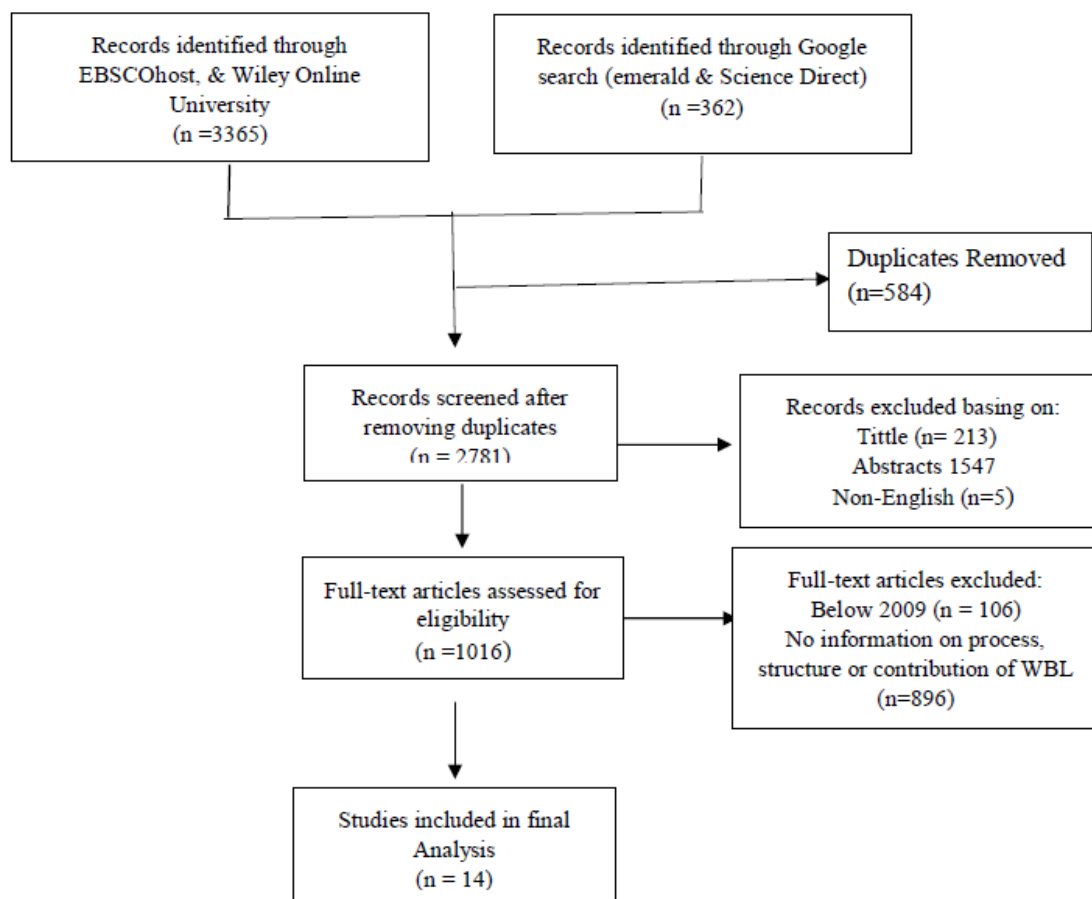

Figure 1. PRISMA Flow Diagram of Study Eligibility Screening

Analysis of Data Quality

The authors (ENE, KCD, & PM) used inductive content analysis method. This was because the literature in the area of Work-Based Learning for nurses and midwives was limited. More so, no article clearly defined the process and structure for work-based learning. Therefore, the authors read and re-read the articles to contextualize the information in relation to the

review questions. According to Polit & Beck (2017), contextualization helps the researcher to get clear ideas about the area of study.

Among the 14 articles that met the inclusion criteria, six used qualitative approaches. Of the six, one used interventional, another interpretive case study designs. A third qualitative research paper used conventional content analysis approach. There were five literature reviews, one of which used integrative systematic approach, and another scoping approach integrated with one to one interview. Finally, there was one thematic analytic evaluation survey, one action research and one institutional evaluation report.

The Johns Hopkins Nursing Evidence-Based Practice (JHNEBP, 2017) Appendix G: Individual Evidence Summary Tool was adopted to extract data during synthesis of each article. A matrix was developed by summarizing the 14 selected articles as shown in table 2. The level of evidence was determined by *Johns Hopkins Nursing Evidence-Based Practice* (JHNEBP) appraisal tools for research and non-research articles, specifically, Appendix D (JHNEBP, 2017). Appendix D of the JHNEBP categorizes the levels of evidence according to the type of article reviewed and gives explanatory notes for determining the quality of evidence. Each article was critically appraised to determine the level and quality of evidence it presented.

