The Idea of Applying the "Broken Windows Theory" as Quality Tool to Improve Risk Management Strategies

[1]Nouran Sameh Alsafty
Benha Faculty of Medicine

Abstract:-

➢ **Background:**
Broken windows theory (BWT) proposes that visible signs of crime and disorder, however they are minor can lead to further levels of crime and disorders and the concept here is to manage and overcome the minor disorder means we save the whole system from the dangerous disasters.

➢ **Methods:**
The study methodology consisted of a literature review in Google scholar and the PUBMed. the Google scholar search found 10 related papers. PUBMed database search found 16 related papers.

➢ **Results:**
This Review focuses on the Concept of BWT application in Advancing Risk management in healthcare system.

➢ **Conclusion:**
We advance a model of BWT in healthcare system and a proposal of application of this Phenomenon.

Keywords: Broken Window Theory, Risk Management Activities, Strategies for Healthcare Risk management, Benefits of the BWT Application and Hospitals Organization.

I. INTRODUCTION

The broken window theory (BWT) is an idea proposed by criminologists James Q. Wilson and George Kelling in 1982, which argues that when people are presented with physical signs of disorder, crime and other forms of anti-social behavior are more likely to occur. The BWT states that allowing small windows of opportunity, such as a broken window or sign of disrepair, signals to potential criminals that no one cares, and as a result they will be less inhibited to carry out criminal acts. In recent years, the BWT has been increasingly used in healthcare settings to attempt to reduce risk, improve patient safety, lower costs, and increase nurse satisfaction. The goal of this research paper is to analyze how BWT can be strategically implemented in hospitals to improve the risk management of patients.

➢ *Overview of Broken Window Theory:*
The broken window theory has now been identified as a key factor in how risk management failure can occur in hospitals, specifically in the medical field. This is due in part to the chaotic atmosphere of hospitals and the low tolerance for visible errors in the medical field, which can be indicative of poor performance and care. Hospitals and healthcare organizations are often left in a state of disrepair, where staff and patients are accustomed to substandard services and outcomes, and where a culture of silence is instilled to downplay or cover up significant problems [1]. BWT advocates have therefore argued that by addressing disrepair and other signs of disorder, a shift in the culture of tolerant behavior and decline of acceptable standards may be achieved, allowing an organization to put patient safety first and make improvements that will ultimately enhance the quality of care.[2]

➢ *The Relationship Between BWT and Risk Management in Hospitals:*
Broken windows theory (BWT) proposes that visible signs of crime and disorder, however they are minor can lead to further levels of crime and disorders and the concept here is to manage and overcome the minor disorder means we save the whole system from the dangerous disasters, So the BWT can be a powerful tool for risk management. The theory suggests that the number of quality issues increases when not enough attention is paid to minor issues. For example, an uncorrected broken window in a building is usually followed by windows breaking more frequently [3]. BWT was first introduced as a Quality Management Tool in 1980. Since then, it has been used extensively to analyze risk management strategies. The concept of the theory has also been used in healthcare facilities such as hospitals.it has been used as a quality tool within health care systems, specifically the Hospital Care system [4]. The problem with the healthcare system is that there are some doctors and nurses who get away with dangerous behavior because they think no one is watching. This paper introduces the broken windows theory as a tool for understanding the problem, to make hospitals safer, staff need to be encouraged to speak up when they notice a situation where they believe their colleagues may be deviating from hospital policy or practice. And the hospital should put strategies for Risk Management and Quality all the staff members to deal with them [5]. Healthcare environments are not much different from any other places or organization, like schools, banks, and jails. Creating a safe environment to function can be