Table 2. Literature Review Matrix on WBL

Author & year of publication	Source of publication	Tittle and place of study	Purpose of the study	Nature of research, design, population & sample size	Study findings in relation to the research questions:		Level of evidence & Quality
					How do nurses & midwives learn at their places of work? Available/ required Structure	How does Work-based learning contribute to the nursing/health care outcomes?	
Attenborough, Abbott, Brook, & Knight (2019).	Nurse Education in Practice, 36; 132-138.	Everywhere and nowhere: Work-based learning in healthcare education.	To explore the experiences of supervisors and learners currently engaged in WBL to inform the introduction of a specific new role in healthcare in the UK and a new initiative to increase access to healthcare education	Explorative qualitative research, used nine clinical educators (Nurses)	Reflecting, attending meetings (uni-multi-disciplinary), discussing things with colleagues, case studies, case conferences	Team building, leadership development, strong interprofessional working relationship	III, B
Burholt, R., Buckingham, T., Roche, M., Nixon, E, & Simmons, S (2016)	NHS Trust (Brighton and Sussex University Hospitals), UK	Developing nursing practice through Work Based Learning	To evaluate an HIV work-based learning (WBL) module with regard to the development of nursing skills and practice	A thematic analytic Evaluation Survey of 5 staff who undertook a seven-month HIV WBL module.		Improved communication between medics and nurses; Improved patients' outcome during emergencies; development of new guidelines & patient information (leaflets);	III; A

Author & year of publication	Source of publication	Tittle and place of study	Purpose of the study	Nature of research, design, population & sample size	Key findings in relation to the research question: How do nurses & midwives learn at their places of work? Available/ required Structure	Key findings in relation to the research question: How does Work-based learning contribute to the nursing/health care outcomes?	Level of evidence & Quality
						Improved documentation of patient care; Nurse-led projects resulting in improved patient outcomes; Development of tailored education programs; Survey and audit activities hence, improved quality of care delivery.	
Cameron, S; Rutherford, I & Mountain, K. (2012)	Quality in Primary Care 20: 211–17 Edinburgh, UK	Debating the use of work-based learning and interprofessional education in promoting collaborative practice in primary care: a discussion paper	To review and debate the evidence on the role of work-based learning and IPE in enhancing collaborative practice in primary care	Literature Review/discussion paper	Use of reflective diaries, clinical supervision, action learning, e-learning, personal development plans, project work, individual	Promotion of learning and collaborative practice among workers (team learning); Enhanced engagement in current practice; Recognition of staff as key resources;	III; B

Author & year of publication	Source of publication	Tittle and place of study	Purpose of the study	Nature of research, design, population & sample size	Key findings in relation to the research question: How do nurses & midwives learn at their places of work?	Key findings in relation to the research question: How does Work-based learning contribute to the nursing/health care outcomes?	Level of evidence & Quality
Chakkaravarthy, Ibrahim, & Mahmud, 2018)	Nurse Education Today Vol 69; 60-66	Predictors for nurses and midwives' readiness towards self-directed learning: An integrated review	To systematically review the existing evidence on predictors for nurses and midwives' readiness towards Self-directed Learning (SDL).	Integrated Systematic Literature review	Self-interest, self-awareness, self-analysis, observation, experience, logical reasoning/ internal locus, Engaging in training activities, Being involved in clinical activities, friendly peers/workmates	coaching & mentoring *structure that supports WBL* A positive culture of learning, Interprofessional working & collaboration, Protected time for learning, Leadership Increased visibility and power of the organization.	III; B

Author	Source	Title	Aim	Design	Available/ required Structure	Findings	Level
Faithfull-byrne et al., (2017)	Collegian vol 24; 402-410	Clinical coaches in nursing and midwifery practice: Facilitating point of care workplace learning and development In Australia	To identify the theoretical and conceptual background to the model of coaching that was developed, share the context in which the innovative role was developed, and explain the conceptual model of coaching that is used across the health service.	N/A	Self-awareness, self-management, ability to challenge routine/assumptions, goal setting, support from preceptors, coach, access to learning resources, performance appraisals, use of adult learning methods *Structure* Learning resources, Availability of preceptors, coaches, supervisors, and mentors.	Strengthened partnerships between education and clinical institutions; Improved safety & client-centred care; Clear communication and reporting lines; Improved personal and professional development	III; A
Mari-Hall, A; Ulicna, D; & Duchemin, C (2013)	European Training Foundation Report	Work-based learning: Benefits and Obstacles. A literature Review for Policy makers and Social Partners in ETF	To review the evidence relating to the benefits obtained from investment in WBL worldwide	Literature Review	Asking questions, getting information, locating resource people, Listening and observing, Reflecting, learning from mistakes, Giving	*Employee:* Development of professional expertise (acquisition of technical skills and disciplinary knowledge); soft skills (communication, team work, customer	III; A

Author & year of publication	Source of publication	Tittle and place of study	Purpose of the study	Nature of research, design, population & sample size	Key findings in relation to the research question: How do nurses & midwives learn at their places of work? Available/ required Structure	Key findings in relation to the research question: How does Work-based learning contribute to the nursing/health care outcomes?	Level of evidence & Quality
	partner Countries				and receiving feedback, Use of mediating artefacts	relations skills); improved career management skills & awareness; improved self-confidence & motivation; improved quality of work, added certification. *Employers:* Increased productivity, recruitment impact, increased employee retention, better image,	
Marshall, J. E (2017)	Journal of Nurse Education in Practice Vol 12; pages 273-278 Elsevier Ltd	Developing midwifery practice through Work-Based Learning: An Exploratory study in UK	To explore what effect the introduction of a Work-Based Learning module undertaken by midwives in maternity settings has on their personal professional development, and impact of developing	Qualitative research involved: 12 midwives, 12 clinical supervisors, 12 employers/managers and 28 other	Clinical assessment and Identification of what has to be fixed, reflection on personal abilities, understanding the culture of the workplace	Increased confidence & credibility of midwives attracts increased trust among colleagues, employer and clients; Improved role identification and development among midwives reduces role	III;A

		local maternity and neonatal care provision	health professionals	(availability & accessibility of support required for learning), identification of required resources, development of learning action plan, collaboration with experts. *Structure*; Academics & clinical S.S.	conflict and promotes specialty areas; Improved communication and decision making reduces delays in the provision of health care services, increases visibility of health facility, attracts more clients and reduces community morbidity and mortality.	
Matovu, J. K. B., Wanyenze, R. K., Mawemuko, S., Okui, O., Bazeyo, W., & Serwadda D. 2013)	BMC: International Health and Human Rights; Uganda	Strengthening Health workforce capacity through work-based training	To strengthen the capacity for monitoring and evaluation and continuous quality improvement in health care service delivery	Action research that used work-based training as the intervention model was implemented on 120 trainees in 66 health care institutions completed the training	Reduced waiting time of clients at the health facility; Improved access to PMTCT services; Increased numbers of eligible clients for initiation on ART; Improved efficiency and quality of home visits; Improved data collection, management, and reporting; improved psycho-social support among clients in the PMTCT program.	III;B

Author & year of publication	Source of publication	Tittle and place of study	Purpose of the study	Nature of research, design, population & sample size	Key findings in relation to the research question: How do nurses & midwives learn at their places of work? Available/ required Structure	Key findings in relation to the research question: How does Work-based learning contribute to the nursing/health care outcomes?	Level of evidence & Quality
McDonald. G; Jackson. D; Wilkes. L & Vickers M. H (2013)	Journal of Contemporary Nurse 45(1) 134-143 Content Management Ltd	Personal Resilience in nurses and midwives: Effects of a work-based educational intervention in Australia	To devise, implement and evaluate a work-based educational intervention to potentially enhance resilience and ultimately provide protection against work place adversity	Qualitative interventional case study in a population of 14 nurses & midwives	Self-awareness, reflection, use of creative problem-solving skills, peer support, listening to others. *Structure* Learning framework, supportive learning environment.	Improved resilience among nurses and midwives towards work place adversities promotes effective communication and relationships among health care workers and their clients; Objectivity and assertiveness improves client advocacy and promotes health care outcomes.	III;A
Nacioglu, (2016)	Asia-Pacific Journal of Corporative Education, 13(3), 147-158	Examining the efficacy of a work-based learning project: Preparing new academics to teach in higher education (Australia)	Report the efficacy of work-based learning in preparing new academics to undertake the role in a higher education context	Qualitative Interpretive research that used a case-study design	Identifying an issue, exploring surrounding circumstances including self-reflection and emotional openness, engaging in	*Presumed contribution*: Development of professional identity; Participant's inclusion in a community of practice; capacity building, & creation of reflective practitioners.	III; B

Author & year of publication	Source of publication	Tittle and place of study	Purpose of the study	Nature of research, design, population & sample size	Key findings in relation to the research question: How do nurses & midwives learn at their places of work? Available/ required Structure	Key findings in relation to the research question: How does Work-based learning contribute to the nursing/health care outcomes?	Level of evidence & Quality
					interactive workshops/learning opportunities, use of educational mentor/designer, readiness of workplace environment to support WBL		
Okereke et al. (2015)	BMC Health Services Research, 15:64	An Innovation for improving maternal, newborn and child health (MNCH) service delivery in Jigawa State, northern Nigeria: A qualitative study of stakeholders' perceptions	To evaluate the perceptions of different stakeholders about clinical mentoring as a strategy for improving maternal, newborn, and child health service delivery in Jigawa state, northern Nigeria	Qualitative research that used 33 mentees, mentors, clinical heads and 2 government officials at the Ministry of health		Introduction of Appropriate baseline investigations for patients; Improved use of identified treatment regimen (magnesium sulphate and misoprostol for the management of eclampsia and post-partum haemorrhage respectively);	III; B

Author & year of publication	Source of publication	Title and place of study	Purpose of the study	Nature of research, design, population & sample size	Key findings in relation to the research question	Level of evidence & Quality
		about clinical mentoring			Improved health care services on the whole.	III;B
Shiraz, F; Sharif, F; Molazem, Z; & Alborzi, M (2017)	Journal of advances in Medical Education and Professionalism, 5(1), 1-10	Dynamics of self-directed learning in M.Sc. nursing students: A qualitative research (Iran)	To explore the M.Sc. nursing students' self-directed learning activities	Qualitative research that used conventional content analysis approach; Used 12 M.Sc. nursing students	Identifying and analysing a problem; observing/watching others perform; asking others; listening to colleagues, seniors and clients; trying out (experimenting); searching for information using available literature; role modelling.	
Author & year of publication	**Source of publication**	**Tittle and place of study**	**Purpose of the study**	**Nature of research, design, population & sample size**	**Key findings in relation to the research question: How do nurses & midwives learn at their places of work? Available/ required Structure**	**Level of evidence & Quality**
Williams C. (2010)	Journal of Nursing Management, 18, 624–632. University of	Understanding the essential elements of work-based learning and its	To critically review the work-based learning literature and explore the implications of the	Critical Review of Literature	**Key findings in relation to the research question: How does Work-based learning contribute to the nursing/health care outcomes?** Improved creativity and utilization of knowledge hence, Promotion of evidence-based practice;	V; A