achieved through education, screening, and counseling. The "Broken Windows Theory" is an evidence-based theory that is used to reduce crime in areas where the broken windows work. It could be applied easily in healthcare to reduce the number of incidents that occur inside the hospital [6]. BWT has been applied to the hospital context for many years and is supported by much empirical research. It provides a clear framework for behavior that has a negative impact on others, yet this behavior goes undetected. In health care, it is argued that due to time pressures and staff shortages BWT will continue its prevalence because it is seen to be a low-cost solution that increases staff control at the same time it reduces patient safety issues. This paper looks at risk management strategies in health care. It argues that because of limited resources there needs to be greater consideration of disorder as an intervention opportunity for safety improvement, particularly with regards to patients who are vulnerable and/or injured [7]. Most healthcare organizations have adopted the patient-centered approach in care. With the limited resources, health care organizations must consider nursing stations as a safety improvement opportunity to minimize the risk factors and reduce patient's vulnerability. BWT provides a clear framework for behavior that has a negative impact on others, yet this behavior goes undetected. In health care, it is argued that due to time pressures and staff shortages BWT will continue its prevalence because it is seen to be a low-cost solution that increases staff control.at the same time it reduces patient safety issues. Medical mistakes can be life-or-death events. They are potentially devastating, so they are serious problems that need to be eliminated. Now imagine if medical professionals could implement their daily work more efficiently and safely? To achieve this goal, a new model is necessary. BWT delivers solutions to fix, prevent, and enhance patient safety in health care settings. If the window is broken and left uncovered, it can lead to further Risks, fixing up our windows today will offer a long-term

improvement of healthcare system. Taking into consideration that most hospital-acquired surgical errors are from objectively preventable (human factor) causes, this could help to be a determining factor, in which baseline values will be compared and measured. [8]

➤ *Risk Management on the way of BWT:*
Risk management, defined as the systematic process of identifying, evaluating, and addressing potential and actual risk, is proactive in nature and is meant to protect organizational assets and minimize financial loss. Managing risk involves taking action to reduce the frequency and severity of unexpected incidents and promote high reliability performance and system design.[9]

Risk management activities were inducted into the health care system in response to the growing national malpractice insurance costs. As of the 1970's, the risk management function was essentially comprised of Quality Assurance nurses performing incident report and trending in acute care hospitals, but there was little to no proactive prevention of control activities [10]. Risk management should be common practice throughout an organization, and it is recommended that each employee and volunteer be charged with risk management. A person appointed as Risk Manager should be responsible for integrating all components of the program. In hospitals, this is typically the Risk Manager, in inpatient settings, it could be Quality Manager, and in outpatient settings, it is frequently the Head Nurse or Office Manager [11]. As such, proactive risk management activities have been integrated into the health care system over the last several decades to lower the prevalence of malpractice. The practical application of the BWT has proven to be effective in reducing costs and enhancing the quality of health care by preemptively addressing and correcting minor issues.[12]

Table 1 The Fruitful Elements of Risk Management Based on BWT Concept

Risk assessment	Which involves identifying and evaluating the potential risks associated with a particular environment or situation. In the context of hospitals, risk assessment can involve identifying and assessing the physical environment within the hospital, including items such as broken windows, disrepair, and general physical neglect. It has been argued that neglect of physical maintenance and the presence of physical disrepair can lead directly to an increase in the rates of medical errors and other negative outcomes. Thus, the presence of physical disrepair can be seen as a risk factor that must be addressed.[13]
Risk reduction	Which involves taking steps to lessen the severity or frequency of specific risks. In the context of hospitals, one of the key strategies for effective risk management is to minimize the effects of broken windows and other forms of physical disrepair, as this can reduce the risk of medical errors and other negative outcomes. This can be achieved by implementing regular maintenance schedules and developing protocols and procedures to address any signs of deterioration in the physical environment. For example, if a broken window is discovered, it should be repaired in a timely manner to prevent further damage. Similarly, regularly scheduled maintenance of hospital equipment can help to identify signs of disrepair and ensure that any necessary repairs are completed before they become a significant problem.[14]
Developing Clear Policies:	Developing and enforcing clear Health Care policies can show that the management has a zero-tolerance approach to any unacceptable behavior. By clearly setting out expectations for staff and patients, health care organizations are not just showing their commitment to providing quality care, but also their commitment to keeping a well-managed, professional environment.[15]

Create a Culture of Accountability:	A professional organization must cultivate an organizational culture of accountability. Health care providers should be proactive in setting standards and expectations to help prevent any behavior that could lead to a broken window. This can manifest in appraisals, feedback, or evaluations of team members at all levels in the organization. Acknowledging that any kind of misbehavior will not be tolerated can help ensure that everyone is held to the same high standard. [16]

➢ *Main Steps in the Clinical Risk Management Process:*
These needs Planned strategies applied with the help of Most of Hospital departments.

Fig 1 Main steps in the clinical risk
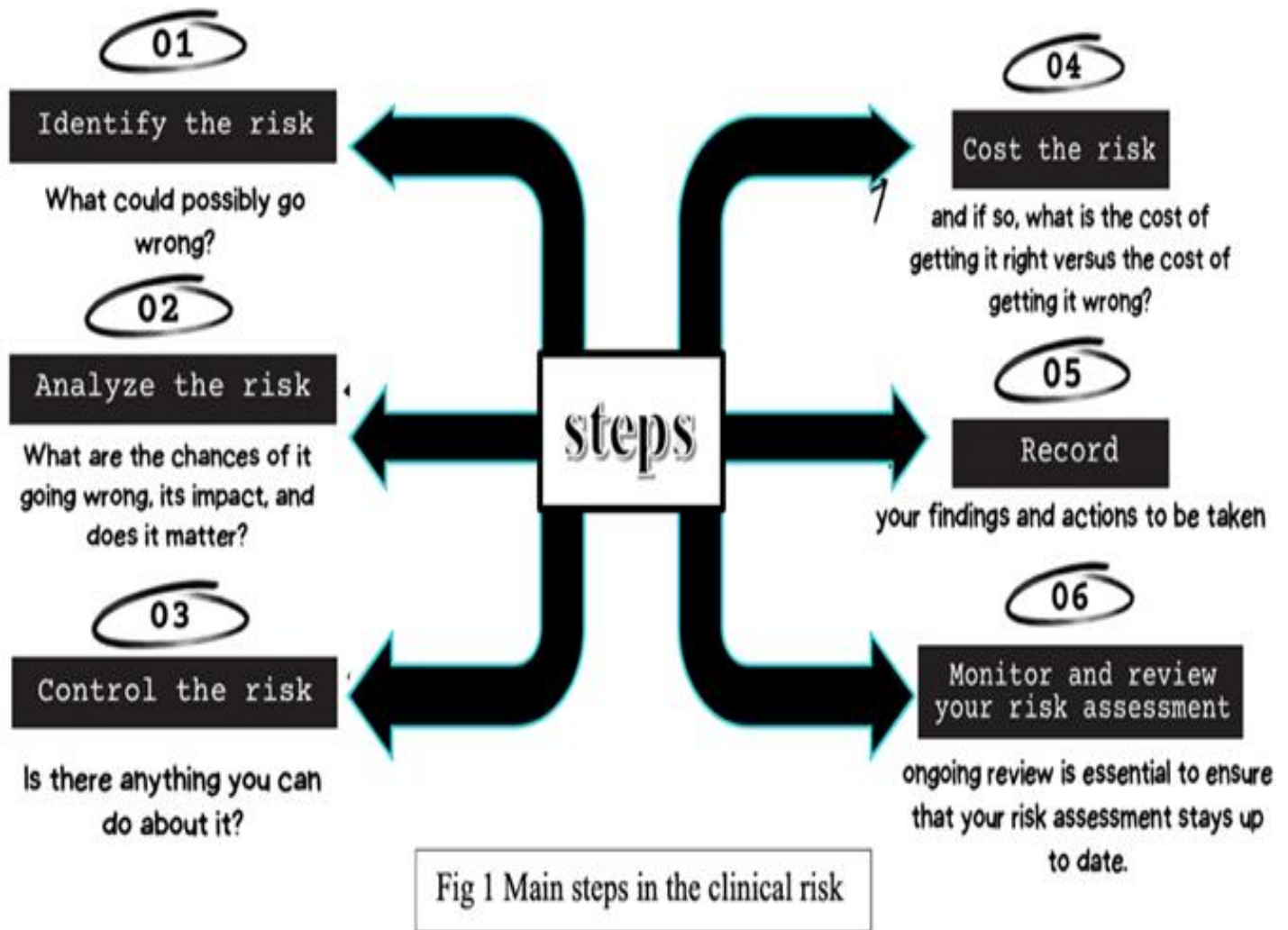
➢ *Risk Management Committee will have Representatives from the following Departments:*
- Quality Assurance
- Blood Bank
- Medical Audit
- Infection Control
- Safety and Security
- Accreditation
- Education
- Physicians
- Nurses
- Legal Counsel
- Tissue Committee
- Professional Liability Committee
- Professional Practices Committee
- Utilization Review Committee