	Ulster, Newtownabbey, Co.Antrim, UK.	relevance to everyday clinical practice findings for the development of work-based learning programmes.			Improved translation of theory into practice; Promotion of life-long learning among nurses-change in status quo.
Wright, McDowell, Leese, & McHardy, (2010)	Journal of Practice Teaching and Learning (2010); 10(2), 28-42	A scoping exercise of work-based learning and assessment in multi-disciplinary health care in Scotland	To describe and evaluate work-based learning according to existing literature in Scotland and from individuals involved in WBLA	Scoping review of 26 articles and qualitative approach for nurses and allied health workers (13 in total)	**Structure:** Partnership and collaboration between learner, employers and education institution;	Promotion of Learner-centred approach; integration of theory and practice; promotion of socialization and teamwork	III; A

*S.S= Support Supervision

The Process of Work-Based Learning

To establish the process, articles with information to answer the question:" How do Nurses/Midwives learn at their places of Work?' were reviewed. No step-wise process was found in any of the articles reviewed. However, articles that explored subject's self-directed learning activities had some information that represent the process individuals undergo to identify and address their learning needs. The information as outlined in the matrix was analyzed and themes developed basing on what is likely to come first, next, until the desired learning is achieved. Six themes, which can be translated into six steps are presented in table 2.

Table 3. Steps Involved in the Process of WBL

Theme/Step	Defining words or statements	Evidence
1. Identification of task or problem or gap	Exploration of surrounding circumstances, identification of what is to be fixed, self-reflection, self-assessment, self-awareness (identification of personal abilities)	Chakkaravarthy, Ibrahim, & Mahmud (2018); Shiraz, Sharif, Molazem, & Alborzi, (2017); Faithfull-byrne et al., (2017); McDonald, Jackson, Wilkes, & Vickers, (2013) Clarke & Llewellynn, (2012); Marshall, (2017)
2. Assessment of the workplace environment	Understanding of the work place culture, identification of available and accessible resources	Marshall, (2017);(Booth, 2019)
3. Development of a learning action plan	Goal setting, identification of available and accessible resources	Faithfull-byrne et al., (2017); Marshall, (2017).
4. Implementation of the learning action plan (actual activities for the desired learning) 5. Documentation 6. Evaluation	Trying and failing, asking colleagues, mentor, or coach, observing others perform, listening & reflecting, searching for information, reading available literature, use of reflective diaries, use of creative problem-solving skill, use of adult learning methods, giving & receiving feedback, engaging in workshops or training opportunities, collaborating with experts, use of mediating artifacts Reflective diaries, attending workshops & training sessions, search for information Reflection, receiving feedback	Chakkaravarthy, Ibrahim, & Mahmud (2018); Shiraz, Sharif, Molazem, & Alborzi, (2017); Faithfull-byrne et al., (2017); Mari-Hall (Nevala), Ulicna, & Duchemin, (2013); McDonald, Jackson, Wilkes & Vickers (2013); Cameron, Rutherford, & Mountain (2012); Clarke & Llewellynn, (2012); Marshall, 2017) Shiraz, Sharif, Molazem, & Alborzi, (2017); Cameron, Rutherford, & Mountain (2012); Clarke & Llewellynn, (2012). Mari-Hall, Ulicna, & Duchemin, (2013)

Structure for WBL

The literature reviewed did not clearly outline the structure that supports or is recommended for Work-Based Learning. However, through content analysis, statements like "learning framework" and "supportive learning environment" (Mcdonald, Jackson, Wilkes, & Vickers, 2013; Clarke & Llewellynn, 2012) point to structures that should be available for WBL. Marshall, (2012) highlights the collaboration between academic and clinical supervision whereas Faithfull-byrne et al., (2017) mention the need for preceptors, coaches and learning resources. Additionally, statements like: "A positive culture of learning", "interprofessional working & collaboration", "protected time for learning", and "supportive leadership" (Cameron, Rutherford, & Mountain, 2012;

Manley, Sanders, Cardiff, & Webster, 2011; Wright et al., 2010) describe the structure for WBL. Out of the 14 articles analyzed, six had statements or words that hinted on the structure for WBL.