➢ *Strategies for Advancing the Risk Management:*

First, good applicable strategies mean good training and Awareness with Strick compliance of the whole staff to these Strategies, and this is Done By applying the Step-By-step process**.** [17] [fig 2]

• *Step-By-Step Process:*

If a health care organization implements a proactive risk management strategy today, it could use a simple seven-step process like this one: In view of the rapid changes in all facets of the health care industry, there is a need to continually strengthen both monitoring and evaluation of the risk management program.[18]
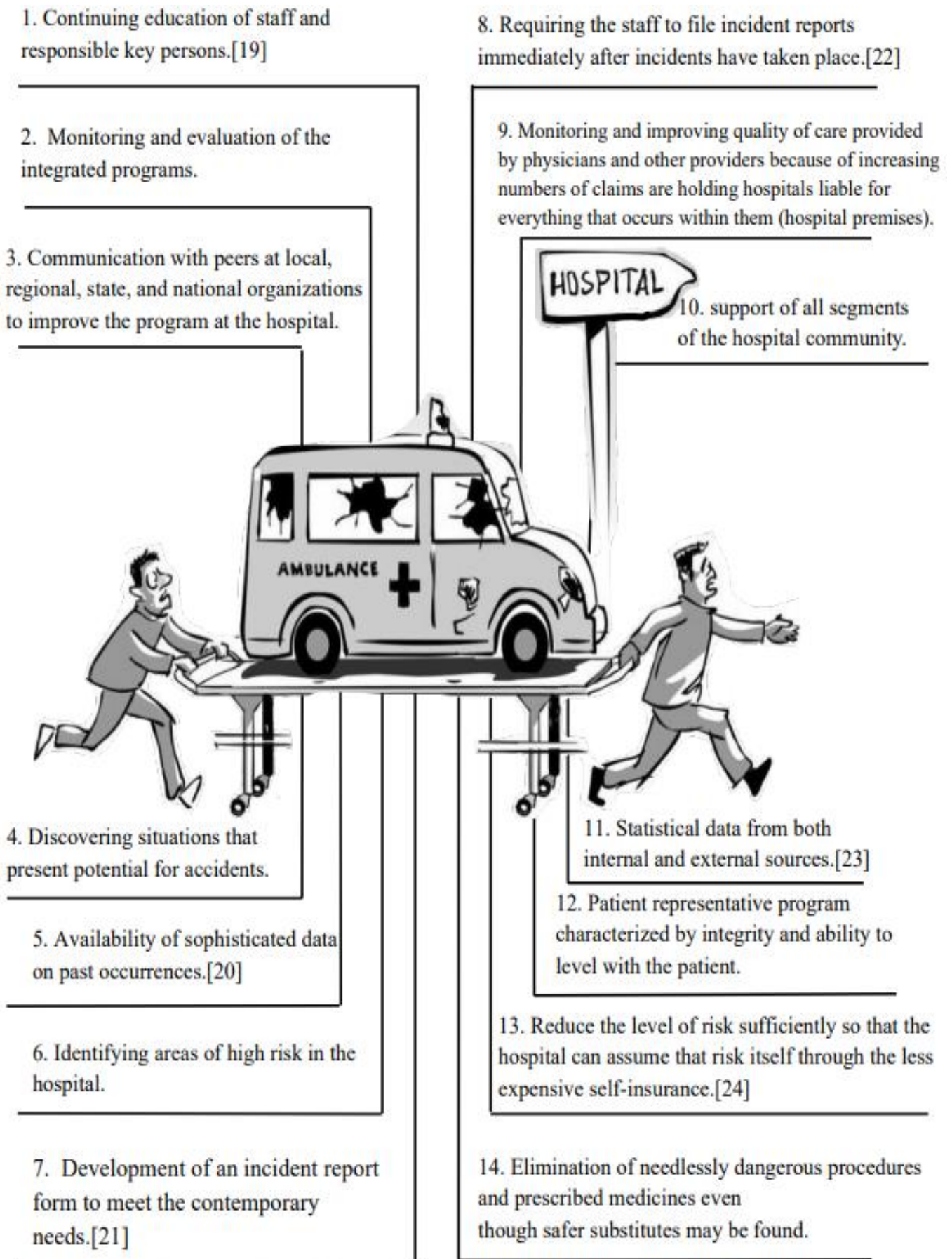

Fig 2 Step-By-Step Process

1. Continuing education of staff and responsible key persons.[19]

2. Monitoring and evaluation of the integrated programs.

3. Communication with peers at local, regional, state, and national organizations to improve the program at the hospital.

4. Discovering situations that present potential for accidents.

5. Availability of sophisticated data on past occurrences.[20]

6. Identifying areas of high risk in the hospital.

7. Development of an incident report form to meet the contemporary needs.[21]

8. Requiring the staff to file incident reports immediately after incidents have taken place.[22]

9. Monitoring and improving quality of care provided by physicians and other providers because of increasing numbers of claims are holding hospitals liable for everything that occurs within them (hospital premises).

10. support of all segments of the hospital community.

11. Statistical data from both internal and external sources.[23]

12. Patient representative program characterized by integrity and ability to level with the patient.

13. Reduce the level of risk sufficiently so that the hospital can assume that risk itself through the less expensive self-insurance.[24]

14. Elimination of needlessly dangerous procedures and prescribed medicines even though safer substitutes may be found.

Fig 3 Risk Management Program

➢ *Healthcare Organization Role for Maintenance:*

The health care organization must ensure adequate supervision of the clinical practice of each of its professionals. This process is frequently included in the organization's credentialing and peer review programs. Health care organizations must develop and implement competency-based performance parameters for each professional category. The scope of competencies required should be in accordance with the regulatory requirements of each professional group.[25]

➢ *Results of Application of BWT in Risk Management of Healthcare System:*

The application of the BWT in risk management of the healthcare system has several benefits:

- It provides a detailed view of risk in the healthcare system, allowing for comprehensive risk management.
- Marked Risk Reduction.
- Reduce the risk of medical errors and other negative outcomes.
- Improving quality of care provided by physicians.
- Marked Elimination of needlessly dangerous procedures.
- Leads to Brilliant Healthcare System with Successful rate.

II. METHODS

➢ *Protocol and Registration:*

This review of current studies, dealing with risk management strategies according to broken window theory, was written according to PRISMA statement for reporting systematic reviews.

➢ *Eligibility Criteria:*

Case reports were excluded due to lack of outcome data. clinical and non-clinical Minor errors that developed into major disastrious uncontrolled Risks due to Ignorance of minor Errors have been reported in more than 5 hospitals , so our study targets this problem by Solutions depending on the concept of BWT and we focused on How to apply it for advancement of Risk Management in our hospital this Survay done from four major hospitals.

➢ *Information Sources:*

Studies were identified by searching electronic databases PubMed, Google Scholar, the Cochrane database was reviewed, the last search was conducted in 2022.

➢ *Search:*

For searching the electronic databases, the following search term were used: Broken Window Theory, Risk management Activities, Strategies for healthcare Risk management.