Contribution of WBL to Nursing and Health Care Outcomes

The contribution of WBL to nursing or health care outcomes were derived from the outcomes of the WBL projects that were implemented or evaluated. The personal or institutional benefits attributed to WBL were translated into its contribution to the nursing or healthcare outcomes. Out of the 14 articles analyzed, seven focused on either developing nursing or midwifery practice through WBL, evaluating a WBL project, or debating the use of WBL. Sub-themes are summarized in figure 2.
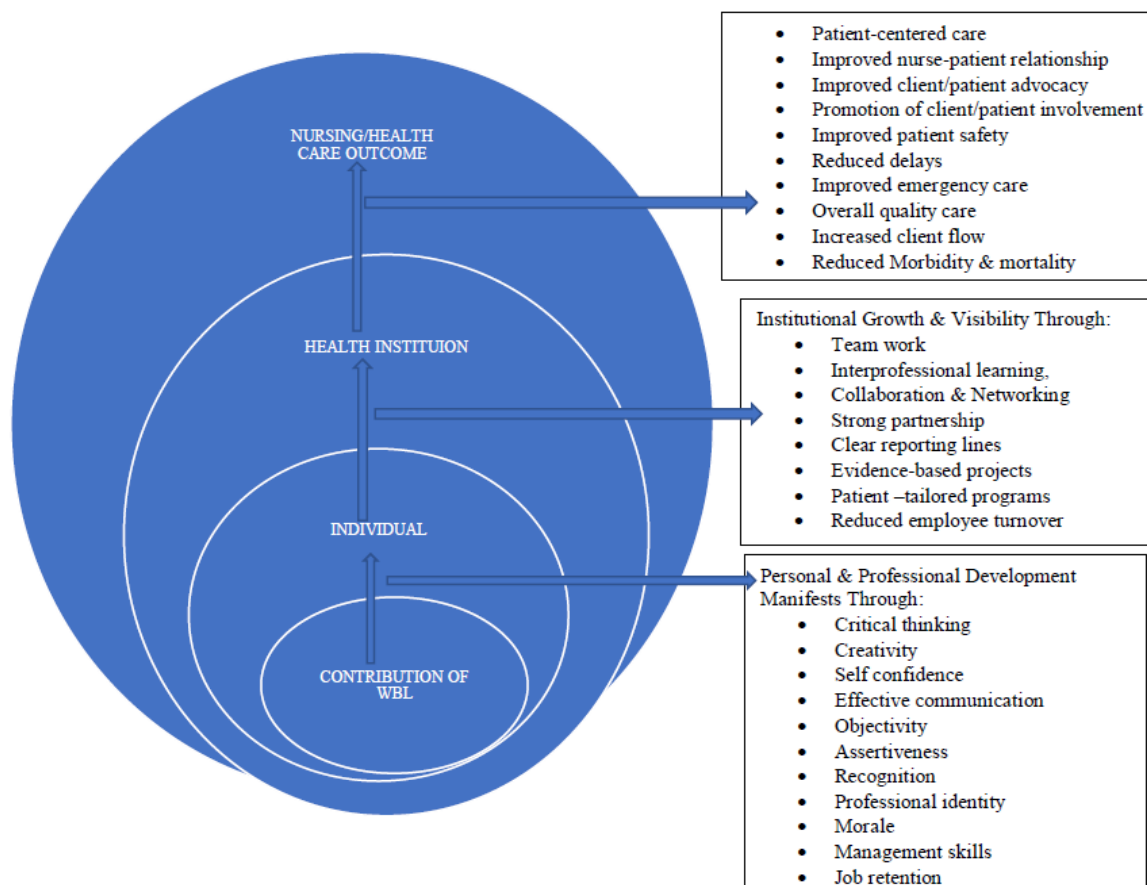

Figure 2. Contribution of WBL to Nursing/Health Care Outcomes

The contribution of WBL stretches from an individual, to the team, institutional and professional outcomes (Fig. 2). Individuals gain by acquiring several skills, obtaining recognition,

professional identity, and building morale. The skills acquired lead to job retention. The institution registers pronounced growth and visibility through what WBL builds as seen in Fig. 2 and there is improvement in professional outputs and health care outcomes.

Discussion

The literature review focused on describing the process that nurses and midwives undergo to identify and achieve their learning needs at the workplace, determining the structure that support WBL and, its contribution to nursing or healthcare outcomes. Findings revealed that successful engagement in WBL may require an understanding of the different steps involved, the supporting structures and its benefits. Apart from the literature reviews, most of the evidence was from action research. This is not surprising since WBL is an application strategy that may rarely call for Randomized Controlled Trials (RCTs).

For learning to take place at the workplace, the learner, employer and actual environment must be engaged. The environment or workplace presents a task or problem to be addressed. The learner or employee engages in an analysis of the task or problem. This goes hand in hand with self-reflection or assessment to determine how best to accomplish or address the task. This helps the individual learner/employee to identify the knowledge and skills gaps to be addressed. According to Chakkaravarthy, Ibrahim, & Mahmud (2018); Shirazi, Sharif, Molazem, & Alborzi, (2017); Faithfull-byrne et al., (2017); Mcdonald, Jackson, Wilkes, & Vickers, (2013), effective WBL requires the learner to initiate the process through a self-assessment. Chakkaravarthy, Ibrahim, & Mahmud, (2018) assert that self-assessment calls for the skill of self-analysis and logic reasoning, which are driven by self-interest. This relates to what Raelin (2015) describes as tacit knowledge that helps an individual to learn through experience.

Findings of the review revealed the need to assess the workplace environment to identify the available and accessible resources and tools to be used, and to understand the culture (Marshall, 2017; Booth, 2019). This is in agreement with the findings of Norman's and Sjetne's scoping review on nurse's perception of work environment (2017) which revealed the outstanding fields as resource adequacy, working conditions, collaboration or teamwork of the staff, culture, management and professional support. Qualified nurses and midwives are part of the inspection team that continually assesses the workplace environment for the provision of quality health care services (Bae & Fabry, 2014). Assessment of the workplace environment enables the employee to determine the availability and state of resources, hence make evidence-based requisitions that promote the accomplishment of the clinical tasks. In the same way, for a nurse or midwife to engage in successful WBL, there is need to assess the workplace environment to develop a valid and relevant work plan (Faithfull-byrne et al., 2017).