➢ *Study Selection:*

First, titles and abstracts were screened for eligibility criteria, then full text availability were checked. Eligibility was assessed second time based on full texts article if abstracts were not enough. The search on PubMed provided 16 article, 10more articles were found on Google Scholar search and 3 systematic reviews from Cochrane library. A sum of 29 articles were identified, through screening based on titles and abstracts, 12 articles were excluded because they didn't meet eligibility criteria. Out of the remaining 17articles, 4 articles were excluded because full texts were not available, 3 articles turned out to be case reports and 2 article didn't contain the appropriate outcome data. [Fig 4]
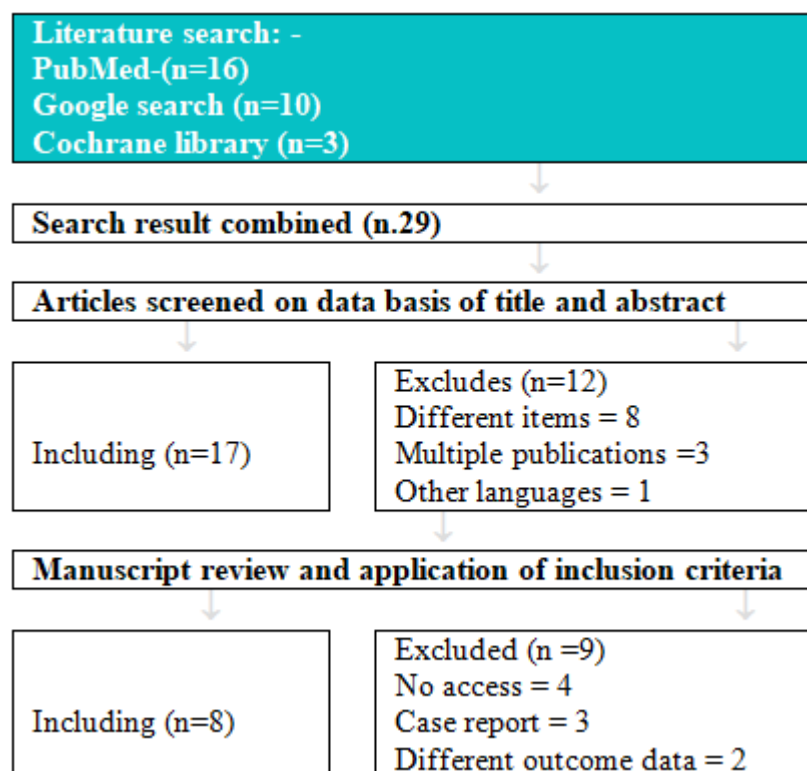
Fig 4 Flow Chart for the Study Selection

III. SUGGESTIONS AND RECOMMENDATIONS

➢ *Action in Benha University Hospital:*

This can be achieved through specific actions and behaviors that embody a commitment to safety:

- Provide safety education to front-line staff, managers, and physicians that includes team training and education in communication techniques.
- Advocate safety as everyone's responsibility and incorporate a safety culture initiative into the overall organizational patient safety plan; ensure that patient safety initiatives, action plans, and results, as well as interventions to improve safety, are periodically reported to the board of directors.
- Empower staff to identify and ameliorate hazards and risks by allocating adequate safety resources and establishing a non-punitive system for reporting errors and events.
- Implement a reward-based reporting system and ensure timely feedback to staff on how reports are used to improve patient safety.
- Healthcare leaders and researchers should develop a "code of safe health settings and practices" to keep health practices much safer and up to the required standards.
- Healthcare organizations should conduct conferences, seminars, and discussions about how to initiate and maintain safety culture among all working teams while providing patient care.

IV. CONCLUSION

In conclusion, the 'Broken Window' theory has potential applications in the healthcare sector, and healthcare professionals should consider the implications of the theory in terms of risk management and patient safety. By ensuring that all staff are correctly trained and supervised, and by creating a culture of safety and accountability, healthcare organizations will be better placed to minimize the risk of medical negligence and errors. The practical application of the BWT has proven to be effective in reducing costs and enhancing the quality of health care by preemptively addressing and correcting minor issues.

REFERENCES

[1]. Kyle, M.; Aveling, E.-L.; Singer, S.-J. Establishing High-Performing Teams: Lessons from Health Care. MIT Sloan Manag. Rev. 3. Kyle, M.; Aveling, E.-L.; Singer, S.-J. Establishing High-Performing Teams: Lessons from Health Care. MIT Sloan Manag. Rev.2020, 61, 14–18. 2020, 61, 14–18.

[2]. Konkel, R. H., Ratkowski, D., & Tapp, S. N. (2019). The effects of physical, social, and housing disorder on neighborhood crime: A contemporary test of broken windows theory. ISPRS International Journal of Geo-Information, 8(12), 583.