Each organization has its own beliefs, values, principles or ideologies which define its culture. Understanding the workplace culture guides the learner or employee's behaviors within and outside the organization (Juneja, 2015). Juneja (2015) further asserts that the culture of an organization presents predefined policies that direct the employee in his roles and responsibilities but also bring all employees on a common platform. An organization with a culture that supports WBL will motivate employees to engage in it. Therefore, successful WBL requires an employee to fit in the organization culture.

Having identified the task, the learning gap, workplace culture and available resources, it is important for the learner (employee) to develop an action plan (Faithfull-byrne et al., 2017; Marshall, 2017). A learning action plan spells out the specific goals and activities to be engaged in to achieve the learning. The review identified several activities in which the learner can engage to achieve learning at the workplace. They vary from trying and failing to collaborating with experts (Table 2). Raelin (2015) asserts that trying out means using the available resources or tools, and by doing so, evidence of what is available and missing comes out. Trying out results into experience or seeking the experienced for help (Mari-Hall (Nevala), A; Ulicna, 2013; Raelin, 2015).

The evidence of one's learning ought to be documented to ascertain achievement of the set learning goal (s). On the other hand, documentation on its own is another learning approach for some individuals. Not much evidence was found in relation to documentation as a critical step for WBL. However, a learner or employee who keeps a reflective diary (Mari-Hall, Ulicna, & Duchemin, 2013; Cameron,

Rutherford, & Mountain, 2012) depicts evidence of documenting the learning. Since different institutions used different methods for assessing WBL (Wright et al., 2010), there is still a challenge of identifying the recommended documents as evidence for one's WBL.

The last step in the process of WBL was identified as evaluation. Evaluation is the process of determining any achievements in relation to the set goals and identifying areas for improvement (Mari-Hall (Nevala), A; Ulicna, 2013). Every process that has identifiable steps requires evaluation at different stages, the same for WBL. In education, the different learning approaches ought to be evaluated to determine progress. Available literature on WBL reflects evaluation of the entire WBL program (Burholt, Buckingham, Roche, Nixon, & Simmons, 2016; Nacioglu, 2016; Mari-Hall, Ulicna, & Duchemin, 2013) and not the self-evaluation at individual level.

It is evident that successful WBL requires a strong support system (Ferrández-Berrueco, Kekale, & Devins, 2016) that ranges from the employer, education institution and professional regulatory bodies. However, Sitikovs, Anohina-Naumeca, & Petrovica, (2013) talk about the tripartite of WBL as the employer, employee and institution of higher education. The role of each partner ought to be spelt out clearly; the employer has a vision, upon which the employee contributes. The education institution ought to participate in guiding the employee's and employer's strategies to achieve the set goals (Mari-Hall et al., 2013). It is noted that a positive learning culture that cuts across from the learner (employee), employer and partners strengthen collaboration and implementation of projects that promote quality health care services (Cameron, Rutherford, & Mountain, 2012; Manley et al., 2011). WBL strengthens the partnership between educational and clinical institutions. The strong partnership promotes collaboration and improves evidence-based practice. However, Wright et al., (2010) warns about the challenge of change management in acquiring the required partnerships and collaborations.

The contribution of WBL to health care outcomes calls for the individual, team, organization, and multisectoral efforts to effect community, similar to what the Social Ecological Model (SEM) recommends. The Social Ecological Model is an effective approach used by public health to prevent and control diseases and illnesses (ACHA, 2018). The SEM involves five levels in its operation: self (individual), interpersonal, community, and policy (ACHA, 2018). According to the SEM, the knowledge, attitude, skills and self-concept of an individual are key to influencing behavior. WBL impacts the individual's knowledge, skills, attitude and self-concept by increasing the learning capacity (Salehe & Doreen, 2016), critical thinking, creativity, credibility and confidence (Marshall, 2017; Williams, 2010). Bäck et al., (2017) noted that increased credibility and confidence among health care providers attracts increased trust from their colleagues, employer and clients. WBL has been reported to improve personal and interpersonal communication skills and decision making, attributes that reduce delays in the provision of health care services (NHS Providers, 2015). Additionally, WBL develops the intrapersonal abilities of objectivity and assertiveness among health care providers (Mcdonald et al., 2013b). Characteristics of objectivity and assertiveness among health care individuals improve client advocacy and promote health care outcomes (Bakari Salehe, 2016; Nacioglu, 2016).

According to the SEM, characteristics at the personal level influence the interpersonal level. The interpersonal level involves the peers, partners and family. In a health care setting, this can be related to other members of the health care team who may be peers, supervisors, mentors and other health professionals. For an individual to engage in successful WBL, there is need to interface with the team. Some of the benefits of WBL include interprofessional learning, strengthening team work through effective collaboration and networking (Cameron et al., 2012). An organization with strong team work, collaboration and networking grows its visibility and reflects its power (Gibson, Hardy, & Buckley, 2014), attributes that attract more clients.

It has been noted that successful WBL programs require organizational support. The support may be through a designed learning culture, partnerships with education institutions and other policy or regulatory bodies. In the same way, the SEM recommends involvement of the community. The community may be the organization, leaders and providers of social and technical services. Support from the community

boosts the individual and other members at interpersonal level to promote the desired behavior. An individual's improved soft skills and learning capacity will be influenced by the existing organizational policies, its partnerships and collaboration with other institutions. Policy comes in to enforce behavior. National and international policies shape personal and interpersonal behavior, resulting into the desired outcome.

Limitations

The findings are limited to the databases used therefore other relevant literature not indexed in these datasource might have missed. The search terms were designed to identify the relevant concepts but may have missed relevenat literature. Screening was perfomed by one reviewer.

Conclusion

Work-Based Learning is a commendable health improvement strategy likely to equip nurses and midwives with the required employability skills to improve self, the profession and client's expected outcomes. Its success calls for the individual nurse's potential to employ tacit knowledge, blend in the organization culture and show case of the achieved learning. For any given task, nurses and midwives ought to engage in self-assessment and evaluation, assessment of the workplace (environmental assessment), developing a learning action plan, implementing the learning action plan, documentation, and evaluation. Health care facilities should provide a learning culture that models nurses and midwives to work towards achieving the set institutional goals. Health care facilities should work hand in hand with education institutions to strengthen workplace learning. Policies that guide the implementation of WBL in health care facilities will strengthen its adoption, leading to improvement in professional and client outcomes.

Contribution of this Review findings to Nursing

This study contributes to the body of knowledge by documenting that:
1. The process of WBL involves six steps that are dependent on learner initiative and involvement

2. The structure of WBL is complete through availability of learning resources, a positive learning culture and strong collaboration between the learner (employee), the employer, education, and other policy formulating institutions
3. WBL has potential for individual & institutional growth & visibility, promoting quality health care outcomes
4. Successful contribution of WBL to nursing or health care outcomes may require a Social Ecological Model (SEM) approach.

Acknowledgement

Conflict of Interest

The author(s) declare no conflict of interest.

References

[1] ACHA. (2018). *Ecological Model* □. Retrieved from https://www.acha.org/HealthCampus/HealthCmpus/Ecological_Model.aspx

[2] Alam, A. (2015). Work Based Learning pedagogy in the Cross Disciplinary Fields of Health and Education. 5(1), 105–116.

[3] Bäck, L., Hildingsson, I., Sjöqvist, C., & Karlström, A. (2017). Developing competence and confidence in midwifery-focus groups with Swedish midwives. Women and Birth, 30(1), e32–e38. https://doi.org/10.1016/j.wombi.2016.08.004

[4] Bae, S., & Fabry, D. (2014). Assessing the relationships between nurse work hours / overtime and nurse and patient outcomes : systematic literature review . Nursing Outlook, 62(2), 138–156. https://doi.org/10.1016/j.outlook.2013.10.009

[5] Bakari Salehe, D. N. (2016). Good quality interaction between the registered nurse and the patient. 48.

[6] Booth, J. (2019). How does participant experience of work-based learning shape a professional identity? Work Based Learning E-Journal, 8(1), 20–38.

[7] Burholt, R., Buckingham, T., Roche, M., Nixon, E., & Simmons, S. (2016). Developing nursing practice through Work Based Learning.

[8] Cameron, S., Rutherford, I., & Mountain, K. (2012). Debating the use of work-based learning and interprofessional education in promoting collaborative

practice in primary care: a discussion paper Ishbel Rutherford MSc BSc RN RM DNcert DNT Senior Lecturer. *Quality in Primary Care*, *20*, 211–217.

[9] Chakkaravarthy, K., Ibrahim, N., & Mahmud, M. (2018). Nurse Education Today Predictors for nurses and midwives ' readiness towards self-directed learning : An integrated review. *Nurse Education Today*, *69*(February), 60–66. https://doi.org/10.1016/j.nedt.2018.06.030

[10] Clarke, D., & Llewellynn, A. (2012). Examining the efficacy of a work-based learning project: Preparing new academics to teach in higher education. *Asia-Pacific Journal of Cooperative Education*, *13*(3), 147–158.

[11] Faithfull-byrne, A., Thompson, L., Schafer, K. W., Elks, M., Jaspers, J., Welch, A., … Moss, C. (2017). Clinical coaches in nursing and midwifery practice : Facilitating point of care workplace learning and development. Collegian, 24(4), 403–410. https://doi.org/10.1016/j.colegn.2016.06.001

[12] Ferrández-Berrueco, R., Kekale, T., & Devins, D. (2016). A framework for work-based learning: Basic pillars and the interactions between them. Higher Education, Skills and Work-Based Learning, 6(1). https://doi.org/10.1108/HESWBL-06-2014-0026

[13] Gibson, C., Hardy, J. H., & Buckley, M. R. (2014). Understanding the role of networking in organizations. Career Development International, 19(2), 146–161. https://doi.org/10.1108/CDI-09-2013-0111

[14] Juneja, P. (2015). Importance of Organization Culture. Retrieved from https://www.managementstudyguide.com/importance-of-organization-culture.htm

[15] Lowden, K., Hall, S., Elliot, D., & Lewin, J. (2011). Employers' perceptions of the employability skills of new graduates. In The SCRE Centre Research In Education. https://doi.org/ISBN 978-0-9565604-3-8

[16] Manley, K., Sanders, K., Cardiff, S., & Webster, J. (2011). Effective workplace culture: the attributes, enabling factors and consequences of a new concept. International Practice Development Journal, 1(2).