[3]. Ren, L., Zhao, J. S., & He, N. P. (2019). Broken windows theory and citizen engagement in crime prevention. Justice quarterly, 36(1), 1-30.

[4]. Ozturk, O. G., Daglioglu, G., & Inal, T. C. (2022). Idea of Applying "Broken Windows Theory" to Clinical Laboratories as a Quality Tool to Increase the Success of Proactive Risk Management Strategies. Journal of Patient Safety, 18(4), e722-e726.

[5]. Farokhzadian, J., Nayeri, N. D., & Borhani, F. (2015). Assessment of clinical risk management system in hospitals: an approach for quality improvement. Global journal of health science, 7(5), 294.

[6]. Li, Jian, et al. "Safety system review in healthcare environments: a comprehensive, human reliability-based strategy." Safety Science (2019): 198-212.

[7]. Perlas, R., & Khanna, P. (2020). Application of the Broken Window Theory to patient safety and health care. BMC Health Services Research, 20(1), 67.

[8]. Guo, M. (2019). Window, Window, Who's There? A Study on the Impact of Windows in Health Care Settings. International Journal of Environmental Research and Public Health, 16(14), 2683.

[9]. Zhang, K. Q., Du, T., & Wang, X. M. (2016). Risk management in organizations: Concepts and guidance. Boca Raton, FL: CRC Press.

[10]. Shaffer, R. M. (2021). Environmental health risk assessment in the federal government: A visual overview and a renewed call for coordination. Environmental science & technology, 55(16), 10923-10927.

[11]. Prop, U.S. (2020). Global Risk Management in Hospitals and Healthcare.

[12]. Robson, M. (2017). Clinical Risk Management in Health Care: Centralising Risk in the Name of Quality Improvement. Journal of Health Services Research & Policy, 22(1), 96–101.

[13]. Haugen, A. S., Sevdalis, N., & Søfteland, E. (2019). Impact of the World Health Organization surgical safety checklist on patient safety. Anesthesiology, 131(2), 420-425.

[14]. Kannampallil, T. G., Osei-Bonsu, E., & Numer, M. (2018). Risk management and maintenance methodologies: Factors that influence the repair of broken windows in healthcare facilities. International Journal of Interior Architecture and Spatial Design, 12(1), 21–30.

[15]. Liebert, S., & Ameringer, C. F. (2013). The health care safety net and the Affordable Care Act: Implications for Hispanic immigrants. Public Administration Review, 73(6), 810-820.

[16]. Byrnes, R. (2018, January 4). 3 Steps for Creating a Culture of Accountability. HR Bartender. Retrieved from https://www.hrbartender.com/2018/leadership/creating-culture-accountability/

[17]. Cook, S. (2019). Managing Effective Change. Oxford University Press.

[18]. Archer, S., Hull, L., Soukup, T., Mayer, E., Athanasiou, T., Sevdalis, N., & Darzi, A. (2017). Development of a theoretical framework of factors affecting patient safety incident reporting: A theoretical review of the literature. BMJ Open, 7(12), e017155.

[19]. Blegen, M.A., Goode, C.J., Park, S.-H., Vaughn, T., & Spetz, J. (2010). Strengthening the organizational infrastructure for continuing education in hospitals. JONA: The Journal of Nursing Administration, 40(7/8), 350-356.

[20]. Booth, A., & Walker, E. (2009). Experiential Learning in Health and Social Care: Theory, Practice and Perspectives. New York, NY: Routledge.

[21]. Leone, C. (2009). Accident prevention in the workplace. London, UK: Taylor & Francis.

[22]. Oster, L. (2017). Using quality assurance to improve healthcare. Philadelphia, PA: American College of Healthcare Executives.

[23]. Walshe, K., Smith, J., & Baldwin, L. (2009). An Introduction to Quality in Healthcare. London, UK: Oxford University Press.

[24]. Yilmaz, S.K. (2010). Strategies for improvement of quality of care in hospitals. International Journal of Health Care Quality Assurance, 23(7), 664-679.

[25]. Mattke, S., Huang, E. S., & Bazzoli, G. (2012). The role of healthcare organizations in maintaining quality: A systematic review. Journal of the American Medical Informatics Association, 19(3), 445-451.