[17] Mari-Hall (Nevala), A; Ulicna, D. & D. (2013). WORK-BASED LEARNING : BENEFITS AND OBSTACLES. ETF.

[18] Mari-Hall, A., Ulicna, D., & Duchemin, C. (2013). Work Based Learning: Benefits and Obstacles - A Literature Review For Policy Makers And Social Partners In ETF Partner Countries. European Training Foundation, 1–45.

[19] Marshall, J. E. (2017). Developing midwifery practice through work-based learning : An exploratory study. (June 2012). https://doi.org/10.1016/j.nepr.2012.06.003

[20] Matovu Joseph K B, Wanyenze Rhoda K, Mawemuko Susan, Okui Olico, Bazeyo William, and S. D. (2013). Strengthening health workforce capacity through work-based training. BMC International Health & Human Rights, 13(8), 2–13. https://doi.org/10.3109/13625189809167254

[21] Mcdonald, G., Jackson, D., Wilkes, L., & Vickers, M. H. (2013a). Personal resilience in nurses and midwives: Effects of a work-based educational intervention. Contemporary Nurse, 45(1), 134–143. https://doi.org/10.5172/conu.2013.45.1.134

[22] Mcdonald, G., Jackson, D., Wilkes, L., & Vickers, M. H. (2013b). Personal resilience in nurses and midwives: Effects of a work-based educational intervention. Contemporary Nurse, 45(1), 134–143. https://doi.org/10.5172/conu.2013.45.1.134

[23] Nacioglu, A. (2016). As a critical behavior to improve quality and patient safety in health care: speaking up! Safety in Health, 2(1), 10. https://doi.org/10.1186/s40886-016-0021-x

[24] NHS Providers. (2015). Right place, right time. Better transfers of care: a call to action. 44. Retrieved from http://nhsproviders.org/media/1258/nhsp-right-place-lr.pdf

[25] Okereke, E., Tukur, J., Aminu, A., Butera, J., Mohammed, B., Tanko, M., … Egboh, M. (2015). An innovation for improving maternal, newborn and child health (MNCH) service delivery in jigawa state, northern Nigeria: A qualitative study of stakeholders' perceptions about clinical mentoring. BMC Health Services Research, 15(1), 1–10. https://doi.org/10.1186/s12913-015-0724-4

[26] Raelin, A. J. (2015). A Model of Work-Based Learning. ResearchGate, (June). https://doi.org/10.1287/orsc.8.6.563

[27] Salehe, B., & Doreen, N. (2016). QHNMSDF - Building Blocks of Lifelong Learning – A framework for nurses and midwives in Queensland. (September).

[28] Shirazi, F., Sharif, F., Molazem, Z., & Alborzi, M. (2017). Dynamics of self-directed learning in M.Sc. nursing students: A qualitative research. Journal of Advances in Medical Education & Professionalism, 5(1), 33–41. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/28124019%0A http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=PMC5238494

[29] Sitikovs, V., Anohina-Naumeca, A., & Petrovica, S. (2013). Tripartite view on Work-based Learning in Latvia. Procedia - Social and Behavioral Sciences, 93, 1552–1561. https://doi.org/10.1016/j.sbspro.2013.10.081

[30] Williams, C. (2010a). Understanding the essential elements of work-based learning and its relevance to everyday clinical practice. Journal of Nursing Management, 18(6), 624–632. https://doi.org/10.1111/j.1365-2834.2010.01141.x

[31] Williams, C. (2010b). Understanding the essential elements of work-based learning and its relevance to everyday nursing practice. In Journal of nursing management (Vol. 18). https://doi.org/10.1111/j.1365-2834.2010.01141.x

[32] Wright, W., McDowell, J. R. S., Leese, G., & McHardy, K. C. (2010). A scoping exercise of work-based learning and assessment in multi-disciplinary health care in Scotland. Journal of Practice Teaching and Learning, 10(2), 28–42. https://doi.org/10.1921/174661110X592737.

1 Appendix 1

Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
Title			
Title	1	Identify the report as a scoping review.	1
Abstract			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	2-3
Introduction			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	4
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	4
Methods			
Eligibility criteria	5	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	5
Information sources*	6	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	4-5
Search	7	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	5
Selection of sources of evidence†	8	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	5-6
Data charting process‡	9	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was	8

		done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	
Data items	10	List and define all variables for which data were sought and any assumptions and simplifications made.	9
Critical appraisal of individual sources of evidence§	11	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).	8
Synthesis of results	12	Describe the methods of handling and summarizing the data that were charted.	7-8
Results			
Selection of sources of evidence	13	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	7
Characteristics of sources of evidence	14	For each source of evidence, present characteristics for which data were charted and provide the citations.	9-15
Critical appraisal within sources of evidence	15	If done, present data on critical appraisal of included sources of evidence (see item 12).	9-15
Results of individual sources of evidence	16	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	9-15
Synthesis of results	17	Summarize and/or present the charting results as they relate to the review questions and objectives.	16-19
Discussion			
Summary of evidence	18	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	20-24
Limitations	19	Discuss the limitations of the scoping review process.	24-24
Conclusions	20	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	25
Funding			
Funding	21	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	26

JBI = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.